

# THE NMS EXCHANGE

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By Mark Baumgartner  
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## A Quantitative Rosetta Stone for Better Performance Evaluations

Ideally, investment teams would be evaluated primarily qualitatively by knowledgeable and experienced governing bodies who understand the team’s investment process deeply and have ample time to spend monitoring it. In practice, governing bodies are often time-constrained, and seek easily accessible quantitative measures to aid in judging performance. The most available and visible measure — realized returns — represents an important, tangible result of the investment process, but should not be the only measure used to evaluate an investment team’s performance.

Comprehensive performance measurement has become a particularly relevant topic now, at the end of the 2016 fiscal year, a year when the median institution has delivered a negative return, and even top quartile institutions have lagged a CPI + 5% target. It’s inevitable that increased scrutiny and single-point, short-term returns-based relative comparisons (“What’s *your* FY16 Quartile ranking?”) will arise given the media focus and competitive human nature.

Many investment teams with poor absolute returns will seek to highlight their relative returns, or create alternate narratives to explain their performance. Governing bodies may find it challenging to fairly evaluate their teams given these shifting perspectives and measurement bases. Is it just a short-term bad outcome from a good process? Or is it actually a good outcome relative to the risks that were taken? Is there any way to tell?

### The Complexity-Comprehensiveness Trade-off

In general, there are three key questions or dimensions to performance measurement: What is being measured? Relative to what? And, over what timeframe?

Basing performance evaluation solely on realized fiscal year returns is simple and understandable, but represents only a narrow slice of those dimensions. Investment teams know that returns are highly variable, and at any given time their results may not be representative of a best-in-class process. Governing bodies know this too, and the next question typically [Continued on Page 9]



NMS Management, Inc.  
Nancy M. Szigethy  
Founder and  
Chief Executive Officer

## ABOUT NMS

NMS is a membership-based organization serving as the primary educational resource for the endowment and foundation community through its high caliber meetings. Believing that most successful business ventures are built on trust, and trust can only be developed through relationships, NMS strives to facilitate relationships through its membership platform.

As the chief source of unbiased educational forums, NMS promotes high standards of competence and ethics. As part of its mission, NMS provides its members with access to leading thinkers in the asset management industry through its content rich programming in a non-commercial setting of peers. NMS is the bridge to the latest investment ideas and information applicable to the endowment and foundation community.



By John C. Pomeroy  
Chief Investment Officer/  
Chief Risk Officer  
The Pennsylvania State  
University



By Sonali K. Dalal  
Chief Investment Strategist  
The Pennsylvania State  
University

# India

India has a history of rich social, political, and cultural multiplicity and she values that history even as she strides toward modernization. If one had to choose a single word to describe the investment potential of India, that word would be “poised.” A rapidly expanding working class, untapped resources, a burgeoning economy, and local urbanization trends all bring home the point: India is open for business.

**Demographics:** With a population over 1.26 billion (65% working age) compared to the United States population of 319 million (59% working age) — India’s potential economic pool of suppliers and consumers of goods and services is rapidly expanding. The trend in today’s working class population in India is positive and sustainable. In contrast, China’s working age group has actually peaked and is starting to trend toward a decline.

An expected 140 million people will be added to India’s labor force by 2020 — resulting in a staggering working age population of 70%. Combine this trend with the increasing urbanization of smaller towns and cities to as much as 30% — this augurs well for balanced and sustainable economic growth for the bulk of the country. Moreover, according to the World Bank, while the per capita income (Purchasing Power Parity Method) is low at \$5,350 annual (vs. China: \$11,850), it continues to steadily grow while other countries, including the U.S., remain slack.

Population growth doesn’t always mean widely-shared financial gain — there are some specific conditions that need to be coupled with increases in population in order to adequately support sustainable positive economic impacts. The model of demographic dividend works only if India is able to meet the following conditions:

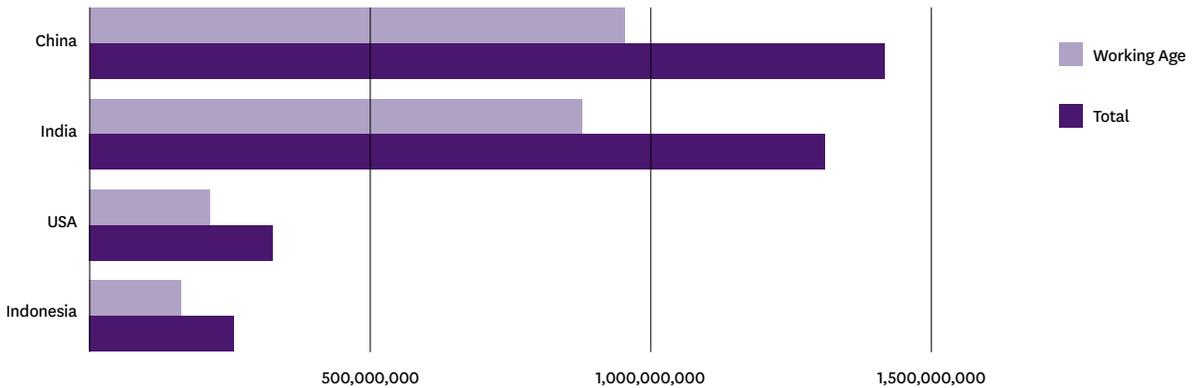
- ◆ Good governance, rule of law, property rights, sanctity of contracts, low level of corruption.
- ◆ Efficient infrastructure
- ◆ Prudent fiscal and macro-economic management
- ◆ Well-developed and competitive financial markets
- ◆ Investment in education and training

Source: David Bloom, Harvard School of Public Health, Jan 2011

India meets all of these conditions to varying degrees. This groundwork could provide the needed momentum that will drive India to become one of the largest economies in the world.

**Balanced Urbanization:** The advantage of a balanced urbanization trend is that it can set a positive feedback loop in motion. A gradual *[Continued on Page 11]*

FIG. 1 World’s Four Most Populous Countries Total Population vs. Working Age Population



## The NMS Institutional Select Series

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By Christopher Longee  
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# Examining the Role of Biological Investments in a Natural Resources Portfolio



By Katrina Carder  
Senior Portfolio Manager  
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By Kristin Staffeldt  
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Natural resources allocations have long been included in diversified endowment and foundation investment portfolios. The asset class is typically intended to provide a hedge against inflation, current cash flow, and diversification benefits that contribute to an institution's expected return targets. Traditionally, natural resources have been thought of as predominantly oil and natural gas investments, and when looking at widely-used natural resources benchmarks, energy and energy-related sectors comprise upwards of 70% of the underlying entities.

The asset class contains more than just energy, though. The investable natural resources universe more broadly encompasses metals and mining, power generation, infrastructure, and other related services. While not as prevalent as energy-based investments, institutional investors frequently have some exposure to these natural resources sub-sectors as well. However, less often found in institutional portfolios are what can be considered biological investments — timber, agriculture, or environmental investments.

Commonly, natural resources are grouped into four categories:

- ◆ Energy
- ◆ Metals and Mining
- ◆ Power Generation and Infrastructure
- ◆ Biological Investments

Although these are all in the natural resources universe, each strategy has unique risk, return, and investment horizon characteristics. Evolution of the investable opportunity set and sector attributes may warrant a review of asset allocation policy within institutional natural resources portfolios, with greater consideration given to biological investments.

## What are Biological Investments?

Biological investments can be defined as investments in assets that have an organic growth factor. This growth factor causes the majority of these resources to increase in physical volume with maturation, typically adding value to a holding. Investments in this space can be classified in three additional subcategories: timber; agriculture; and environmental. Timber and agriculture are relatively well understood, while environmental assets are slightly more esoteric and include investments that capitalize on governmental regulations and legal rights surrounding the natural environment.

**Timber:** Timberland includes both softwood and hardwood species of trees requiring anywhere from 10 to

15 years for softwoods and 30 to 80 years for hardwoods to reach commercial maturity. Hardwoods are grown in naturally-regenerating forests while softwoods are most frequently grown on managed plantations. Timber managers create value by optimizing planting, growth, and harvesting techniques along with marketing and selling the timber. Additional value creation is possible through land sales for the highest and best use. Institutional investment in timberland increased significantly beginning in the 1990s when forest product companies began divesting from timber holdings in order to deploy capital to higher-yielding projects. Debt is commonly available to managers but tends to be utilized at conservative levels (under 40%) if at all. While returns for timber can vary from year to year, income is largely expected to generate half of returns and capital appreciation of the timberland properties the remaining half.

**Agriculture:** Agriculture is grouped by farming operation and can include seasonally replanted row crops (e.g., corn, soybean, cotton, wheat), permanent crops (such as pitted fruits or nuts), livestock, and farming infrastructure. Clearly the essential need of nourishment for all living beings creates an inelastic demand curve and sustains the strategy. Supporting growth in the sector are expectations for world population expansion along with rising incomes in developing countries, historically proven to drive increased meat consumption. Given the finite supply of arable land, innovation will be required to increase efficiency and productivity, creating potential investment opportunity in agricultural infrastructure. Similar to timber, financing is available to managers although if used is most frequently under 40% LTV. Return contributors are a combination of operating income from the sale of crops or output as well as capital appreciation of land over time.

**Environmental:** Beginning in the 1970s and continuing today, a growing number of federal, state, and local environmental laws require that unavoidable ecological impacts be offset by restoring comparable land that has been previously degraded or threatened by degradation, resulting in "No Net Loss" of protected natural resources. The most well-known of these regulations, The Clean Water Act and The Endangered Species Act, promoted the creation of investable Land-Based Environmental Offset credits, which resulted in mitigation banks as the preferred solution for offsetting impacts. The most established offset markets include wetland, stream, and endangered species mitigation banking. Investable water rights and carbon credits are also environmental investments. Due to the earlier stage of market development, environmental strategies are typically unlevered. Returns are generated predominantly from the sale of offset credits with some residual value earned by selling the mitigation bank acreage.

*[Continued on Page 13]*



By Elaine Orr  
Director of Investments  
Silicon Valley Community  
Foundation

# “Anything you want to, do it; want to change the world...there’s nothing to it.”

Gene Wilder, as Willy Wonka in the classic family film, encapsulated our thinking and mission crisply as a global center of philanthropy. Following its formation in 2007 from a combination of two local community foundations, Silicon Valley Community Foundation (“SVCF”) began its efforts to engage more people of color and women managers in its investment portfolio. We hold diversity and inclusion as fundamental principles, with a diverse staff, board and committees serving a diverse population. Yet we also recognized that such values were not appropriately represented within our charitable portfolios.

As part of its exploration process, SVCF co-authored “The Hardest Taboo to Break” ([siliconvalleycf.org/manager-diversity](http://siliconvalleycf.org/manager-diversity)), outlining its views and learnings with its investment consultant. It addressed the inertia very likely due to hidden biases; the incorrect assumption that total returns would somehow be less optimal or skilled managers would be difficult to identify.

Remarkably, SVCF and its investment consultant, Colonial Consulting, share a high conviction that nimble, skilled managers with a differentiated investment view can outperform their peers, and structural and behavioral changes by an asset owner can support diversity. Thus began our transition towards an actionable strategy, with support from leadership, our CEO, Dr. Emmett Carson, the board and investment committee members.

SVCF seeks diversity of thought and investment behaviors that will generate consistent portfolio outperformance to the benefit of its ultimate charitable missions. Simply put, we seek to avoid unintentional biases when investing. Over the past several years, SVCF’s leadership team, board and committee members, staff and consultant have collaborated to create and maintain an inclusive process in hiring diverse asset managers across gender, ethnicity and race.

Three key questions were raised that are now addressed at least annually with the consultant and committee:

1. The number of meetings held with diverse managers
2. The number of diverse managers recommended by the consultant across all its clients
3. The number of diverse managers hired across all its clients

SVCF also provides a regular update on the minority and women owned firms in its portfolios. Such results are published in the annual diversity report located here: <http://www.siliconvalleycf.org/manager-diversity>.

In the earlier years, SVCF and Colonial Consulting both required lead time to establish a baseline. This included allocating time to meet other like-minded investors, engage with professional groups and industry experts, and to learn and consider the definition of best practices. Then we pondered on how to strategically expand our manager outreach processes, followed by an adjustment of priorities and internal workflows, intentionally addressing staff biases and modifying how we work.

We created a broad and deep funnel for gathering data and this included interviewing various consultants, asset owners, individual minority and women owned investment managers, and participating or speaking at conferences such as Consortium West, Toigo, NAIC, and AAAIM. Data breeds more data, as most would attest to, and the intention remains to learn and engage with investors, consultants and managers and be a catalyst for change towards more diverse, high performing, manager rosters.

We also leveraged the momentum around the United Nations effort on the Sustainable Development Goals which are described further here at <http://www.un.org/sustainabledevelopment/sustainable-development-goals/>.

**Gender diversity** is one of the SDG’s, and aligns nicely with SVCF’s guiding principles of **diversity and inclusion, especially in investment management.**

To further bring our message and strategy to the public, we participated this summer in a webinar hosted by the Council of Foundations, with our co-panelists from the Association of Black Foundation Executives (“ABFE”) and Lenox Park. One of the discussion questions is shared here:

**Have you found that your diverse asset managers have performed as well as your more traditional asset managers?**

We responded that we are still in the early innings, since most of our diverse managers were only hired in the past two years. Until three years of history with a public securities manager, and preferably five years record or more, the results are not substantial enough to draw any precise conclusions. We can also unequivocally state that all managers will be held to a consistent investment performance standard, and those that fail over an extended watch period and who are not serving the portfolios well shall be terminated.

