

INSIGHTS

DEDICATED TO INVESTMENT TRENDS AND INDEX INNOVATION

Fixed Income 2.0: The Globalization of Bond Markets

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FIXED INCOME 2.0

THE GLOBALIZATION OF BOND MARKETS

INTERVIEW BY THERESA BAGGS

The fixed income market is redefining itself on a global stage. Enter the next generation: Fixed Income 2.0, a more transparent and level playing field than ever before for this asset class. InSIGHTS recently sat down with J.R. Rieger, Global Head of Fixed Income at S&P DJI, to discuss effectively navigating the globalization of bonds and its potential implications on investor holdings.



J.R. RIEGER
Global Head of Fixed Income
S&P Dow Jones Indices

InSIGHTS: Why are we seeing a shift in attention to global fixed income?

J.R. : It's a combination of two key factors and their effects on the market. The first is an extended period of quantitative easing that has pushed yield down in the U.S. The second is periods of risk on/risk off seen across various regions around the world, like unrest in Greece and Ukraine, which are driving volatility in the equity and commodities markets. Plain and simple, investors are turning to fixed income as a solution because its cash flow and returns have been historically less volatile than other asset classes. In addition, we see a hunger for securities that have higher yield than what is available in U.S. markets. With rates at record lows in the U.S., some investors have abandoned their usual "comfort zone," opting to venture outside of the domestic market and into higher yielding countries, like Australia and New Zealand, and into even lower credit quality bonds from the emerging market countries in their hunt for yield. This is what we call the globalization of bond markets.

InSIGHTS: What regions are most prominently catching on to this trend?

J.R. : U.S. and European investors have a particular interest in China fixed income because China has opened its doors after all these years to foreign investment. Global investors are attracted to China's onshore bond market because they have access to quality instruments at a yield that is not readily available at that quality in other markets, and the currency risk in China is less volatile than in other countries. Also sought after, and more readily available to foreign investors, are dim sum bonds, which are denominated in Chinese renminbi but are issued in Hong Kong or other markets outside of mainland China, allowing foreign investors an easier way to gain exposure to Chinese credit and currency risk. Sukuk bonds comply with Shariah [Islamic] law, and they are a fast-growing asset class in Asia.

The ETF market, while more advanced in the U.S. and Europe, is still in its infancy across Asia and Latin America. The ETF market is quickly catching on to these markets, as investors see the appeal of ETFs as a transparent way to access bond market diversification at a low cost. For instance, Mexican legislative changes have categorized fixed income ETFs as "look-through" instruments to resolve pressures on capital solvency requirements and generally favor adoption of fixed income ETFs in insurance portfolios.

Demand can also be very telling. We're seeing investor interest in frontier markets such as Africa and the Middle East. India, in particular, has experienced a great deal of attention, and it is expected to be the world's next fastest-growing economy, surpassing China. But there are tax consequences that make investments in India complex. Until India fits into a more global market model, it will be difficult for those bonds to trade freely on a global scale.

InSIGHTS: Are we also seeing a trend of fixed income ETFs in Europe?

J.R. : Yes, we are seeing a strong ETF trend in Europe, and many fixed income ETFs are available. However, uncertainty surrounding the eurozone has driven some complications in the European markets, resulting in a flight to quality. For instance, Germany and France have very low yield for their debt; investors have flocked in a risk-off mindset to buy those bonds in order to protect themselves from happenings in the market. Other investors need to find yield and are going outside of Europe to find it. When you add up the debt from all eurozone countries, yield is still quite low. What's interesting is that unpredictability in Europe is somewhat contributing to the globalization of bond markets in the rest of the world because it is pushing investors to find other investments to help meet various strategies.

InSIGHTS: So, how is the globalization of bond markets affecting fixed income as a whole?

J.R. : We are seeing an advent of ETFs crossing over from equities to over-the-counter fixed income markets. ETFs bring an increased level of price transparency to a fixed income investor, much like an equity investment. They change the way individual investors can obtain access to these often difficult-to-understand and opaque markets, and we are seeing this trend around the world. For example, fixed income ETFs are in place in Latin America, and a China fixed income ETF was launched in the U.S. late last year. One of the things I hear when I talk to financial advisors is that they view the bond market as complicated. Well, ETFs un-complicate the bond market because buying an ETF is very much like buying an equity. You have the benefits of price transparency, low transaction cost, and intra-day liquidity, as well as a more efficient way to get access to a diversified portfolio. Investors looking for yield can turn to ETFs and make actionable decisions about getting exposure to those markets, just like buying a stock. That one vehicle is helping to drive globalization of bond markets. Looking at emerging markets' often-complicated tax structures for investments, an ETF is simpler because investors are buying and selling ETF shares rather than a series of individual bonds. Comparing the performance of a small-cap value manager to a small-cap value index allows one to better understand the manager's sources of return beyond and above their exposure to the value and small-cap factors. Lastly, they can also be used in macro-analysis. For example, if stocks with higher momentum or lower dividends, or value stocks, etc. are behaving notably differently, that can provide a valuable insight into the evolving dynamics of the market.

InSIGHTS: What are the challenges of investing in global bond markets, and how are they mitigated?

J.R. : Currency risk is a challenge when looking at bonds globally. The challenge with going global is that investors worry about currency getting weaker or stronger. If a U.S. investor owns bonds in another currency and the U.S. dollar is getting stronger, that's negative for that investment. To eliminate currency risk, foreign bonds can be issued in one's domestic currency—for example, U.S. dollar issues in Europe, commonly known as euro-dollar bonds. This is another way bonds are being globalized.

InSIGHTS: What role do indices play in this transformation of the bond market?

J.R. : Indices can be used for both benchmarking and as the basis for investment products, including ETFs. The globalization of bond markets has created a need for more benchmarks in the space. In 2014, S&P Dow Jones Indices started an aggressive build-out of our fixed income offerings globally. Core fixed income is a strategy designed to reduce risk and/or generate income. Indices come into play to track the performance of the core market, i.e., investment-grade sovereign bonds, sovereign inflation-linked bonds, and corporate bonds in both U.S. and global currencies. We launched nearly 700 new indices in 2014 as part of that initiative. Noteworthy, and continuing to be developed, is the S&P Aggregate™ Bond Index Family, which is designed to measure the performance of publicly issued investment-grade debt in various regions around the world. We have launched two indices from this family, the S&P U.S. Aggregate Bond Index and the S&P Canada Aggregate Bond Index, and we intend to launch additional indices from this family later this year. Also worth noting are the S&P Global Developed Sovereign Bond Index, the S&P Global Developed Sovereign Bond Inflation-Linked Index, and the S&P Global Emerging Sovereign Inflation-Linked Bond Index . These indices are designed to track the performance of local currency-denominated securities that are publicly issued by developed and emerging countries for their domestic markets. These indices represent the core fixed income markets globally, allowing for a broad global market comparison and a way to identify global trends precisely by region.

Benchmarking needs also extend beyond core. A big chunk of the "more" is the shift toward alternatively weighted indices. As an index provider, S&P Dow Jones Indices offers ways for investors to look at markets from unique weighting perspectives. This includes sustainability focused options and frontier and emerging market exposure. Multi-asset class strategies allow investors to asset allocate while still

looking at their investment holistically. When fixed income is a component to an investment strategy, using asset allocation models with multi-asset class strategies creates an opportunity to include fixed income into the framework of an increasing number of portfolios. Also, as foreign bond markets become more sophisticated and easier to invest in, the necessary tools to measure the performance of these markets is critical. Geopolitical headline news and global economic recovery concerns can cause high volatility in the markets. Indexing allows a way to track volatility, evaluate trends, and weigh risks in various markets. Indexing can combine different asset classes from different countries around the globe, tailoring to unique investment strategies. It also offers an insightful window into markets that have traditionally been difficult to get timely data from, like emerging and frontier markets.

InSIGHTS: Do you think the globalization of the bond markets has staying power?

J.R. : Absolutely. We are seeing a trend of more access to global markets, not less. Today's technology allows global markets to communicate and interact in ways we have not seen before. No longer can only large-scale investors have access to markets on the other side of the world. Global investing has now trickled down to the retail investor, allowing them to gain diversification across all time zones, and the global ETF market is one of the main vehicles to support this access.



MOMENTUM: DOES ADJUSTING BY RISK MATTER?



AYE M. SOE, CFA, SENIOR DIRECTOR, GLOBAL RESEARCH & DESIGN

Momentum, despite a 200+ year history, is still misunderstood. Aye Soe discusses how adjusting for risk in momentum strategies could potentially impact results across markets and asset classes.

Among all the widely known and accepted systematic sources of return in modern investment theory, momentum is the longest standing¹ and, perhaps, most pervasive factor of all. The tendency for stocks to exhibit persistence in their relative performance—for winning stocks to continue performing well and for losing stocks to continue performing poorly—in the near-to-medium-term has been thoroughly researched, debated, and written about in financial literature. In addition, the evidence and efficacy of the momentum effect has been documented across different markets and time periods, and it has extended beyond equities into other asset classes such as fixed income, commodities, and currencies.

Over the past two decades, momentum has gained widespread acceptance in the investment management industry. It is often incorporated in quantitative stock selection models, and many investment strategies are focused primarily on momentum. Based on the publicly available monthly return data from January 1934² to October 2014 for the four Fama-French factors (value, size, market, and momentum) momentum³ has the second-highest annualized return, after the market itself, and the highest Sharpe ratio (0.244) after adjusting for risk.

Despite widespread acceptance and a record of strong historical performance, momentum is not free of controversy. Earlier criticisms of momentum focused on the ability of such a simple strategy to generate abnormal returns, with skeptics attributing such results to data mining. In recent years, momentum studies have highlighted

the significant drawdown experienced by equity momentum strategies following the 2008 financial crisis, leading many skeptics to conclude that gains from a momentum strategy could be wiped out by market volatility. This has led to a search for improved momentum strategies that can withstand market volatility.

