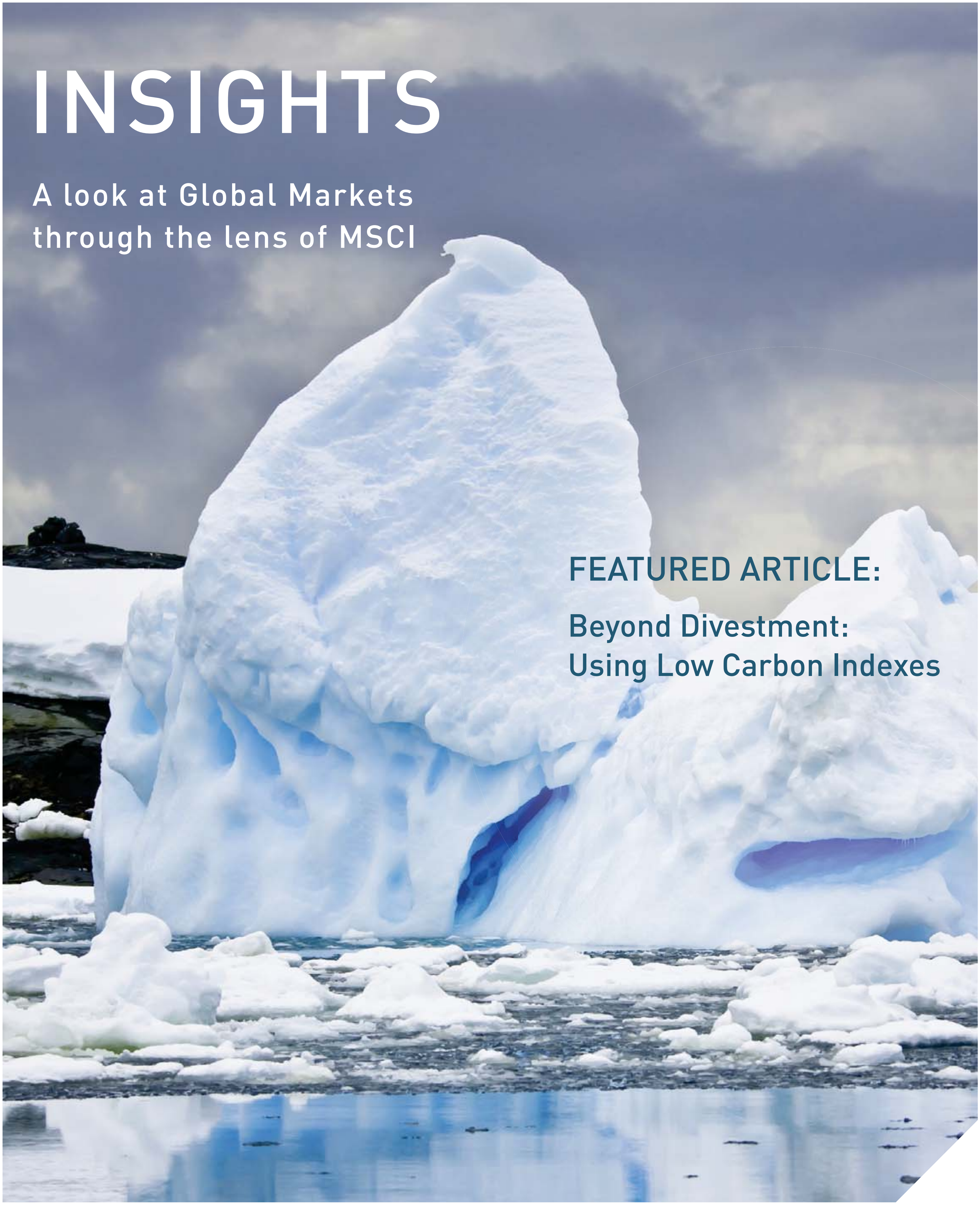
INSIGHTS

A look at Global Markets
through the lens of MSCI



FEATURED ARTICLE:

Beyond Divestment:
Using Low Carbon Indexes

APRIL 2015

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INNOVATIONS IN FACTOR INVESTING

New York, Thursday, April 23, 2015

FEATURING KEYNOTES:

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Managing Director, Global Head of Scientific Equity Research, BlackRock

Mark Anson
Chief Investment Officer, Bass Family Office

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MSCI INDEX PERFORMANCE

Month Ending March 31, 2015
All prices in U.S. Dollars

		Performance						
		1 Month	3 Months	6 Months	9 Months	YTD	1 Year	5 Years
		% Change	% Change	% Change	% Change	% Change	% Change	% Change
GLOBAL	MSCI ACWI	-1.78	1.83	1.90	-0.93	1.83	3.34	6.68
	MSCI ACWI ex USA	-1.98	2.90	-1.42	-7.17	2.90	-3.49	2.00
	MSCI ACWI IMI	-1.55	2.12	2.38	-0.98	2.12	3.11	7.01
	MSCI World	-1.81	1.82	2.50	-0.15	1.82	4.00	7.71
	MSCI EAFE	-1.96	4.19	0.18	-6.23	4.19	-3.46	3.14
	MSCI Emerging Markets (EM)	-1.59	1.91	-3.06	-7.25	1.91	-2.02	-0.72
	MSCI World ESG	-1.51	1.81	2.42	-0.36	1.81	3.70	7.44
	MSCI Frontier Markets (FM)	-3.23	-4.50	-16.59	-15.70	-4.50	-6.81	1.00
ASIA PACIFIC	MSCI Kokusai (World ex JP)	-2.05	1.16	2.12	-0.48	1.16	3.45	8.12
	MSCI Pacific	-0.08	6.76	4.17	-0.47	6.76	4.71	3.07
	MSCI AC Asia ex Japan	0.29	4.65	4.45	1.79	4.65	8.12	3.79
	MSCI Emerging Markets Asia	0.28	5.06	4.46	1.91	5.06	8.33	3.44
	MSCI China	2.41	8.12	15.78	16.11	8.12	20.20	2.28
	MSCI Japan	0.88	9.47	6.68	3.55	9.47	10.26	3.84
	MSCI Australia	-3.03	1.78	-2.80	-11.68	1.78	-10.06	-0.13
	MSCI Emerging Markets Far East	0.87	5.05	4.48	1.41	5.05	7.11	3.82
EMEA	MSCI Europe	-3.02	2.85	-1.88	-9.12	2.85	-7.39	3.27
	MSCI Europe IMI	-2.97	3.03	-1.38	-9.00	3.03	-7.64	3.77
	MSCI Europe ex UK	-1.47	5.12	0.40	-7.20	5.12	-6.72	3.39
	MSCI EMU	-1.43	5.15	0.39	-8.45	5.15	-8.00	1.72
	MSCI EM EMEA	-3.45	1.27	-9.51	-17.68	1.27	-14.72	-4.41
	MSCI Switzerland	-1.23	3.97	1.63	-2.93	3.97	-2.30	7.37
	MSCI United Kingdom IMI	-6.18	-1.53	-5.63	-12.34	-1.53	-9.00	3.88
	MSCI AC Europe	-3.04	2.82	-2.59	-10.03	2.82	-8.16	2.69
AMERICAS	MSCI North America	-1.71	0.39	4.00	4.06	0.39	9.26	11.19
	MSCI EM Latin America	-7.63	-10.13	-22.68	-27.26	-10.13	-23.25	-10.08
	MSCI BRAZIL	-11.49	-15.50	-28.66	-35.23	-15.50	-31.55	-15.56
	MSCI CANADA	-3.44	-6.53	-11.49	-15.83	-6.53	-8.00	-0.36
	MSCI MEXICO	-2.91	-2.07	-14.38	-12.84	-2.07	-7.41	2.08
	MSCI USA ALL CAP	-1.22	1.36	6.03	5.51	1.36	10.19	12.51
	MSCI US REIT INDEX	1.26	3.87	17.47	12.73	3.87	19.48	11.59
	MSCI USA	-1.60	0.86	5.17	5.64	0.86	10.58	12.22
FACTOR	MSCI ACWI Minimum Volatility	-0.49	3.46	7.45	6.82	3.46	11.27	9.06
	MSCI ACWI Risk Weighted	-1.54	1.95	1.76	-1.93	1.95	2.66	6.23
	MSCI ACWI Value Weighted	-2.06	1.23	-0.50	-4.41	1.23	-0.53	4.99
	MSCI World Minimum Volatility	-0.89	3.29	7.70	6.56	3.29	10.92	9.13
	MSCI World Risk Weighted	-1.40	2.60	4.35	0.29	2.60	4.92	7.98
	MSCI World Value Weighted	-2.05	1.27	0.43	-3.21	1.27	0.47	6.19
	MSCI USA Minimum Volatility	-0.94	1.87	9.40	10.66	1.87	14.33	12.85
	MSCI USA Value Weighted	-1.68	-0.36	3.52	3.38	-0.36	7.98	12.07

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An Interview with...

LAURENT SEYER,

MANAGING DIRECTOR AND GLOBAL HEAD OF CLIENT COVERAGE

Before joining MSCI, Mr. Seyer was Global Head of the Client Group at AXA Investment Managers in Paris, where he previously also served as Global Head of Multi-Asset Class solutions. Prior to that, Mr. Seyer spent 24 years at Société Générale where he held a variety of senior roles in equity derivatives and structured product sales, mergers and acquisitions, corporate finance and corporate development and business strategy, culminating in his role as CEO of Lyxor Asset Management from 2006 to 2012. Mr. Seyer graduated from the Institut d'Etudes Politiques in Paris. Mr. Seyer is based in MSCI's London office.

Q: YOU RECENTLY JOINED MSCI. WHAT DREW YOU TO THE COMPANY?

LAURENT: In today's complex and volatile markets, investment managers and asset owners need tools to help them make more informed investment decisions and better monitor risks. MSCI was therefore extremely attractive to me - it is an innovative, international company that sits in the middle of the investment process, one that is ideally positioned to meet investment managers' needs because of its comprehensive suite of product and services. MSCI's unique capacity to help clients navigate today's financial markets gave me the opportunity to operate in a firm that could truly offer long term, extremely valued and holistic relationships to its clients.

Q: CAN YOU ELABORATE FURTHER ON THIS CAPACITY?

LAURENT: There are few firms that can claim that they have such deep expertise across the investment spectrum - risk models, portfolio construction, performance attribution, asset allocation, security valuations, risk modeling, market risk, credit risk, liquidity risk, regulatory transparency, indexes and benchmarks. MSCI's product offering is truly global and covers all asset classes. We have a wide range of tools and solutions that can help investors in any market build and manage better portfolios.

Not only do we provide state- of-the-art solutions, but we also have the capacity to truly understand client problems because many people within MSCI came from the investment world and know what it means to manage money. We have a very strong research team and we have over 500 dedicated client facing staff focused on helping our clients every day. That's one of our key strengths.

This all adds up to an astonishing capacity to help clients solve their problems. Very few firms can help clients the way MSCI can.

Q: WHAT IS THE ONE THING THAT HAS CHANGED IN THE INVESTMENT BUSINESS SINCE YOU STARTED 20 YEARS AGO?

LAURENT: In In a word – complexity. We are living in a world which has become much more complex. Ten years ago if you were a pension scheme CIO in Europe you might invest 80% of your assets under management locally, using local asset managers and splitting your assets between equites and bonds only.

"VERY FEW FIRMS CAN HELP CLIENTS THE WAY MSCI CAN"

Now with a low growth, low interest rate environment that is no longer possible. You must be global. You must consider invests in alternatives, real assets, and private assets. The world is also more complex because of the ever changing regulatory requirements. And it's more complex because many are moving towards multi-asset class outcome-oriented investments in search of higher returns. This complexity has created a tremendous cost and organizational burden on our clients.

Q: YOU HAVE BEEN TRAVELING QUITE A BIT SINCE JOINING MSCI VISITING CLIENTS ALL OVER THE WORLD. WHAT ARE THE KEY CHALLENGES THEY ARE DISCUSSING WITH YOU?

LAURENT: Since I joined MSCI four months ago, I have been traveling the globe meeting and listening to our clients. From my conversations, they are dealing with three major challenges.

The major concern, as I mentioned earlier, is the search for returns. Investors continue to diversify their portfolios in order to find new sources of income. In this respect, Factors and Factor Indexes are often seen as a way to better manage exposures in their portfolios. Also, institutional investors are giving asset managers more flexibility to invest through unconstrained mandates. As a result they need to monitor very closely the risks and performance attribution of these mandates.

The second challenge our clients face is the requirement for more transparency. Providing this transparency becomes more challenging given the higher complexity of portfolios. Many of our buy-side clients, faced with the rising costs of data aggregation and normalization of multi-asset class portfolios, are now beginning to outsource non-core functions like data aggregation and data management and reporting so they can focus squarely on the investment process.

Lastly, regulation remains an area of focus for our clients. New requirements around stress testing for banks and the impact of solvency rules on European insurance firm's asset allocation are a few illustrations of the growing influence of regulation on the way investments are managed.

We are working closely with Asset Managers, Hedge Funds, Banks and Asset Owners globally to help them address these challenges.

Q: WHAT ARE YOUR PLANS MOVING FORWARD FOR MSCI'S CLIENT COVERAGE ORGANIZATION?

LAURENT: Our clients are looking for people who can help them solve problems and make their lives easier and simpler. They are looking for better investment tools but they are also looking for experts to help extract value from these tools and analytics.

Most of the people in my organization are not sales people. They are consultants and client service people who are here to help our clients succeed. We have consultants on the ground in every major financial market that are available to spend time at our client's offices, designing tailor made solutions to their problems and ensuring they maximize the value MSCI brings them. This service excellence is something I am extremely proud of.

I am committed to building strong, holistic relationships with our clients where we are valued because of what we bring to the table and how we work side-by-side with our clients to help solve their problems. That value is in the DNA of the people at MSCI that I hope you experience every day.


"WE HAVE CONSULTANTS ON THE GROUND IN EVERY MAJOR FINANCIAL MARKET"

GLOBAL MACROECONOMIC RISK AND ASSET ALLOCATION

INTEREST RATE UNCERTAINTY IN THE U.S. HAS IMPLICATIONS FOR FACTOR ALLOCATIONS

By Raghu Suryanarayanan, Katalin Varga, András Urbán, Jahiz Barlas

The health of the U.S. economy is back under scrutiny following the Federal Reserve's comments that policy normalization will be "data driven" and depend on benign trends in growth and inflation. The MSCI Macroeconomic Model indicates that low inflation and slow growth are likely to persist, although there is significant uncertainty about the future of these key economic drivers. This uncertainty has important implications for both the timing and scale of future increases in interest rates, equity risk premia, and factor allocations. A rise in interest rates could be driven by faster growth or significantly higher inflation, and while the former scenario could be positive for the equity market and factor index-based strategies, the latter could have an adverse impact. Relative to bonds, both scenarios could be positive for equities, meaning that uncertainty-tolerant investors could decrease their allocation to bonds and within equities, remain tilted towards factor-based strategies.