**And if we were asked “what is working well?”**

We can distinctly point to the redesign of the engagement process for prospective managers along with a deeper collaboration with our investment consultant. This is where most investors get stuck — *[Continued on Page 15]*

Leslie Bricusse and Anthony Newley. “Pure Imagination”. Willy Wonka & the Chocolate Factory. 1971.



By Susanne Gealy  
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# Are Low Volatility Stocks in a Bubble Environment?

## US, Europe, Japan and Emerging Markets Data Analysis

Are low volatility stocks in a bubble environment? The quality or “compounders” investment strategy has been a multi-year success story in long/short and long only equity portfolios and a topical question in a year of poor hedge fund manager returns and where the value-style resurgence seems underway. The Teacher Retirement System of Texas (TRS) leverages broad sources of data on markets and managers in their oversight and management of portfolios. For TRS, the purpose of data collection, report development, and customized analysis is to:

- ◆ Understand market return drivers more deeply,
- ◆ Identify manager headwind and tailwind impacts, and
- ◆ Enhance portfolio management decisions.

In posing the question, “Are low volatility stocks in a bubble environment?” this piece introduces some of the data analysis tools and an external resource utilized by the TRS External Public Markets team. Systematic data aggregation is not the end, but the starting point for our

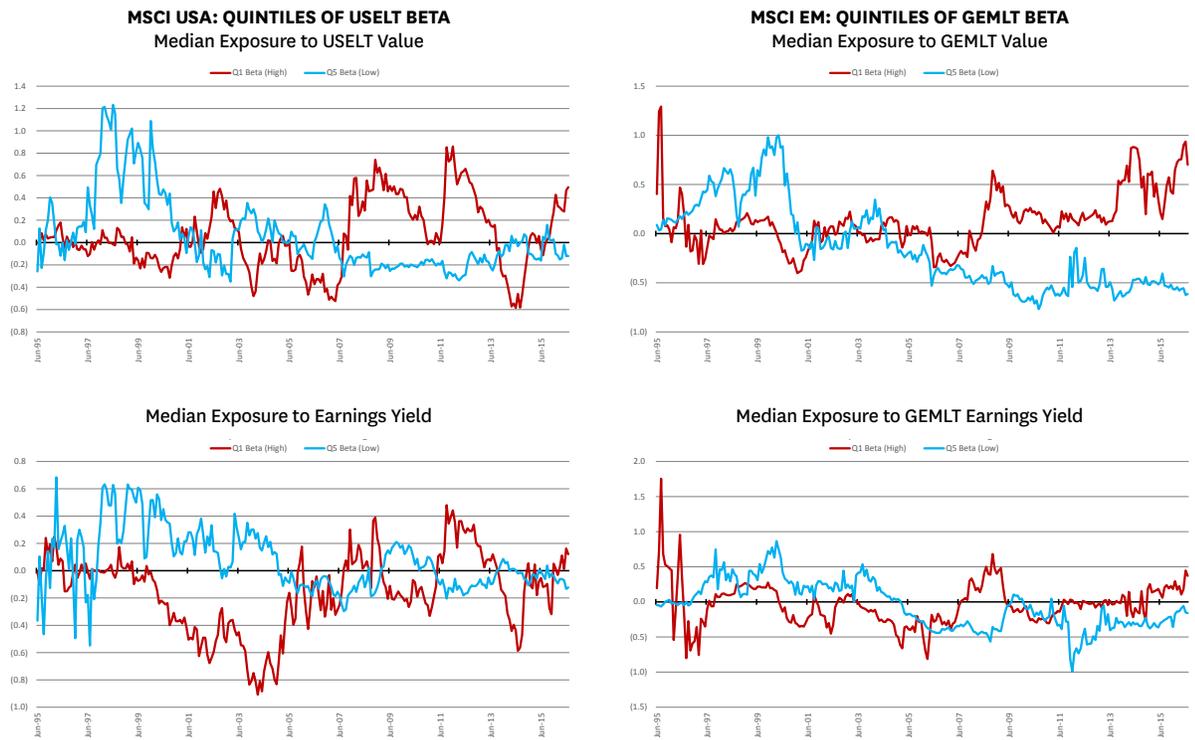
critical thinking and qualitative work to leverage information for insightful manager conversations and evaluation of portfolio risks and opportunities. Collaboration and internal debate are central to the TRS due diligence process; the reports do not make the decision, but serve as a dashboard for understanding complex markets.

It is important to emphasize that TRS is not making a recommendation on the timing of factors. (That is for others to endeavor and debate.) As shown here via Barra factor, holdings data analysis, and external resources, we have the opportunity to assess and debate the environment of low volatility stocks, and consider potential actions with each other and our teams.

### Barra Beta factor analysis across US, Europe, Japan and Emerging Markets Indexes:

Starting with the Barra risk model tool, TRS utilizes manager holdings in equity portfolios and market indexes to measure and evaluate factor exposures and return drivers. For the examination of a bubble environment in low volatility stocks, the median valuation of high Barra Beta factor stocks (Quintile 1, Q1) and [Continued on Page 16]

FIG. 1 Barra Beta Factor Analysis



Sources: Barra, Factset, TRS



By Bruce Zimmerman  
Former CEO & Chief  
Investment Officer  
The University of Texas  
Investment Management  
Company

# Top Ten Risks for Practicing CIOs

A Chief Investment Officer's primary responsibility is to identify and clearly communicate his/her portfolio's risks to his/her Board, Investment Committee and/or client(s). About eighteen months ago, the University of Texas Investment Management Company (UTIMCO) developed a ten item framework to help with this responsibility.

The first risk we highlighted is the risk of **underperformance**. Precisely because this risk is typically not the first risk that is thought of, coupled with the reality that if not for this risk no other risk need be borne, we placed it at the beginning.

Of course, in order to identify this risk the required/desired performance must be clearly known. Generally the required performance is the distribution rate plus inflation, although even this seemingly straightforward objective requires additional specificity as to time frame and inflation measurement, much less the required or desired distribution rate. And many a client and/or boss really thinks the required performance is the **greater of** the distribution rate plus inflation, market returns or competitor returns. Good luck nailing down the definition of performance! But try we must.

Given a performance requirement, the second risk we articulated is **market** risk. Cash simply will not earn enough to satisfy distribution rates plus inflation, so exposure to other capital markets is required. Such exposure can cover a broad range of markets from bonds to commodities to real estate to equities, each present in numerous varieties. Every capital market, however, carries with it specific risks, often times including, but not limited to, interest rate exposure, duration, cash flows, earnings, asset values, counterparties, exchange rates and a myriad of other factors. A thorough and detailed understanding of each specific market's risk factors, combined with correlations across market risks, is a starting point for understanding a total portfolio's inherent market risks.

Participation in capital markets guarantees some element of the third risk we addressed: **volatility**. Many investors have come to associate with volatility as **the** definition of risk. We are not among that group. When someone uses the phrase "risk-adjusted" they are usually speaking about "volatility-adjusted"; we think one should be clear about the difference.

In fact for us, because an endowment arguably is the longest term of investors, volatility is something that we should be able to take advantage of, not be troubled by. On the other hand, while our portfolios are in perpetuity, our jobs are most certainly not.

Therefore, we need to be cognizant of volatility risk and careful to communicate it to our bosses and clients in order to have the best chance of keeping our jobs and producing stellar long term results. Educating bosses and clients on the basics of probability theory based on empirical data, therefore, is one necessary part of our job.

A second element inherent in capital markets is the fourth risk which we have dubbed **scenarios**. Said in other words, the unexpected should be expected and bad

things can (and will) happen. Things that may, or may not, be different from what we have already experienced.

We look at what we think will be the effect on our portfolio of economic changes (e.g., interest rate increases, inflation, deflation, etc.), previous market events (e.g., Black Monday, the Lehman crash, sustained bear markets, etc.) and conceivable future events (e.g., hard landings, oil price changes, monetary miscues, etc.). Our goal for this analysis is to think about potential portfolio repositioning (which, candidly, are rare) and, more importantly, what our respond would be should such an event arise.

We are given the challenge of underperformance risk and therefore compelled to assume market risk with its inherent volatility and scenarios. We choose, however, to take or not take the fifth risk: **active management**.

Most of us have chosen to take active management risk; some of us are correct in doing so. The key question here should not be "do I feel lucky" but rather "what makes me think I'm good". Our view is that active management is difficult and that skill matters in investing. A clear delineation of the perceived "edge" that the investing organization brings to bear is essential.

UTIMCO's belief is that we can identify and partner with skilled practitioners around the globe who are focused on specific capital markets. We believe we can do so because of our asset size and staff quality. We believe it is very difficult to do so, requiring constant, patient and disciplined effort.

Our sixth risk is **transparency**. Because our business model is to partner with external investment managers, with varying degrees and timeliness of security-level disclosure, we do not always know precisely what we own.

This is a risk we are willing to bear in order to partner with the best, although we look to mitigate this risk through initial and ongoing diligence and dialogue with our partners. Their interest in communicating with us is enhanced not only by our asset size but by the quality of our staff and thus the quality of the two-way discussions we are able to have.

**Concentration** risk is the seventh we list and, like most risks, too little can be as challenging as too much. We measure many different aspects of concentration, including geographic, sector, manager, and security level concentration.

Like many portfolios I suspect, we may be overly diversified although we have not yet determined what an optimal level of concentration would be. Concentration can be a double-edged sword: wonderful when it works but wounding when it doesn't. We continue to focus on better understanding this risk in order to optimize its expenditure.

Our "lucky eight" risk is **illiquidity**. Lucky because for us this is an inherent competitive advantage vis-à-vis other capital pools that are not in perpetuity.

Again, a "Goldilocks" approach is optimal: expend the risk if and when appropriately rewarded and never in excess of the portfolio's ability to "weather a storm". We've

*[Continued on Page 19]*

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By Teresa Kong  
Portfolio Manager  
Matthews Asia

# When “Risk-Free” Becomes Risky

Fixed income investors are currently facing a conundrum as global bonds offer little or even negative yield, while being subject to significant duration — or interest rate risk — if rates move higher. Various estimates suggest the value of negative yielding bonds globally is approaching \$13 trillion, representing almost 40% of total outstanding developed markets’ government bonds. Moreover, as growth picks up in the U.S., the question is no longer if, but, more importantly, when, the U.S. Federal Reserve Bank will resume its rate hiking cycle. With the probability of a rate hike increasing so do the risks associated with owning “risk-free” Treasuries. Given the potential risks involved with holding U.S. Treasuries today, we believe **Asia High Yield** (as represented by the high yield portion of the JACI index) **offers a compelling investment case for institutional investors looking for returns and diversification.**

## U.S. Treasuries today have more potential for downside than upside.

At today’s absolute low level of interest rates in the U.S., we believe the risk-return profile of holding U.S. Treasuries has become asymmetric, with a greater potential for downside than upside. Consider an investor buying a 10-year U.S. Treasury today at a yield of 1.5% and a price of 100. If U.S. interest rates rise by 1%, the 10-year bond will lose 9% of its value. Because of the current absolute low level of rates, the sensitivity of bond prices to changes

in rates is much higher today than it has been at any time in U.S. history. Likewise, an investor in other low, even negative, yielding global government bonds would experience a similar mark-to-market loss in a rising interest rate environment. For example, an investor in German bunds with a yield of -0.11% would be even more exposed to a rise in rates given the bunds’ higher duration of 10. This means that a 1% rise in German rates would lead to an even greater fall of 10% in price. In other words, a 10-year German bund priced at 100 would be worth 90.