In an upcoming research paper to be published by S&P Dow Jones Indices, we examine the momentum effect across four major global equity markets. We find that incorporating a stock's risk profile in rank order for portfolio selection, such as using volatility-adjusted momentum, can potentially improve the risk/return profile of a momentum strategy and possibly provide better downside protection, as well as increase the potential predictive power of the factor. The finding is consistent across all the markets studied. While there are research studies showing that adjusting the momentum value of a security by its idiosyncratic or residual risk provides superior risk-adjusted returns, we show that using even a simple measure of risk, such as standard deviation, can potentially enhance the consistency of performance and result in a higher fractile hit rate.

In our analysis of the momentum effect, we follow the widely accepted method of ranking securities based on their n^{th} -month local currency price return, excluding the most recent month to account for short-term reversals. For risk-adjusted momentum, the momentum value or the price return of each security for each n month is further scaled by its volatility, which is computed as the standard deviation of the daily price changes over the same measurement period.

¹ Geczy and Samanov (2013) noted the evidence of momentum in the U.S. market from 1801-2012.

² We start in January 1934 due to the limitation in availability of three-month Treasury bill returns in computation of Sharpe ratio.

³ Data based on monthly returns in Kenneth French data library. Momentum is based on the stock return from 12 months prior, excluding the recent past month.

In this article, using three momentum definitions ranging from short- to longer-term (three-, six-, and twelve-month momentum) and a six-month holding period assumption⁴, we summarize the results for the U.S. and for global markets. Every month, we rank the securities in each universe based on the n^{th} month momentum value, or the risk-adjusted momentum value, as described above. The universe is then fractiled into five groups. Each ranked-quintile portfolio is held for a six-month period following the portfolio formation. Each portfolio is equal weighted and the returns are calculated in USD.

Exhibit 1 shows that, compared to simple momentum, the highest risk-adjusted momentum portfolio (Q1) generated higher average excess returns over the investable universe and over those in the bottom quintile (Q5). This finding is consistent regardless of the momentum term structure definition or the holding period. The higher average excess returns exhibited by risk-adjusted momentum portfolios are not entirely unexpected. Barroso and Santa-Clara⁵ studied volatility-sorted momentum portfolios and saw that lower values performed better, and they noted the negative relationship between risk and return for the portfolios.

Exhibit 2 compares the quintile hit rate results of simple momentum strategies to those of risk-adjusted momentum strategies for the U.S. and global markets. During up market periods, both types of strategies have outperformed the market 60%-70% of the time. However, the simple momentum strategy appears to have higher upside participation than its risk-adjusted counterpart when

the momentum term is six months. This behavior is not surprising given that higher volatility stocks tend to have higher returns in up markets.

The results paint a decisive picture for the quintile hit rate in down markets. For both U.S. and global markets, we observed the average quintile hit rates of the risk-adjusted momentum portfolios to be unanimously higher than those of the simple momentum portfolios. The higher fractile hit rate of risk-adjusted momentum strategies over simple momentum strategies in an overall market environment and during down periods highlight the benefits of scaling momentum by risk.

Exhibit 3 presents the risk/return profile of the stylized simple momentum and risk-adjusted momentum strategies for the U.S. and global markets. Based on the 25 years of back-tested data, risk-adjusted momentum strategies have higher risk-adjusted returns across all the time periods studied compared with their simple counterparts.

As we stated earlier, momentum, despite being one of the longest-standing and most researched factors, remains misunderstood. Much of the criticism relates to the factor's tendency to experience significant drawdowns, which makes the strategy unappealing to risk-averse investors. Our research shows that momentum can potentially be risk managed. Incorporating a stock's volatility profile, such as standard deviation, into the ranking order process, thereby forming risk-adjusted momentum portfolios, could result in higher risk-adjusted returns and superior downside protection.

EXHIBIT 1: RISK-ADJUSTED MOMENTUM PORTFOLIOS HAVE SHOWN HIGHER AVERAGE EXCESS RETURNS

Q1-Q5 AVERAGE EXCESS RETURNS	GLOBAL MOMENTUM	GLOBAL RISK-ADJUSTED MOMENTUM	U.S. MOMENTUM	U.S. RISK-ADJUSTED MOMENTUM
3M MOM	2.3	2.67	2.59	3.2
6M MOM	3.82	4.2	4.25	4.84
12M MOM	1.48	2.89	2.04	3.43
Q1-UNIVERSE AVERAGE EXCESS RETURNS				
3M MOM	1.16	1.39	0.82	1.38
6M MOM	2.06	2.11	1.86	2.22
12M MOM	0.92	1.32	0.77	1.27

Source: S&P Dow Jones Indices LLC. Data from Dec. 31, 1989 to Dec. 31, 2014. MOM: Momentum. Past performance is no guarantee of future results. Charts and tables are provided for illustrative purposes and may reflect hypothetical historical performance. The underlying universe for the global momentum portfolios is the S&P Global LargeMidCap and for the U.S. momentum portfolios is the S&P United States BMI which were launched on Dec. 31, 1992. All information presented prior to these launch dates is back-tested. Back-tested performance is not actual performance, but is hypothetical. The back-test calculations are based on the same methodology that was in effect when the indices were officially launched. Complete index methodology details are available at www.spdji.com. It is not possible to invest directly in an index. Please see the Performance Disclosures at the end of the magazine for more information regarding the inherent limitations associated with back-tested performance.

⁴ In the research paper, we studied three holding periods: three, six, and twelve months.

⁵ Barroso, Pedro and Pedro Santa Clara, Momentum Has Its Moments, 2013.

EXHIBIT 2: QUINTILE HIT RATE OF MOMENTUM STRATEGIES

QUINTILE HIT RATE-OVERALL MARKET	GLOBAL MOMENTUM	GLOBAL RISK-ADJUSTED MOMENTUM	U.S. MOMENTUM	U.S. RISK-ADJUSTED MOMENTUM
3M MOM	57	64.51	58.36	67.24
6M MOM	70.31	71.33	68.26	72.7
12M MOM	60.41	64.51	65.19	65.87
QUINTILE HIT RATE-UP MARKET				
3M MOM	62.07	62.56	61.61	65.88
6M MOM	72.41	69.46	72.04	70.14
12M MOM	61.08	62.07	67.30	66.35
QUINTILE HIT RATE-DOWN MARKET				
3M MOM	45.56	68.89	50.00	70.73
6M MOM	65.56	75.56	58.54	79.27
12M MOM	58.89	70.00	59.76	64.63

Source: S&P Dow Jones Indices LLC. Data from Dec. 31, 1989 to Dec. 31, 2014. MOM: Momentum. Past performance is no guarantee of future results. Charts and tables are provided for illustrative purposes and may reflect hypothetical historical performance. The underlying universe for the global momentum portfolios is the S&P Global LargeMidCap and for the U.S. momentum portfolios is the S&P United States BMI which were launched on Dec. 31, 1992. All information presented prior to these launch dates is back-tested. Back-tested performance is not actual performance, but is hypothetical. The back-test calculations are based on the same methodology that was in effect when the indices were officially launched. Complete index methodology details are available at www.spdji.com. It is not possible to invest directly in an index. Please see the Performance Disclosures at the end of the magazine for more information regarding the inherent limitations associated with back-tested performance.

EXHIBIT 3: RISK/RETURN PROFILES OF MOMENTUM STRATEGIES

ANNUALIZED RETURN	GLOBAL MOMENTUM	GLOBAL RISK-ADJUSTED MOMENTUM	U.S. MOMENTUM	U.S. RISK-ADJUSTED MOMENTUM
3 Year [%]	13.14	13.87	22.37	20.97
5 Year [%]	9.96	11.75	18.84	18.92
10 Year [%]	9.15	10.24	6.85	7.39
20 Year [%]	9.48	10.70	11.97	13.34
25 Year [%]	9.05	10.21	12.58	13.84
ANNUALIZED RISK				
3 Year [%]	11.47	11.06	13.48	11.94
5 Year [%]	17.47	15.91	20.27	17.36
10 Year [%]	20.79	19.56	20.65	19.02
20 Year [%]	18.76	17.47	21.41	18.86
25 Year [%]	17.98	16.76	20.56	18.40
RISK/REWARD RATIO				
3 Year	1.15	1.25	1.66	1.76
5 Year	0.57	0.74	0.93	1.09
10 Year	0.44	0.52	0.33	0.39
20 Year	0.51	0.61	0.56	0.71
25 Year	0.50	0.61	0.61	0.75

Source: S&P Dow Jones Indices LLC. Data from Dec. 31, 1989 to Dec. 31, 2014. MOM: Momentum. Past performance is no guarantee of future results. Charts and tables are provided for illustrative purposes and may reflect hypothetical historical performance. The underlying universe for the global momentum portfolios is the S&P Global LargeMidCap and for the U.S. momentum portfolios is the S&P United States BMI which were launched on Dec. 31, 1992. All information presented prior to these launch dates is back-tested. Back-tested performance is not actual performance, but is hypothetical. The back-test calculations are based on the same methodology that was in effect when the indices were officially launched. Complete index methodology details are available at www.spdji.com. It is not possible to invest directly in an index. Please see the Performance Disclosures at the end of the magazine for more information regarding the inherent limitations associated with back-tested performance.

WHAT GOES UP MUST... BRING OTHERS UP WITH IT?



JODIE GUNZBERG, GLOBAL HEAD OF COMMODITIES

Given recent volatility in oil prices, it's important to understand how price shifts may affect other commodities. What happens to other commodities when oil prices spike?

If oil prices rise so much that an economic slowdown overpowers the tax-break effect, then the price of other commodities might fall. However, oil is a main input to produce many other commodities, so prices of goods can rise when oil prices increase. The latter scenario—rising oil prices and rising prices for other commodities—has been more likely, as shown by the historical relationship of energy to other commodities and to inflation.

One of the hallmarks of commodities is how lowly correlated they are to each other thanks to their varied individual supply and demand models. Note that the highest correlation between any two sectors in the chart below is 0.26. The main driver of low correlations between commodities is expectational variance or supply shocks for individual commodity types.