PROJECTED GROWTH REMAINS SLOW BUT STEADY

The MSCI Macroeconomic Model projects that the U.S. economy will grow at 2.4% three-years-out (see Exhibit 1). Although solid, that growth rate is well below the pre-crisis trend. The model's slow growth projections are consistent with renewed

EXHIBIT 1: Economic Growth and Inflation Projected to Remain Well Below Pre-Crisis Trend

As of April 1, 2015			Global	DM	EM	US	UK	Eurozone	China	Russia	Switzerland
GDP	Long-Term Trend Through 2007		4.5	3.2	7.8	3.4	2.8	2.8	9.5	6.9	1.8
	Last Four Quarters		2.7	1.6	5.5	2.7	2.5	0.7	7.6	0.0	2.2
	MSCI Year-Ahead Projections as of February 2015	Baseline	3.1	1.9	5.5	2.5	2.9	1.1	8.9	-1.3	1.4
		Low	1.3	0.2	3.2	0.9	1.4	-0.5	7.2	-5.3	0.1
		High	4.9	3.6	8.0	3.9	4.6	2.8	10.6	2.6	2.7
	MSCI 3 Years Out Projections as of February 2015	Baseline	3.1	1.7	6.0	2.4	1.6	1.0	8.9	0.0	1.6
		Low	1.0	-0.3	3.5	0.6	-0.3	-1.1	7.1	-3.8	0.2
		High	5.1	3.7	8.6	4.2	3.7	3.0	10.7	4.0	3.0
INFLATION	Long-Term Trend Through 2007		3.4	3.4	4.1	4.0	2.7	3.1	0.4	13.1	0.7
	Last Four Quarters		1.9	1.1	3.8	1.7	0.4	-0.2	2.4	6.2	0.5
	MSCI Year-Ahead Projections as of February 2015	Baseline	1.7	0.9	4.0	1.6	-1.7	0.5	2.4	13.2	0.5
		Low	1.0	0.2	2.7	1.3	-3.7	-0.4	2.1	10.3	0.5
		High	2.3	1.7	5.3	1.9	0.4	1.4	2.6	16.3	0.6
	MSCI 3 Years Out Projections as of February 2015	Baseline	1.8	1.3	4.4	1.7	2.3	0.6	2.9	8.4	0.0
		Low	0.7	0.2	2.2	1.1	-0.8	-0.7	1.3	6.0	-1.1
		High	2.9	2.3	6.6	2.2	5.3	1.8	4.6	11.0	1.0
TERM SPREAD	Current		1.1	1.1	0.4	1.8	1.6	0.8			0.7
	MSCI Year-Ahead Projections as of February 2015	Baseline	1.2	1.2	0.6	1.9	0.8	0.8			0.9
		Low	0.7	0.7	0.2	1.4	0.2	0.3			0.7
		High	1.6	1.6	1.0	2.4	1.3	1.3			1.2
	MSCI 3 Years Out Projections as of February 2015	Baseline	1.1	1.2	0.7	1.8	0.8	0.8			0.9
		Low	0.5	0.5	0.3	1.1	0.1	0.0			0.6
		High	1.7	1.8	1.2	2.6	1.6	1.6			1.2

This Exhibit shows Baseline, Low, and High projections for real GDP growth, inflation, and term spread (10-year minus 3-month) for selected regions and countries from the MSCI Macroeconomic Model. Low and High projections are the 30th and 70th percentiles. All rates are annualized percentage rates. The model Baseline projections are consistent with the continuation of global macroeconomic uncertainty. In turn this scenario implies that low global bond yields and high global equity risk premia, driven by low inflation and slow growth, are likely to persist.

Source: MSCI Macroeconomic Model

sluggishness in industrial production and retail sales (see Exhibit 2). Inflation projections remain stubbornly low, even three-years-out, at about 1.7% (see Exhibit 1). Our model also suggests that inflation is unlikely to pick up much in 2015: the model gives a less than 30% chance of inflation outstripping the Fed target of 2%.

The Fed's decision to normalize policy and increase rates is likely to depend on significant improvements in growth and inflation. An imminent hike is unlikely under the model baseline scenario, and in turn, bond yields may well remain low and equity risk premia high. The model projects an annualized and inflation-adjusted return to the U.S. equity market of 5.9% (see Exhibit 3). As a result, uncertainty-tolerant institutional investors could favor equities (65%) relative to bonds (35%) (see Exhibit 4).

WAITING ON THE FED'S HIKE

However, there is uncertainty about the future pace of growth and inflation. A faster recovery to pre-2008 crisis trend growth in the United States, combined with moderately higher inflation, could spur the Federal Reserve to hike interest rates sooner. With equity cash-flows and returns driven primarily by real economic growth, according to our model, this could benefit equities at the expense of bonds (see Exhibit 3).

EXHIBIT 2: Short-Term Macroeconomic Indicators Signal Greater Uncertainty About Long-Term Trend Growth and Inflation

As of March 25, 2015	Industrial Production	Retail Sales	Unemployment	CPI Inflation	Unit Labor Cost	Trade Balance	Exports
U.S.	0.05	-0.10	-0.08	-0.34	0.01	-0.33	-0.13
CANADA	0.00	-0.05	-0.10	-0.06	-0.02	**1.37**	-0.04
UK	0.15	0.10	-0.29	-2.18	0.14	0.03	0.01
GERMANY	0.02	0.20	-0.09	-1.69	-0.07	0.40	0.14
FRANCE	0.04	0.07	-0.08	-1.65	-0.02	0.60	0.10
SPAIN	0.02	-0.28	-0.35	-3.51	0.22	0.32	-0.01
ITALY	0.15	0.21	-0.30	-0.49	-0.01	0.38	0.11
JAPAN	0.01	-0.01	-0.08	-0.42	0.00	**1.47**	0.91
AUSTRALIA	-0.09	0.05	0.12	-1.32	-0.93	**-1.20**	0.78
CHINA	0.02	0.19	0.23	-0.69	-0.02	**2.22**	-0.05
INDIA	0.03	-0.10	0.07	-0.47	0.01	0.71	-0.51
KOREA	0.02	0.31	-0.07	1.21	0.19	0.66	-0.08
BRAZIL	-0.33	-0.01	0.11	0.08	-0.27	**-2.19**	-0.97
RUSSIA	**1.09**	-0.28	0.22	0.45	-0.21	-0.53	-0.40

The heat map shows, for each variable, the change in realized value over previous quarter's trend, normalized by historical standard deviation.

Shaded figures indicate above one standard deviation changes (positive or negative). Red coloured scores contribute to a potential decline in real GDP relative to previous quarter trend. Green coloured scores contribute to a potential increase in real GDP relative to previous quarter trend. Bold figures indicate scores that remain in positive/negative territory. CPI Inflation is coloured in green between -1 and 1, otherwise coloured in red.

Source: MSCI Research

EXHIBIT 3: A Faster Return to Pre-Crisis Trend Growth and Inflation in the U.S. Could Benefit Equity Market, Factor, and Cyclical Sector Returns

Annualized Real Returns		10-Year Government Bond Yield	Equity Market	Equal Weighted	High Dividend Yield	Momentum	Quality	Risk Weighted	Value Weighted	Energy	Materials	Industrials	Consumer Discretionary	Consumer Staples	Health Care	Financials	Information Technology	Telecom Services	Utilities
3 Years Out Projection as of March 2015	Baseline	1.8	5.9	8.0	6.9	9.2	8.8	8.0	7.3	5.8	6.2	7.1	6.2	7.2	6.1	6.9	4.1	4.3	3.4
	Return to Trend Growth	2.2	6.6	9.1	9.1	10.7	9.6	9.5	8.6	6.9	7.5	8.1	7.4	7.3	6.3	8.5	5.2	5.0	3.5
	High Inflation	3.0	3.3	5.0	3.3	1.3	5.3	5.6	3.5	2.5	2.6	3.5	2.6	5.4	4.4	3.2	2.9	1.3	1.9
Long-term Equilibrium Projections	Baseline	1.8	5.4	6.2	4.6	4.9	5.4	6.7	6.4	3.9	6.5	5.6	6.2	3.1	3.1	6.9	6.2	4.6	3.1
	Low	1.1	3.8	3.9	3.0	2.5	3.3	4.3	4.0	2.7	4.2	3.4	3.7	2.6	2.5	4.7	3.9	3.1	2.6
	High	2.6	7.0	8.6	6.3	7.4	7.6	9.1	8.7	5.2	8.9	7.8	8.8	3.5	3.7	9.3	8.3	6.1	3.6

The Exhibit shows the MSCI Asset Pricing Model implied three-year horizon projections for the U.S. 10-year constant maturity nominal government bond yield, and MSCI U.S. market, factor and sector index returns under the model Baseline, Return to Trend Growth and High Inflation scenarios. While the Return to Trend Growth (4.2% growth and 2% inflation) and High Inflation (3.2% inflation) scenarios could be consistent with higher interest rates, they could have different implications for equities. The former could be positive for equities. As significantly higher inflation could decrease future economic growth, the latter could be negative for equities. The Exhibit also shows the MSCI Asset Pricing Model implied long-term equilibrium return projections and the standard error bands (Low/High) for these projections. Long-term returns reflect compensation for their cash-flow exposure to macroeconomic uncertainty. Equity factors and sectors differ in their exposure to macroeconomic uncertainty. All equity returns are annualized and adjusted for inflation.

Source: MSCI Asset Pricing Model

EXHIBIT 4: Portfolio Allocations Could Depend on Investors' Tolerance for Macroeconomic Uncertainty and Their Macroeconomic Scenarios

	High Inflation	Baseline	Return to Trend Growth
Equity Market	34%	27%	34%
Equity Factor Tilted Strategy	40%	38%	43%
Bonds	26%	35%	23%

The Exhibit shows optimized allocations for an uncertainty tolerant institutional investor to the U.S. equity market, a risk-parity combination of U.S. factors (Equity Factor Tilted Strategy) represented by the 6 MSCI US factor indexes, and 10-year constant maturity U.S. government bonds, conditional on the model Baseline, Return to Trend Growth, and High Inflation scenarios. Model allocations could depend on investors' tolerance for macroeconomic uncertainty and their macroeconomic scenarios. Under the Baseline scenario, allocations to the equity factor tilted strategy could help enhance risk-adjusted returns to an equity and bonds portfolio. This return enhancement comes at the cost of greater exposure to macroeconomic uncertainty. Bonds help diversify. A rise in interest rates could be consistent with the Return to Trend Growth and High Inflation scenarios. Under both scenarios, bonds could underperform relative to equities in risk-adjusted terms according to our model. In turn, an uncertainty tolerant investor could benefit from reducing allocations to bonds, and increasing allocations to the equity market and the equity factor tilted strategy.

Source: MSCI Dynamic Asset Allocation Model

The annualized inflation-adjusted equity return for the next three years could thus rise from 5.9% to 6.6%, with the 10-year treasury yield climbing to 2.2%.

Within the equities market, growth-sensitive factors and cyclical sectors should continue to outperform (see Exhibit 3), as return premia compensate for uncertainty in real growth rates. Factor index-based strategy returns could rise by about 90 bps to 220 bps per year, depending on the strategy, and cyclical sector returns could rise by about 100 bps to 160 bps per year, depending on the sector. In turn, Exhibit 4 indicates that uncertainty-tolerant institutional investors could further tilt their allocations towards equities (77%) relative to bonds (23%), and towards equity factor-based strategies (43%).

However, if the Fed delays its move to raise interest rates for too long, a significantly higher rate of inflation cannot be totally ruled out - although this is unlikely according to our model baseline scenario.

MODELING THE IMPACT OF ADVERSE INFLATION

If inflation were to mount to 3.2% three-years-out compared to the model baseline of 1.7%, the Fed might hike interest rates aggressively, pushing the 10-year treasury yield to about 3% according to our model (see Exhibit 3). In turn, real economic growth could fall by about 80 bps, implying that real equity returns would decrease from 5.9% to about 3.3% per year over the next three years (see Exhibit 3).

Factor index-based strategies and cyclical sector returns could experience larger declines. On balance, however, equities might still profit over bonds. Furthermore, the MSCI Macroeconomic Model indicates that uncertainty-tolerant investors could reduce their allocations to bonds to 26% relative to the baseline allocation of 35%, and within equities, could decrease their relative tilt towards factor-based strategies.

MSCI MACROECONOMIC RISK MODEL

Starting in 2012, MSCI Research began exploring the impact of macroeconomic events on asset valuation and strategic asset allocation. This research has allowed us to create a growing suite of "macro" models to:

- Generate future scenarios for global macroeconomic variables such as GDP growth and inflation
- Measure and attribute long-term portfolio risk to macroeconomic factors
- Assess the impact of long-term macroeconomic scenarios on portfolio returns and asset allocation decisions

The MSCI Macroeconomic Model covers twenty-three countries accounting for more than 80% of world GDP, and combines country-specific models into a global framework, providing an important risk and asset allocation tool to investors. The model produces timely forecasts that compare favorably to alternative forecasts. In addition to the forecasts for the macroeconomic scenarios, the model also provides scenario probabilities. Combined with the MSCI Asset Pricing and Dynamic Asset Allocation models, the macroeconomic forecasts can be used to decompose long-term macroeconomic risk in portfolios, and to establish a quantitative asset allocation strategy based on the potential macro scenarios.

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Our powerful databank offers analytical insight to enhance the understanding of real estate markets globally. Market intelligence is available in more than 30 investable markets worldwide.

REAL ESTATE MARKET INTELLIGENCE - SUBSCRIPTIONS

IPD Global Intel is a consolidated set of global, regional and national indexes with sector-specific breakdowns. It equips asset owners, researchers, strategists, portfolio and risk managers with rich analytics to understand local and regional real estate performance and risks. This product can be accessed in three overarching modules:

1. **Multinational Intel -** services available in 32 markets indicating performance trends using core measures such as returns, investment activity, costs and income, rental growth and consistent yields.
2. **City & Sector Intel -** services include granular market and property sub-type disaggregation. This market intelligence focuses on geographies within countries, cities, secondary and tertiary key centers, and sectors.
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For more information please contact **enquiries@ipd.com**

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GLOBAL RISK MONITOR

CENTRAL BANKING POLICY IMPACTS THE MARKET

Using a standard RiskMetrics forecasting model, the monthly MSCI Global Risk Monitor shows forecasts for 12 key global risk factors. We examine changes in volatility and correlation behavior and identify days when factor returns were surprising relative to the risk forecasts.

By Thomas Verbraken and Raj Iyengar

March began with a sell-off in U.S. Treasuries, following the payroll report from the Bureau of Labor Statistics on March 6, which indicated a pickup in activity. We saw the U.S. Dollar strengthen relative to the Euro, and the U.S. two- and ten-year yields and the U.S. three-month Eurodollar futures three-month rate increase (see Exhibit 3) .

The European Central Bank (ECB) began its bond-buying program on March 9th, sending European short-term yields further into negative territory and weakening the Euro. The impact of a stronger U.S. Dollar and prospects for higher interest rates weighed on equity markets, and we observed a larger than two-sigma loss for the MSCI USA and MSCI Emerging Markets indexes on March 10 (see Exhibit 3 and 4)

On March 18, the Fed revised its interest rate projections downward, and downgraded its outlook for the U.S. economy, with inflation data surprising to the downside. In addition, the Fed included in its statement some prudence to the outlook going forward, suggesting a less aggressive timeline for an interest rate hike. U.S. Treasuries rallied, credit spreads tightened and the Euro appreciated with respect to the U.S. Dollar (see Exhibit 3).