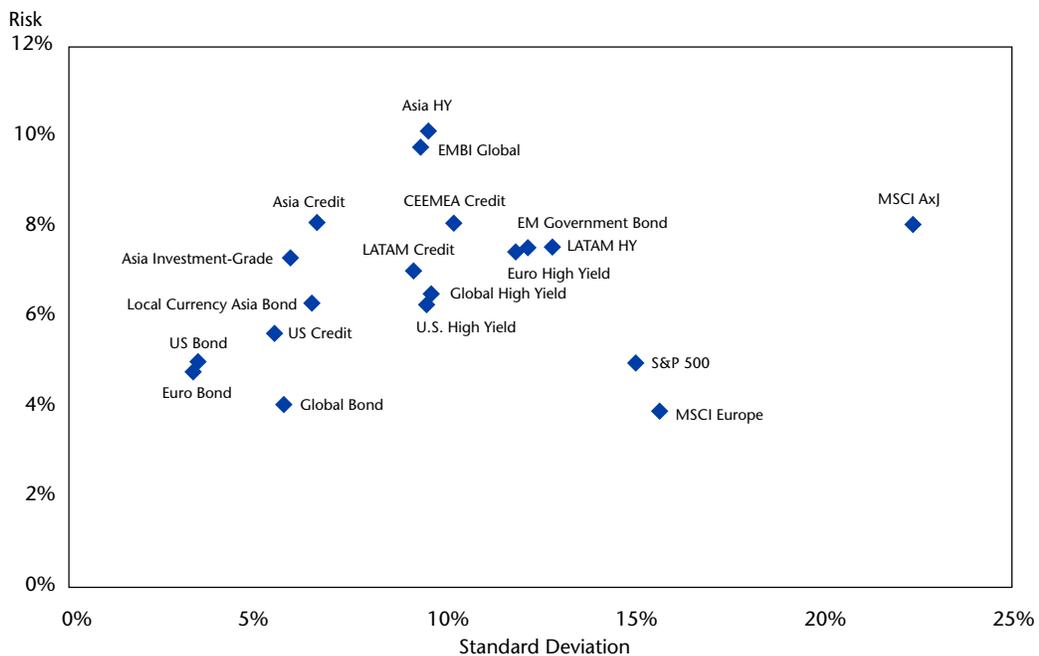
While it may seem counterintuitive, due to the lower empirical sensitivity of high yield to interest rates, investing in high yield at this point in the credit cycle may potentially have less downside risk than buying U.S. Treasuries because current spreads already capture much of the credit risk. **We are at a unique and critical point in the economic and credit cycle — where historically low rates coincide with above average credit spreads.**

## Why should one focus on an asset class as esoteric as Asia high yield, as opposed to U.S. high yield?

First, historically, the risk-adjusted returns of Asia high yield have been higher than those of high yield from other regions. Below is the risk return profile of various asset classes over history:

[Continued on Page 19]

FIG. 1 Since Inception Annual Risk and Return Annual Returns, in Home Currency, since inception of JACI



Data shown from 1999 (or since inception) through December 2015 for Asia Credit (J.P. Morgan Asia Credit Index–JACI), Asia High Yield (high yield portion of J.P. Morgan Asia Credit Index), U.S. High Yield (BofA Merrill Lynch High Yield Master II Index), Euro High Yield (Barclays Pan-European High Yield Index), LATAM High Yield (J.P. Morgan CEMBI Broad Latin American High Yield Index), Global High Yield (BofA Merrill Lynch Global High Yield Index), U.S. Credit (BofA Merrill Lynch U.S. Corporate Master Index), CEEMEA Credit (J.P. Morgan Corporate Broad EMBI CEEMEA Index), Asia Bond (HSBC Asian Local Bond Index–ALBI), LATAM Credit (J.P. Morgan Corporate Broad EMBI Latin America Index), Emerging Markets (EM) Bond (JP Morgan Emerging Markets Bond Index Global), U.S. Aggregate (Barclays U.S. Aggregate Bond Index), Euro Aggregate (Barclays European Aggregate Bond Index), Global Aggregate (Barclays Global Aggregate Bond Index) U.S. Equity (S&P 500 Index), MSCI Europe Index and MSCI All Country Asia ex Japan Index. Past performance is no guarantee of future results. It is not possible to invest directly in an index. Volatility is the standard deviation of returns. Source: Bloomberg; data period 1999 to December 2015; †2000 to December 2015; \*2002 to December 2015



By Adam R. Karr  
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Orbis Investment  
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# This Too Shall Pass — a Practitioner’s Perspective on Active Management

It is popular these days to talk about how “difficult” the past several years have been for active managers. Not a day passes without a headline touting investors’ flight to cheap passive strategies. The reality is that active management is always difficult because it is a zero-sum game. And since the cost of active management is inherently higher, a passive approach will always be superior, on average, after fees.

The key takeaway for many investors has been that active management simply isn’t worth the hassle. This is evident in the data on fund flows. According to eVestment, more than \$2.7 trillion has flowed out of active equity funds globally since 2009, while about \$1 trillion has flowed into passive equity funds. While this tide has been unmistakable, we think it would be a mistake to proclaim the death of active management based on the past few years. In our view, this argument is too often used as a convenient excuse for poor performance on the part of individual active managers and as the easy argument in favor of passive investing by their critics.

We think both sides are missing the point.

An important truth, which we think has been lost in the debate, is that there has always been a wide distribution of active managers. Some have added genuine value for their clients over time, many others have not. But the fact that active management cannot “beat” passive funds on average does not disprove the existence of skilled managers. Besides, who wants to invest with a mediocre manager?

As bottom-up stockpickers ourselves, it goes without saying that we are resolute believers in active management and believe that we can win the zero-sum game on behalf of our clients. Nonetheless, our objective is to offer our perspective as practitioners and to highlight what we think are the key questions investors should consider when making up their own minds:

1. Does skill exist in investment management?
2. Can one identify skilled managers in advance?
3. Is something “different this time”?

## Does skill exist?

Obviously if you don’t believe that skill exists, then there’s not much else to say in defense of active managers! But we think many investors are too quick to conflate observed performance versus a benchmark with skill. The argument many make is: “managers can’t beat the index, ergo they are unskilled.” We think this is far too simplistic. To be clear, there are managers that consistently generate alpha for their clients net of fees over the cycle.

But there also might be some skilled managers out there who can’t deliver for other reasons. These include organizational frictions such as over-diversification, career risk, poor incentives, tracking error constraints, inability to take a long-term view, and capacity concerns — all of which may induce a manager to hold lower-conviction positions that obscure or dilute their true skill.

For more than 25 years, we’ve seen firsthand that great investment ideas are difficult to find. And, when you do find them, the best opportunities tend to be the ones most uncomfortable to own. It is absolutely critical to have an organizational structure and incentives that support these contrarian investments and a willingness to hold them in positions that are large enough to make a difference for clients. Very few investment firms have those ingredients in place, and very few individuals can stomach the career risk that comes with high-conviction decisions.

Furthermore, the real risk that matters is the probability of permanent capital loss (not volatility or tracking error). As stewards of their clients’ money, managers have a responsibility to avoid permanent capital impairment and to seek a reasonable margin of safety when making investment decisions. One of the easiest ways to destroy capital is to pay more for an asset than it is worth — and by their nature passive strategies and closet indexers completely ignore this risk of overpayment.

As passive strategies ramp up in popularity and indices hit new highs, we believe the embedded risks loom larger and larger. Indeed, protecting client assets during draw-downs should be as much a part of assessing a manager’s skill as considering their ability to outperform.

[Continued on Page 22]

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April 23 – 25, 2017

For more information please contact [Diana@nmsmanagement.com](mailto:Diana@nmsmanagement.com)

asked about poor realized returns is, “How has everyone else done?”, moving to a relative benchmark from an absolute one.

Other potential questions that should be asked are: “How is your performance over longer timeframes?” “What risks did you take to generate those returns?” “How efficiently are you taking risk?” and “How does this compare with what you expected?” or “How unusual are these results?”

These questions represent shifts along the various performance measurement dimensions. The “What is being measured?” question can be shifted from returns, to risk, to efficiency. The “Relative to what?” question can be shifted from a target return, to a peer comparison, to relevant benchmarks. And the timeframe can be shifted to any of a number of more relevant longer-term periods.

Each of these questions broadens and improves the basis for evaluation. But each additional question also adds complexity to the conversation. When time is limited, complex conversations tend to move back toward the default — simple and understandable — even if they are less comprehensive or effective.

### Breaking the Compromise

We challenged ourselves to solve this problem — to create a thorough quantitative performance evaluation tool that would be attractive both to investment teams who

are concerned with being judged fairly, as well as governing bodies who are concerned with evaluating teams efficiently and effectively.

Often “quantitative” translates to “impractical.” Quantitative measures can be rigid, not linked to intuition, or misaligned with natural thought processes. We were particularly sensitive to this during the design process, because we believed that practicality was the key to adoption. To address this, we took a page from Edward Tufte’s book, *The Visual Display of Quantitative Information*, and structured our narrative around a number of key questions we thought most relevant in performance discussions. We essentially reverse-engineered the performance conversation, starting with how we would ideally qualitatively assess performance, then building the quantitative underpinnings supporting the story.

The result of this process is shown in Figure 1, a dashboard which summarizes performance across a variety of dimensions and over a number of timeframes. The “What is being measured?” question is answered along the left hand side (Returns, Volatility, Drawdowns, and Risk-Adjusted Returns). The “Relative to what?” question is answered across the top (Absolute, Relative to Peers, and Relative to Benchmarks). The “Over what timeframe?” question is answered throughout. And the color-coding provides an “at-a-glance” summary of performance (aqua= good, purple = bad).

FIG. 1 Single year return (black square) shown in broader context of a comprehensive and intuitive quantitative dashboard (simulated data).

		ABSOLUTE				RELATIVE												
		VS. OBJECTIVE				VS. PEERS				VS. POLICY BENCHMARK				VS. SIMPLE 70/30 BENCHMARK				
		1 YEAR	3 YEAR	5 YEAR	10 YEAR	1 YEAR	3 YEAR	5 YEAR	10 YEAR	1 YEAR	3 YEAR	5 YEAR	10 YEAR	1 YEAR	3 YEAR	5 YEAR	10 YEAR	
RETURN	FUND	-2.1%	6.1%	6.4%	8.2%	-2.1%	6.1%	6.4%	8.2%	-2.1%	6.1%	6.4%	8.2%	-2.1%	6.1%	6.4%	8.2%	
	VS.	5.9%	6.0%	6.3%	6.8%	-3.7%	4.7%	4.5%	4.9%	-3.4%	5.2%	4.8%	6.4%	-3.6%	5.7%	5.3%	5.2%	
RISK	VOLATILITY	FUND	6.3%	5.7%	6.2%	10.1%	6.3%	5.7%	6.2%	10.1%	6.3%	5.7%	6.2%	10.1%	6.3%	5.7%	6.2%	10.1%
		VS.	10.0%	10.0%	10.0%	10.0%	8.0%	6.7%	7.7%	9.2%	8.9%	7.6%	8.5%	11.2%	12.7%	8.3%	9.4%	12.0%
	DRAWDOWN	FUND	-4.5%	-6.9%	-8.0%	-27.7%	-4.5%	-6.9%	-8.0%	-27.7%	-4.5%	-6.9%	-8.0%	-27.7%	-4.5%	-6.9%	-8.0%	-27.7%
		VS.	-5.0%	-10.0%	-15.0%	-22.5%	-5.4%	-6.9%	-10.5%	-31.8%	-6.6%	-7.2%	-12.3%	-33.7%	-9.0%	-10.2%	-13.2%	-40.7%
RISK ADJUSTED RETURN (SHARPE RATIO)	FUND	-0.4	1.0	0.9	0.6	-0.4	1.0	0.9	0.6	-0.4	1.0	0.9	0.6	-0.4	1.0	0.9	0.6	
	VS.	0.8	0.8	0.8	0.8	-0.5	0.6	0.5	0.5	-0.4	0.6	0.5	0.5	-0.3	0.6	0.5	0.4	

Quintile Color Key

BEST — TOP 20%	GOOD — NEXT HIGHER 20%	EXPECTED — MIDDLE 20%	POOR — NEXT LOWER 20%	WORST — BOTTOM 20%
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FIG. 2 Brief descriptions of quantitative performance measures and color-coding rules. Additional detail provided in Appendix A.

		ABSOLUTE				RELATIVE											
		VS. OBJECTIVE				VS. PEERS				VS. POLICY BENCHMARK				VS. SIMPLE 70/30 BENCHMARK			
		1 YEAR	3 YEAR	5 YEAR	10 YEAR	1 YEAR	3 YEAR	5 YEAR	10 YEAR	1 YEAR	3 YEAR	5 YEAR	10 YEAR	1 YEAR	3 YEAR	5 YEAR	10 YEAR
RETURN		Return color-coded by quintile relative to target return of R% and target volatility of V% over period				Return vs. Median Peer color-coded by quintile in Universe				Excess return vs. Policy Benchmark portfolio color-coded by quintile over period				Excess return v.s 70/30 MSCI ACWI/ Barclays Agg portfolio color-coded by quintile over period			
RISK	VOLATILITY	Volatility color-coded by quintile (periods since inception)				Volatility vs. Median Peer color-coded by quintile in Universe				Relative volatility vs. Policy Benchmark portfolio color-coded by relative ratio				Relative volatility vs. 70/30 MSCI ACWI/ Barclays Agg portfolio color-coded by relative ratio			
	DRAWDOWN	Maximum peak-to-trough drawdown color-coded by quintile (periods since inception)				Maximum peak-to-trough drawdown vs. Median Peer color-coded by quintile in Universe				Maximum drawdown vs. Policy Benchmark portfolio color-coded by relative severity				Maximum drawdown vs. 70/30 MSCI ACWI/ Barclays Agg portfolio color-coded by relative severity			
RISK ADJUSTED RETURN (SHARPE RATIO)		Sharpe Ratio color-coded by quintile relative to target Sharpe over period				Sharpe Ratio vs. Median Peer color-coded by quintile in Universe				Sharpe Ratio vs. Policy Benchmark portfolio color-coded by relative ratio				Sharpe Ratio vs. 70/30 MSCI ACWI/ Barclays Agg portfolio color-coded by relative ratio			

Most importantly, the color-coding is linked to carefully chosen qualitatively based interpretations of performance. The color-coding is the “Rosetta Stone” that helps translate the underlying quantitative measures into a qualitative view of performance. Figure 2 briefly describes the rationale behind the metrics used (full descriptions of the quantitative scoring methodology can be found in Appendix A).

## The Performance Dashboard

We believe the Dashboard in Figure 1 provides an intuitive, comprehensive and consistent quantitative performance summary that can be used as a basis for performance discussions.

**Intuitive.** The table is designed to be easy to read, making effective use of the time and mindshare of governing bodies. The color-coding provides an instant performance summary and helps direct questions. Is the table primarily purple or aqua? Are there concentrations of color? The coloring is quantitatively determined, but based on intuition for “what is good” and “what is bad,” not necessarily on formal statistical measures like standard deviation or confidence intervals.