EXHIBIT 1: CORRELATION OF S&P GSCI SECTORS

	AGRICULTURE	ENERGY	INDUSTRIAL METALS	LIVESTOCK	PRECIOUS METALS
Agriculture	1.00	0.12	0.25	0.02	0.23
Energy	0.12	1.00	0.19	0.08	0.21
Industrial Metals	0.25	0.19	1.00	0.02	0.26
Livestock	0.02	0.08	0.02	1.00	[0.02]
Precious Metals	0.23	0.21	0.26	[0.02]	1.00

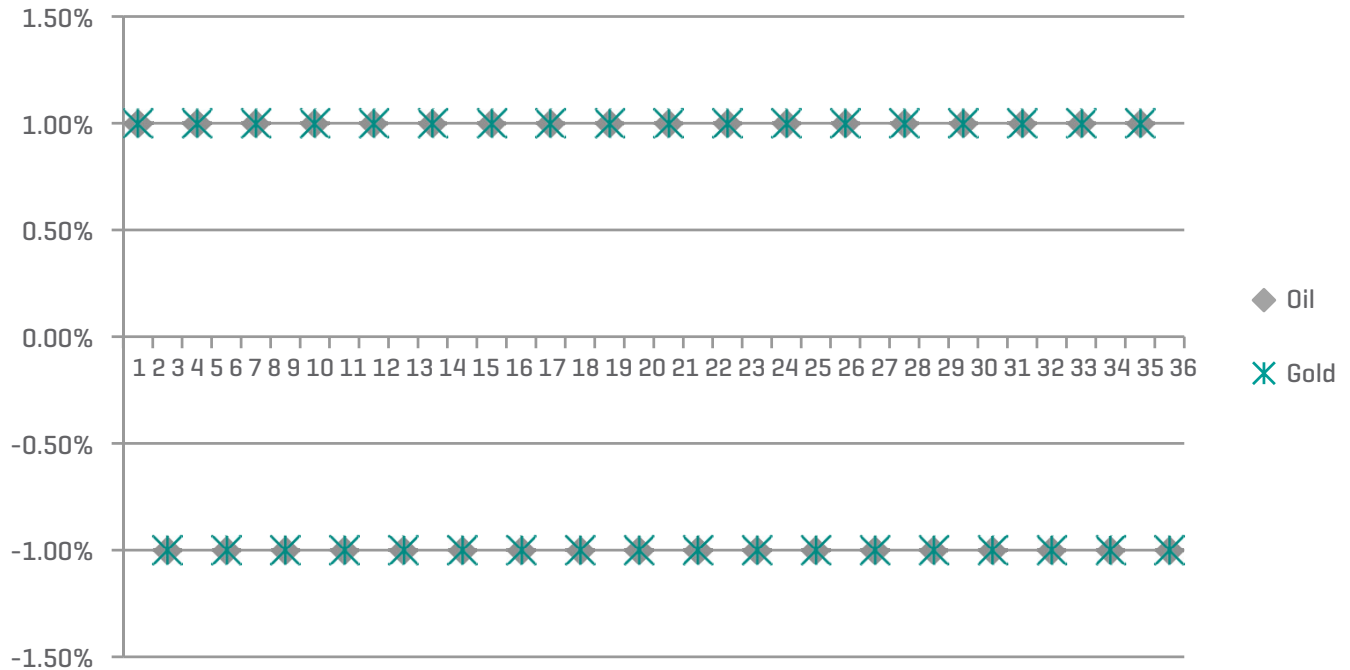
Source: S&P Dow Jones Indices. Data from February 1983 to December 2014. Charts and graphs are provided for illustrative purposes.

When the price of oil falls, it may be demand or supply driven. Most of the time weaker oil pricing has come from demand drops, and when this happens, the correlation is higher between commodities—about 0.40 on average. The recent moves (both down and up) in the price of oil have been more driven by supply, however, which also has been the case in many historical oil price spikes. We can see this in the case of the lower correlation of about 0.2 between oil and other commodities during oil price spikes. Despite the lower correlation, all commodities prices have tended to rise with rising oil prices.

A supply-driven oil bull market can pull other commodities up with it but with very low correlation—a measure of lockstep but not magnitude. Since the concept of a strong upward force on commodities as oil prices rise—but with low correlation—can be difficult to explain and understand, below is a quick correlation refresher with a few hypothetical and real illustrations.

Both of the hypothetical charts on the following page show a perfect correlation of +1.0. However, the top chart on average has a down month of -1.0% for both oil and gold. The bottom chart has an average down month for oil of -1.0%, but while oil is down, gold drops an average of just 25 basis points.

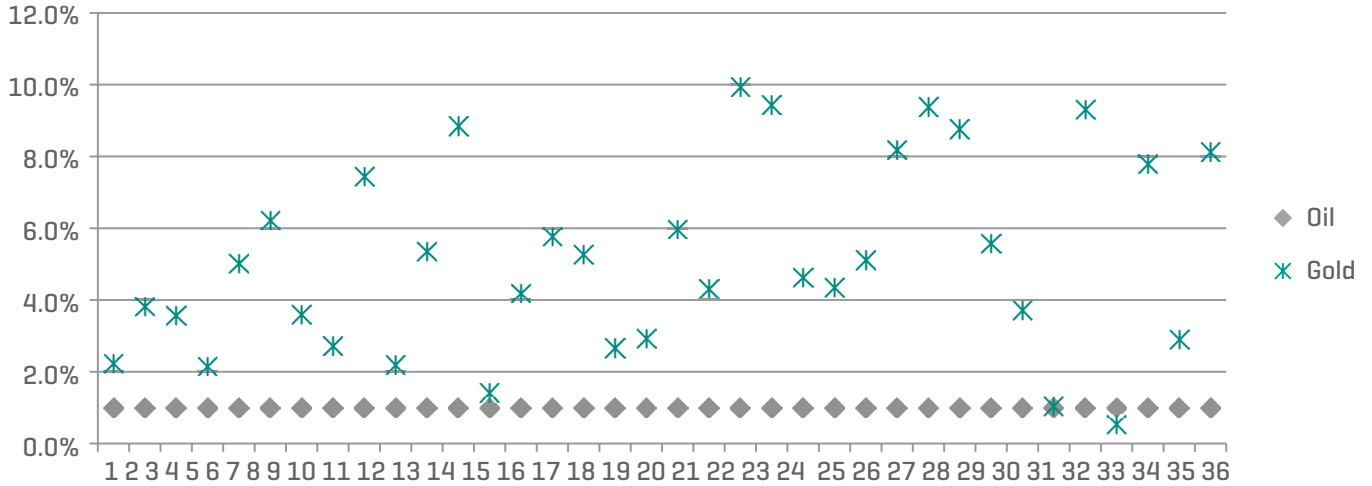
EXHIBIT 2: HYPOTHETICAL PERFECT CORRELATION BETWEEN OIL AND GOLD



Source: S&P Dow Jones Indices. Charts and graphs are provided for illustrative purposes.

The next hypothetical chart shows zero correlation but a directional pull. Both oil and gold are always up. Oil is up 1% every month on average while gold is up 5.1% on average. They are always up at the same time but there is little control of lockstep despite a directional relationship.

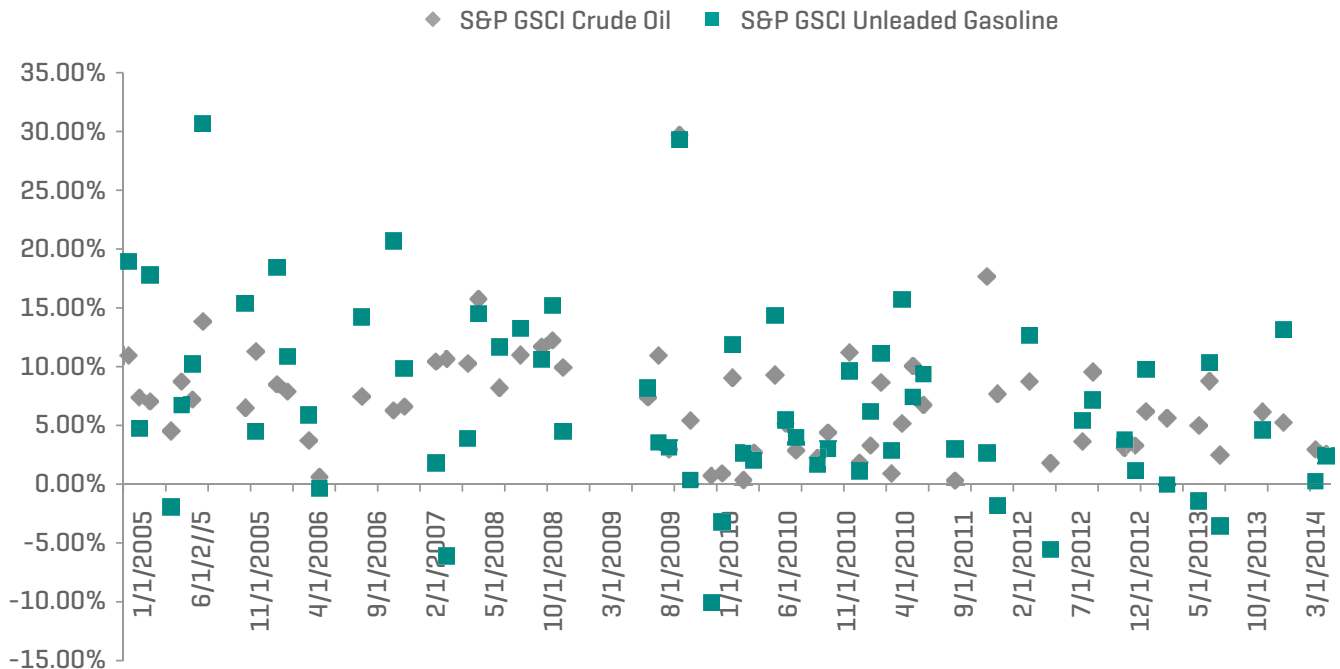
EXHIBIT 3: HYPOTHETICAL ZERO CORRELATION BETWEEN OIL AND GOLD



Source: S&P Dow Jones Indices. Charts and graphs are provided for illustrative purposes.