FORECAST VOLATILITY

VOLATILITY STATS FOR EWMA (DECAY FACTOR OF 0.97)

EXHIBIT 1: Risk Forecast of Daily Absolute Changes in Rates (bps) Over Prior Month, Prior Three Months and Prior Year (Decay = 0.97)

	Prior month[1]				Prior 3 months[2]				Prior year[3]			
	Return	Avg. vol.	Min. vol.	Max. vol.	Return	Avg. vol.	Min. vol.	Max. vol.	Return	Avg. vol.	Min. vol.	Max. vol.
US GOVT 2Y	-6.10	3.79	3.53	**4.10**	-11.23	3.49	2.73	**4.10**	13.73	2.39	1.53	**4.10**
US GOVT 10Y	-5.52	5.94	5.65	6.18	-24.97	5.73	4.44	6.43	-85.94	4.33	3.43	6.43
EUR GOVT 2Y	-2.52	1.00	**0.84**	**1.16**	-13.73	0.97	**0.84**	**1.16**	-41.24	1.22	**0.84**	1.86
US 3M EURODOLLAR FUT 3M	0.27	0.97	0.83	**1.13**	4.50	0.70	0.43	**1.13**	10.59	0.41	0.23	**1.13**

EXHIBIT 2: Risk Forecast of Daily Relative (log) Changes Over Prior Month, Prior Three Months, and Prior Year (Decay = 0.97)

	Prior month[1]				Prior 3 months[2]				Prior year[3]			
	Return	Avg. vol.	Min. vol.	Max. vol.	Return	Avg. vol.	Min. vol.	Max. vol.	Return	Avg. vol.	Min. vol.	Max. vol.
CDX NAIG OTR	4.31%	2.11%	**2.00%**	2.18%	-3.30%	2.33%	**2.00%**	2.64%	-5.26%	2.24%	1.52%	3.01%
CDX NAHY OTR	-1.75%	2.05%	**1.95%**	2.13%	-11.39%	2.19%	**1.95%**	2.47%	-1.00%	2.00%	1.44%	2.74%
EUR/USD	-4.25%	0.66%	0.56%	**0.72%**	-11.24%	0.61%	0.48%	**0.72%**	-22.08%	0.40%	0.23%	**0.72%**
MSCI USA	-1.60%	0.80%	**0.75%**	0.84%	0.86%	0.85%	**0.75%**	0.94%	10.58%	0.71%	0.49%	0.94%
MSCI EM	-1.59%	0.75%	**0.71%**	0.77%	1.91%	0.79%	**0.71%**	0.87%	-2.02%	0.68%	0.47%	0.90%
EURODOLLAR 3M VOL	18.75%	4.24%	**4.01%**	4.53%	8.18%	4.70%	**4.01%**	5.47%	70.75%	5.46%	**4.01%**	6.84%
VIX	14.62%	7.02%	**6.75%**	7.37%	-20.36%	7.90%	**6.75%**	8.81%	10.16%	7.05%	4.82%	9.28%
WTI 1M	-4.22%	3.14%	2.99%	3.37%	-9.90%	3.12%	2.48%	3.62%	-52.49%	1.67%	0.71%	3.62%

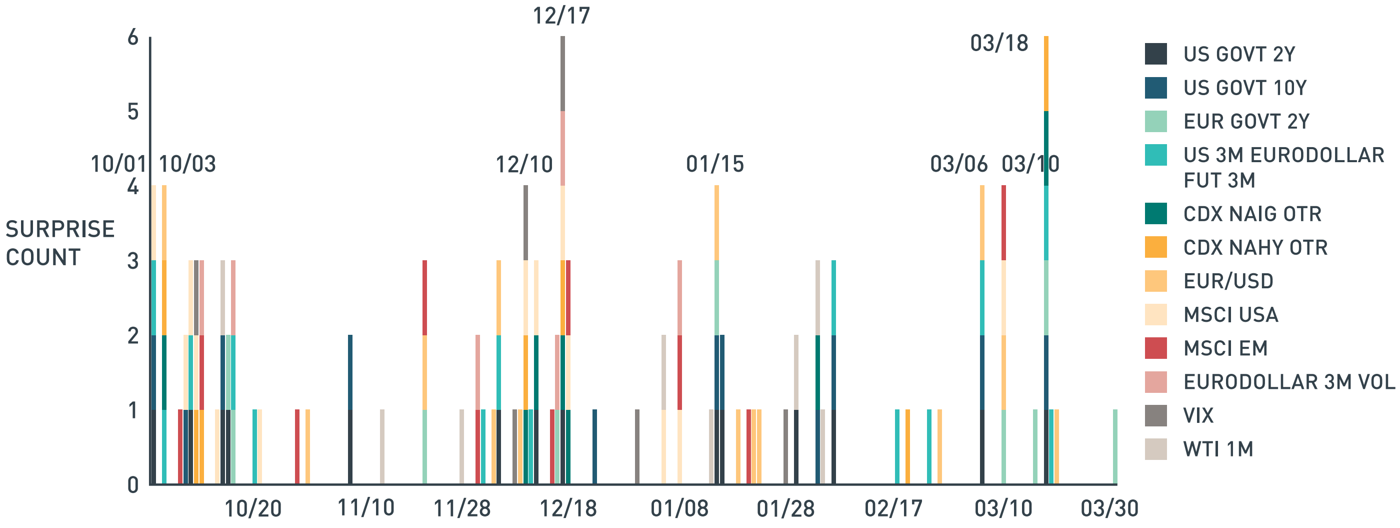
Overall, March was not very volatile, but central banking policy impacted several risk factors. We saw U.S. and EUR government rates decrease, the Euro weaken, the VIX increase and the Oil price slide.

[1] Prior month date range: March 01, 2015 - March 31, 2015.

[2] 3 month date range: January 01, 2014 - March 31, 2015.

[3] One year date range: April 01, 2014 - March 31, 2015. Highlighted prior month volatilities indicate that the volatility level reached its minimum/maximum value of the last three months or twelve months. The relevant three-month/ twelve-month minimum/maximum values are highlighted as well.

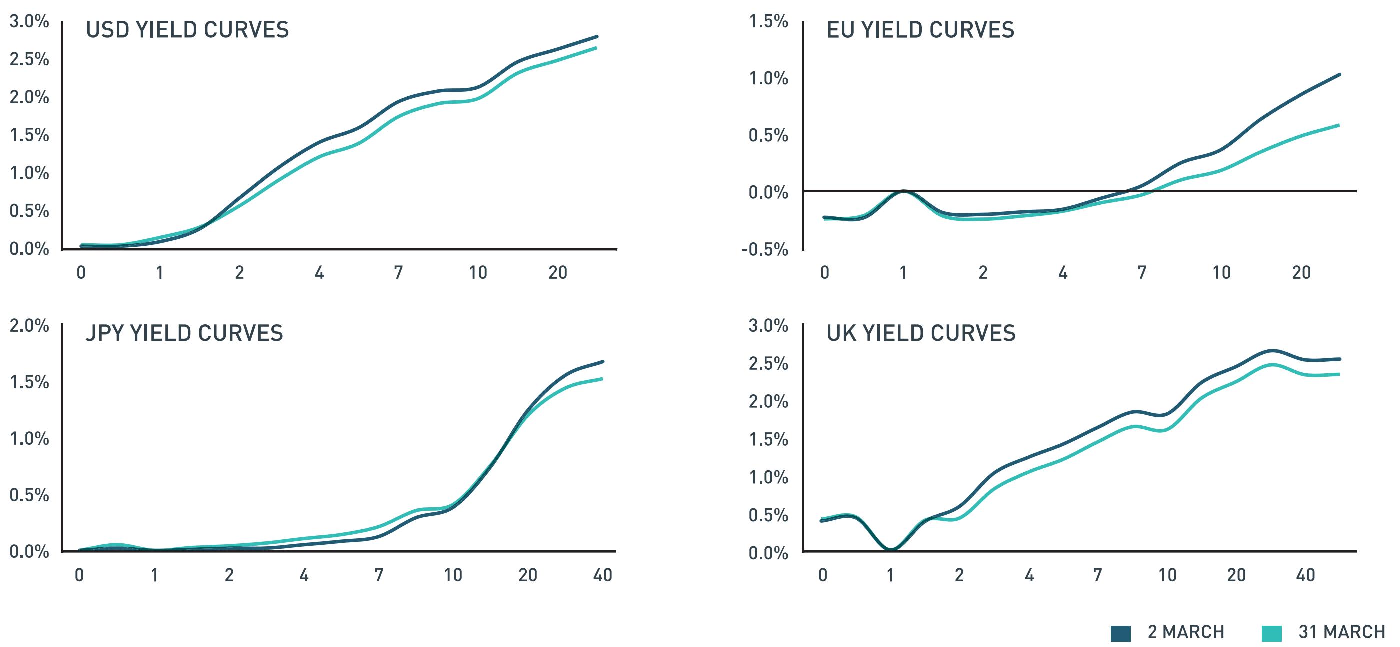
EXHIBIT 3: Daily Returns Exceeding Two Times Forecast Volatility



Date range: October 01, 2014 to March 31, 2015

Exceedances clustered around three main dates. At the beginning of the month, nervousness about an early rate hike by the Federal Reserve worried investors. We observed positive return exceedances for U.S. interest rates (on March 6) and negative return exceedances for equity prices (on March 10). On March 18, after the Federal Reserve's monthly meeting, an early rate hike seemed less likely and we observed a downward pressure on U.S. rates and on the U.S. Dollar.

EXHIBIT 4: Major Government Yield Curves



As a result of dovish monetary policy, short-term yields remained low across the major fixed income markets. European yields even went systematically into negative territory, pushed by the European Central Bank's bond buying program.

RISK FACTOR DEFINITIONS

CDX NAIG OTR

Five-year North American Investment Grade CDS Index Spread Level, constructed by MSCI using the most liquid five-year North American Investment Grade CDS Index and smoothed over a period when a new series becomes on-the-run.

CDX NAHY OTR

Five-year North American High Yield CDS Index Spread Level, constructed by MSCI using the most liquid five-year North American High Yield CDS Index and smoothed over a period when a new series becomes on-the-run.

EUR two-year government bond

Euro government two-year Zero Rate, constructed by MSCI from on-the-run German Bunds.

EUR/USD

Mid quote for EUR/USD Foreign Exchange Rate snapped at 1100 EST. Appears in the report each month

Eurodollar three-month volatility

Implied volatility time series of three months at-the-money options on Eurodollar interest rate futures.

Europe two-year government bond

Euro two-year Zero Rate, constructed by MSCI from on-the-run German Treasury bonds..

MSCI emerging market index

Time series of MSCI Emerging Market Equity Index using end-of-day closing prices.

MSCI EM Europe Index in EUR

The MSCI Emerging Market Europe equity index using end-of-day closing prices quoted in Euros.

MSCI USA Index

Time series of MSCI USA equity index using end-of-day closing prices.

U.S. 10-year government bond

U.S. Government 10-Year Zero Rate, constructed by MSCI from on-the-run U.S. Treasury bonds.

U.S. three-month Eurodollar Futures three-month rate

Interest rate of three-month interest rate futures calculated by MSCI based on CME Eurodollar futures quotes on three-month deposits.

U.S. two-year government bond

U.S. Government Two-Year Zero Rate, constructed by MSCI from on-the-run U.S. Treasury bonds.

VIX

Time series of the CBOE Market Volatility Index using end-of-day closing prices.

WTI

One-Month Crude Oil: One-Month CME light sweet crude oil time series. One-Month tenor constructed as a Constant Maturity Future time series by interpolating the first two near-term CL futures contracts.

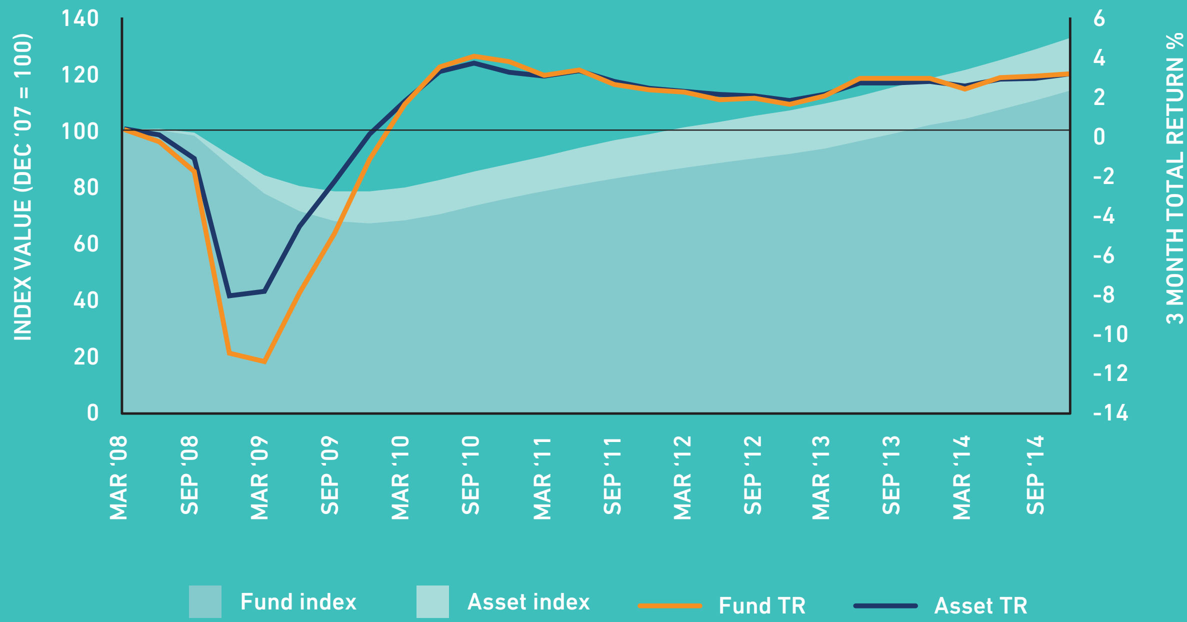
MSCI'S CLIENTS INCLUDE

98 OF THE TOP 100

GLOBAL ASSET MANAGERS, AS RANKED BY P&I.[1]

* Based on P&I AUM data as of Dec 2013 and internal MSCI data as of December 2014

MSCI



MSCI GLOBAL QUARTERLY PROPERTY FUND INDEX

The consultative IPD Global Quarterly Property Fund Index incorporates a consistent dataset of core open-ended funds across the globe. The index is the only quarterly dataset tracking core real estate investment performance globally.

The index is based on a sample of 86 funds with a total net asset value of USD $ $238.0billion and a total capital value of over USD $ $290.29 billion as at December 2014.

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U.S. MARKET BRIEF

SMALL CAPS, MOMENTUM OUTPERFORM IN BRUISING MARCH

By Anthony Yip, Altaf Kassam, Ting Fang and Stanislav Radchenko

For most of March 2015, U.S. equity market performance hinged on the pending hike in interest rates by the U.S. Federal Reserve. After weighing mixed economic signals, the Fed calmed investors by taking a dovish stance on the economy and adopted a "go slower" policy on raising interest rates. After this news, the MSCI USA Index responded with a gain of 2.7% in one week.

The following week, a surprise decline in February durable goods orders and growing violence in the Middle East caused the MSCI USA Index to end the month down 1.44%, compared with a modest 1.38% gain for the quarter[1].

[1] The MSCI USA Index is designed to measure the performance of the large and mid-cap segments of the U.S. market. With 628 constituents, the index covers approximately 85% of the free float-adjusted market capitalization in the U.S.

U.S. small cap stocks and the Momentum and Quality factors outperformed the broad market in March, as the strong U.S. Dollar and weak energy prices continued to buffet U.S. large cap stock prices. Investors shunned large-caps, which had outsized exposure to foreign revenue; instead, investors pursued U.S. small caps, which are more reliant on domestic revenues and have continued to outperform since February of this year. The MSCI Small Cap Index advanced 1.29% for March 2015 and 4.8% for the first quarter, while the MSCI Large Cap Index returned -1.76% for March and eked out a slim gain of 0.89% for the quarter.

Within small caps, Momentum and Growth factors helped drive performance for March and for the quarter. Within MSCI Factor Indexes, the MSCI USA Momentum Index was dominant in the first quarter while low volatility and small size indexes performed best in March.

Within the broader market, however, the Barra Factor Models indicated that Momentum and Quality outperformed in March, while Value, Long-term Reversal and Size[2] underperformed. For the first quarter, Seasonality[3], Prospect, Momentum and Growth were the top performing factors while Long-term Reversal underperformed in all three months of the first quarter.