**Comprehensive.** The table is designed to read like a narrative, covering a number of the most meaningful dimensions of performance and focusing attention on both short- and longer-term timeframes. The initial simple and obvious question: “What are fiscal year returns?” is answered in the upper left-hand corner, the natural starting point. Next, the question “How are returns over longer timeframes?” is answered by moving to the right. Then the question “How do these results compare vs. peers?” is answered. Then, “How does this look vs. relevant benchmarks?” Moving down the page, readers can compare the amount of risk taken (from both a volatility and a realized drawdown perspective), and ultimately, how much return is being delivered per unit of risk taken. The basis for evaluation has been broadened along each of the key performance evaluation dimensions.

**Consistent.** The comprehensiveness of the table means that this same information can be presented in the same way each time a performance summary is needed, improving the efficiency and effectiveness of the evaluation and building trust between investment teams and their governing bodies. By not changing the story or the basis for evaluation in each performance reporting period, performance discussions become consistent and repeatable. Our goal was to resist making any changes that would have to be explained, erode trust, or consume time in future performance reviews.

## Using the Dashboard

The dashboard provides a number of useful building blocks for creating a performance narrative. For instance, the dashboard shows whether the team meeting its return targets on an absolute basis over both short- and longer-term time periods. The color codes help assess how unusual each result is relative to expected or stated ranges. Discussion can be focused away from particularly unusual short-term results towards more relevant (and perhaps less unusual) longer-term time periods.

Risk comparisons can be used to normalize performance. Perhaps poor relative performance is due to less risk being taken — helping raise more relevant questions: Should risk be increased? Could the institution tolerate a drawdown similar to those experienced by peers or benchmarks in the same time periods? Is the portfolio particularly good at protecting capital during crises? Or are there “hidden risks” that have resulted in unexpectedly large drawdowns?

Risk-adjusted returns, a reasonable measure of investor skill, can be tracked over longer-term timeframes, providing at least one basis for comparison with peer organizations. Risk-adjusted returns can also be used to demonstrate the quality of the alpha added by the team when compared with Policy or Simple benchmarks.

There will never be certainty in any quantitative measure of performance, but single-point, short-term, returns-based performance comparisons are too myopic. By using a broader quantitative dashboard as the basis for a narrative which focuses attention on a comprehensive set of longer-term measures of risk and relative performance, skilled investors can have additional means to encourage a better assessment of their performance, and governing bodies can have a more efficient, easier-to-understand, thorough and consistent way to evaluate their teams and foster alignment with institutional objectives.

## Appendix A: Additional Detail on Quantitative Performance Measures and Color-Coding Rules

Following is additional detail on the rationale for the use of each quantitative metric and the color-coding which indicates the degree of “unusualness” of each metric — ranging from aqua (very good), to lighter aqua (good), to white (expected), to lighter purple (poor), to purple (very poor).

**Return.** Return is the most tangible and understandable quantitative performance metric, indicating the actual realized growth of the endowment due to investment decisions in a given time period.

- ◆ *Absolute.* Absolute returns for trailing one, three, five, and 10 year periods are shown, color-coded by their relative quintile rank in a range set by a multi-period annualized return of R% (target return) with a standard deviation of V% (target risk) for trailing one, three, five, and 10 year periods.
- ◆ *vs. Peers.* Returns are compared vs. the median peer return in an appropriate Peer Universe over the same time periods and color-coded by relative quintile rank in the overall universe.
- ◆ *vs. a Policy Benchmark.* Returns are compared vs. a Policy Benchmark and color-coded by a z-score based on expected excess return and tracking error to the benchmark over the same time periods.
- ◆ *vs. a Simple Benchmark.* Returns are compared vs. a 70/30 mix of global equity (MSCI ACWI) and global bonds (Barclays Agg) (which can be thought

**Investment teams know that returns are highly variable, and at any given time their results may not be representative of a best-in-class process.**

of as an “equivalent returns benchmark” modeled on common systematic exposures of institutional portfolios) and color-coded by a z-score based on expected excess return and tracking error to the benchmark over the same time periods.

**Risk.** Risk should also be considered when evaluating performance: return and risk are two sides of the same coin. Volatility is the most common measure of risk, but can suffer from measurement uncertainty. A supplemental risk measure (and a good “pain” indicator) is realized drawdown, defined as the peak-to-trough decline in assets in a given time period. Both measures of risk are useful in a quantitative performance evaluation.

- ◆ *Absolute.* Volatility for trailing one, three, five, and 10 year periods are shown, color-coded by their relative quintile rank in trailing one, three, five, and 10 year periods since inception. The volatility quintiles are re-scaled by the ratio of V% (the target vol) to the median realized volatility during each period, so that the color is less dependent on the realized volatility environment and more dependent on the relative volatility of the endowment — i.e., aqua indicates a lower volatility relative to the potential range, purple is higher volatility relative to the potential range. Drawdowns for the same periods are also shown, color-coded by their relative quintile rank relative to all realized drawdowns in trailing one, three, five, and 10 year periods since inception.
- ◆ *vs. Peers.* Volatility is compared vs. the volatility of the median peer in an appropriate Peer Universe over the same time periods and color-coded by the relative quintile rank in the overall universe. Drawdowns are compared vs. the drawdown of the median peer in an appropriate Peer Universe over the same time periods and color-coded by a measure designed to compare recovery times for the drawdowns (i.e., the ratio of the logarithms of the fraction of asset values remaining at the trough) and color-coded by relative ratio (within a 1.25X ratio of each other, white; for ratios greater than 1.25X but less than 2X, lighter aqua or purple; and beyond a 2X ratio, aqua or purple).

- ◆ *vs. a Policy Benchmark.* Volatility and drawdowns are compared vs. the volatility and drawdowns for the Policy Benchmark and color-coded as vs. Peers.
- ◆ *vs. a Simple Benchmark.* Volatility and drawdowns are compared vs. a 70/30 mix of global equity (MSCI ACWI) and global bonds (Barclays Agg) and color-coded as vs. Peers.

**Risk-Adjusted Return.** Risk-adjusted return can be thought of as a quantitative measure of investment skill. It shows the amount of return realized per unit of risk taken — the higher the better. Skillful investors can deliver more return per unit of risk than unskilled investors, however just as returns and risk vary with time, risk-adjusted returns vary as well. The Sharpe ratio is a standard measure of risk-adjusted return. Higher Sharpe ratios mean an increasing chance of achieving long-term goals as well as a reduction in size of expected drawdowns, both of which are beneficial to the endowment.

- ◆ *Absolute.* Absolute Sharpe ratios for trailing one, three, five, and 10 year periods are shown, color-coded by their relative quintile rank in a range set by a multi-period modeled returns of R% (target return) with a standard deviation of V% (target risk) for one, three, five, and 10 year periods.
- ◆ *vs. Peers.* Sharpe ratios are compared vs. the Sharpe ratio of the median peer in an appropriate Peer Universe over the same time periods and color-coded by quintile rank in the overall universe.
- ◆ *vs. a Policy Benchmark.* Sharpe ratios are compared vs. a Policy Benchmark and color-coded by relative ratio (within a 1.25X ratio of each other, white; for ratios greater than 1.25X but less than 2X, lighter aqua or purple; and beyond a 2X ratio, aqua or purple).
- ◆ *vs. a Simple Benchmark.* Sharpe ratios are compared vs. a 70/30 mix of global equity (MSCI ACWI) and global bonds (Barclays Agg) and color-coded by relative ratio (within a 1.25X ratio of each other, white; for ratios greater than 1.25X but less than 2X, lighter aqua or purple; and beyond a 2X ratio, aqua or purple).

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**India**  
*[Continued from Page 2]*

shift of the labor force from lower-paying agricultural jobs to higher-paying service and industrial positions created within the same geographic area, is more advantageous than a rapid exodus to an established but distant urban center. This type of urbanization leads to labor movement without destroying local economies. In contrast to China’s urbanization, where population migration to existing urban centers is a larger trend, India’s population is urbanizing locally — building up smaller towns and cities in a slower but more balanced and sustainable way throughout the whole of the country.

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**Cycle of Sustainable Urbanization**

This local urbanization is in sharp contrast to the “boom town” phenomenon which are marked by pairing “instant” economic opportunity with a rapidly deteriorating quality of life due to poorly developed service sectors and a lack of capital investment. Slowly creating better job opportunities in step with rising income levels leads to more maintainable increases in infrastructure, higher saving rates and, of course, higher consumption trends. The movement toward these positive macro-environmental factors has the potential to make India the top emerging market story in our lifetime.

## Additional Macro Factors

Within the emerging market world, India stands out as the least likely economy to be impacted by an economic slowdown in China or indeed the world. With high internal demands and a much lower dependence on exports to fuel growth, the Indian economy is somewhat insulated from global economies. India does have global market exposure as a net importer of commodities - especially oil; of course, with the prevailing trend of lower crude prices, this has been a benefit. The current overall balance sheet of India is stronger today than in the previous decade — with higher economic growth rates, lower inflation and a sustainable deficit.

**Political and Governmental Reforms:** 2014 marked a watershed moment in Indian elections. A single pro-business conservative party was able to win a majority of the votes for the Lower House of Parliament. With 23 political parties represented in elections, this was considered quite a feat. As with any political body, anywhere — coalitions of multiple parties with disparate economic visions are not as successful in effectively governing as a single party with a clear vision. Because of this perceived political advantage, there were high expectations for Prime Minister Narendra Modi, and his reform agenda. Although Modi has been able to implement some of his proposed reforms, the progress has been very slow, leaving some of his constituents disappointed. It should be pointed out, however, that although the pace is slower, it is indeed moving forward and the path is hopefully being set for a much more positive economic future.

The Modi administration has been successful in implementing an “ease of doing business” reform which reduced bureaucratic involvement in the private sector. Other reforms streamlined coal/mining reporting and production, and the Goods and Service Tax Bill (GST) — a constitutional amendment signed by President Mukherjee this year. GST is expected to decrease unnecessary layers of government bureaucracy and deter corruption. Although there are some social challenges that have come with a more conservative political shift, overall, India is poised to make significant progress on the macro-economic and governmental/political reform fronts.

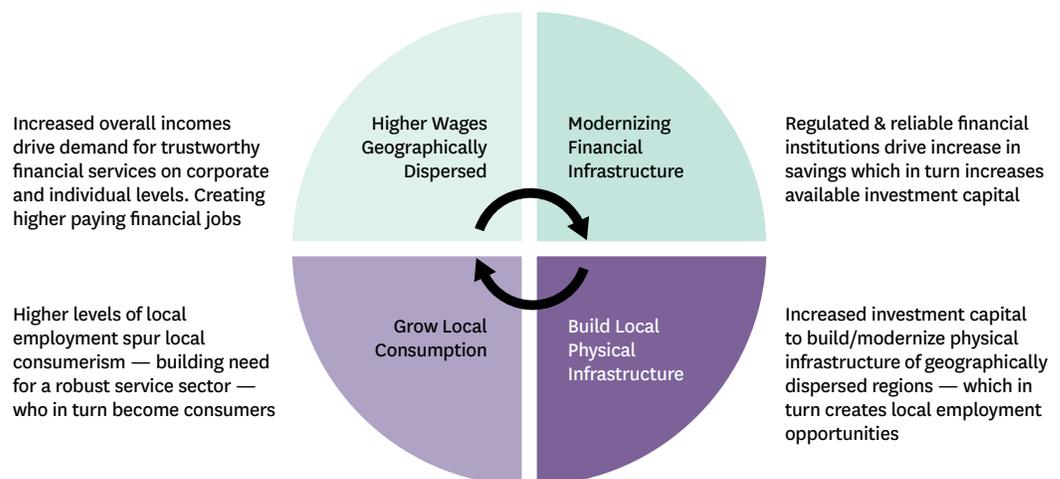
**Sector Exposure:** The Indian Public Market Index (MSCI India) is richly diversified, which is unusual among Emerging Market (EM) countries. No one major industry or sector group exposure is more than 24% of MSCI India. Other EM countries have high single sector exposures such as Brazil and China, with 35% and 40% in the financial sector; Russia with a staggering 70% exposure to commodities; the consumer sector stands at 35% for Mexico; while technology proves to be South Korea’s Achilles heel at 40%. It is much easier to achieve broad exposure to the Indian markets passive index. Indian State Owned Enterprise is only a quarter of the usual government exposure of other EM countries — which generally comes in around 24%. This insulates Indian investments from the vagaries of political fluctuations and allows exposure to economic growth-profitability.

**Indian Stock Market Valuation:** Indian market valuations have always been dependably higher than other EM countries. Many EM countries have a 10 year average forward P/E ratio between 7.5x (Russia) to 14.8x (Mexico). India’s 10 year P/E average ratio comes in at an impressive 15.8x. The current Indian market valuation (15.5x) is right in line with that 10 year average. While corporate earnings in India have had lower earnings growth over the last 4 to 5 quarters, this is expected to pick up in the very near future. Governmental reforms and lower inflation combined with an excellent monsoon season, following two years of drought, are contributing greatly to an expectation of increased economic activity.

**Private Equity / Venture:** India is poised to become one of the largest economies in the world. Consequently, it needs to acquire investment capital in order to fund its start-up and middle market private companies. The country is making rapid changes to its tech, consumer and healthcare sectors — making a move from the traditional large, under-organized and sometimes fragmented family-run businesses across various sectors of the economy. Entrepreneurship and the private sector have always been vibrant in India. Indian entrepreneurs are savvy, and their cost of capital has always been very high — with businesses run in a manner to maximize rates of return. These businesses are going to need increased capital to fund such

**Indian entrepreneurs are savvy, and their cost of capital has always been very high — with businesses run in a manner to maximize rates of return.**

FIG. 2 Cycle of Sustainable Urbanization



rapid growth. Although the past few years have been challenging in producing exits and investment returns, the private ecosystem has improved remarkably.