Below is an actual example showing the relationship between WTI crude oil [gray] and unleaded gasoline [teal] where the magnitude of average increases is almost exact, yet the correlation is only 0.6. Out of 66 positive WTI oil months in the past 10 years, there were only 10 months where unleaded gas dropped, showing it is difficult for gas to fall when oil rises.

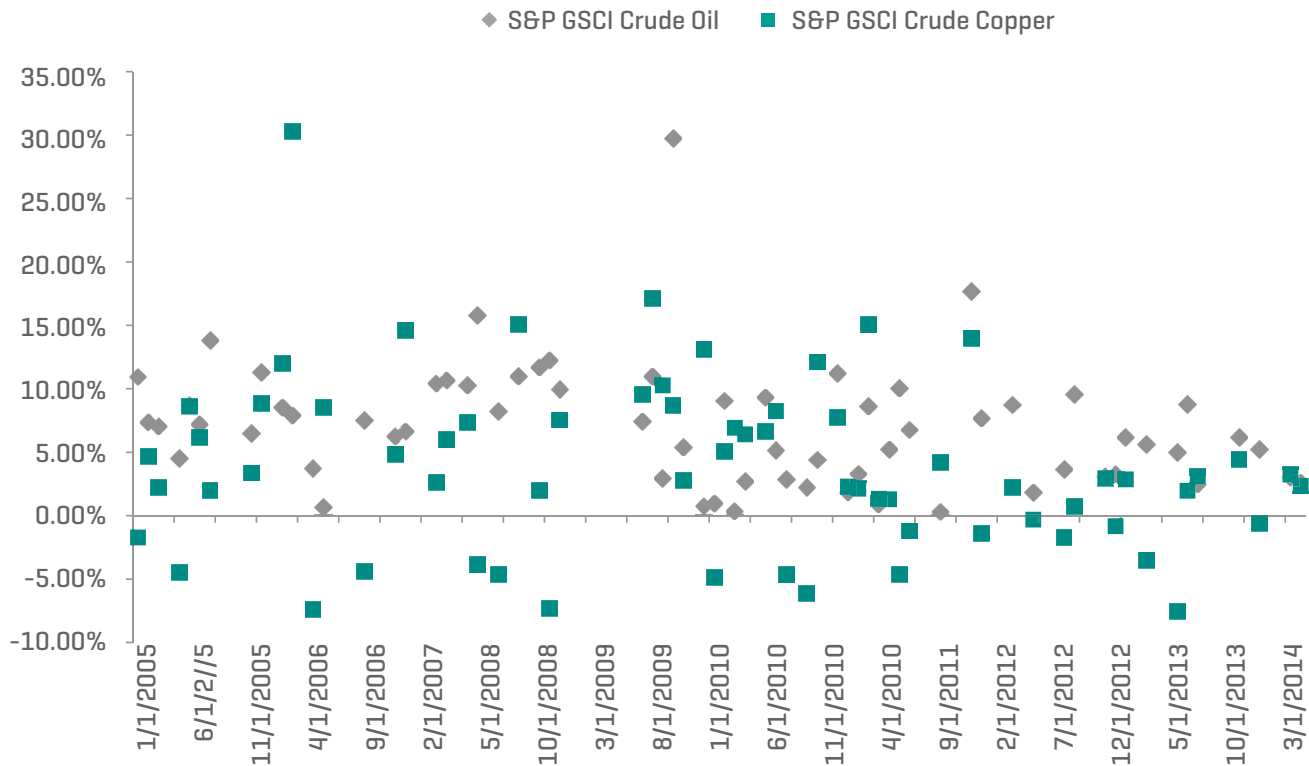
EXHIBIT 4: RETURNS OF UNLEADED GASOLINE IN POSITIVE MONTHS FOR WTI CRUDE OIL



Source: S&P Dow Jones Indices. Data as of Dec. 31, 2014. Charts and graphs are provided for illustrative purposes. Past performance is no guarantee of future results.

Let's take copper as another example. It has a very low correlation of 0.18 to oil when oil is rising. However, on average it had a monthly return of 3.85% when oil was positive and returned positive in 71%, or 47 out of 66 of those months. Copper generally was pulled up with oil, just at various magnitudes, making the correlation low.

EXHIBIT 5: RETURNS OF COPPER IN POSITIVE MONTHS FOR WTI CRUDE OIL



Source: S&P Dow Jones Indices. Data as of Dec. 31, 2014. Charts and graphs are provided for illustrative purposes. Past performance is no guarantee of future results.

Exhibits 6 and 7 show the behavior of other commodities as oil prices have risen and fallen over the past 10 years ended 2014. There has been much attention paid to the impact of oil prices around the world, and whether prices rise or fall, we'll be equipped to understand how those shifts could potentially affect other commodities.

EXHIBIT 6: HIGHLIGHTS OF INTERACTION BETWEEN PRICES OF WTI CRUDE OIL AND OTHER COMMODITIES

ON AVERAGE WHEN WTI CRUDE OIL HAS BEEN UP:

- All commodities (24) have had positive performance on average.

- Unleaded gasoline has had about the same return as WTI crude oil, showing that gas prices have gone up with oil.

- Silver has captured more upside than copper or natural gas.

- Copper has had the highest percentage (71%) of positive months [excluding petroleum].

- Lean hogs is the only single commodity for which less than half of its months (48%) have been positive.

- There is near zero correlation with other commodities [excluding petroleum].

ON AVERAGE WHEN WTI CRUDE OIL HAS BEEN DOWN:

- Most commodities (21) have had negative performance on average.

- Wheat, live cattle, and lean hogs have shown positive returns on average when oil has been down.

- Commodities, excluding petroleum, have dropped less than half the magnitude that oil has dropped on average.

- Excluding petroleum, copper has had the highest percentage (69%) of negative months.

- Wheat has had the lowest percentage (44%) of negative months.

- Industrial metals have had moderate-to-high correlations to negative oil.

- Only gold and silver have had lower correlation to oil in down oil markets than in up oil markets.

EXHIBIT 7: INTERACTION BETWEEN PRICES OF WTI CRUDE OIL AND OTHER COMMODITIES

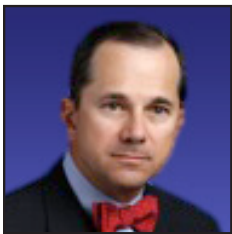
	AVERAGE MONTHLY RETURN WHEN WTI IS UP	PERCENTAGE MONTHS UP WHEN WTI IS UP	UP CORRELATION	AVERAGE MONTHLY RETURN WHEN WTI IS DOWN	PERCENTAGE MONTHS DOWN WHEN WTI IS DOWN	DOWN CORRELATION
S&P GSCI Crude Oil	6.99%			-7.25%		
S&P GSCI Unleaded Gasoline	6.97%	84.8%	0.60	-6.76%	81.5%	0.77
S&P GSCI Brent Crude	6.09%	87.9%	0.80	-5.99%	85.2%	0.93
S&P GSCI Heating Oil	5.65%	87.9%	0.72	-5.44%	85.2%	0.88
S&P GSCI Gasoil	5.61%	84.6%	0.63	-5.40%	81.5%	0.86
S&P GSCI Silver	4.70%	66.7%	0.21	-3.03%	64.8%	0.16
S&P GSCI Copper	3.85%	71.2%	0.18	-2.64%	68.5%	0.65
S&P GSCI Natural Gas	3.48%	58.5%	0.12	-3.42%	59.3%	0.23
S&P GSCI Cotton	3.33%	65.2%	0.11	-2.53%	55.6%	0.30
S&P GSCI Lead	2.90%	69.7%	0.16	-1.32%	53.7%	0.37
S&P GSCI Soybeans	2.89%	60.6%	0.17	-1.54%	61.1%	0.20
S&P GSCI Zinc	2.85%	62.1%	0.06	-1.50%	57.4%	0.38
S&P GSCI Sugar	2.82%	59.1%	[0.02]	-1.37%	63.0%	0.12
S&P GSCI Nickel	2.60%	62.1%	0.05	-1.97%	60.4%	0.48
S&P GSCI Coffee	2.57%	53.0%	0.18	-1.38%	55.6%	0.26
S&P GSCI Corn	2.39%	54.5%	0.11	-0.68%	51.9%	0.27
S&P GSCI Cocoa	2.23%	63.1%	0.13	-0.84%	51.9%	0.27
S&P GSCI Aluminum	2.16%	62.1%	[0.03]	-2.30%	64.8%	0.50
S&P GSCI Gold	2.09%	63.6%	0.23	-0.35%	55.6%	0.13
S&P GSCI Kansas Wheat	1.84%	56.1%	0.14	-0.12%	48.1%	0.25
S&P GSCI Wheat	1.60%	53.0%	0.11	0.35%	44.4%	0.25
S&P GSCI Feeder Cattle	1.58%	66.7%	[0.06]	-0.22%	51.9%	0.28
S&P GSCI Live Cattle	0.99%	66.7%	[0.16]	0.15%	50.0%	0.26
S&P GSCI Lean Hogs	0.68%	48.5%	[0.02]	0.11%	53.7%	0.22

Source: S&P Dow Jones Indices. Data as Dec. 31, 2014. Charts and graphs are provided for illustrative purposes. Past performance is no guarantee of future results.

ANALYZING THE “RISKScape”

INTERVIEW BY THERESA BAGGS

When asked what the stock market would do, J.P. Morgan famously remarked, “it will fluctuate.” Spikes in volatility have persisted regardless of how markets have been regulated or managed, but our understanding of risk, and the technology available to measure it, have evolved. Can a multidimensional view of risk help distinguish crisis from opportunity? Craig Lazzara and Tim Edwards explored this question in recent research, entitled “The Landscape of Risk.” InSIGHTS recently sat down with Craig and Tim to dissect their research.