EXHIBIT 1: **USA Factor Indexes Momentum (Gross Total Returns, USD) - All returns to 31 March, 2015**

Source: http://www.msci.com/factorindexes/

FACTOR INDEX PERFORMANCE

Low volatility and small size were a strong combination last month, with the MSCI USA Minimum Volatility and Equal Weighted Indexes both outperforming their MSCI USA index parent. The MSCI USA Risk Weighted Index, which combines both of these factors, was the best performing Index in March.

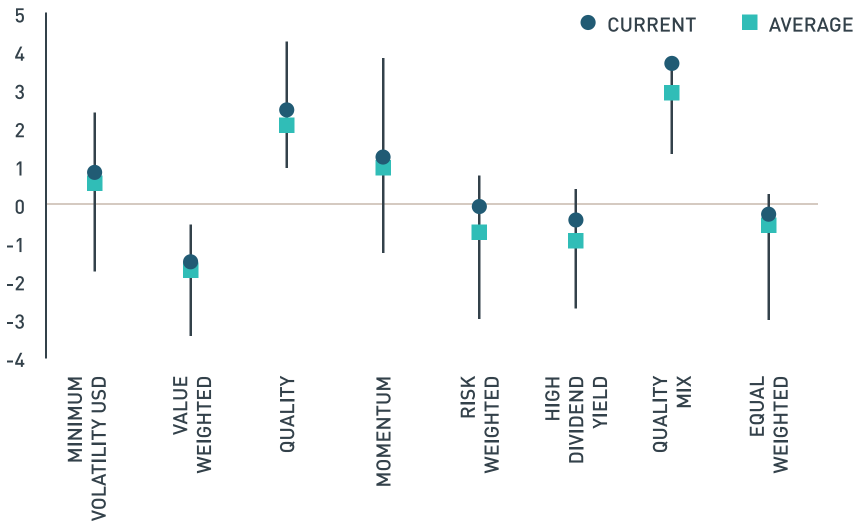
Despite its wobble last month, the MSCI USA Momentum Index was the standout of the USA Factor Indexes in terms of 3-month and 1-year returns, and also looking farther out to 5-year horizons, (see Exhibit 1).

As markets retraced their recent rise towards the end of March, and the more defensive Factor Indexes outperformed, the High Dividend Yield Index continued its steep fall, keeping its position at the bottom of the year-to-date rankings for MSCI USA Factor Indexes, and leaving it the worst performing Factor Index over the last 12 months.

[2] The Size factor captures differences in stock returns and risk due to differences in the market capitalization of companies. Large-cap companies have high size exposure, and hence negative performance of the Size factor means small-cap outperformance.

[3] Seasonality was the top performing factor for the quarter.

EXHIBIT 2: USA Factor Index Relative Valuations November 30, 2001 to March 31, 2015



These valuations are based on price to earnings, price to book value, price to cash earnings and price to sales at month end dates. Values below zero indicate the factor index is cheaper than the parent index. A current value below average indicates that the factor is cheap relative to its own history. The line endpoints indicate historical minima and maxima.

Source: http://www.msci.com/factorindexes/

RELATIVE VALUATIONS BY FACTOR INDEX

As smaller and more defensive constituents continued to outperform, their relative valuations moved up. The MSCI USA Quality Mix remained near the top of its historical range, with Risk Weighted moving higher too. Notably, the High Dividend Yield Index, despite its recent pullback, also saw higher than average relative valuations (see Exhibit 2).

BARRA FACTOR PERFORMANCE

As seen through our factor models[4], Momentum and Quality outperformed in March across the broad market and in small caps with Momentum factors rebounding sharply after their underperformance in February and have now returned to their previous highs. Industry Momentum and Momentum are among the top performing factors this quarter across both the total market and small-cap space. Also notable for the quarter are the Seasonality and Prospect factors, which top the list of best performers.

Small-cap outperformance in March was reflected in the poor performance of the Size factor in our U.S. Sector Model. Further, the preference for small-cap stocks appeared broad as most factors were positive for the quarter in our U.S. Small Cap Model.

Momentum and Growth factors drove small cap outperformance in March and for the quarter. Notably, the Value factor was a strong performer among small caps for both the month and the quarter.

Long-Term Reversal, which is based on reversal patterns during the last two years, underperformed sharply for the entire quarter across both the total market and small caps, continuing a trend that began in early 2014. Our research shows that actively managed U.S. mutual funds have significant exposure to this factor.

[1] Barra factors help explain risk and return characteristics and thus are important tools in understanding performance and portfolio construction, while MSCI Factor Indexes are rules-based indexes designed to provide exposure to six key factors that have historically offered a premium over long horizons and offer greater investability than pure factors.

EXHIBIT 3: Risk-Adjusted Performance of Select Investment Styles

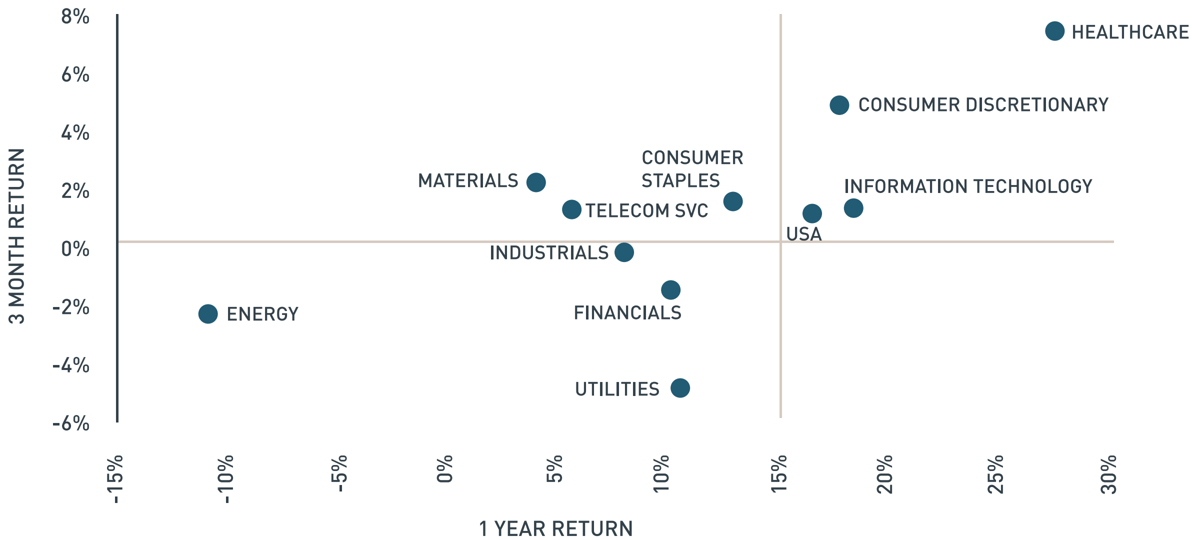
	Total market cap				Small cap			
	January	February	March	Q1	January	February	March	Q1
SEASONALITY	1.9	2.4	(0.6)	2.1	1.5	0.6	(1.1)	0.3
PROSPECT	1.3	1.2	0.2	1.5	1.1	1.2	(1.0)	0.8
INDUSTRY MOMENTUM	2.2	(1.5)	2.2	1.5	0.5	(0.3)	2.6	1.4
SENTIMENT	0.6	1.5	0.0	1.3	(0.2)	0.8	(0.2)	0.3
GROWTH	0.7	0.5	1.0	1.2	1.2	(0.0)	2.0	2.0
MOMENTUM	1.9	(1.3)	1.9	1.2	2.5	(1.2)	2.0	1.6
ASSET TURNOVER	0.5	0.0	1.3	0.9	(0.2)	2.0	0.3	1.0
LEVERAGE	(0.8)	2.1	0.3	0.6	0.8	2.0	(0.9)	1.3
LIQUIDITY	0.6	0.8	(1.4)	0.3	0.0	0.2	(1.8)	(0.9)
EARNINGS QUALITY	(0.2)	(0.7)	1.7	0.2	(0.5)	(0.1)	2.0	0.6
VALUE	(1.3)	1.3	(0.6)	0.1	(0.1)	1.1	0.9	1.0
SHORT-TERM REVERSAL	(2.1)	2.5	(0.4)	(0.2)	(0.5)	3.0	(1.4)	0.2
BETA	(1.4)	0.9	(0.1)	(0.6)	(1.6)	1.1	0.2	(0.5)
RESIDUAL VOLATILITY	(0.7)	0.5	(1.2)	(1.0)	(0.2)	1.5	(1.1)	0.0
PROFITABILITY	(0.2)	(1.5)	0.2	(1.1)	1.5	(1.1)	(1.0)	(0.1)
SIZE	(0.4)	(0.2)	(2.5)	(1.8)	0.5	1.3	(0.1)	1.0
LONG-TERM REVERSAL	(1.8)	(2.0)	(2.2)	(3.5)	(0.7)	(2.2)	(1.7)	(2.4)

Source: MSCI Barra US Sector Model and MSCI Barra US Small Cap Model

SECTOR INDEX PERFORMANCE

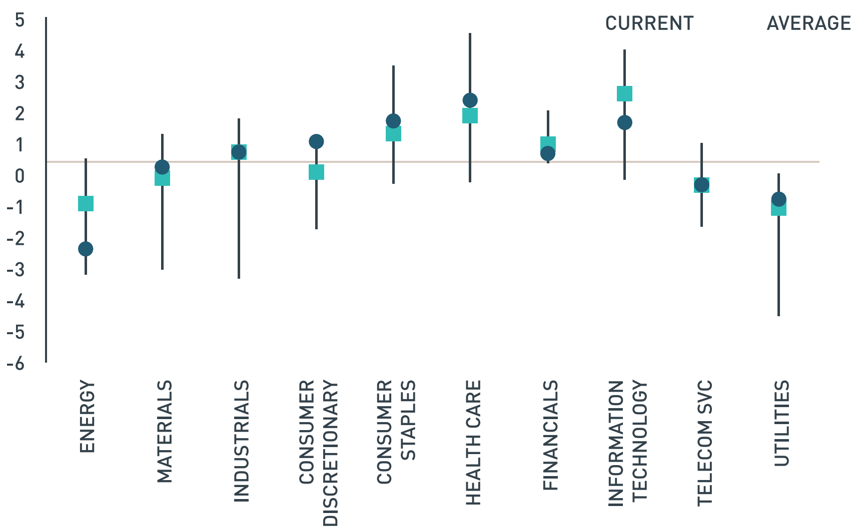
During the first quarter of 2015, the MSCI USA High Dividend Yield Index underperformed, possibly as a result of its historically high allocation to the poor-performing Technology Sector, as well as the high weight in fading Consumer Staples (see Exhibit 4).

EXHIBIT 4: USA Sector Indexes Momentum (Gross Total Returns, USD) - All returns to 31 March, 2015



Source: http://www.msci.com/factorindexes/

EXHIBIT 5: USA Sector Index Relative Valuations November 30, 2001 to March 31, 2015



These valuations are based on price to earnings, price to book value, price to cash earnings and price to sales at month end dates. Values below zero indicate the factor index is cheaper than the parent index. A current value below average indicates that the factor is cheap relative to its own history. The line endpoints indicate historical minima and maxima.

Source: http://www.msci.com/factorindexes/

RELATIVE VALUATIONS BY SECTOR INDEX

In terms of relative valuations, the Consumer Discretionary Sector has remained near the highest historic levels, whereas Energy and Technology were below recent averages (see Exhibit 5).

MOMENTUM DOMINATES SECTOR PERFORMANCE

Looking at sector performance through our Factor Model, Momentum continued its domination in March. The factor outperformed across every sector, while Size, a proxy for large-cap, and Long-Term Reversal underperformed in all but one sector. Earning Quality and Industry Momentum delivered positive performance in all but two sectors.

Within Momentum, performance is particularly strong in Materials, Information Technology and Consumer Staples. Long-Term Reversal, which explains the return differences of stocks based on their reversal pattern during the last two years, underperformed across all sectors except for Financials.

Size underperformed in all sectors except for Energy, suggesting investors tilted towards large-cap companies in this sector. Within the Energy Sector, Sentiment and Industry Momentum were key drivers of risk and return this month (see Exhibit 6).

EXHIBIT 6: Investment Style Risk-Adjusted Performance by Sector (March 1 through March 31, 2015)

	Consumer discretionary	Consumer staples	Energy	Financials	Healthcare	Industrials	Information technology	Materials	Telecom	Utilities
INDUSTRY MOMENTUM	0.5	2.0	2.5	0.2	0.7	0.6	2.0	(0.9)	(0.2)	0.5
MOMENTUM	1.4	1.7	1.6	1.4	1.3	1.5	1.9	2.3	1.1	1.3
EARNINGS QUALITY	0.9	0.1	1.9	(0.0)	2.3	0.8	(0.9)	1.1	0.2	1.5
ASSET TURNOVER	(1.9)	0.7	0.8	(0.8)	(0.6)	1.3	1.0	1.8	1.0	(0.1)
GROWTH	1.0	(1.6)	1.6	0.9	(0.0)	(0.5)	1.4	(0.4)	1.9	(1.0)
LEVERAGE	(0.4)	0.9	(0.4)	(0.2)	(0.0)	0.3	1.2	0.5	0.3	0.9
PROSPECT	(1.1)	0.5	0.3	0.1	(0.1)	(1.5)	0.5	(0.1)	(0.5)	(0.0)
PROFITABILITY	(1.6)	(0.3)	0.8	0.7	(0.6)	0.2	(0.0)	0.8	0.4	0.0
SENTIMENT	1.4	0.2	2.8	0.3	0.9	(1.9)	(0.6)	(1.0)	(0.8)	0.0
BETA	(0.8)	1.3	0.7	0.3	(0.3)	(0.6)	(1.6)	0.0	0.7	1.5
SHORT-TERM REVERSAL	(1.5)	(0.0)	1.3	0.7	(0.6)	(0.1)	(0.4)	0.5	1.1	0.3
SEASONALITY	1.5	0.4	(0.4)	(0.8)	0.6	0.5	(3.5)	(1.1)	0.5	1.6
VALUE	0.6	0.2	(2.7)	(1.1)	1.0	(0.8)	(0.6)	1.2	(0.7)	(0.4)
RESIDUAL VOLATILITY	(1.8)	1.4	(0.7)	(0.0)	(0.5)	(1.4)	(1.3)	(1.3)	0.3	1.5
LIQUIDITY	(1.2)	(1.9)	0.8	(0.9)	(0.3)	(0.9)	0.1	(1.2)	(1.7)	(0.4)
LONG-TERM REVERSAL	(1.5)	(1.3)	(1.2)	1.0	(1.7)	(1.8)	(0.2)	(1.5)	(0.4)	(1.1)
SIZE	(2.2)	(2.0)	0.7	(2.0)	(1.4)	(2.3)	(2.5)	(2.5)	(1.3)	(0.4)

In the first quarter, Momentum outperformed across all sectors and was particularly strong in Energy and Materials. Within the Energy Sector, Industry Momentum, Growth and Liquidity were important drivers of risk and return for the first quarter. Notably, Long-Term Reversal strongly underperformed in Consumer Discretionary and Industrials.