Today, there are better organized intermediaries, improved communication and data availability, and a more capable legal framework for deal making. Sophisticated players have emerged but, conversely, there has been a dearth of exits and illiquidity. Most private firms hold a large number of unrealized companies in their portfolio, and the subdued business cycle of the last few years has negatively impacted profitability and valuations. It will be the firms who have dry powder today who are poised to take advantage of the coming economic upswing.

**Risks:** Risk factors for India come in a few different forms: structural (insufficient infrastructure), cultural (governance/corruption), and geo-political (strained relations with China and Pakistan). Other influences are cyclical and political in nature, like governmental reform trajectories, strategic policies to curb inflation and other “good for business” oriented laws. Given India’s current

status, the two most concerning risks are a possible spike in oil prices, and a slowdown of the reform process. Either one of these potential events could be quite negative for India’s future.

India has always enjoyed the freedoms of an independent Judiciary, Press and Central Bank, in stark contrast to many other EM countries. Recently, however, governmental interference was suspected of playing a part in the ousting of Central Bank Governor, Raghuram Rajan, following just one term in office. It should be noted that his deputy governor (who actually has a similar policy structure as Rajan) has assumed the position of RBI (Reserve Bank of India — similar to the Federal Reserve in the US) Governor. If political influence was used in these central bank operation changes — it raises the question of whether the Reserve Bank of India (India’s central bank) is still wholly independent. The world will be watching how the RBI handles rates when there is an increase in inflation as an indication of whether it is still independently managed, or being swayed by political pressures.

**Examining the Role of Biological Investments in a Natural Resources Portfolio**

[Continued from Page 3]

**Benefits of Biological Investments**

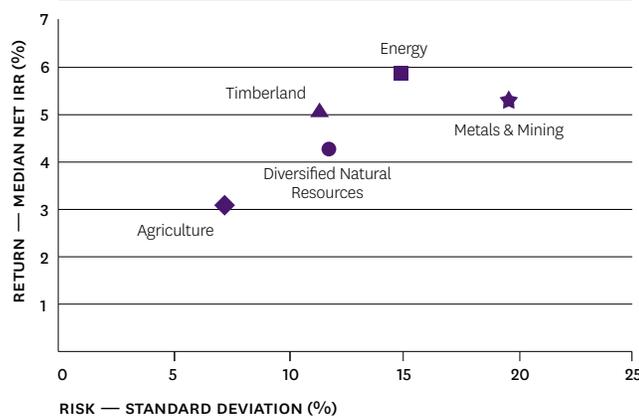
Biological investments share the same positive attributes that other natural resources strategies have, including providing current cash flow and protection from inflation. Beyond the advantages classically sought from natural resources investments, there are several additional constructive characteristics of biological investments, including lower depletion than, lower price risk than, and lower correlation to many other asset classes.

One key benefit of biological investments is that they are only marginally tied to the capital markets. Biological development occurs independent of market and economic cycles in that regardless of near-term market fluctuations, trees, vegetation, wildlife, and harvests will continue to mature. While some agricultural crops are seasonal and must be harvested at specific times, the vast majority of biological investments gain in value with development over longer hold periods such that harvesting can be timed to avoid unfavorable pricing. The lack of resource exhaustion and, more accurately, increasing resource value combined with the ability to choose the pricing environment in which income is generated creates a differentiated, less cyclical income stream. This contrasts starkly with the

inherent depleting and strongly pro-cyclical traits of other natural resources sub-sectors, namely energy, power generation, and metals and mining. Of course, over long time horizons some level of economic growth is required for biological investments to produce positive returns, so a certain degree of correlation to global markets as a whole does exist. However, performance from biological investments provides stability to natural resources portfolio returns that routinely are dominated by strategies quite susceptible to capital market oscillation.

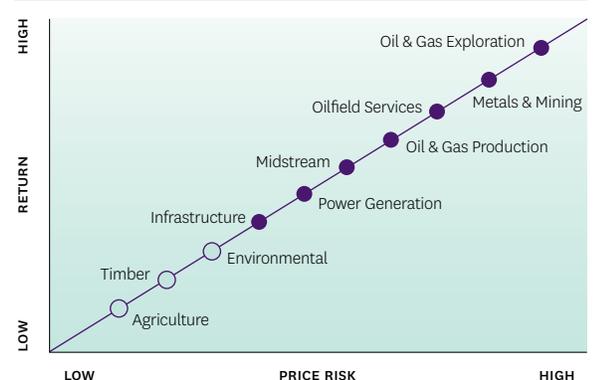
As with all investments, there is a risk versus return spectrum in natural resources strategies. Figure 1 shows the risk/return tradeoff for a representative set of natural resources strategies. The data clearly indicates that biological investments experience less price sensitivity than other sub-sectors within the universe. In addition to reasons already cited, the lower standard deviations result from fundamental demand for harvested biological produce. Human need for nourishment and shelter underpins agriculture, livestock, water, and ecosystems to create a floor in price and fairly well understood supply and demand relationships.

FIG. 1 Natural Resources Risk/Return by Strategy



Source: Preqin; 2003-2013 vintage funds as of September 30, 2015.

FIG. 2 Natural Resources Risk/Return Spectrum



Note: For illustrative purposes only and not to scale

With Figure 2, natural resources strategies are broken down even further in a simplified illustration of the relative expected return and risk. The interplay of return and risk is unmistakably more nuanced and somewhat difficult to quantify given a limited data set in many sub-sectors due to nascent investable structures and markets as well as long fund lifecycles. Nevertheless, the continuum of variation in risk and targeted return across sub-strategies is intended to be captured. For the purpose of this discussion, risk can be thought of as standard deviation, although theoretically the likelihood of permanent loss of capital is also represented. Conceptually, the chart aids in understanding the counterbalancing effects adding biological investments has to a typical natural resources portfolio that is heavily weighted to strategies in the top right corner.

Correlation between natural resources sub-asset classes and the broader equity market are presented in Figure 3. As shown in the matrix, natural resources strategies have been weakly correlated to global equities. Correlation strength within the sub-sectors varies with the more traditional strategies demonstrating higher correlations to equities and amongst each other. When looking at agriculture and timber, the low correlation coefficients are quite pronounced. Due to the more recent development of environmental investments there is no investable proxy, preventing separate inclusion in the analysis. For this purpose, timber is the best representation given the land-based fundamentals of environmental investments. Because of their weak relationship to equities and to other natural resources investments, biological investments provide strong diversification benefits to a portfolio. Inclusion of biological investments in a portfolio should be expected to mute downside risk and lower overall volatility of returns.

Biological investments may also present an option for institutional investors to embrace environmental, social and corporate governance (ESG) investing, although not all biological investments will necessarily meet the standards. Timber and agriculture managers frequently employ sustainable production principles while environmental managers actively restore habitats and reverse damaging ecological impacts. Alternative natural resources strategies, such as biological investments, that address environmental concerns while still meeting expected returns can be a welcome prospect for many institutions.

FIG. 3 Correlation Matrix

	Agriculture	Timber	Energy	Midstream	Metals & Mining	Power Generation	Global Equities
Agriculture	1.00						
Timber	0.64	1.00					
Energy	0.19	0.08	1.00				
Midstream	-0.11	-0.22	0.51	1.00			
Metals & Mining	0.04	-0.10	0.48	0.45	1.00		
Power Generation	0.10	0.10	0.28	0.38	0.25	1.00	
Global Equities	0.16	0.06	0.36	0.36	0.58	0.33	1.00

Based on quarterly returns from 3/31/1996-3/31/2016; Agriculture, Timber and Energy data are private fund indices, respectively: NCREIF Farmland, NCREIF Timberland, Cambridge Upstream Royalties and Private Equity Energy; remaining asset classes are public indices, respectively: Alerian MLP, HSBC Global Mining, S&P 500 Electric Utilities, MSCI ACWI.

## Considerations and Questions

Despite the numerous benefits of biological investments, some challenges and issues remain when contemplating an allocation to this sub-sector.

While it is a positive that biological investments are relatively lower in risk that also means they tend to be lower in return than other natural resources investments. As shown earlier in Figure 1, returns from all natural resources have been muted in the last decade while volatility has remained high in the non-biological sectors. Ramifications from the Global Financial Crisis and recent commodity price declines certainly have played a role. The compressed spread between nominal and real returns driven by the lack of inflation over this specific timeframe is also a factor. While on an individual basis biological strategies might not seem appealing, in the broader context of a portfolio, a lower returning and less volatile fund can be quite helpful. Even if oil and gas and/or metals and mining funds meet their targeted returns at the end of a ten-year fund life, those funds may also produce interim years of sharply negative returns. The dampening effect of stable, largely uncorrelated returns from biological investments should be quite appreciated in those years.

Although farming and forestry have been around for centuries, institutional asset management of biological investments is a relatively new endeavor. The availability of high quality managers in the space is limited, though it has improved greatly in recent years. Timber was the first of the biological investments to become institutionalized such that there are quite a few established timberland investment management firms. More recently, there has been an increase in the number of managers providing access to agriculture and environmental investments. However, even with the growth in number of managers, the total capital invested in the sub-sector is still small. According to Preqin data, over the last 10 years (2006-2015), for every dollar raised institutionally for timber funds, there was \$1.25 raised for agricultural funds and over \$19 raised for energy funds. Not surprisingly, given the low level of institutional allocation to biological investments, the weighting is equally low in most commonly used natural resources benchmarks. Thus, investing in the sector requires taking benchmark risk. The impact of an out-of-benchmark holding will vary based on each institution's asset allocation policy and will likely influence desirability for and weighting to biological strategies.

**The availability of high quality managers in the space is limited, though it has improved greatly in recent years.**

Degree of illiquidity is an additional feature that needs assessing. Due to lengthy organic growth lifecycles of biological assets, investing in the sector tends to require longer hold periods. Fund life needs to be sufficient for the manager to fully implement their stated business plan, which can often be longer than the conventional ten-year private fund. Separately managed accounts and private funds allow for reduced asset/liability mismatch and are likely better vehicles for long-term institutional investors to gain exposure to the strategies. Partially offsetting the heightened illiquidity is the income generation potential that biological assets provide. Given the greater level of illiquidity, biological investments should be appropriately sized in an institution's portfolio.

A variation of the illiquidity discussion is, "Can access to biological investments be gained via public markets rather than private markets?" Unfortunately, there are fairly limited marketable options to get pure exposure to timber, agriculture, and environmental assets. Though timber REITs and agriculture-related equities (e.g., fertilizer and seed companies) provide access to some biological investments, these listed entities tend to be diversified businesses producing only partial access to the desired resources. Similarly, environmental public equities are most readily available in the water sector, where the securities are often only tangentially related to water rights, instead often having utility business models. Water stocks then are grouped in with power and electric utilities creating unwanted cross-correlations. Private market vehicles allow investors to specifically access biological assets, more closely corresponding to the ideal hold period and providing superior flexibility for value-additive active management.

A final point to be weighed is the effect of current valuations on an investor. The post-Global Financial Crisis

low interest rate regime globally has led to concerns of asset inflation in nearly every asset class. Have biological investments been immune to, less susceptible to, or equally impacted by this phenomenon? One could argue that timber experienced a period of overvaluation in the early 2000s when institutional ownership became widespread, although values have since come back to more reasonable levels. Likewise, when sentiment regarding Emerging Market growth and the rising middle class share of global population themes were at a peak in the mid-2000s, agriculture valuations appeared high but diminished expectations of growth in recent years has led to flat pricing for farmland and stable to lower crop values. Environmental investing and offset credit markets are at an embryonic stage, making relative and absolute valuation judgements difficult. Likely the most prudent approach is to stage into new biological investments over a number of years in order to mitigate vintage year and valuation risks.

## **Conclusion**

A fundamental tenet of portfolio management is to continually reassess the available opportunities and appropriate allocations both to and within each asset class. The natural resources asset class has long been thought of as nearly synonymous with energy, possibly with a smattering of the other more traditional strategies. Similarly, biological investments, if included at all, have been largely synonymous with timber. The evolution of strategies and markets, breadth and depth of available managers, and greater appreciation for lower correlation investments should lead institutional investors to assess increasing commitments to biological investments and broadening to strategies beyond timber.

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**"Anything you want to,  
do it; want to change the  
world... there's nothing  
to it."**

*[Continued from Page 4]*

natural resistance by the consultant or by leadership. My hypothesis is that it is due to the age-old issue of competing priorities, limited resources, and the low risk, almost lazy route, of staying put.

As a result of SVCF's and Colonial's ongoing engagement with each other and with minority and women owned business enterprises ("MWBE"), the breadth and volume of quality manager introductions has expanded. Similarly, the level of interest across the field has also risen. We have found the collaboration with our consultant to be highly beneficial and mutually reinforcing to the strategic relationship.

We hope other foundations will commit to inclusive practices by collaborating with their investment advisors to create a new approach to sourcing, evaluating and rec-

ommending MWBE firms, as well as regular reporting to ensure accountability and transparency.

By doing so, together we can collectively begin to address institutionalized race and gender biases across the field. As leaders in this space, we seek to be transparent in sharing our experiences, lessons learned and progress.