CRAIG LAZZARA
CFA, Global Head of Index
Investment Strategy
S&P Dow Jones Indices

InSIGHTS: Let’s start with the title. How did you arrive at the term “landscape of risk” and what exactly do you mean by that?

TIM: A better understanding of risk and its various forms was the framing objective for this paper, which looks at the different sorts of risk there are and how they interact with each other. We also looked at how the evolution of these risks plays out in terms of investment opportunity.

There are essentially three components to consider. The first is the relatively simple concept of market risk, in the sense of market volatility. The second is single stock risk, which we measure by dispersion and is more complex to analyze because, ideally, you wish to examine the risk in each stock distinct from its market risk. The third variable is correlation, which measures the extent to which stocks in the market are moving in tandem.



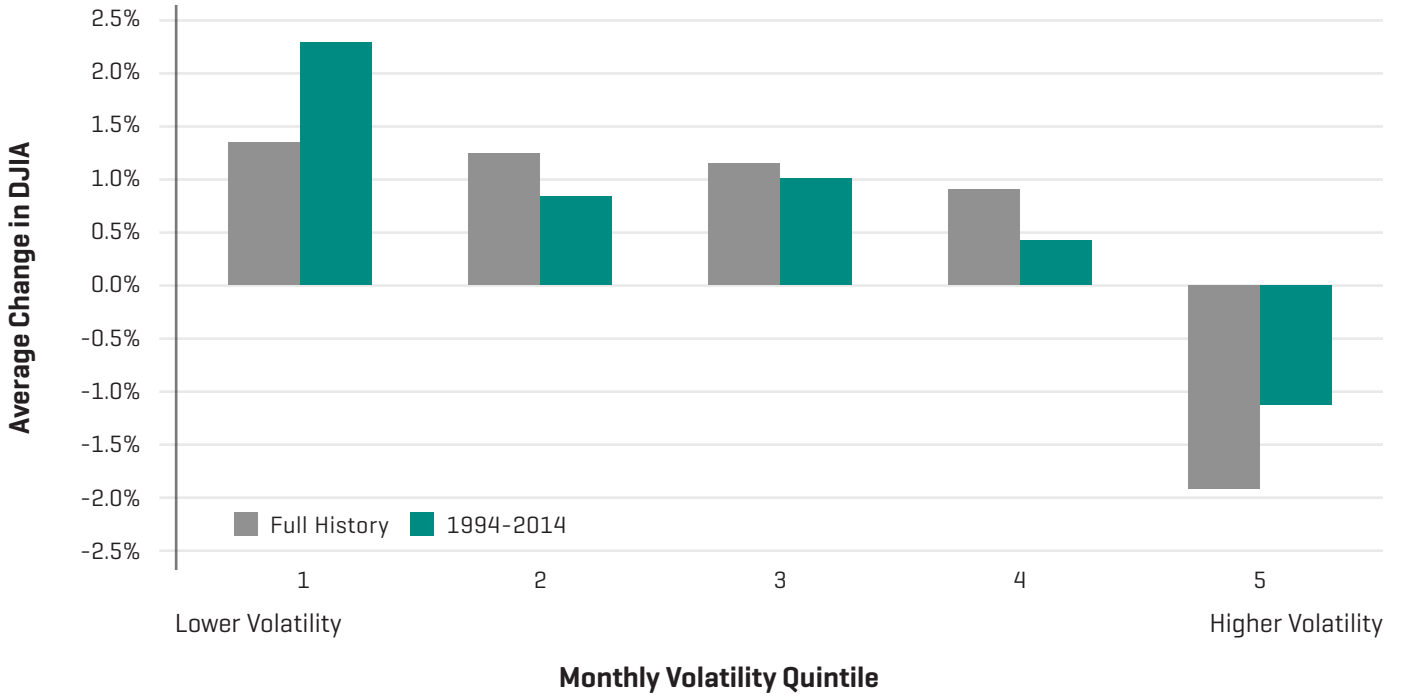
TIM EDWARDS
Director, Index Investment
Strategy
S&P Dow Jones Indices

What we discovered is that the interactions of these three components provide a fundamental insight into the possible states of the market. Simply put, volatility can be produced from either correlation or dispersion, and it is completely determined by their particular combination in any period of time. What’s surprising in our results is that correlation and dispersion are somewhat independent—they don’t seem to move together. This suggests that correlation and dispersion are akin to longitude and latitude on a map; “the landscape of risk” arises when one considers volatility as the “height” on the map that results from each pair of dispersion and correlation coordinates. “The landscape of risk” thus refers to the possible locations the market can exist in (and move to) based on a reading of the three components.

InSIGHTS: Volatility can be synonymous with loss, but is it that simple?

CRAIG: No, although conflating volatility with losses is directionally correct. It’s comparatively well understood that changes in volatility are negatively correlated with returns. What’s less well known is that higher levels of volatility are also negatively correlated with returns. The following chart, which shows the average monthly change in the Dow Jones Industrial Average® against its concurrent monthly volatility, shows that the lowest quintile of volatility has had the highest average returns and the highest quintile of volatility has had the lowest average returns. These data, however, only reflect short-term performance.

EXHIBIT 1: AVERAGE BY VOLATILITY QUINTILE

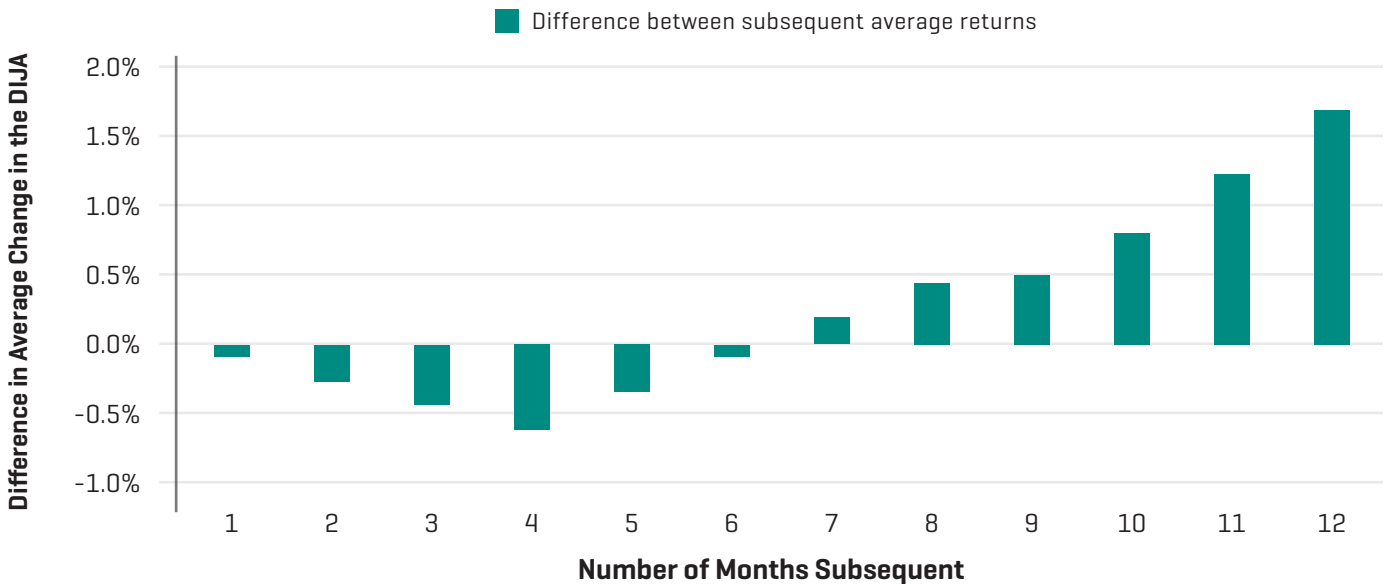


Source: S&P Dow Jones Indices LLC. *The Landscape of Risk*. Data from July 1896 to July 2014. Charts and tables provided for illustrative purposes. Past performance is no guarantee of future results.

InSIGHTS: This begs the question, how should investors think about the longer term?

TIM: If volatility indicates distress for existing investments, it may signal an attractive entry point for new ones. We tested this hypothesis by calculating returns for holding periods of various lengths, conditioned on whether volatility is above or below the 85th percentile of the distribution. Given the relationship between high volatility and low returns, it's not surprising that investments made during periods of lower volatility outperform over short holding periods (up to about 11 months). After that, however, fortune seemed to favor the bold.

EXHIBIT 2: DIFFERENCE IN DJIA PRICE RETURNS AT ENTRY POINTS OF VARYING HISTORICAL VOLATILITY



Source: S&P Dow Jones Indices LLC. *The Landscape of Risk*. Data from July 1896 to July 2014. Charts and tables provided for illustrative purposes. Past performance is no guarantee of future results.

InSIGHTS: You mentioned single stocks earlier. How does market risk and opportunity affect single stocks?

CRAIG: There is an important subtlety here. You might assume that, since high volatility signals a buying opportunity in the entire market, it should also present a buying opportunity in single stocks. And, of course, if all the stocks are more volatile and you are buying a market index, we've already seen that this view is supported by historical example. But that doesn't tell you anything about the attractiveness of one stock that is more volatile compared to another. This is where what's called the low volatility anomaly comes in. Historically, highly volatile stocks have been less attractive than less volatile ones. So, clearly, if we are to find opportunities in risk we must take a more nuanced investigation.

It turns out to be helpful, in analyzing how to find or express concepts of opportunity of single stocks, to look at the concept of dispersion. Periods of high dispersion are characterized by a relatively wide spread between the best and worst performers, while periods of low dispersion see a tight spread of performances. Dispersion is similar to volatility in many respects, not least in that they are highly correlated in the short term. But it is measuring a different form of risk. It's best to think of dispersion [along with correlation] as a contributor to our understanding of overall market volatility.

InSIGHTS: Do levels of dispersion have a pattern of impact on certain styles or strategies?