EXHIBIT 7: Investment Style Risk-Adjusted Performance by Sector (January 1 through March 31, 2015)

	Consumer discretionary	Consumer staples	Energy	Financials	Healthcare	Industrials	Information technology	Materials	Telecom	Utilities
SEASONALITY	2.0	1.2	1.1	(0.2)	1.4	1.7	0.3	(1.0)	2.3	(0.6)
PROSPECT	0.7	0.5	0.3	0.7	0.4	0.0	0.6	0.4	(1.0)	(0.7)
INDUSTRY MOMENTUM	(0.8)	1.3	2.9	0.2	1.4	0.2	0.4	(0.6)	1.7	1.6
SENTIMENT	0.6	1.6	1.4	(0.0)	1.8	0.9	0.9	(0.6)	(1.1)	1.2
GROWTH	0.3	(1.4)	2.4	0.5	(0.1)	0.7	1.7	(0.5)	0.4	0.5
MOMENTUM	1.0	1.4	1.6	1.4	0.4	0.5	1.0	1.5	0.5	0.4
ASSET TURNOVER	0.2	(1.0)	0.8	(1.6)	(0.5)	0.6	0.7	0.1	0.7	(0.2)
LEVERAGE	0.5	0.7	(0.5)	(0.0)	(0.4)	(0.2)	2.1	(0.1)	0.8	0.3
LIQUIDITY	(0.5)	(0.1)	2.1	0.0	0.8	0.1	0.3	0.4	(0.7)	(0.2)
EARNINGS QUALITY	0.9	(0.4)	1.4	(0.7)	0.3	0.4	(1.5)	(0.0)	(0.3)	0.6
VALUE	1.1	(0.7)	(0.4)	(1.3)	0.8	0.8	(0.2)	1.8	(0.0)	(0.7)
SHORT-TERM REVERSAL	(0.7)	0.1	1.2	(0.3)	(1.5)	(0.3)	0.2	0.9	0.7	0.9
BETA	(0.9)	0.3	0.7	(0.0)	(1.0)	(1.5)	(1.7)	(0.7)	0.0	0.2
RESIDUAL VOLATILITY	(1.4)	0.8	0.6	(0.6)	(0.3)	(2.0)	(1.4)	(0.7)	0.3	2.3
PROFITABILITY	(1.5)	0.6	(0.4)	1.2	(1.0)	(0.4)	(0.6)	(0.4)	(1.4)	0.4
SIZE	(0.8)	(1.5)	1.5	(1.6)	(1.2)	(2.0)	(1.8)	(0.8)	(0.6)	(1.2)
LONG-TERM REVERSAL	(3.3)	(1.3)	(1.9)	0.2	(2.6)	(3.8)	(0.6)	(1.8)	(0.9)	(1.0)

FACTOR INDEXES: THE GLOBAL VIEW

On the global stage, the MSCI Momentum Factor Index has also seen strong performance worldwide during the last 12 months, particularly in Japan where it has historically failed, but it has been the MSCI Minimum Volatility Index which has seen the most outperformance in regions outside of the Americas (see Exhibit 8).

On the downside, the High Dividend Yield and Value Weighted Indexes, compared to regions outside the MSCI USA, have been the two worst performers during the same 1-year period.

EXHIBIT 8: Factor Indexes Heat Map

Active Gross Total Return versus Parent	ACWI	World	EM	EAFE	USA	Europe	Japan
MINIMUM VOLATILITY	8.3	7.2	5.2	9.5	4.1	4.9	4.3
VALUE WEIGHTED	-3.7	-3.3	-4.2	-1.9	-2.4	-2.7	-1.9
QUALITY	4.7	3.7	6.8	0.1	1.8	5.7	7.3
MOMENTUM	4.9	5.0	5.4	4.4	5.1	4.6	8.9
RISK WEIGHTED	-0.5	1.1	-1.4	4.1	2.1	1.4	4.2
HIGH DIVIDEND YIELD	-5.7	-5.7	-1.0	-2.5	-2.6	0.3	-1.3
QUALITY MIX	3.0	2.5	2.6	2.5	1.1	2.6	3.2
EQUAL WEIGHTED	-2.4	-1.1	-1.1	2.6	0.2	-1.5	1.8

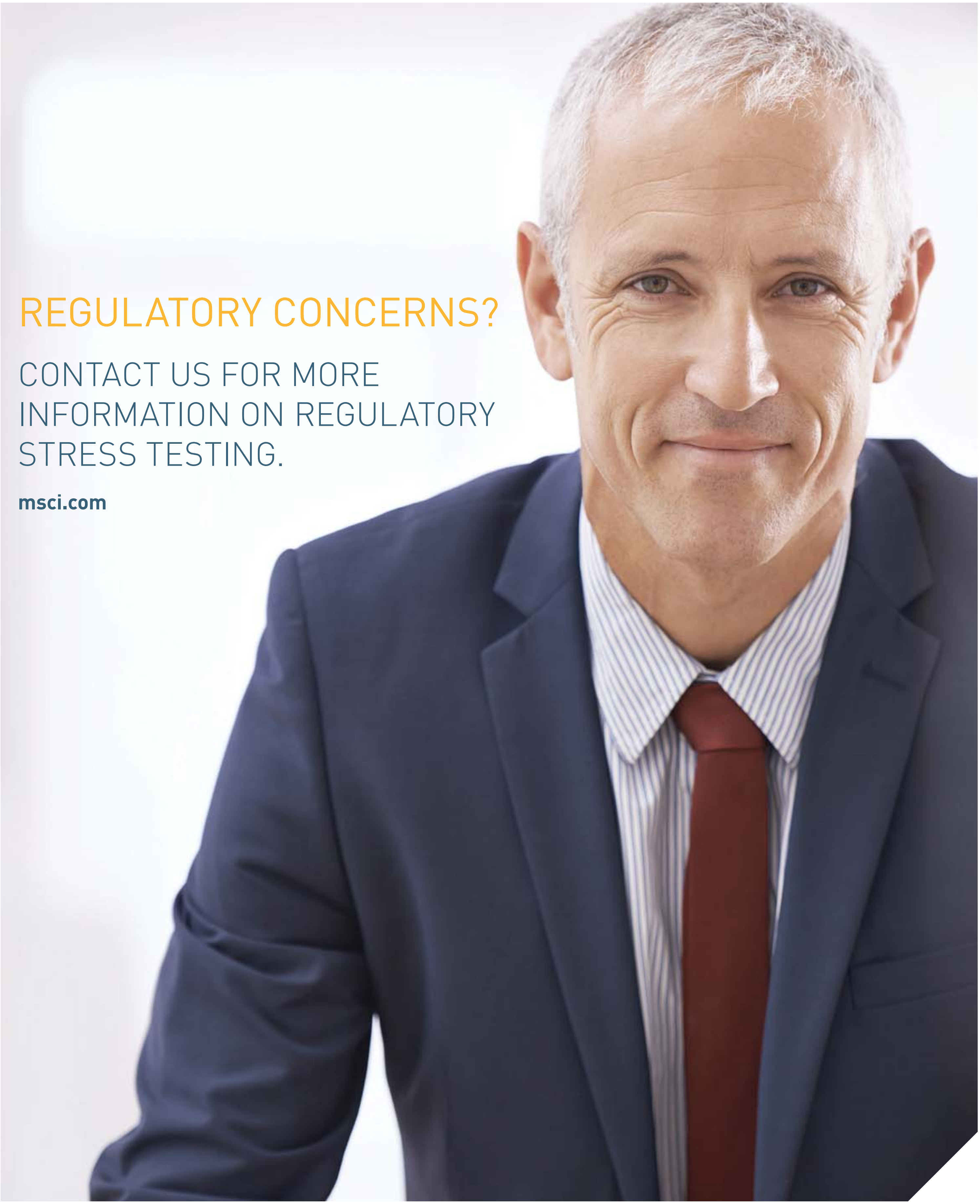
All returns over 12 months to March 31, 2015

Conversely, the MSCI USA Momentum Index appears to have benefitted from its multi-year high active allocation to Healthcare, which is now the best performing of the MSCI USA Sectors in the past year. This strong sector performance was a global phenomenon (see Exhibit 9), while the continued slide of the Energy Sector has also been a consistent worldwide theme.

EXHIBIT 9: Sector Indexes Heat Map

Active Gross Total Return versus Parent	ACWI	World	EM	EAFE	USA	Europe	Japan
ENERGY	-24.1	-24.3	-22.4	-24.1	-25.5	-20.0	-24.6
MATERIALS	-11.8	-10.7	-15.8	-6.4	-8.6	-4.6	4.3
INDUSTRIALS	-3.6	-3.8	-3.2	-2.1	-5.4	-4.8	-2.0
CONSUMER DISCRETIONARY	5.1	5.7	-1.9	5.3	4.8	6.1	4.5
CONSUMER STAPLES	3.3	3.8	-2.2	3.0	4.3	5.5	8.9
HEALTH CARE	16.2	15.6	22.0	10.6	15.6	12.2	9.5
FINANCIALS	-1.1	-1.8	5.0	0.9	-2.1	0.0	-6.4
INFORMATION TECHNOLOGY	9.6	9.2	12.8	5.8	5.1	1.6	3.5
TELECOMMUNICATION SERVICES	-3.3	-4.8	5.6	0.7	-8.2	3.8	-14.7
UTILITIES	-4.0	-4.1	-3.3	-6.9	-1.6	-9.2	-7.5

All returns over 12 months to March 31, 2015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MSCI DIVERSIFIED MULTI-FACTOR INDEXES

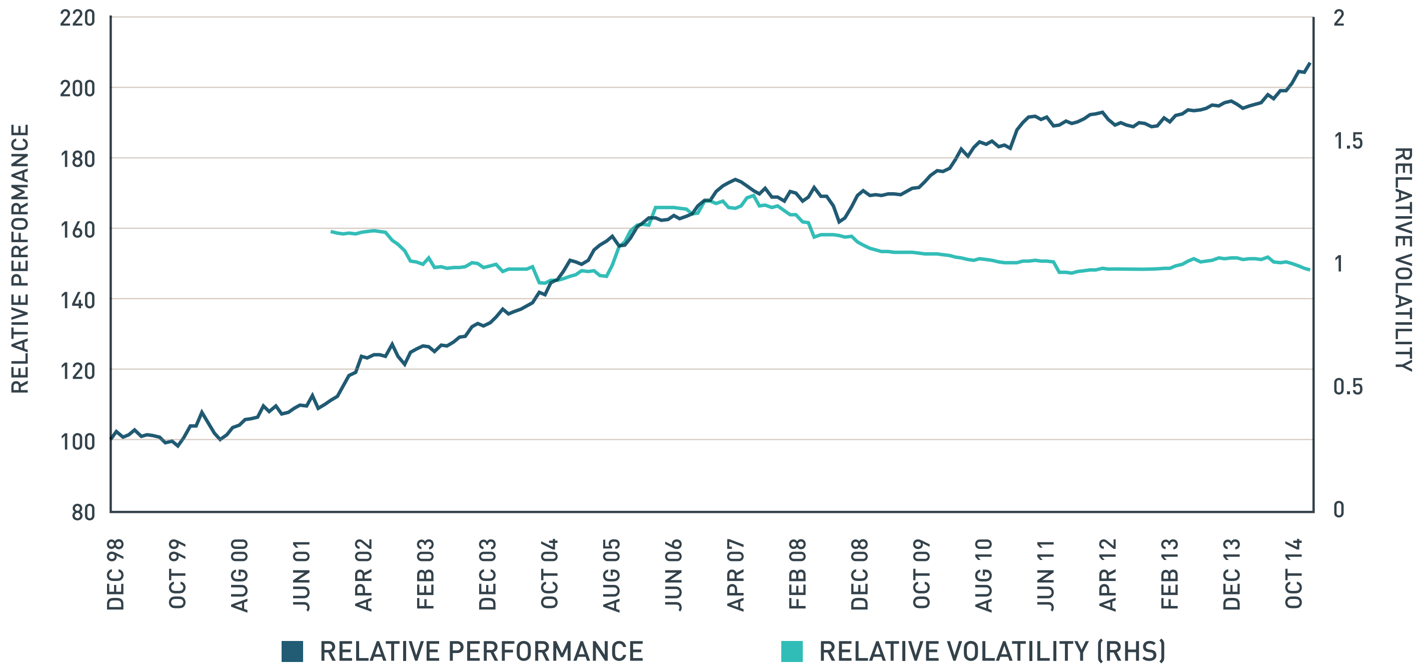
MORE FACTOR EXPOSURE, SAME RISK PROFILE

By Remy Briand

Almost five years ago, MSCI introduced a new line of "multi-factor indexes" that combine factor building blocks into multi-factor combinations to enable investors to focus on specific investment objectives or reflect particular expectations about market performance. This approach is simple, transparent and flexible, making it easy for investors to adjust the weighting among factors as their investment objectives or expectations change.

To address the needs of investors who want to adjust their exposure to underlying factors while maintaining control over the level of risk, beta, and tracking error in their portfolios, MSCI recently launched Diversified Multi-Factor Indexes. These indexes combine four well-researched factors - value, momentum, size and quality - with a control mechanism that aims to keep volatility close to the level of the market.

EXHIBIT 1: Relative Performance and Volatility



HOW THE METHODOLOGY WORKS

At each semi-annual review, methodology rules will do three things:

1 Add stocks, or increase the weight of stocks, with high exposure to the four targeted factors.

2 Delete stocks, or reduce the weight of stocks, with undesirable exposure.

3 Adjust weights to control the volatility profile of the index.

We use the Barra Optimizer and Barra Equity Models to manage these objectives.

BENEFITS OF THIS APPROACH

Investors who believe that the four factors will continue to provide excess returns relative to the market will want maximum exposure to these factors. However, in the process of maximizing exposure to the factors, they may not want to structurally change the risk profile of their portfolios (making it either more defensive or more aggressive than the market). Embedding a volatility target into the methodology provides a mechanism for addressing this constraint.

Combining four factors with different performance cycles provides an added level of diversification, as highlighted in Exhibit 1.

MSCI LEADERSHIP IN FACTOR INDEXES

Having introduced our first investable factor indexes in 2006 and our first multi-factor indexes in 2010, we intend to bring a continuous stream of research-based innovations to our clients. Our Diversified Multi-Factor Index is the latest development in our market-leading product line. Stay tuned for more from MSCI.

A SPOTLIGHT ON ASIA

ASIA PACIFIC ASSET OWNERS: MATURING PORTFOLIOS ADOPT MSCI ANALYTICS

Christopher Ryan is Managing Director and Head of MSCI Asia Pacific based in Hong Kong. Chris is responsible for driving MSCI's growth in the APAC region. Chris has more than 33 years of experience in financial services, having worked in the investment management industry since 1983. He has served in senior management positions for Asian divisions of global firms and regional investment management firms, including HSBC, ING, Fidelity, and Perpetual.

Q: WHY ARE APAC ASSET OWNERS IMPORTANT TO MSCI?

CHRISTOPHER: Asset owners in APAC share many characteristics with their counterparts in the Americas and EMEA. Most asset owners have a long term investment objective of achieving a favorable balance between return and risk. As Asset Owners drive the downstream business of asset management, their strategy decisions have a significant impact on the overall investment community. In many markets, the Asset Owner segment is responsible for the bulk of the assets managed on behalf of their citizens by the asset managers who serve them.

MSCI has always had a strong footprint in the asset management segment globally. In Asia ex-Japan, the aggregate AUM for the region is approximately USD 7 trillion, half of the current U.S. GDP.

Q: WHAT DIFFERENTIATES ASSET OWNERS IN ASIA FROM THEIR COUNTERPARTS IN THE U.S. AND EUROPE?

CHRISTOPHER: Asian households save at around twice the rate of Western countries. Chinese households save 51% of their net income, while most other Asian countries save between 30% and 45%. This compares with 17% in the U.S. and 13% in the UK. At the same time Asia's populations are huge and represent a growing proportion of the world's wealth. Savings in Asian countries are also very concentrated, with large Sovereign Wealth Funds (SWFs) responsible for a substantial part in many nations.

While they are often low profile, state-controlled and conservative, SWFs have come a long way in their approach to investing globally across all asset classes. Large insurance companies also contribute to the concentration of assets in Asia, and in China, Taiwan, Japan and South East Asia control around 20% of national private savings.