We invite you to visit [siliconvalleycf.org/manager-diversity](http://siliconvalleycf.org/manager-diversity) to learn about emerging best practices and encourage all foundations and asset owners to join us by supporting The Association of Black Foundation Executives' Investment Manager Diversity Pledge and the Diverse Asset Managers Initiative's Statement of Principles located at: <http://www.abfe.org/programs/advocacy/the-investment-manager-diversity-pledge/>.

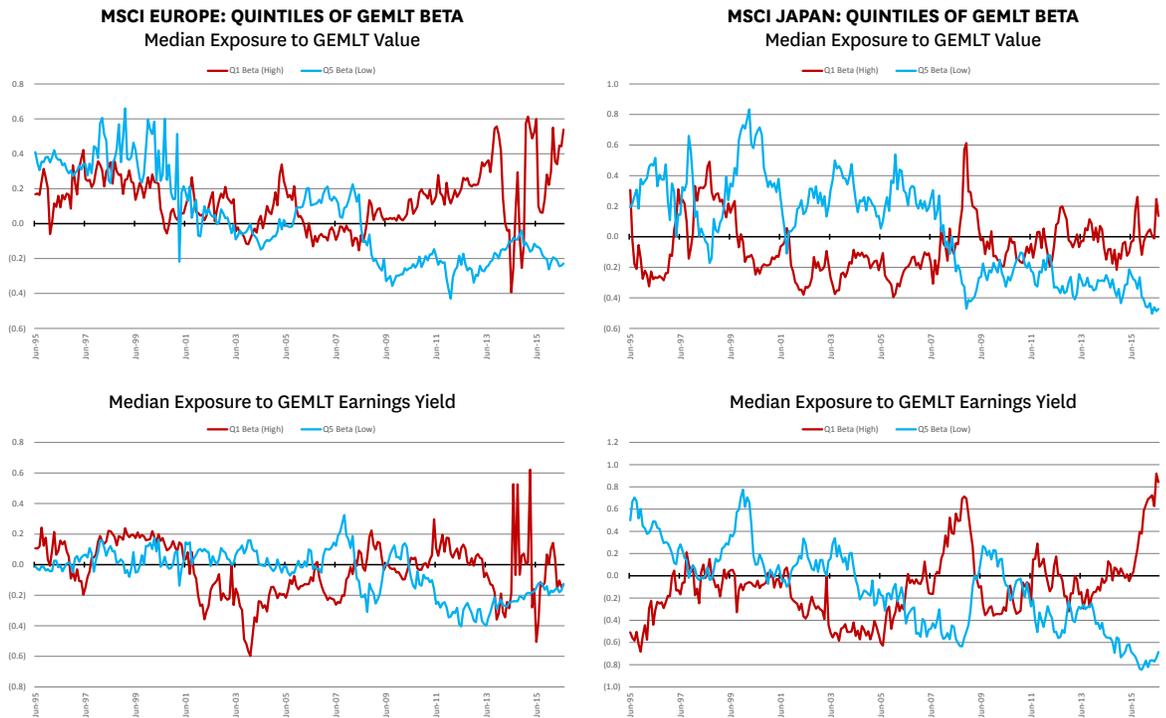
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by phone at 516-933-3700***

**Are Low Volatility Stocks in a Bubble Environment?**

[Continued from Page 5]

FIG. 1 Barra Beta Factor Analysis (Cont'd)



Sources: Barra, Factset, TRS

low Barra Beta factor stocks (Quintile 5, Q5) are charted over the past 20 years. See the following graphs (*Figure 1*) for the MSCI US, Emerging Markets, Europe and Japan markets through July 2016. Two sets of charts for each market are graphed, Book-to-Price is on top and Earnings Yield below. These charts reveal extremes, peaks, trends, and reversals. The Europe charts also have a wider Y-axis scale.

**Barra Chart Note:**

In Barra, factor (momentum, market cap, book to price or earnings yield, etc.) exposures are quantified in terms of standard deviations from a reference Index. This is the y-axis of the charts below, where the Index exposure is scaled to zero. An overweight to a factor is a positive number, and an underweight is a negative number. For example, the MSCI Europe Index's Barra Beta factor exposure is zero. A stock or group of stocks with a Barra Beta factor exposure of 0.5 is half a standard deviation higher in beta than the market. This does not translate into a returns-based calculation of beta of 1.5. Separately, Factset data provides index holdings for a variety of market traits, including valuation and fundamentals. When further segmented by the same quintiles, the following assessments of low beta and valuation extremes can be revealed, some consistent and others muted compared to Barra (*Figure 2*).

**Leveraging External Resources:**

The insights from the Barra risk model and Factset tools require clean data and specialized staff. External resources and third party risk and analytics firms provide options

for outsourced solutions and/or augment internal tools. Wellington Management's Investment Strategy and Risk Team revised its Barra-derived, custom risk factors report last year to cover more major markets and is a resource to TRS. Their tools were developed for internal risk monitoring of Wellington teams and are also shared with clients to better understand how portfolio performance is influenced by the market environment. Additionally, the tools help evaluate returns from execution of that style of investing by the PM.<sup>1</sup>

To address the topic of a low volatility bubble environment, the volatility (highest volatility decile) and low volatility (lowest decile) factors are shown for the US, EM, Europe and Japan markets, and summarized in tables and charted below. The Wellington Factor Risk Monitor info shown here (*Figure 3*) compares the returns of the market to two factors over various time periods. Z-scores are calculated for: 1. the since inception relative performance, 2. current forward PE, and 3. current P/Bk in order to highlight extremes.

For example, the MSCI Japan market return is 0.6 std. deviations above trend in Wellington's framework. For the Japan High Volatility factor, the annualized excess returns since 2002 are 1 std. dev. above average and -1.7 std. dev. cheap on a forward PE basis. The Barra charts and Factset tables above represent similar valuation trends. For the Japan Low Volatility, the factor's return is 1.8 std. dev. above trend. Forward PE and P/Bk valuations have more modest Z-scores of 0.9 and 1.1, both looking less stretched compared to Barra and market valuations reports.

**Collaboration and internal debate are central to the TRS due diligence process; the reports do not make the decision, but serve as a dashboard for understanding complex markets.**

**Are Low Volatility Stocks in a Bubble Environment?**

FIG. 2 MSCI Markets Quintile Analysis

MSCI USA: QUINTILE ANALYSIS OF VALUATION AND FUNDAMENTAL METRICS							
As of July 29, 2016	Beta Factor Median Exp.	Fwd PE	P/Bk	Est. LT EPS Growth	ROA	RCE	LT Debt / Cap
Barra Beta Q1 (High)	1.5	15.0	1.6	10.7	0.3	5.1	42.3
Barra Beta Q2	0.7	16.1	2.4	11.8	5.9	14.1	57.8
Barra Beta Q3	0.2	17.8	3.3	14.8	8.6	18.3	47.1
Barra Beta Q4	-0.3	19.8	3.1	11.8	8.6	19.5	44.8
Barra Beta Q5 (low)	-1.1	21.6	2.9	7.1	6.5	14.4	51.0
<b>MSCI USA</b>	0.2	17.9	2.5	11.2	6.0	14.4	48.6

MSCI EMERGING MARKETS: QUINTILE ANALYSIS OF VALUATION AND FUNDAMENTAL METRICS							
As of July 29, 2016	Beta Factor Median Exp.	Fwd PE	P/Bk	Est. LT EPS Growth	ROA	RCE	LT Debt / Cap
Barra Beta Q1 (High)	1.7	11.4	0.7	-4.6	0.8	-0.7	39.1
Barra Beta Q2	1.1	10.9	1.1	11.7	4.5	10.8	35.4
Barra Beta Q3	0.6	10.9	1.2	13.9	6.5	14.9	29.4
Barra Beta Q4	0.1	11.8	1.2	13.4	4.7	10.6	26.8
Barra Beta Q5 (low)	-0.9	14.2	1.6	14.9	7.6	15.7	28.5
<b>MSCI USA</b>	-0.4	13.0	1.4	13.5	6.5	13.8	29.1

MSCI EUROPE: QUINTILE ANALYSIS OF VALUATION AND FUNDAMENTAL METRICS							
As of July 29, 2016	Beta Factor Median Exp.	Fwd PE	P/Bk	Est. LT EPS Growth	ROA	RCE	LT Debt / Cap
Barra Beta Q1 (High)	1.8	11.8	0.8	16.1	2.1	6.0	92.4
Barra Beta Q2	1.1	14.8	1.4	10.8	3.5	8.4	38.9
Barra Beta Q3	0.6	15.3	1.7	6.5	6.0	14.8	35.4
Barra Beta Q4	0.1	17.9	2.4	11.3	7.8	17.2	37.1
Barra Beta Q5 (low)	-0.4	20.2	3.7	9.0	8.8	20.8	36.0
<b>MSCI USA</b>	0.5	15.5	1.6	10.5	5.8	13.9	48.0

MSCI JAPAN: QUINTILE ANALYSIS OF VALUATION AND FUNDAMENTAL METRICS							
As of July 29, 2016	Beta Factor Median Exp.	Fwd PE	P/Bk	Est. LT EPS Growth	ROA	RCE	LT Debt / Cap
Barra Beta Q1 (High)	1.7	11.7	0.9	6.1	4.0	9.9	23.7
Barra Beta Q2	1.1	12.1	0.9	9.0	4.3	8.8	24.5
Barra Beta Q3	0.6	14.1	1.1	7.0	6.2	10.3	19.6
Barra Beta Q4	0.1	18.0	1.4	10.5	5.3	9.5	21.0
Barra Beta Q5 (low)	-0.5	20.5	1.8	5.4	4.0	8.2	29.4
<b>MSCI USA</b>	0.5	14.6	1.1	7.6	4.8	9.4	23.7

Note: Valuation metrics as harmonic mean and fundamental metrics as an equal weighted average.

**Summary of Takeaways:**

The Teacher Retirement System of Texas believes that quantitative market analysis is important in the formation of deep insights into market environments, which in turn, enhances the qualitative assessment of markets, manager returns and skill, and portfolio decisions. External resources extend TRS' internal data capabilities. The exercise herein illustrates data representations of the valuation of low and high volatility stocks in major markets utilizing internal TRS tools and external resources with some differences and interesting similarities.

**TRS Applications:**

TRS External Public Markets team applications for manager and portfolio review include:

◆ **Hedge Funds:**

- Equity long/short manager investment philosophies with lower beta long books versus short books have elevated headwinds. The asymmetry of valuation may impact short book returns; increased opportunity set. Deep value investors could be interesting.

**Are Low Volatility Stocks in a Bubble Environment?**

- Event or Catalyst investors with long ideas more grounded in valuation could capitalize on broader opportunities. Prior years' headwinds might point to performance challenges beyond security selection.

- Consideration of low beta manager tailwind environment returns versus skill-based returns. Paying attention to portfolio-level discount to intrinsic value and opportunity set conversations.

◆ **Equity Managers:**

- Diligence and sourcing managers with multi-year poor results tied to value philosophy headwinds requires a deep understanding of context. Value philosophies are themselves divergent when looking back over recent years.

From tools and observations like shown above, followed by internal debate and manager conversations, TRS evaluates our managers' skill in headwinds and tailwinds and portfolio priorities.

FIG. 3 Summary Table of Wellington Markets, Factors and Valuation Z-Scores (as of July 2016)

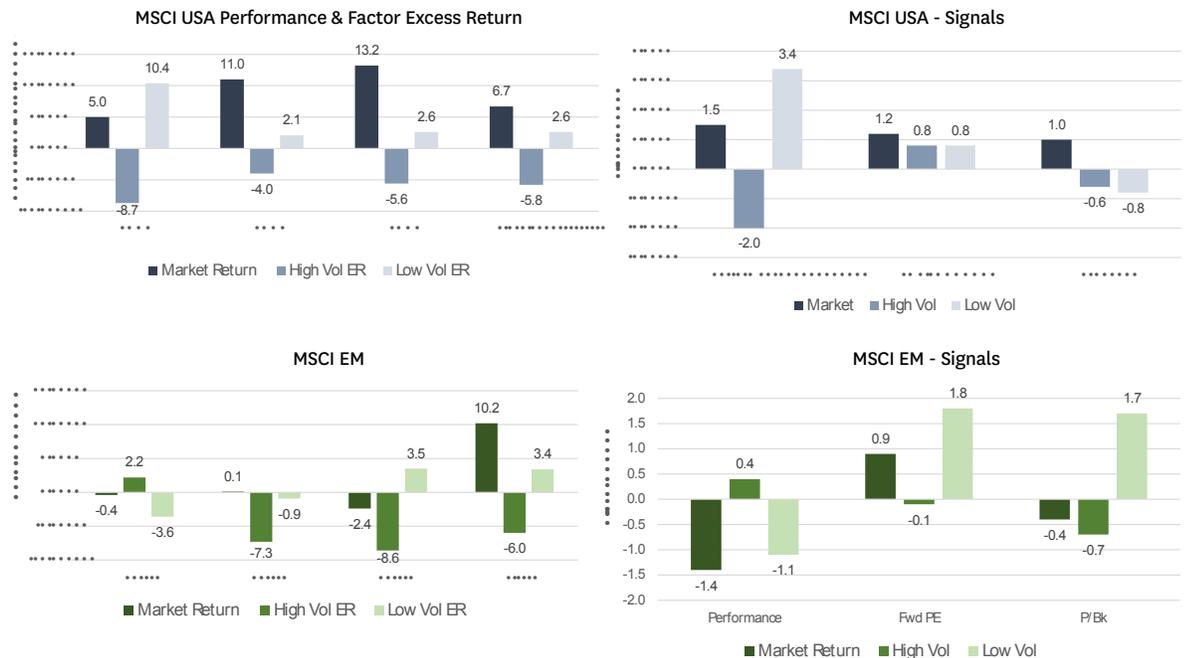
Market	Market Performance Z-Score	High Volatility Factor Z-Score		
		Performance	NTM PE	P/Bk
MSCI USA	1.5	-2	0.8	-0.6
MSCI EM	-1.4	0.4	-0.1	-1.1
MSCI Europe	-0.6	0.8	-1.3	-0.8
MSCI Japan	0.6	1	-1.7	-0.5