TIM: Intriguingly, yes. As the table below shows, historically, increasing dispersion favors growth and momentum, while decreasing dispersion favors equal weight and value. Some of this is possibly due to a rebalancing effect; as the range of performances among stocks tightens, those that have done poorly do better and those that have overshot the market correct. This rebalancing effect and its interaction with dispersion might benefit strategies that "sell winners" and "buy losers" such as equal weight indices. The converse quite reasonably would be the case for opposite strategies such as momentum.

EXHIBIT 3: RELATIVE PERFORMANCE OF FOUR S&P 500 STRATEGIES IN CHANGING DISPERSION PERIODS				
DISPERSION	DECREASING FROM HIGH		INCREASING FROM LOW	
TOTAL RETURN [RELATIVE TO THE S&P 500, %]	DECEMBER 1999 - DECEMBER 2003	MARCH 2009 - MAY 2011	JUNE 1996 - DECEMBER 1999	FEBRUARY 2007 - MARCH 2009
S&P 500 Momentum	-21	-17	132	11
S&P 500 Growth	-15	-2	45	8
S&P 500 Value	17	2	-43	-7
S&P 500 Equal Weight Index	46	41	-56	-5
S&P 500 Total Return [absolute, %]	-20	76	132	-41

Source: S&P Dow Jones Indices LLC. Data from June 1996 to May 2011. Past performance is no guarantee of future results. Charts and tables are provided for illustrative purposes and may contain hypothetical historical performance. The S&P 500 Momentum was launched on Dec. 3, 2014. The S&P 500 Equal Weight Index was launched on Jan. 8, 2003. All information presented prior to these launch dates is back-tested. Back-tested performance is not actual performance, but is hypothetical. The back-test calculations are based on the same methodology that was in effect when the index was officially launched. Complete index methodology details are available at www.spdji.com. It is not possible to invest directly in an index.

InSIGHTS: How does all of this affect the market currently?

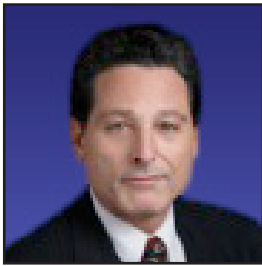
CRAIG: The markets of the past few years have been remarkably placid, with low volatility and record-low dispersion. If there's a big move, it's likely to be upward. As we said earlier, rising volatility is, generally speaking, not good for equity markets, especially in the short run. At the same time, within the equity markets, rising dispersion has historically favored momentum and growth strategies.

For continued reading on this topic, the full research entitled "The Landscape of Risk" is available on www.spdji.com.

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25 YEARS OF GICS®



HOWARD SILVERBLATT, SENIOR INDUSTRY ANALYST, INDEX INVESTMENT STRATEGY,
S&P DOW JONES INDICES

GICS data on S&P 500® sectors dates back to 1989—a time period some consider to be just on the cusp of modern investing.

In the mid-1990s, the internet changed the flow of information and the investing ability of the general public, as financial responsibility for retirement started to shift from companies to individuals. So now that we have 25 years' worth of modern or "almost modern" data available to us, a look-back seems in order. The changes to the sector make-up of the S&P 500 throughout history signal changes in not only the market but also society in general.

Sector Highlights:

- **Information technology** boasts the largest weight in the index, having increased its representation in the S&P 500 by 234%, from 5.89% in 1989 to 19.66% at the end of 2014. In 1989, only one technology issue was in the top ten: IBM, at number three. By 1999, six of the top ten were technology issues, with IBM ranking eighth, and the sector accounting for a whopping 29.18% of the index thanks to the bubble. As of the end of 2014, information technology accounted for 19.66% of the index, with two issues in the top ten.
- **Financials** substantially increased their presence in the index, up 90%, as one-stop-shopping was the theme of the '90s. Derivatives, sub-prime and tiers stole the spotlight over the past seven years.
- **Energy**, which has seen its share of volatility, declined 33% at the end of 2014, but still stood 52% above its 1999 level. On a proforma basis, energy represented 28% of the index in 1980.¹
- While Apple set a market value record for the largest publicly held issue, it represented just 3.35% of the S&P 500, not even placing in the top 20 weightiest issues historically at year-end.
- We recently announced that we will add an eleventh sector to GICS, creating a **real estate** sector and removing real estate issues from the financial sector. The change is slated for the close of August 2016. The new real estate sector will have a higher yield, but little if any tax-qualified dividends. The remaining financials sector may gain some stability, but could decline slightly in yield if its qualified dividends increase.

¹Source: Stock Guide Data Base. Data as of December 31, 1980.

EXHIBIT 1: S&P 500 PRICE CHANGES BY SECTOR

	FROM 1989 [%]	2014 [%]	5 YEARS 2014[%]	5 YEARS 2009 [%]	5 YEARS 2004 [%]	5 YEARS 1999 [%]	5 YEARS 1989 [%]
Energy	540.22	-9.99	151.83	33.86	35.68	112.72	9.14
Materials	290.98	4.68	221.88	-24.89	14.51	59.96	28.07
Industrials	547.67	7.52	234.77	-28.44	5.92	173.38	33.14
Consumer Discretionary	704.39	8.05	338.09	-39.26	-6.82	199.31	40.44
Consumer Staples	701.47	12.87	202.53	4.08	13.91	108.05	60.43
Health Care	991.47	23.30	255.96	-11.72	7.25	226.78	37.82
Financials	337.85	13.10	197.47	-58.94	27.78	221.72	31.36
Information Technology	969.44	18.18	298.50	-29.66	-59.19	707.44	54.55
Telecommunication Services	52.71	-1.91	136.57	-13.48	-60.01	222.81	0.11
Utilities	131.44	24.29	162.33	4.48	-0.59	42.44	-3.62
S&P 500	482.60	11.39	227.94	-25.47	-17.51	219.91	29.96

Source: S&P Dow Jones Indices. Data as of December 31, 2014. Past performance is no guarantee of future results. Charts and tables are provided for illustrative purposes only.

EXHIBIT 2: S&P 500 MARKET REPRESENTATION BY SECTOR

	FROM 1989 [%]	2014 [%]	2009 [%]	2004 [%]	1999 [%]	1994 [%]	1989 [%]
Energy	-32.90	8.44	11.48	7.16	5.55	9.98	12.58
Materials	-59.84	3.17	3.60	3.09	3.00	7.11	7.90
Industrials	-27.74	10.41	10.24	11.79	9.91	12.96	14.41
Consumer Discretionary	-16.90	12.13	9.58	11.90	12.70	14.92	14.60
Consumer Staples	-15.20	9.80	11.36	10.48	7.17	13.18	11.56
Health Care	68.31	14.21	12.63	12.68	9.31	9.16	8.44
Financials	89.97	16.65	14.38	20.64	13.02	10.74	8.76
Information Technology	233.89	19.66	19.86	16.05	29.18	8.57	5.89
Telecommunication Services	-76.62	2.28	3.16	3.27	7.94	8.63	9.76
Utilities	-46.87	3.24	3.71	2.94	2.21	4.76	6.09
S&P 500	0.00	100.00	100.00	100.00	100.00	100.00	100.00

Source: S&P Dow Jones Indices. Data as of December 31, 2014. Past performance is no guarantee of future results. Charts and tables are provided for illustrative purposes only.

EXHIBIT 3: S&P 500 MARKET VALUE BY SECTOR (IN USD MILLIONS)

	12/31/14	2013	2009	2004	1999	1994	1989
Energy	1,539,940	1,695,029	1,139,926	807,789	683,754	333,859	297,760
Materials	579,170	427,613	357,206	349,187	369,046	237,793	187,085
Industrials	1,899,920	1,251,257	1,017,060	1,331,382	1,220,762	433,616	341,116
Consumer Discretionary	2,213,632	1,215,063	950,774	1,343,186	1,564,782	499,136	345,603
Consumer Staples	1,788,173	1,215,306	1,127,768	1,183,001	883,356	441,125	273,582
Health Care	2,593,288	1,246,694	1,254,197	1,431,061	1,146,815	306,563	199,888
Financials	3,037,808	1,835,655	1,427,379	2,330,140	1,604,369	359,417	207,458
Information Technology	3,586,557	2,131,226	1,971,224	1,811,953	3,593,828	286,628	139,356
Telecommunication Services	416,364	355,010	313,983	368,885	978,570	288,741	231,049
Utilities	590,311	376,843	368,048	331,987	272,467	159,244	144,131
S&P 500	18,245,163	11,429,834	9,927,564	11,288,570	12,317,750	3,346,124	2,367,029

Source: S&P Dow Jones Indices. Data as of December 31, 2014. Past performance is no guarantee of future results. Charts and tables are provided for illustrative purposes only.

EXHIBIT 4: LARGEST ISSUES IN THE S&P 500

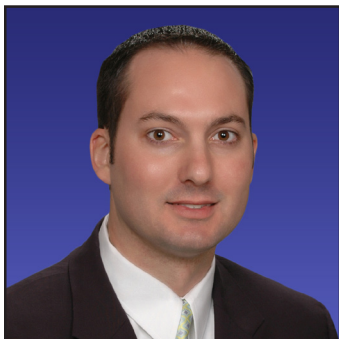
RANK	COMPANY Dec-14	MARKET VALUE MM (USD)	% OF INDEX	COMPANY Dec-99	MARKET VALUE MM (USD)	% OF INDEX	COMPANY Dec-89	MARKET VALUE MM (USD)	% OF INDEX
1	Apple Inc.	647,361	3.35	Microsoft Corp	604,078	4.92	Exxon Corp	62,582	2.65
2	Exxon Mobil	391,482	2.03	Genl Electric	507,734	4.14	General Electric	58,198	2.46
3	Microsoft Corp	382,881	1.98	Cisco Systems	366,481	2.99	Int'l Bus. Machines	54,481	2.30
4	Berkshire Hathaway "B"	370,008	1.92	Wal-Mart Stores	307,843	2.51	American Tel & Tel	48,937	2.07
5	Johnson & Johnson	292,703	1.52	Exxon Mobil	278,218	2.27	Royal Dutch Petrol	41,546	1.76
6	Wells Fargo	284,386	1.47	Intel Corp	274,998	2.24	Philip Morris Cos	38,619	1.63
7	Wal-Mart Stores	276,808	1.43	Lucent Technologies	234,982	1.91	Merck & Co	30,639	1.30
8	Genl Electric	253,766	1.31	Intl Bus. Machines	194,447	1.58	Bristol-Myers Squibb	29,202	1.24
9	Procter & Gamble	246,136	1.28	Citigroup Inc	187,734	1.53	duPont(EI)deNemours	28,163	1.19
10	JP Morgan Chase & Co	233,936	1.21	America Online	169,606	1.38	Amoco Corp	28,046	1.19

Source: S&P Dow Jones Indices. Data as of December 31, 2014. Past performance is no guarantee of future results. Charts and tables are provided for illustrative purposes only.