In a recent agreement with a large Taiwan pension fund, MSCI was selected to provide a 5-factor global benchmark to support a multi-billion Dollar set of passive investment mandates, highlighting the potential of multi-factor strategies in the region. These mandates focus on MSCI Minimum Volatility Index, MSCI Quality Index, MSCI Value Weighted Index, MSCI Equal Weighted Index and MSCI Momentum Index for ACWI, World, and single country. This is a historic first for the region.

Asset owners in APAC are large and progressive, with a pressing need to diversify away from their home markets as they grow beyond the capacity of local markets to absorb their expanding investment flows. Most of these are already working closely with MSCI, and we are reaching out to the few that are not yet significant clients.

Q: WHAT ARE THE MAJOR INVESTMENT CHALLENGES CONFRONTING THE ASIAN ASSET OWNER TODAY?

CHRISTOPHER: Asset Owners in APAC have similar concerns to those in other parts of the world. They want to build sustainable portfolios that are well diversified and have reasonable limits on volatility and asset liability, as well as effective liquidity management that enables them to meet cash flow obligations. They have however been suffering from the strength of their currencies against developed markets, creating headwinds for international diversification. Yet they are still finding ways to invest globally which meet their needs for diversification, while at the same time achieving sustainable real returns in their own currencies. In many cases, they have adopted alternative asset strategies involving real estate, hedge funds and private equity, a key focus of the development of MSCI risk analytics capabilities in recent years. As a result, we are increasingly able to meet Asian Asset Owners' risk management needs through stress testing, scenario analysis and specific asset class analysis.

Q: WHAT IS THE CURRENT REGULATORY ENVIRONMENT IN CHINA?

CHRISTOPHER: Some years ago, Asian asset owners and particularly Sovereign Wealth Funds were principally interested in our traditional benchmarking capabilities and associated data. However in recent years, as elsewhere in the world, Asian Asset Owners have increasingly focused on factor index investing, stress testing and scenario analysis. A number of larger APAC investors have MSCI risk solutions fully imbedded in their own systems, managed by large internal teams of risk professionals, who advise their investment departments on how to invest the rising tide of cash flows. As governments in APAC become more accountable to their citizens for the performance of the assets in their SWFs and pension funds, investment performance reporting, risk reporting and associated analytics are also becoming increasingly important.

In the recent past there has been a surge in interest in our Environmental, Social and Governance (ESG) capabilities across many APAC markets. While in developed markets our ESG capabilities have been taken up by many pension funds and some SWFs, these have only been slowly adopted in APAC until the last few years. In South East Asia, several MSCI asset owner clients have now adopted our ESG research and reporting to help them to manage their exposure to global markets. Our ability to screen stocks on a Sharia basis is important in Malaysia, Indonesia and some other markets across the region. Flows into such products and portfolios are increasing.

As elsewhere, MSCI has also recently completed major research projects for specific asset owners in the region. Last year, MSCI's research team completed a groundbreaking study for the Japanese Government Pension Investment Fund (GPIF), the world's largest pension fund. This study looked closely at factor investing and how the GPIF could implement factor investment strategies in a sustainable way.

The study has heavily influenced Japanese investors' approach to domestic and international opportunities, and the GPIF has already issued a number of multi-billion Dollar passive mandates as a result. This is clear evidence of the huge potential for MSCI to provide strategic applications to the Asset Owner segment.

Q: WHAT IS THE MIX BETWEEN INTERNALLY MANAGED AND EXTERNALLY MANAGED ASSETS FOR APAC ASSET OWNERS AND HOW IS IT CHANGING?

CHRISTOPHER: In most APAC markets, Asset Owners need to outsource their overseas investment to external managers in order to acquire a high enough level of expertise. Most domestic managers in smaller markets do not have the ability to manage foreign assets. The use of outsourced expertise can be enhanced by the application of MSCI's analytic products, from Risk Manager to Barra Portfolio Manager. Some Asset Owners are using ETFs to supplement their outsourcing in order to keep control of their asset allocation while at the same time driving down the overall costs of investing offshore. In this context MSCI can help Asset Owners manage these exposures in a risk-controlled manner, report on the performance of such assets and add new asset classes as they continue to diversify away from their home market. The proportion of assets invested offshore continues to rise and, as a result, the potential benefit from MSCI's internationally relevant expertise is also growing.

In some larger APAC markets, particularly Australia and Singapore, we see a trend towards the insourcing of investment mandates. In markets where fees represent a relatively high proportion of the delivered investment return, Asset Owners are often now showing a preference to bring their indexing and quant strategies in-house. While this is at an early stage, the trend is clear and MSCI is well-placed to help these asset owners execute their insourcing programs in an efficient way.

CHINA AMC SELECTS MSCI CHINA A INDEX FOR A NEW ETF

The MSCI China A Index captures large and mid-cap representation across China securities listed on the Shanghai and Shenzhen exchanges.

For more information on the performance, sector weights and top ten constituents, download the latest monthly index fact sheet on msci.com/resources

RESEARCH SPOTLIGHT

Beyond Divestment: Using Low Carbon Indexes

As the global economy copes with the unpredictable challenges of climate change, institutional investors are exploring the potential impact of these changes on financial assets. This paper provides a framework for evaluating ways to reduce two dimensions of carbon exposure – current carbon emissions and potential future emissions embedded in fossil fuel reserves — and explores new and more financially viable ways of managing carbon risk.

KEY FINDINGS

- Investors are focusing on the risk that a significant portion of current assets could become "stranded"—and thereby drastically lose value—if carbon emissions are constrained by regulation or technological innovation in the future.
- Thus far, approaches using sector-based selection (or divestment) have received the most attention from stakeholders and investors; these approaches, which include portfolios based on the MSCI Fossil Fuels Exclusion Indexes, help investors send a strong message to stakeholders but ignore short-term benchmark risk.
- Newer, innovative approaches that use re-weighting and optimization techniques, such as the MSCI Global Low Carbon Target and MSCI Global Low Carbon Leaders indexes, would have reduced exposure to carbon-intensive companies while limiting short-term risk against the benchmark.
- These newer strategies are also more expansive than traditional approaches, encompassing both current and future emissions, going to the heart of risk mitigation.

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Beyond Divestment:
USING LOW CARBON INDEXES

Carbon Stranded Assets

Institutional investors are probing the long-term portfolio implications of "carbon stranded assets" — assets that may lose economic value before the end of their expected life, primarily driven by changes in regulation and technological innovation. Two core assumptions underlie this view. The first is that the Earth will be unable to sustain the current rate of increase in greenhouse gas emissions (GHGs) without triggering catastrophic effects. A second core assumption is that policymakers or regulators will eventually limit the amount of GHG emissions, as a response to the potential catastrophic effects of climate change.

While regulatory changes that limit GHG emissions would have the most direct role in triggering the stranding of carbon-intensive assets, the rapid development and falling costs of new technology could also trigger large-scale substitution of current energy sources with cleaner sources of energy. As these alternative sources of energy gain economies of scale and become less costly, they could challenge the dominance of fossil fuels, even in the absence of stringent regulations on GHG emissions or high carbon prices. Another trend that could dampen future demand for fossil fuels is improvements in energy efficiency. In particular, technologies targeting the residential, transport and industry sectors have the potential to significantly reduce aggregate energy demand.

Limiting future GHG emissions would have important financial consequences:

- Two-thirds of the fossil fuel reserves that we have already discovered but have not yet extracted would remain unused. According to the International Energy Agency, this could represent 50% of current oil and gas reserves, and 80% of coal reserves.

- Fixed assets reliant on burning fossil fuels could also be abandoned if future carbon emissions would exceed the carbon budget or if new energy sources become economically competitive.

Identifying Sources of Risk

For institutional investors, the first step to addressing risks of carbon stranded assets requires identifying holdings in companies that own fossil fuel reserves and companies whose business activities are highly carbon-intensive. Measuring the extent of fossil fuel reserves holdings and carbon-intensity of business activities across a broad, diversified portfolio replicating the MSCI ACWI Index shows the risk of potential carbon stranded assets was highly concentrated, as of January 15, 2015.

- **Proved and probable coal, oil and gas reserves:** Unsurprisingly, the risk of stranded assets was highest in the Energy sector representing more than 80% of total fossil fuel reserves.

- **Sector exposure:** The three most intensive sectors — Utilities, Materials, Energy — accounted for more than 80% of the total direct and indirect carbon emissions in the MSCI ACWI Index, as of January 15, 2015. This measure can act as a proxy for long-lived assets at risk of stranding as well as for evaluating a company's contribution to climate change.

- **Issuer exposure:** In the sample portfolio, the top fifth of companies with direct and indirect emissions in absolute terms accounted for more than 80% of the total emissions of the universe during the examination period. Similarly, 13 companies accounted for more than 50% of the total potential future emissions from burning current reserves held by MSCI ACWI Index constituents, as of June 2014.

Key Parameters for Institutional Investors

Asset owners differ widely in terms of their investment beliefs and constraints when it comes to assessing their carbon-related risk. Thus, the approaches they use may vary significantly. Investors may fall along a wide spectrum based on four key parameters.

SHORT-TERM RISK

Institutional investors differ in the constraints they face or the appetite they have for deviating from the benchmark (tracking error) and market exposure in the short term.

LONG-TERM THESIS

Investors fully convinced of the stranded asset thesis may take into account long-term risks to their portfolios.

STAKEHOLDER COMMUNICATION

Some institutions face pressure from stakeholders that may affect their choice of approach to lowering carbon exposure. For example, they may be expected to display high levels of transparency on the impact of their investments on social and environmental issues.

PUBLIC STANCE

Some large institutions cannot diversify away their long-term carbon exposure and thus may take a more active role by engaging with companies with poor corporate practices.

Reducing Carbon Risk Exposure: Re-weighting vs. Selection

There are two broad investment approaches to reduce carbon exposure risks in portfolios. The exact choice of the investment strategy – re-weighting versus selection – will depend on sensitivity to the above-mentioned four key parameters.

EXHIBIT 1

RE-WEIGHTING VS SELECTION

	Re-weighting	Selection
SHORT-TERM RISK	Allows for different techniques (e.g. optimization) to manage short-term risk	Tracking error is ignored in favor of long-term considerations
LONG-TERM THESIS	Aims to minimize exposure to companies most vulnerable to stranded assets	Exposure to companies most vulnerable to stranded assets depends on selection approach
STAKEHOLDER COMMUNICATION	Communication to stakeholders is more challenging due to the more complex nature of the approach	Conducive to public communication with stakeholders when targeting key sectors or high profile companies
PUBLIC STANCE	Allows investment in the full universe and keeps communication channels open with companies	Makes strong public statement that investor aims to influence corporate behavior

The selection-based approach partially reduces carbon exposure risk, focusing on avoiding potential long-term risks from holding stocks of companies whose value is derived from reserves that may be unburnable in a future regulatory or technological scenario. However, a selection-based approach ignores short-term financial risks of deviating from the benchmark. Additionally, a selection-based approach focused on fossil fuel reserves fails to capture the risk that "fixed assets" locked into burning fossil fuels become stranded in a carbon-constrained future.

- MSCI's Fossil Fuel Exclusion Indexes aim to eliminate 100% of carbon reserves exposure by excluding companies that own oil, gas and coal reserves, representing 8.0% of the MSCI ACWI Index's market capitalization, as of November 28, 2014.
- The MSCI ex Coal Indexes aim to significantly reduce carbon reserves exposure found in the parent index by excluding solely companies that own coal reserves, representing just 1.1% of the MSCI ACWI Index market capitalization.

The re-weighting approach seeks to increase exposure to more carbon-efficient companies and to lower exposure to large current and future carbon emitters.

In the long run, investors may reduce the risk of emitters' stocks underperforming from future and unforeseen changes in environmental regulations, technological changes or market forces. In shorter time periods, however, the low carbon portfolio may lag a "traditional" broad equity market portfolio because of differences in their weighting strategies.

- The MSCI Global Low Carbon Target Indexes aim to address both short-term and long-term risks by first re-weighting the portfolio to minimize carbon exposure and then using portfolio optimization techniques to reduce short-term risk to the parent index. Carbon emission intensity was reduced by 78% compared to the parent index; the reduction in potential carbon emissions normalized by market cap was 97%.
- The MSCI Global Low Carbon Leaders Indexes, which combine selection and re-weighting techniques, aim to select the companies with low carbon emissions relative to sales and those with low potential carbon emissions per Dollar of market capitalization. They also aim to minimize the tracking error relative to the market-cap weighted parent index while reducing carbon exposure by at least 50%.

Comparing the Different Approaches: What Matters?

Institutional investors have a variety of options dependent upon their investment beliefs and constraints, as well as their available resources and willingness to take a public stance.

We summarize the pros and cons of the global Low Carbon indexes and the MSCI Fossil Fuels Exclusion Indexes and compare key metrics of four indexes to the parent in Exhibits 2 and 3, respectively. Current and potential carbon emissions for those indexes are compared to the parent index.

EXHIBIT 2

COMPARISON OF GLOBAL LOW CARBON AND GLOBAL FOSSIL FUELS EXCLUSIONS INDEXES

	MSCI Global Fossil Fuels Exclusion Index	MSCI Global Low Carbon Target Index	MSCI Global Low Carbon Leaders Index
APPROACH USED IN INDEX DESIGN	Selection	Re-Weighting	Selection + Re-Weigthing
SHORT-TERM RISK	Not considered	Uses optimization to reduce tracking error to parent index	Uses optimization to reduce tracking error to parent index
LONG-TERM THESIS	Exposure reduction based solely on selecting companies with low fossil fuel reserves	Uses optimization to reduce exposure to companies most vulnerable to stranded assets (i.e. exposed to current and future emissions) while retaining complete opportunity set	Exposure reduction based on selecting companies with low current carbon emission and low fossil fuel reserves
STAKEHOLDER COMMUNICATION	Transparent and simple methodology	Sophisticated methodology, could be more difficult to explain	Selection methodology is transparent and simple BUT weighting methodology could be more difficult to explain
PUBLIC STANCE	Excluding stocks makes strong public statement	Allows for engagement with companies	Excluding stocks makes strong public statement

EXHIBIT 3

KEY METRICS OF MSCI ACWI LOW CARBON INDEXES

	MSCI ACWI	MSCI ACWI Low Carbon Target	MSCI ACWI Low Carbon Leaders	MSCI ACWI ex Coal Index	MSCI ACWI ex Fossil Fuels Index
TOTAL RETURN* (%)	11.4	11.8	11.6	11.7	12.5
TOTAL RISK* (%)	13.3	13.2	13.3	13.1	12.8
RETURN / RISK	0.86	0.89	0.88	0.89	0.97
SHARPE RATION	0.84	0.88	0.86	0.88	0.96
ACTIVE RETURN* (%)	0.0	0.4	0.2	0.3	1.1
TRACKING ERROR* (%)	0.0	0.4	0.5	0.3	1.0
INFORMATION RATIO	NA	0.98	0.49	1.18	1.06
HISTORICAL BETA	1.00	1.00	1.00	0.99	0.96
TURNOVER** (%)	2.0	12.5	6.2	2.2	2.3
ACTIVE SHARE*** (%)	NA	21.8	16.2	1.1	8.0
#SECURITIES EXCLUDED	NA	0	497	28	127
% MARKET CAP EXCLUDED	NA	0.0	15.5	1.1	8.0

CONCLUSION

Institutional investors concerned about their carbon exposure have considered selection-based approaches to reduce carbon exposure in their portfolios. However, these approaches ignore short-term benchmark risk. While this approach enables investors to reflect clear communications with stakeholders, new and more financially viable approaches address short-term risk as well as long-term risk associated with carbon exposure. At the same time, these new approaches are more expansive than traditional approaches, encompassing both current and future emissions, going to the heart of risk mitigation.