Market	Market Performance Z-Score	Low Volatility Factor Z-Score		
		Performance	NTM PE	P/Bk
MSCI USA	1.5	3.4	0.8	-0.8
MSCI EM	-1.4	-1.1	1.8	1.7
MSCI Europe	-0.6	1.3	2.2	1.8
MSCI Japan	0.6	1.8	0.9	1.1

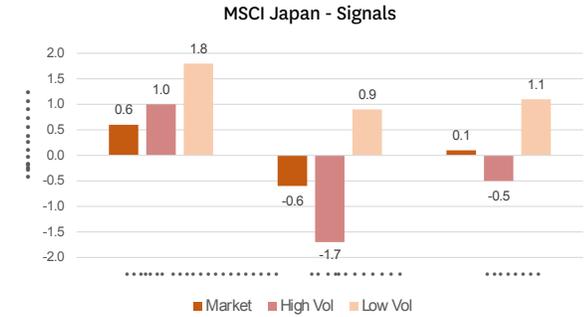
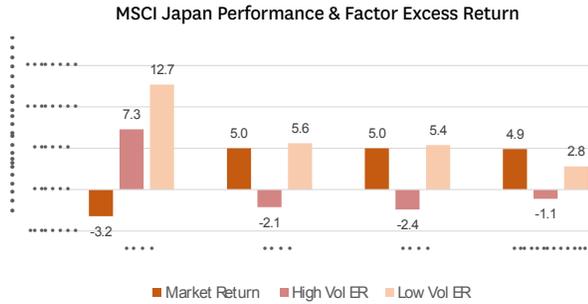
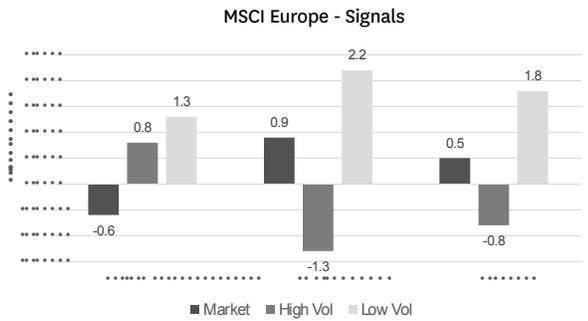
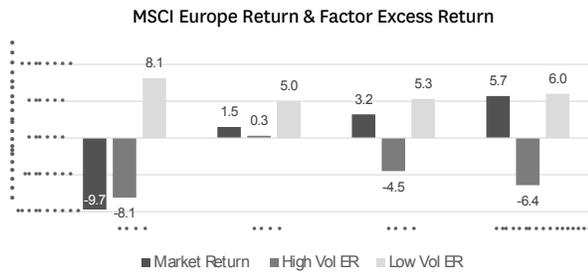
<sup>1</sup>The full Wellington Risk Monitor Report includes over 40 factors grouped by Volatility, Value/Mean Reversion, Growth/Momentum and Quality-related factors.

<sup>2</sup>January 31, 2002 is the inception date of the proprietary factor returns data, and is turned into a Z-score through proprietary calculations using cumulative and the annualized detrended factor returns.

FIG. 4 Wellington Management Risk Factor Monitor Snapshot (as of July 2016)



**Are Low Volatility Stocks in a Bubble Environment?**



**Top Ten Risks for Practicing CIOs**  
[Continued from Page 6]

devoted a fair amount of time analyzing illiquidity issues, and we continue to spend a good amount of time and effort tracking illiquidity exposure and returns.

Number nine is **leverage**. As Howard Marks (as usual) insightfully observes: leverage does not make an investment (or portfolio) good or bad; it simply makes a good investment better and a bad investment worse.

We tend not to deploy leverage at the portfolio level. We also prefer public equities with strong balance sheets, hedge funds with very manageable grosses, and we tend to shy away from highly leveraged private investments. Call us old fashioned.

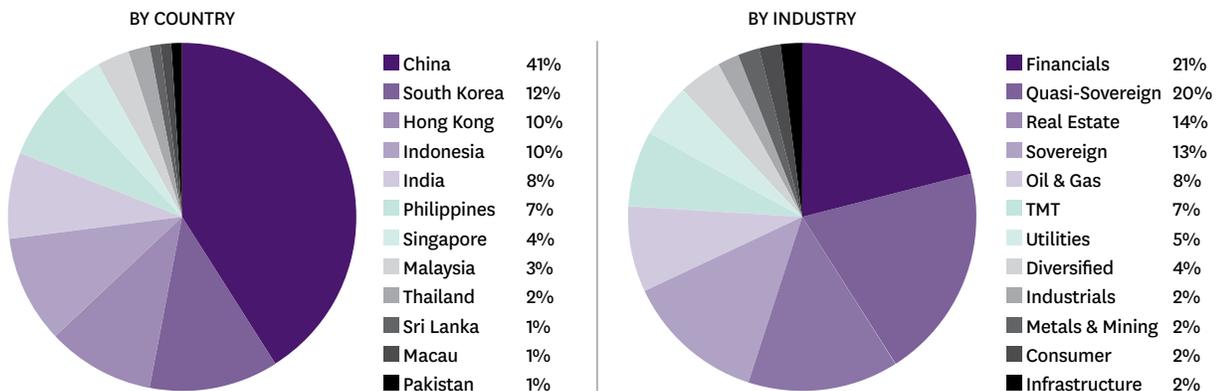
Finally, our **permanent loss of capital** is our tenth risk. I must say that I've never met an investor yet that believes they will lose all their capital at the time they are making the investment. Therefore, I find the "permanent loss of capital religion" only somewhat helpful. That said, we do have a "value" bent and who doesn't like a margin of safety.

We do track and analyze permanent loss of capital and, for the record, ours is quite low. Perhaps too low. Remember, even banks have loan losses.

I hope this framework is helpful. While I know that it is not revolutionary, perhaps it will prove useful for the practicing CIO just trying to understand and communicate risks that we all must do our best to manage.

**When "Risk-free" Becomes Risky**  
[Continued from Page 7]

FIG. 2 Asia Credit By Country



TOTAL MARKET VALUE: US \$623.2 BILLION  
Sovereign: 33% Corporate: 67%

Note: Asia credit represented by J.P. Morgan Asia Credit Index. Sovereign includes government, quasi-sovereign and supranational. It is not possible to invest directly in an index. Source: JP Morgan; Data as of December 31, 2015

**When “Risk-free”  
Becomes Risky**

Asia high yield has delivered higher returns on both an absolute and a risk-adjusted basis than U.S. high yield, European high yield and emerging market high yield (both external debt and local currency debt). But surely this is an unusual period, you might say, as it reflects the period following the Asian financial crisis of 1997–1998. But actually, the superior risk-adjusted returns of Asia high yield bonds hold true even when one considers the more recent 5- and 10- year periods that exclude the aftermath of the Asian financial crisis.

Second, the Asian bond markets have changed meaningfully over the past decade. They now have far greater depth and breadth due to the development of the region’s capital markets, which has enabled companies to finance themselves in the bond market rather than just via bank credit. For comparison’s sake, we take two points in time: 2002 and 2015. Quantitatively, the Asia U.S. dollar (USD) bond market is about 10 times bigger. In terms of types of issuers, 60% of the borrowers in 2002 were sovereign or quasi-sovereign entities versus only 33% today. The growing number of corporates with distinct credit risk increases investors’ ability to diversify and find opportunities for alpha. The Asian bond universe is also much more diverse now, both at the country and industry level, with exposure to countries like China and Sri Lanka, and to industries spanning just about every sector of the region’s economy.

**The growing number of corporates with distinct credit risk increases investors’ ability to diversify and find opportunities for alpha.**

**It’s not about timing the markets, but time in the markets**

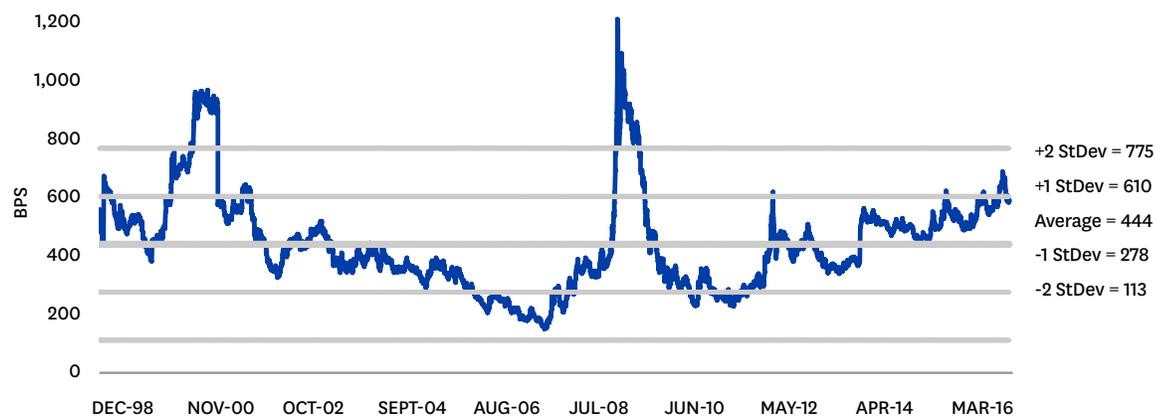
We’ve established that it is a unique time in the credit cycle to invest in high yield given low to negative global rates. We’ve also noted that Asian bond markets have historically produced higher risk-adjusted returns than other global markets, and that they continue to evolve to offer a more open, diverse opportunity set to investors. However, is Asia high yield compelling right now? Haven’t spreads tightened since the beginning of 2016? To be sure, Asia high

yield spreads are no longer as wide as they were in February. Nevertheless, they are still attractively valued relative to historical averages:

**The reality is that it is hard to pull the trigger right at the bottom of a market.** Fortunately, it’s not about timing the markets as much as it is about time in the markets. Take a look at the returns for asset allocators with a long-term investment horizon (*Figure 4*). The charts below depict the historical returns of investing in Asia high yield over a one, two and, three year horizon at today’s spreads (as of August 30, 2016, plus or minus 50 basis points). If an asset allocator only had a one year horizon, she would have reaped positive returns about 91.7% of the time. However, if an asset allocator were able to extend her investment horizon from one to two years, she would have never experienced a loss. Finally, the three year return chart shows the most tightly clustered returns, with all observations solidly above zero. In conclusion, history shows that even entering at today’s spreads, which have narrowed from the wiles of February 2016, investors with a time horizon of at least three years would still look at the potential of attractive returns.

**In summary, in an environment of low or even negative interest rates globally, income-seeking investors are desperately looking for more attractive alternatives.** In addition, given the potential risks associated with holding U.S. Treasuries at such low yields, we believe investors should consider Asia high yield debt to diversify their interest rate exposure. Asia high yield has historically offered risk-adjusted returns superior to high yield of all other regions, including emerging market debt. Although spreads have tightened from their peak in February, we still believe current valuations in Asia high yield remain relatively attractive, and with a three year investment horizon, Asia high yield potentially offers better return potential than U.S. Treasuries.