FA TALKS: TWO SIDES OF THE SAME COIN: OPTIMIZING RISK & RETURN

InSIGHTS recently chatted with Michael McClary, Chief Investment Officer at TOPS® / ValMark Advisers, to get his perspective on managing volatility.

INTERVIEW BY EMILY WELLIKOFF



MICHAEL MCCLARY
Chief Investment Officer
TOPS/ValMark Advisers

Michael McClary has been with ValMark, a leading national independent wealth management firm with offices in over 30 states and over USD 7 billion in assets, since 2003. Mr. McClary has direct responsibility for ValMark Investment Alliance™. Michael also oversees all broker-dealer investment products for ValMark Securities, Inc. and leads the Portfolio Management Team for The Optimized Portfolio System [TOPS].

InSIGHTS: What are managed volatility strategies?

Michael McClary: I think that it is best to first define the movement of dynamic risk management. Dynamic risk management is multifaceted management of investment portfolios with a focus first on risk management. I have a saying, “don’t ever mention return without mentioning risk in the same sentence.”

In this area of investing, there have been three key areas of development: low volatility strategies, risk parity strategies and managed volatility strategies.

Low volatility strategies typically take an asset class or index and overweight underlying holdings that have typically exhibited, or are expected to exhibit, lower volatility than other holdings. For example, there are several options for the S&P 500® where lower volatility stocks are overweighted.

A second option that has developed is risk parity funds. Typically, risk parity funds combine stocks, bonds and alternative investments. Sometimes, funds allocate about a third to each area. Whether algorithmically or through a manager selection process, risk parity funds then typically adjust the allocations over time in an attempt to dynamically manage the risk.

We are fortunate to have been pioneers in the managed volatility area. Managed volatility strategies typically manifest as portfolios that adjust allocations based on volatility triggers. For example, our three primary managed volatility portfolios have risk [standard deviation] targets of 8%, 10%, and 12%, and we are able to manage to our targeted risk levels by decreasing or increasing exposure to stocks over time.

InSIGHTS: Why are these strategies important in today’s investment landscape?

Michael McClary: We have research showing that many of the most significant market pullbacks have historically occurred during periods of high volatility. While many traditional strategies assume that volatility risk is constant over time, managed volatility strategies adjust allocations with the premise that risk is higher in periods of high volatility.

For example, 2008 was a high volatility bear market. As such, investors that reduced exposure to stocks when volatility increased would have generally experienced lower losses. When describing our strategy, I often describe it as a way to adjust the speed in your car to allow for the driving conditions. In our strategy, we simply monitor the weather and we reduce the speed of our car [exposure to stocks] when the weather gets bad. If I said that you were most likely to get into a wreck on days when it snowed more than five inches and I told you exactly when those days would be, wouldn’t it make sense for you to slow down on those days? Our strategy aims to do that. And remember, in investing, as in life, the pain of loss is far greater than the joys of gain.

InSIGHTS: Who do these strategies appeal to, and why?

Michael McClary: We saw a need for managed volatility strategies to be applied in retirement income products. In 2010, we started telling insurance companies about how managed volatility strategies could improve their overall product offering. The movement that we started caught fire and nearly all insurance companies have now implemented managed volatility strategies. Many major asset managers have also launched their version of managed volatility funds.

As the movement started in the insurance community, it was the insurance-based advisors that first gravitated to the story. Now, we are seeing RIAs understanding the benefits. Properly implemented managed volatility strategies may help to increase an investor's overall chances of success, especially when they are taking withdrawals from an account.

InSIGHTS: Can you delve a bit more into the potential benefits to investors?

Michael McClary: Putting managed volatility funds inside insurance products is one of the best alignment of interests I have ever seen. By using managed volatility funds, we seek to reduce the chances that an investor will run out of money. That benefits the insurance companies and enables them to offer more competitive products. And in some cases, it enables them to offer solutions that they wouldn't be able to offer otherwise. Likewise, the client's number one goal is also to not run out of money. By trying to reduce the actuarial odds of running out of money, managed volatility funds may help to align the interests of the investors and the insurance companies.

Fortunately for investors, they now get a highly sophisticated institutional-level investment strategy, which might not be offered if the institutional providers didn't have interests that were aligned. Our ETF portfolios offer a level of investment sophistication that 10 years ago, was reserved for investors with over USD 100 million.

InSIGHTS: How are advisors currently implementing these strategies?

Michael McClary: While some individual asset class options exist, we typically see advisors using managers that manage a whole portfolio with a managed volatility overlay.

InSIGHTS: What is your firm's approach to managing volatility?

Michael McClary: We put together two main levels of risk management. We start with a specially designed global mix of asset classes. We attempt to optimize the risk-return tradeoff in this mix. I often state our goal as "giving you

the most return possible for a given level of risk." We work with our partner Milliman Financial Risk Management to implement the managed risk overlay, called the Milliman Managed Risk Strategy (MMRS). For those who aren't familiar with Milliman, they're one of the leading experts in the world on institutional hedging and risk management.

There are some strategies that use one general volatility measure to adjust their stock exposure. We instead use a proprietary algorithm designed to gauge the risk level of our exact portfolio. Likewise, we use index-based futures contracts to hedge our risk and feel that there are advantages to using index-based futures over using options contracts or simply allocating among stock, bonds and alternative investments. Another differentiator of our strategy is our use of a proprietary capital protection strategy in concert with our managed volatility overlay. The capital protection strategy acts as an emergency brake, providing gains when markets go down.

InSIGHTS: What do you look for in a managed volatility benchmark?

Michael McClary: Being one of the first managed volatility managers, we struggled to find appropriate general benchmarks. Since classical active management is geared towards benchmarking, and appropriately so, we felt that we needed to provide advisors and investors the comfort of showing a benchmark. In our early years, the best option we had was the S&P 500® Risk Control Index. While the S&P 500 Risk Control Index has volatility management, the method was much different than what we use and the concentration in the S&P 500 didn't appropriately account for our global mix.

In years of significant divergence between U.S. and international stocks, it is especially important to properly account for global exposure in your benchmarks. We worked with S&P DJI to create some new volatility benchmarks that utilized an underlying global mix—a new group of risk control indices based on the S&P Global BMI. We also collaborated to adjust the risk control methodology, making it more practical for investors.

InSIGHTS: How does the current market environment affect your strategy?

Michael McClary: With the S&P 500 near an all-time high and with valuations rising, reducing risk by globally diversifying may be important. A managed risk overlay strategy may help to achieve that. It may also be wise to consider the current precarious interest rate environment. We are proud of the unique fixed income mix in our portfolios, which is strategically designed to optimize risk and return in this climate.

The One to Bond With

An independent formula is taking the lead in fixed income. Synchronize with the team you trust at S&P Dow Jones Indices and accelerate with precise bond signals across traditional, smart beta or multi-asset class indices. Success follows ***Indexology***—fueling ideas whose time is now.

The S&P Aggregate™
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GLOBAL INDEX NEWS FEED

GLOBAL

Assets under management based on our global indices increased to USD 781 billion in 2014, a 20% increase, year-over-year.

S&P DJI and BM&FBOVESPA (BVMF) reached a strategic agreement to create and launch new, co-branded Brazilian equity and fixed income indices. The five inaugural S&P/BOVESPA equity indices developed and launched as a result of this agreement marked the first smart beta indices available in Brazil – **S&P/BOVESPA Low Volatility Index, S&P/BOVESPA Inverse Risk Weighted Index, S&P/BOVESPA Quality Index, S&P/BOVESPA Momentum Index, and S&P/BOVESPA Enhanced Value Index**. BVMF is the largest equity and futures exchange in Latin America.

S&P DJI and the Mexican Stock Exchange (Bolsa Mexicana de Valores, “BMV”) reached an agreement for index licensing, distribution, and management of all BMV indices, including BMV’s flagship index, Índice de Precios y Cotizaciones, “IPC,” the broadest indicator of the BMV’s overall performance. The BMV is the second-largest stock exchange in Latin America with a total market capitalization of over USD 530 billion.

The Economic Times, one of India’s leading newspapers, names **Alka Banerjee**, Managing Director of Strategy and Global Equity Indices at S&P DJI, and CEO of Asia Index Private Limited [a joint venture between S&P DJI and the Bombay Stock Exchange] one of the 20 most-influential global Indian women.

The S&P Momentum Indices expand S&P DJI’s suite of smart beta indices.

The S&P Global 1200 Dividend Stability Low Volatility Index, a new factor-based dividend index, is another addition to S&P DJI’s smart beta offerings.

The S&P 500 VEQTOR Switch Index expands S&P DJI’s family of asset allocation indices that utilize VIX® as a signal.

AMERICAS

The S&P U.S. Aggregate Bond Index and the **S&P Canada Aggregate Bond Index** expand S&P DJI’s fixed income offerings in North America and are part of the S&P Aggregate™ Bond Index family, which includes government, quasi-government, corporate, securitized and collateralized securities.