About MSCI

RESEARCH SPOTLIGHTS

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WHAT ARE THE

ENVIRONMENTAL, SOCIAL AND GOVERNANCE TRENDS TO WATCH IN 2015?

For insight into the top five global ESG trends, institutional investors should watch Global Head of MSCI ESG Research, Linda-Eling Lee, in the recorded webinar "2015 ESG Trends to Watch".

2015 opened against a backdrop of languishing oil prices and renewed geopolitical fault lines, juxtaposed with a return to growth in the U.S. and the emergence of the next generation of tech darlings.

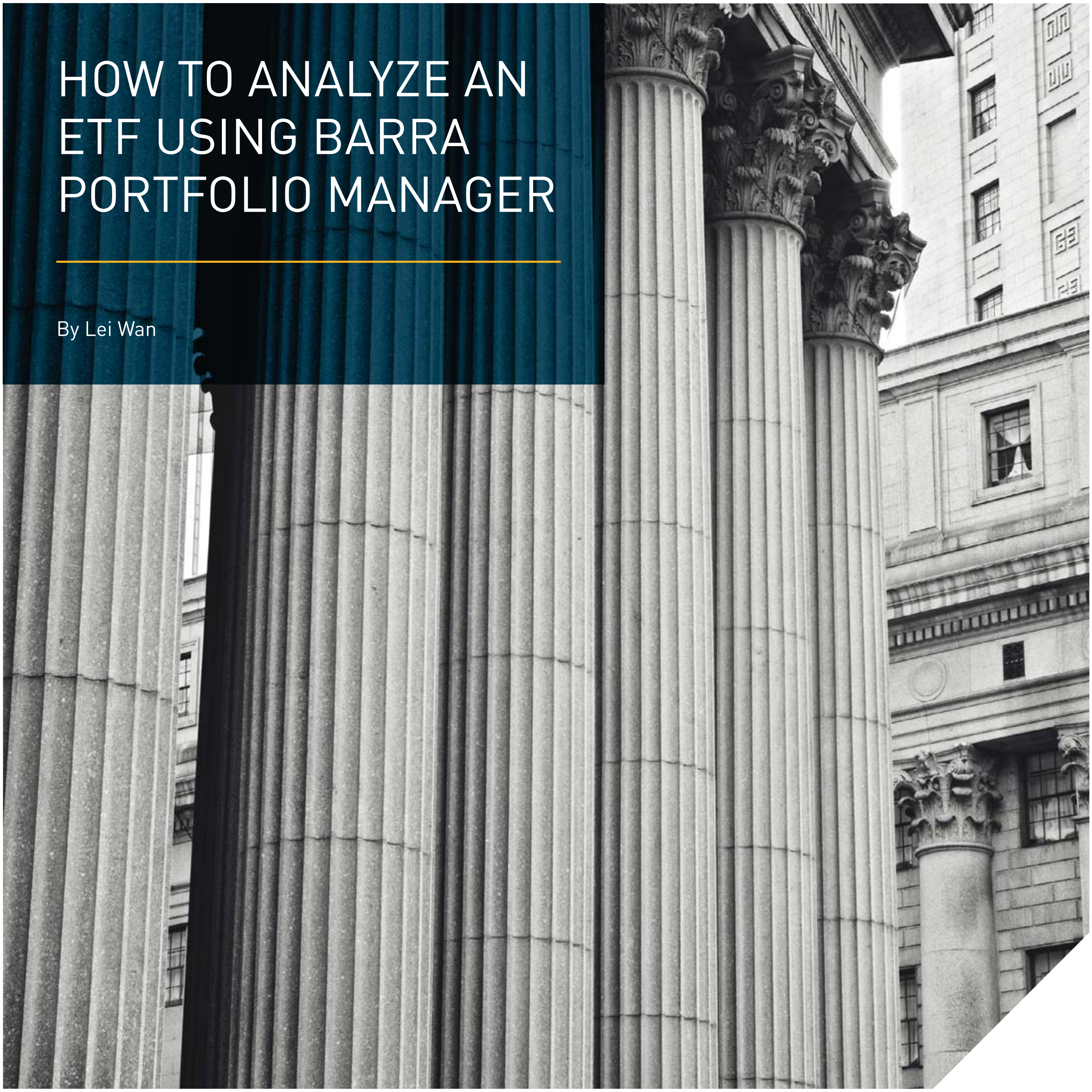
Investors, companies, policymakers and NGOs anticipate the upcoming climate talks in Paris with an equal measure of hope and fear. In this ferment, which ESG trends will be most critical to investors in 2015?

To find out more, please visit
msci.com/resources/event/webinar/2015_esg_trends_to_watch

MSCI

HOW TO ANALYZE AN ETF USING BARRA PORTFOLIO MANAGER

By Lei Wan



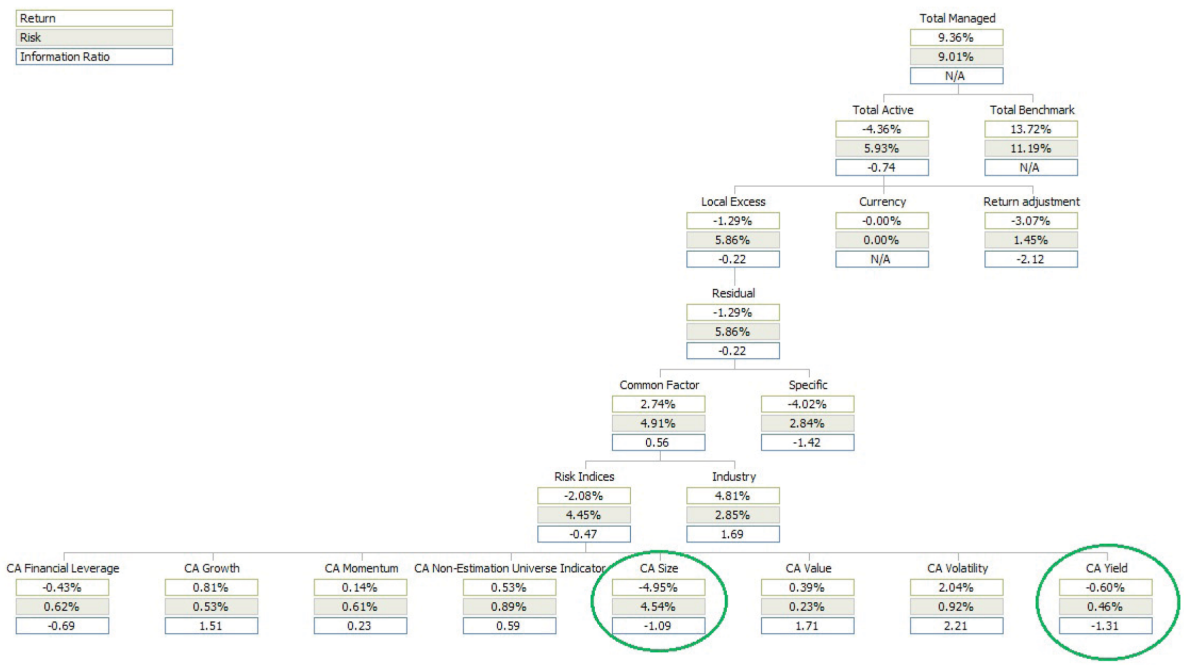
The Exchange Traded Funds (ETF) are no longer considered a niche product, with many investors now adding them to their portfolios. To better understand the underlying risk of an ETF, investors can now use new capabilities in Barra Portfolio Manager (BPM), MSCI's advanced Portfolio Analytics offering.

To demonstrate the value of this new capability let's look at a Canadian Equity ETF. This Canadian equity ETF is a role-based and annually rebalanced product, with its underlying index, a broad Canadian equity index (MSCI Canada) which is systematically tilted to stocks with high dividend yield exposure. However, as this analysis will show, while the ETF is expected to gain a higher exposure on dividend yield, through analysis in Barra Portfolio Manager we found that the actual underlying ETF portfolio bets significantly on small-cap stocks instead.

To do this analysis, we utilized the Barra Integrated Model 301 (BIM301) which includes the Barra Canada Model. This model covers most multi-asset-class securities including equity, fixed income, commodities, and currencies in addition to equity ETFs.

Running the performance attribution for the Canadian high dividend yield ETF against MSCI Canada for the past 1 year (2014/02/12 to 2015/02/11) in Barra Portfolio Manager using the Barra Integrated Model we found that the ETF has actually underperformed the benchmark for 4.4% as demonstrated in Exhibit 1 below:

EXHIBIT 1: Return Attribution



Source: Barra Portfolio Manager

The total portfolio return of the ETF for the past 1-year is 9.4%, while its benchmark's return is 13.7%. The active return, which is -4.4%, can be further decomposed into two categories: Common Factor and Specific. The Common Factor represents the return coming from systematic risk sources which consistently exist in the market, while the Specific part represents the idiosyncratic return which cannot be explained by the systematic risk sources.

There are two major sources of return for Common Factor. The first one is the Industry factor, which indicates the classification of industries of underlying stocks. The second one is Risk Indices, which measures the movements of stocks which are exposed to common investment philosophy and theme.

Through the return attribution diagram in Exhibit 1, you can see that the CA (Canada) Yield factor drags down the overall performance by 0.6% while the CA size factor was the largest negative mover among all Common Factors in the portfolio, down (-4.95%) during the past 1-year.

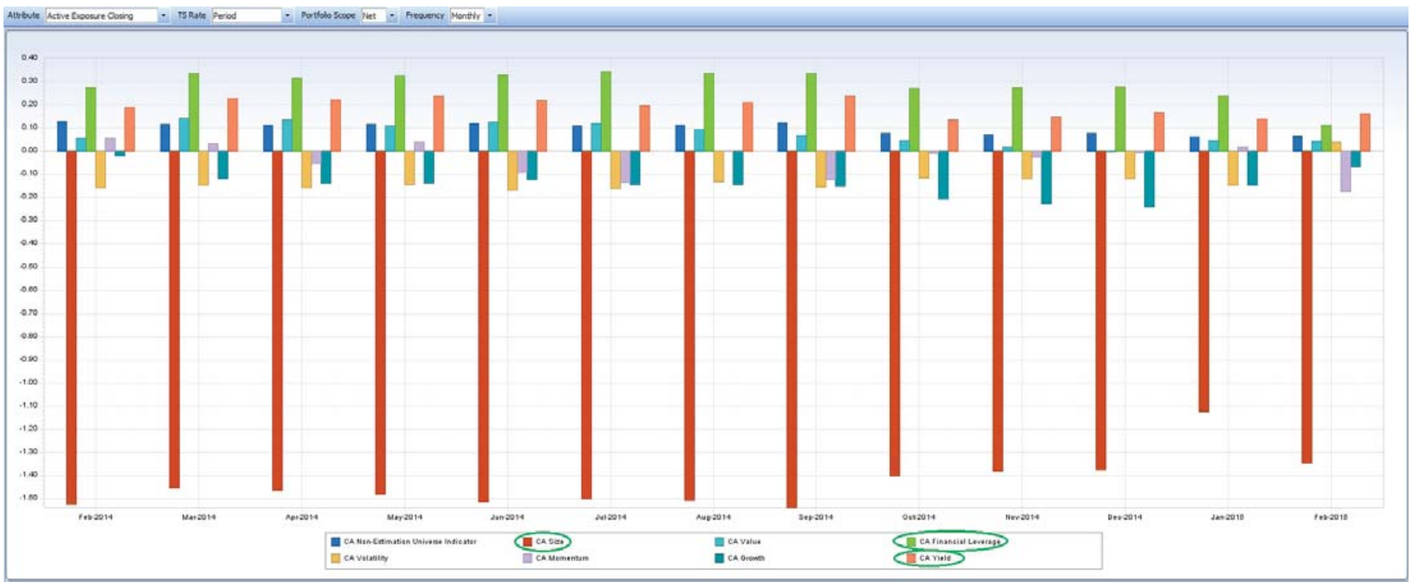
To figure out why the size factor dominates the performance of this Canadian dividend yield tilted ETF we conducted further investigations on the distribution of Risk Indices exposures in Barra Portfolio Manager as demonstrated in Exhibit 2. This chart illustrates the distribution of Active Exposure of all Risk Indices factors in a one year time horizon. The horizontal axis is the date on a monthly frequency. The vertical axis indicates the value of active exposure.

According to this analysis, the CA Size factor is the largest negative bet through the analysis period, which its active exposure is less than -1.3 for most of the time.

And though the CA Yield factor has been advertised as the majorly tilted exposure of the ETF, it only shows as the second largest positive bet according to the analysis. The distribution statistics of these Risk Indices' active exposures can be found in Exhibit 3.

The rule-of-thumb is that if the absolute value of a factor exposure is greater than 0.2, then this factor is a significant bet. According to Exhibit 2 and Exhibit 3, on average, active exposure of CA Yield factor is less than 0.2. In other words, the CA Yield is not considered as a significant bet during most of this time period.

EXHIBIT 2: Active Exposure of Risk Indices across Time



Source: Barra Portfolio Manager

EXHIBIT 3: Basic Statistics for Risk Indices Factor Active Exposure

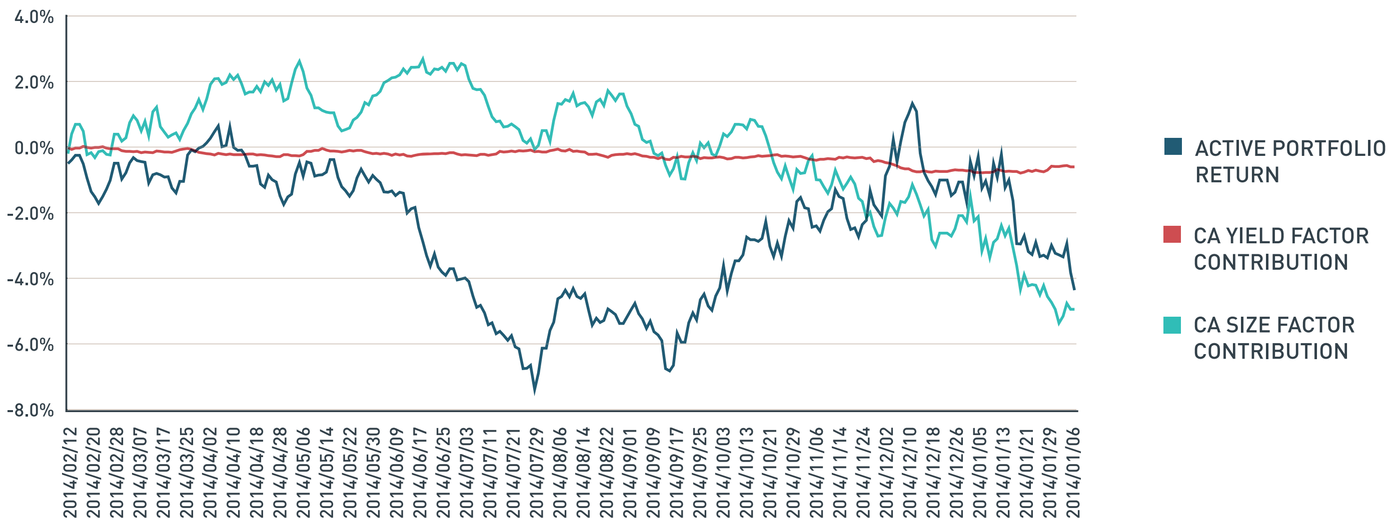
	Mean	Standard Deviation	Minimum	Maximum
CA MOMENTUM	-0.04	0.07	-0.2	0.06
CA VOLATILITY	-0.13	0.05	-0.2	0.04
CA SIZE	-1.43	0.11	-1.5	-1.1
CA GROWTH	-0.14	0.06	-0.2	-0
CA VALUE	0.08	0.05	0	0.14
CA FINANCIAL LEVERAGE	0.29	0.06	0.11	0.35
CA YIELD	0.19	0.04	0.13	0.24
CA NON-ESTIMATION UNIVERSE INDICATOR	0.1	0.02	0.06	0.13

Source: Barra Portfolio Manager

To further illustrate the relationship between active portfolio return, CA size factor contribution, and CA yield factor contribution, we plotted the data on a time series basis. As Exhibit 4 shows, the active portfolio return of this ETF is largely dominated by the CA Size factor contribution through the time. On the other hand, the CA yield factor contribution to the active portfolio return is much smaller. This observation further indicates that this yield tilted ETF has a significant unintended bet on small cap stocks.