FIG. 3 JACI HY Combined Spread History

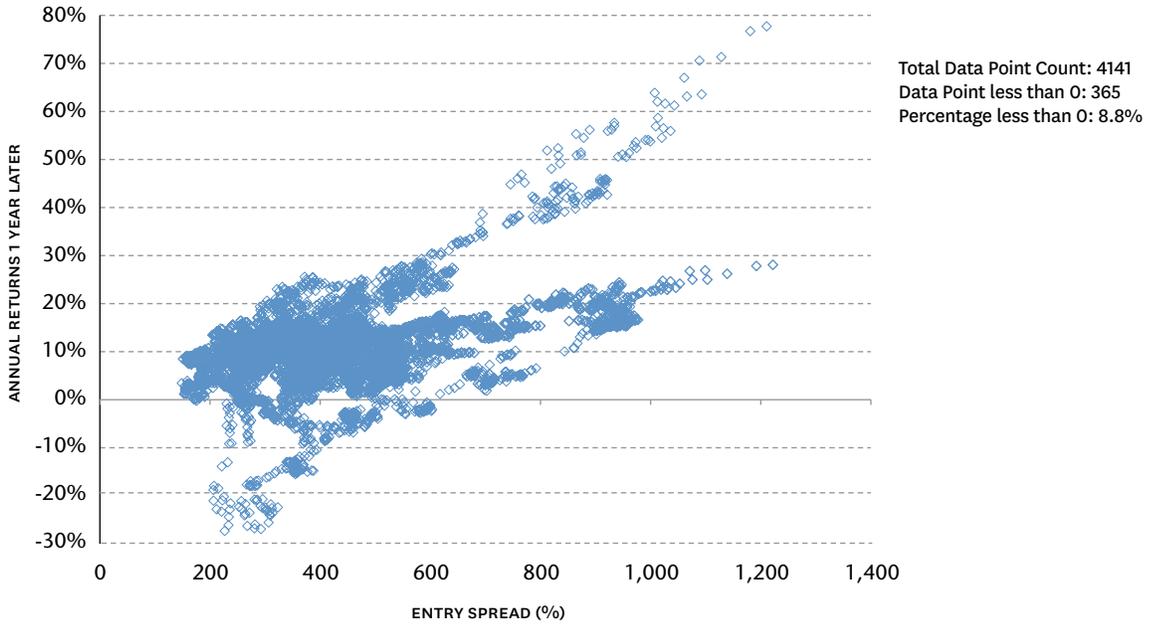


\*JACI HY is the high yield portion of the J.p. Morgan Asia Credit Index  
Note: Chart depicts spread over the U.S. Treasury curve. It is not possible to invest directly in an index.  
Source: Bloomberg

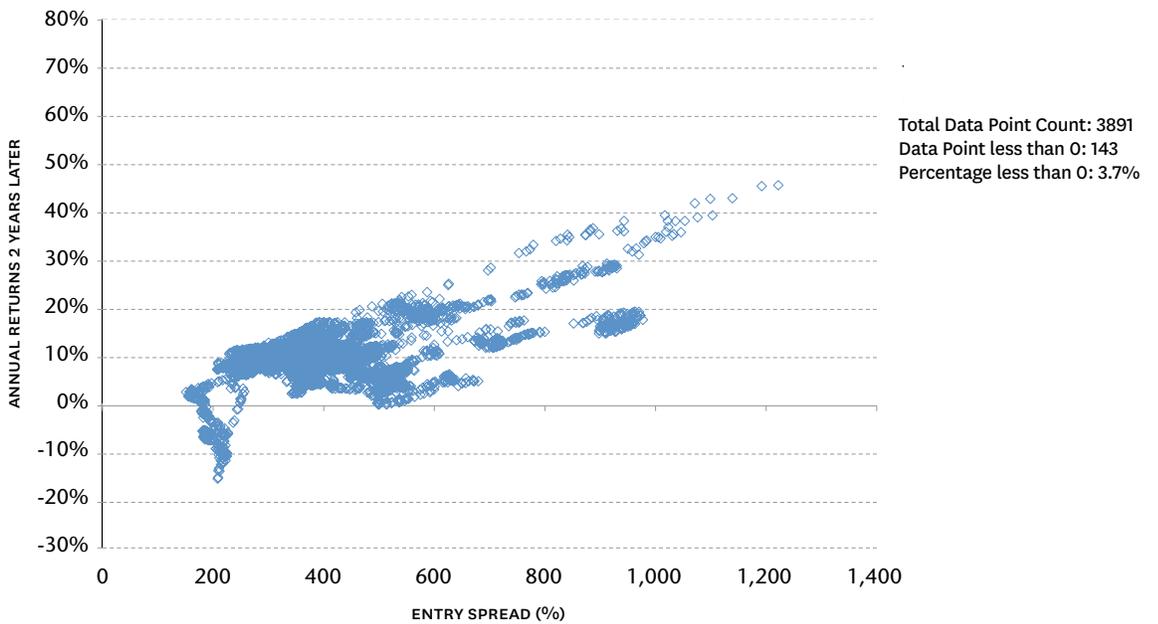
**When “Risk-free”  
Becomes Risky**

**FIG. 4 Historically, Returns Have Been Compelling In Asia High Yield**  
Annualized returns versus entry spread for 1, 2, and 3-year investment horizons

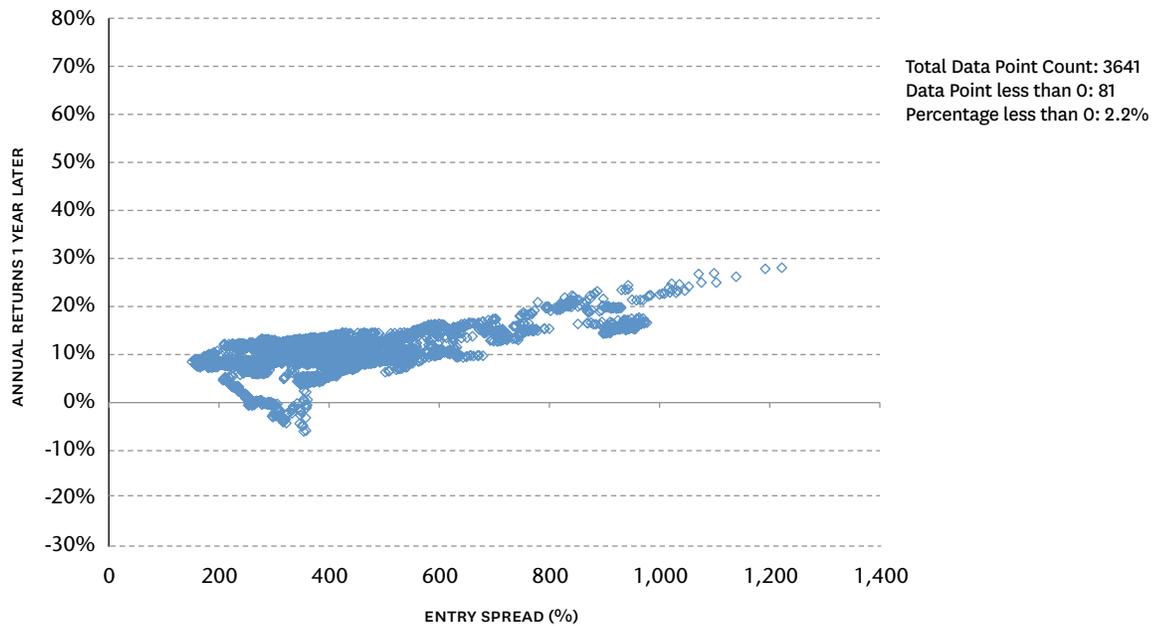
**JACI HY Entry Spread vs 1 Year Return**



**JACI HY Entry Spread vs 2 Year Return**



\*JACI HY (High Yield portion of J.P. Morgan Asia Credit Index) Spread as of Aug 30, 2016= 488 bps  
Each data point on the charts represents the return of the JACI HY on a specific day either 1, 2 or 3 years later at a specific JACI HY spread. Spreads are for the period December 31, 1998–Aug 30, 2016. Returns are for the period December 31, 1998–Aug 30, 2016. Returns in USD. It is not possible to invest directly in an index. Past performance is no guarantee of future results.  
Source: Bloomberg



\*JACI HY (High Yield portion of J.P. Morgan Asia Credit Index) Spread as of Aug 30, 2016 – 488 bps  
Each data point on the charts represents the return of the JACI HY on a specific day either 1, 2 or 3 years later at a specific JACI HY spread. Spreads are for the period December 31, 1998–Aug 30, 2016. Returns are for the period December 31, 1998–Aug 30, 2016. Returns in USD. It is not possible to invest directly in an index. Past performance is no guarantee of future results.  
Source: Bloomberg

**This Too Shall Pass —  
A Practitioner’s  
Perspective on Active  
Management.**

*[Continued from Page 8]*

**Can one identify skilled managers  
in advance?**

Assuming one agrees that skilled stewards of capital exist, the much tougher question is how to identify them in advance. We face a similar problem ourselves when assessing individual stock-pickers. While it is an inherently uncertain process, we believe that there are a couple of characteristics that one can look for in an effort to improve the odds of separating skill from luck.

In our experience, a common thread that skilled investors share is the ability to take advantage of the mistakes others make. Two very notable mistakes that stand out are the:

1. Temptation to focus on AUM growth
2. Inability to differ from the market when appropriate

Incentives play a crucial role. The economics of flat fee structures give firms a very powerful incentive to gather assets rather than focus on performance. They earn the most fees by growing AUM, not by generating alpha. And it’s not that those managers aren’t incentivized to perform, it’s just that the incentive not to differ “too much” is far more dominant. Just think about the tech bubble at its frothiest peak. Many managers faced enormous pressure in the heat of the moment to chase stocks driving the indices that were clearly overvalued by any rational assessment. And their clients paid a steep price for this trend-following approach when the bubble finally burst.

Unfortunately there’s no magic formula for identifying skilled managers, but if you can find those who are properly incentivized and characteristically avoid common

mistakes, we think you are putting yourself in a better position to have the odds stacked in your favor.

**Is something “different this time”?**

The critical question in the active versus passive debate today is the extent to which active managers’ recent struggles represent an enduring change. Those calling for the death of active management often base it on a view that competition is getting more intense. But remember that it’s always been a zero-sum game. Perhaps it is more competitive today, but we think this greatly overstates the case for structural change.

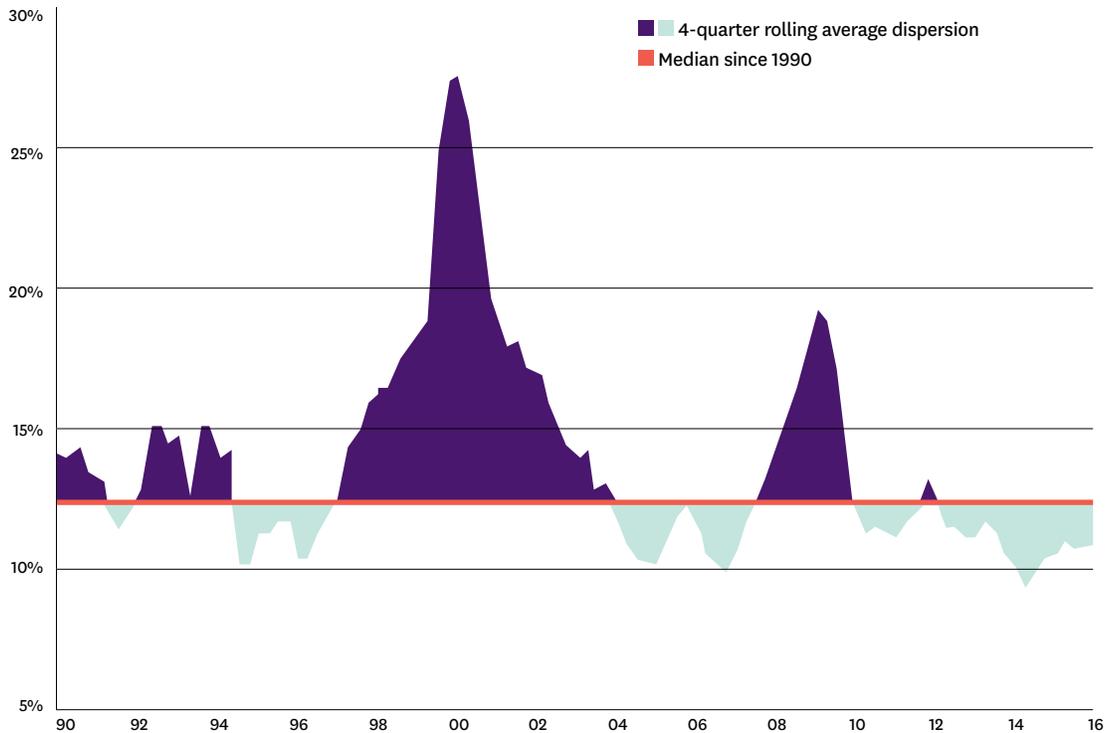
To see why, imagine a stockmarket where every stock moves exactly in unison. By definition, every active manager would achieve the market return. In contrast, imagine a market in which the range of returns between winners and losers is very wide. While the average manager would still be doomed to underperform, there is at least the possibility that a skilled manager can add value by selecting the winners and avoiding the losers. The key point is that it’s the dispersion between winners and losers that is the lifeblood of active management.

In this regard, the past five years have indeed been an unusual period, with the dispersion of market returns well below the historical average. In fact, over that period there have only been two quarters during which dispersion has been above the historical average! The question then is whether or not there is a reason for low dispersion to persist as a structural phenomenon.

One possible reason could be that the investment universe has changed such that fundamental business performance has become more homogenous and there are “fewer mutts in the kennel” as corporate management

**This Too Shall Pass —  
A Practitioner’s  
Perspective on Active  
Management.**

FIG. 2 The dispersion of returns has been well below normal for the past five years  
4-quarter rolling average dispersion in returns of shares in the FTSE World Index, and the median, 1990 through June 2016



Statistics are compiled from an internal research database and are subject to subsequent revision due to changes in methodology or data cleaning.

and governance has improved. But our research doesn't support this idea; if anything, the divergence of fundamentals appears to be widening.

A second argument could be that the market has become more efficient, resulting in fewer mispriced stocks. This also seems unlikely to us because the dispersion of returns is clearly cyclical when one takes a long-term view. It just happens that the current stretch has been unusually long. And it also coincides with a period of unprecedented monetary easing, which has produced a pronounced degree of "trending" in global markets and a flood of capital into "bond-like" equities.

**This too shall pass**

It seems as though active managers can't do anything right at the moment. But we have seen this movie before. Throughout history there have been times when active management is out of favor, and we believe this is one of them. We can't predict when dispersions will widen and the fortunes of skilled active managers will improve, but we do know that momentum-driven markets have ended badly in the past and that passive investments don't offer downside protection. From our vantage point, we still see good reasons to consider active management — but only if managers do the things that are necessary to maximize their odds of success on behalf of clients. It may not be easy to find those managers, but we believe it is well worth the effort.

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*President, Strategic Economic Decisions, Inc.*

**Daniel Crosby**  
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