The S&P 500 Dividend Aristocrats® wins Indexing Product of the Year at the William F. Sharpe Indexing Achievement Awards, presented at IMN’s 20th Annual Global Indexing and ETFs Conference. The index also serves as the basis for 2014’s ETF Product of the Year Award given to ProShares S&P 500 Dividend Aristocrats ETF (NOBL).

The S&P MidCap 400® Dividend Aristocrats expand S&P DJI’s Dividend Aristocrats’ index family.

ASIA PACIFIC

S&P DJI and NZX Limited reached a strategic agreement to jointly develop, produce, and commercialize co-branded investable indices featured on NZX platforms and related data products across equity and fixed income securities. Beginning in June, S&P DJI will calculate, publish, and disseminate existing and future co-branded indices, including the **S&P/NZX 50**.

S&P DJI wins **2014 Index Provider of the Year** for the **fourth consecutive year**. Leading industry publication, Asia Asset Management, announced S&P DJI’s regional award in its annual Best of the Best Awards’ issue.

S&P DJI and the Korea Exchange (KRX) reached an agreement for index licensing, marketing and sales of KRX indices including KOSPI 200, the premier gauge of South Korean equity market performance. **The S&P Korea Dividend Opportunities Index** expands S&P DJI’s South Korea index offerings and the S&P International Dividend Opportunities Index family.

The S&P/ASX Franking Credit Adjusted Indices, a new series of tax-aware indices designed to help gauge the effectiveness of tax-exempt investor and superannuation portfolios, expand S&P DJI’s offerings in Australia.

The S&P Japan 500 GIVI® Index, a new multi-factor index, expands S&P DJI’s smart beta offerings in Japan.

EUROPE

The S&P Quality Nordic Index, a new factor-based index, expands S&P DJI’s smart beta offerings in Europe.

MIDDLE EAST & AFRICA

S&P DJI wins **Best Index Provider** for the **third consecutive year**. Leading Industry publication, MENA Fund Manager, presented the award to S&P DJI at the MENA Fund Services Awards.

The S&P GIVI South Africa Indices and the S&P Quality South Africa Index, new factor-based indices, expand S&P DJI’s smart beta offerings in South Africa.

The S&P Africa Sovereign Bond Index and the **S&P Africa Global Sovereign Bond Index** expand S&P DJI’s fixed income offerings on the continent.

COMPLIMENTARY EVENTS

For up-to-date information or to register for upcoming events, visit www.spdji.com/events/sp-hosted/.

ETFs AS A CATALYST FOR CANADIAN ADVISORY GROWTH

JUNE 24, 2015
TORONTO

In response to the new regulatory environment, more and more Canadian advisors are leveraging low-cost index-based solutions, and global diversification with North American traded ETFs, in their portfolio and asset allocation strategies. Keynote speaker Michael Jones, Chairman and Chief Investment Officer of RiverFront Investment Group, will share his firsthand experience on proactively aligning a firm to embrace transparency and position it for growth while using index investment strategies. [Register Now](#)

CE Credit Available

IS SMART BETA THE SUSTAINABLE ANSWER TO ESG INVESTING?

JUNE 25, 2015
MILAN

Allocations to sustainability are ticking up but concerns around the ESG trade-off persist – what performance will I sacrifice to invest “responsibly”? With smart beta indices taking over industry chatter, is there room to pepper factors strategies into ESG indexing to address alpha versus responsible beta concerns? [Register Now](#)

Upcoming Financial Advisor Forum

July 21: San Francisco

Save The Date

Sept. 17: 9th Annual Commodities Seminar,
London, UK

Webinars On-Demand

WHAT MAKES CHINA'S EQUITY AND BOND MARKETS TICK?

While many advisors have grown more comfortable incorporating equity exposure to China into their portfolios, allocating to its bond market is another story. China's bond market may be the third largest in the world, but access for foreign investors is still relatively new. Join us as we discuss the risks and opportunities inherent in these markets.

[Watch Replay](#)

INCOME BEYOND STOCK-STANDARD DIVIDENDS

What's a simple and practical way to draw out equity income in the current interest rate environment? Answer: Shareholder yield. Find out what industry leaders had to say about the enduring quality of dividends in the U.S. and international markets, buybacks, and more.

[Watch Replay](#)

Webinars On-Demand [cont.]

UNDERSTANDING YIELD STRATEGIES USING THE S&P 500®

The S&P 500 is widely considered the best single gauge of the U.S. market, but it's not the only avenue of exposure. Find out how custom strategies derived from the S&P 500, such as the "buy-write strategy," are being used to manage risk and generate income. [Watch Replay](#)

REAL ASSETS: FINDING ALTERNATIVES FOR DIVERSIFICATION

Recent changes in energy prices are enough to make some investors wary of real assets. But given global equity market volatility and fixed income sensitivity to rising rates, are they a good alternative? [Watch Replay](#)

MAKING PRACTICAL SENSE OF FACTORS

Which risk factors, and across which asset classes, are trending in today's asset allocation discussion? Hear notable industry experts dissect various factor-based strategies and evaluate fundamental frameworks for single- and multi-asset portfolios. [Watch Replay](#)

ARE PAYOUTS OF FIXED INDEXED ANNUITIES AND STRUCTURED NOTES CONVERGING?

Fixed indexed annuities and structured notes are increasingly used by advisors for retirement planning. With today's low interest rates, what are the solutions that can mitigate risk while delivering expected returns? [Watch Replay](#)

PUTTING SPIVA® TO PRACTICAL USE IN PORTFOLIO MANAGEMENT

Is there a clear answer to the active vs. passive debate? The SPIVA [S&P Indices vs. Active] Scorecard has consistently shown how indices outperform managed mutual funds over one, three, five, and now 10-year periods. So, what does this information actually mean for financial advisors and institutional investors? [Watch Replay](#)



Tune into the latest indexing trends today at www.asset.tv

SOUNDBITES...



Each risk factor alone does not work well over a long market cycle, but the silver lining is that there is diversification benefit. It has been demonstrated in academic and practitioners' literature that the correlation between risk premia is low compared to the correlation between asset classes.

- **Aye Soe** of S&P DJI during S&P DJI's webinar, *Making Practical Sense of Factors*



I'd like to use this example, which I borrow from Professor John Cochrane at University of Chicago, where he says, factors are like nutrients and asset classes are like meals. When you have a meal at the end of the day, what matters is really the nutrients that you consumed.

- **Jason Hsu** of Research Affiliates during S&P DJI's webinar, *Making Practical Sense of Factors*



We're probably all familiar with the studies that show that most of the variability of investment returns is due to the asset allocation, with less than 12% due to the market timing, security selection, and cost. What people don't often realize is that on average, those other factors don't add to returns, they subtract from them.

- **Chris Mirrione** of Alesco Advisors during S&P DJI's webinar, *Real Assets: Finding Alternatives for Diversification*



In the current high-tax environment we are in, tax-exempt municipal bonds can be considered an option for many investors and not just the wealthy or the top 1%.

- **J.R. Rieger** of S&P DJI in his Indexology blog post, *Should Municipal Bonds be "Core"?*



If active trading makes for an efficient market, indexing has a long way to go before market efficiency is impaired.

- **Craig Lazzara** of S&P DJI in his Indexology blog post, *Too Much Indexing?*



The probability of finding a manager who is going to outperform in the future is very low, and the payout that you get even if you do find one is relatively low next to the large shortfall that you're going to have if you don't find one.

- **Rick Ferri** of Portfolio Solutions® in S&P DJI's video, *Active Versus Passive Management*

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PERFORMANCE DISCLOSURE

S&P Dow Jones Indices defines various dates to assist our clients in providing transparency on their products. The First Value Date is the first day for which there is a calculated value [either live or back-tested] for a given index. The Base Date is the date at which the Index is set at a fixed value for calculation purposes. The Launch Date designates the date upon which the values of an index are first considered live; index values provided for any date or time period prior to the index's Launch Date are considered back-tested. S&P Dow Jones Indices defines the Launch Date as the date by which the values of an index are known to have been released to the public, for example via the company's public Web site or its datafeed to external parties. For Dow Jones-branded indices introduced prior to May 31, 2013, the Launch Date (which prior to May 31, 2013, was termed "Date of Introduction") is set at a date upon which no further changes were permitted to be made to the index methodology, but that may have been prior to the Index's public release date.

Past performance of the Index is not an indication of future results. Prospective application of the methodology used to construct the Index may not result in performance commensurate with the back-test returns shown. The back-test period does not necessarily correspond to the entire available history of the Index. Please refer to the methodology paper for the Index, available at www.spdji.com for more details about the index, including the manner in which it is rebalanced, the timing of such rebalancing, criteria for additions and deletions, as well as all index calculations.

Another limitation of using back-tested information is that the back-tested calculation is generally prepared with the benefit of hindsight. Back-tested information reflects the application of the index methodology and selection of index constituents in hindsight. No hypothetical record can completely account for the impact of financial risk in actual trading. For example, there are numerous factors related to the equities (or fixed income, or commodities) markets in general which cannot be, and have not been accounted for in the preparation of the index information set forth, all of which can affect actual performance.

Additionally, it is not possible to invest directly in an Index. The Index returns shown do not represent the results of actual trading of investable assets/securities. S&P Dow Jones Indices maintains the Index and calculates the Index levels and performance shown or discussed, but does not manage actual assets. Index returns do not reflect payment of any sales charges or fees an investor may pay to purchase the securities underlying the Index or investment funds that are intended to track the performance of the Index. The imposition of these fees and charges would cause actual and back-tested performance of the securities/fund to be lower than the Index performance shown. For example, if an index returned 10% on a US \$100,000 investment for a 12-month period (or US\$ 10,000) and an actual asset-based fee of 1.5% was imposed at the end of the period on the investment plus accrued interest (or US\$ 1,650), the net return would be 8.35% (or US\$ 8,350) for the year. Over a three-year period, an annual 1.5% fee taken at year end with an assumed 10% return per year would result in a cumulative gross return of 33.10%, a total fee of US\$ 5,375, and a cumulative net return of 27.2% (or US\$ 27,200).