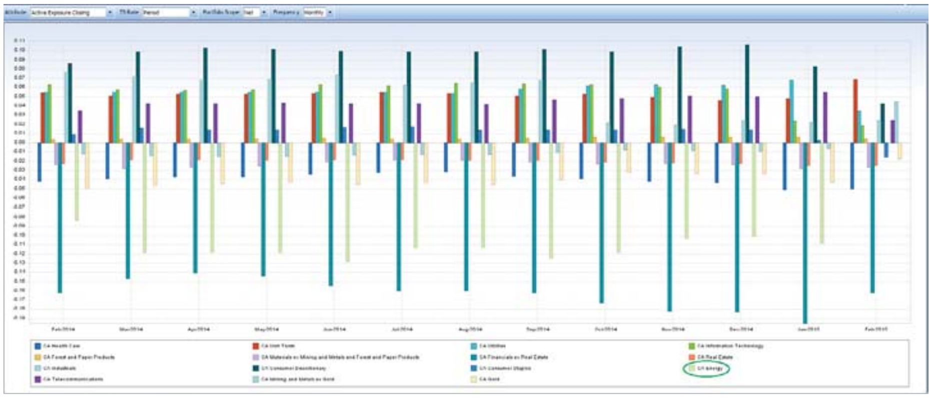
Using Barra Portfolio Manager you can also conduct a similar exposure analysis on Industry factors. As Exhibit 5 shows, the Industry factors behave quite consistently until January 2015. The Industry exposures then change considerably on February 2015 by eliminating all weights in the CA Energy sector. This might be because the underlying index was revised and rebalanced in February 2015. By conducting the exposure analysis in Barra Portfolio Manager, we could easily capture changes in sector allocation of the underlying portfolio.

EXHIBIT 4: **Active Portfolio Return, CA Size Contribution, and CA Yield Contribution**



Source: Barra Portfolio Manager

EXHIBIT 5: **Active Exposure of Industry Factors across Time**



Source: Barra Portfolio Manager

So as you can see from this example, conducting performance analysis on ETFs can help identify the main contributors to performance and help investors avoid incidental risk from unintended bets when implementing a trading strategy.

If you want to run this kind of analysis on your portfolio, click here to contact us

EVENTS 2015

MSCI organizes over 500 events a year

For a full list of events, please **click here**

MSCI invites you, clients and other finance experts to a forum on ESG Trends and Integration of ESG into the investment process.

Sustainable investments kill performance. This prejudice has long outlived itself. Risk reduction and avoiding companies with unethical behavior are driving forces behind institutional investors' thinking. Currently over 950 MSCI clients with assets under management of over 20 trillion CHF incorporate sustainability criteria into their investment decisions and strategies.

MSCI ESG FORUM ZURICH
April 17, 2015

More Information

This annual event will focus on "Innovating the Real Estate Asset Class" and is designed to provide attendees with a better understanding of the innovations affecting real estate investment and the importance of benchmarking and attribution analysis in assessing risk.

MSCI U.S. REAL ESTATE INVESTMENT CONFERENCE
May 20, 2015

More Information

Jesse L. Phillips, Executive Director - Applied Research at MSCI will speak at the PRMIA Edmonton Chapter Investment Risk event. He will discuss Macroeconomic Risk In Asset Allocation: The Risk Parity Case

PRMIA EDMONTON
April 15, 2015

More Information

SOLVENCY II REPORTING - ARE YOU PREPARED?

Webinar

April 15, 2015

Join us for a webinar where we will take a closer look at how you may support the new requirements for Solvency Capital Requirement (SCR) reporting for market risk in an operational and cost-efficient manner.

More Information

PERFORMANCE ATTRIBUTION OF MULTI-ASSET CLASS PORTFOLIOS USING BARRAONE

Webinar

April 16, 2015

Join us for a webinar where we will illustrate how BarraOne performance attribution can be employed for Multi-Asset Class (MAC) portfolios and demonstrate its effectiveness with an important use case.

More Information

CFA TORONTO SPRING PENSION CONFERENCE

Toronto

April 16, 2015

Simon Fairchild, Executive Director, ESG Research at MSCI will be speaking at the CFA Toronto Spring Pension Conference. He will discuss Real Assets for Real Diversification as part of a panel discussion.

More Information

UNDERSTANDING YOUR SHAREHOLDERS - TRENDS IN ESG INVESTING

Webinar

April 16, 2015

Please join MSCI's Global Head of Research, Linda-Eling Lee and Head of Corporate Governance, Howard Sherman in a webinar where we will discuss the latest trends in ESG investing.

More Information

RESPONSIBLE INVESTOR ASIA

Tokyo

April 21, 2015

Minako Takaba, Senior Analyst, ESG Research at MSCI will be speaking at the Responsible Investor Asia Confernece. He will take part in a Panel Discussion of international stewardship and corporate governance.

More Information

MSCI RESEARCH SEMINAR SERIES, SPRING 2015 - INNOVATIONS IN FACTOR INVESTING

New York

April 23, 2015

Join us to learn more about how investors globally are using factors – including a new generation of more sophisticated factors – to drive performance. This full day event will showcase the latest research from MSCI.

More Information

TBLI CONFERENCE ASIA

Singapore

April 29, 2015

Michael Salvatico, Vice President – Australia Client Coverage at MSCI will be speaking at the TBLI Conference Asia. He will take part in a Roundtable discussing Climate Change: Redefining investment strategies and harnessing opportunities.

More Information

MSCI INSTITUTIONAL INVESTOR EVENT: PORFOLIO RISK AND BENCHMARKING WORKSHOP

Austin

April 30, 2015

MSCI is pleased to invite you to a Portfolio Risk & Benchmarking Workshop hosted by Teacher Retirement System of Texas, where we will explore asset owner investment challenges through the lens of MSCI tools and practical cases studies.

More Information

U.S. SIF 5TH ANNUAL CONFERENCE

Chicago

May 4, 2015

Howard Sherman, Executive Director, GMI Ratings, MSCI ESG Research will moderate a panel discussion at the U.S. SIF Annual Conference. The discussion will cover Governance as a Risk Factor.

More Information

INTERNATIONAL ENDOWMENTS NETWORK DENVER DIVESTMENT AND SUSTAINABLE INVESTMENT FORUM

Denver

May 7, 2015

Tom Kuh, Executive Director and Head of MSCI ESG Indexes will speak at the IEN Denver Divestment and Sustainable Investment Forum.

More Information

SOCIETY OF QUANTITIVE ANALYSTS (SQA) FUZZY DAY

New York

May 15, 2015

MSCI is sponsoring SQA Fuzzy, which includes hosting the event at our New York Headquarters. The principal mission of the SQA is to encourage the dissemination and discussion of leading-edge ideas and innovations related to the work of the quantitatively-oriented investment professional, including analytical techniques and technologies for investment research and management.

More Information

MSCI RESEARCH SEMINAR SERIES

London, Frankfurt and Amsterdam

May 19, 2015

MSCI is hosting a series of events across Europe to showcase the recent efforts of our Equity Analytics Research team and the actionable implications of their work for practitioners in today's markets.

More Information

ATLANTIC CANADA CFA SOCIETY

Halifax

May 20, 2015

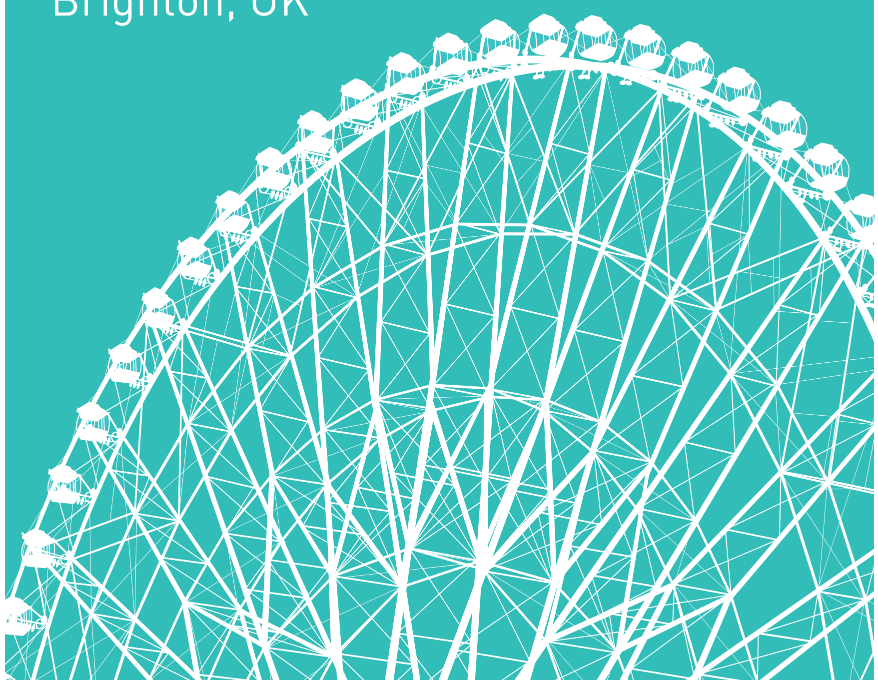
MSCI is sponsoring the Atlantic Canada CFA Society Forecast Dinner, which will feature Jeremy Siegel, Russell E. Palmer Professor of Finance at the Wharton School of the University of Pennsylvania.

More Information

25th IPD/IPF Property Investment Conference

Nov 19 – 20, 2015

Brighton, UK



APRIL 2015

NEW INNOVATION FROM MSCI

Barra U.S. Total Market Equity Suite

A next-generation model suite aimed at helping institutional investors in the world's largest equity market. The MSCI Barra U.S. Total Market Equity Suite has been built to include a new set of factors and factor structures that are aligned with multiple investment horizons as well as introducing new Systematic Equity Strategies factors. The Suite targets three investment horizons: Long-Term, Medium-Term and Trading.

MSCI Barra U.S. Total Market Equity Suite for Long-Term investors is **available now.**

MSCI Barra U.S. Total Market Equity Suite – Trading Version **available now.**

MSCI Barra U.S. Total Market Equity Suite for Medium-Term investors **available in Q2.**

OTHER MODELS COMING SOON

Barra Taiwan Equity Model **available in Q2**

MSCI Diversified Multi-Factor Indexes

MSCI Diversified Multi-Factor Indexes aim to maximize exposure to four factors – Value, Momentum, Quality and Low Size – while maintaining a risk profile similar to that of the underlying parent index. The methodology includes an optimization designed to limit index turnover and unintended exposures to other risk factors.

Barra Open Optimizer 8

An optimization software library designed to fit seamlessly into portfolio management workflows and support improved investment decision making processes. It utilizes multiple optimization engines from MSCI and 3rd parties to create index tracking portfolios, manage asset allocation, implement tax aware strategies and other objectives of portfolio managers.

COMING SOON

- Multiple Period Optimization, which enables the solver to optimize not only for today, but to position the portfolio for return or other market opportunities in the future, through the simultaneous optimization of future periods.
- Stronger optimization algorithms when using thresholds or cardinality constraints.
- Additional methodologies for rules based portfolio construction based on maximum diversification or effective number of names.

THE AUTHORS

GLOBAL MACROECONOMIC RISK AND ASSET ALLOCATION

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Katalin Varga is Senior Associate at MSCI, working in Analytics Research in the Macroeconomic Risk and Asset Allocation Research group. Katalin joined MSCI in 2010 and worked in the Alternatives Research Group focusing on private equity and private real estate risk. Prior to joining MSCI she was working as a quantitative researcher at Morgan Stanley and at OTP Bank. She also worked as an associate professor at the Budapest University of Technology and Economics. She holds a PhD in Mathematics.

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Andras Urban is Senior Associate at MSCI and member of the firm's Analytics Research team. He joined MSCI in 2014 to work on both applied and analytics research projects. Prior to joining the company, he worked in the Market Risk Methodology Group at Morgan Stanley. He holds a PhD in Finance from the Budapest University of Technology and Economics. His research interests cover asset pricing, growth optimal investment strategies and predictive algorithms.

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Jahiz Barlas is a Senior Associate and a member of the Macroeconomic Risk and Asset Allocation Research group. Jahiz joined MSCI in 2012 focusing on asset allocation. Prior to joining MSCI, Jahiz worked as a Researcher at the Federal Reserve Bank of Minneapolis. He holds a PhD in Economics from the University of Minnesota, and has presented at academic seminars and conferences.

GLOBAL RISK MONITOR

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Since December 2013, Thomas has been a member of MSCI's research team. He contributes to the development of new risk methodologies for Barra and RiskMetrics models with special focus on ongoing banking regulation evolutions. He is also responsible after peridicals for the publication of the Riskmetrics periodicals Risk Monitor and Year In Review, the latter an annual, extensive risk models backtest report. Prior to joining MSCI, Thomas obtained a PhD in Applied economics at the KU Leuven, Belgium. He is also a CFA charter holder and holds a Master in Civil Engineering from the KU Leuven, Belgium.

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Raj Iyengar joined MSCI in September 2014 as the lead researcher on Leveraged Loans. Prior to joining MSCI, Raj was a Credit Strategist at Morgan Stanley in New York, focusing on High Yield and Leveraged Loans across Cash and Derivatives markets. In addition, he has held roles as a Trading Strategist on the ABS trading desk at Morgan Stanley and in Pricing and Structuring Energy trades at Macquarie group. Raj holds a Bachelor of Actuarial Science from Macquarie University in Sydney ,Australia and a Masters in Financial Engineering from the UCLA Anderson School of Management.

U.S. MARKET BRIEF

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Anthony is a client consultant at MSCI and is responsible for empowering clients to design, implement and analyze investment strategies through MSCI's research, data and software. Prior to MSCI he was a senior quant researcher focused on systematic investment strategies at an hedge fund based in New York and before that he was an equity trading strategist in the Global Portfolio Trading group at Goldman Sachs from 2004 to 2009. Anthony holds a MS in Computational Finance and a BS in Computer Science both from Carnegie Mellon University.

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Altaf Kassam is Managing Director and Head of Equity Applied Research, Americas and EMEAI for MSCI, with responsibility for research to support new and existing indexes and risk models including factor and economic exposure indexes, as well as performance and risk attribution. Prior to joining MSCI, Altaf was the Global Head of the Equity Market Strategies Group at UBS Investment Bank, and previously at Deutsche Bank and Goldman Sachs. He holds an MSc in Finance from London Business School.

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Ting is a Vice President and a member of the client consultant team at MSCI. Ting's responsibilities include client education and training, product implementation and on-boarding, as well as custom-projects design and execution based on client's specific needs and objectives. Before joining MSCI in 2010, he worked at Ivy Asset Management, the Fund of Hedge Funds division of Bank of New York Mellon. Ting holds an MBA from Fordham University in New York. He graduated with a BS in Finance from University of Nebraska - Lincoln.

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Stan is a Senior Researcher focused on exploring Systematic Equity Strategy (SES) factors in risk models, building new sector models and establishing macro linkages in equities. Prior to MSCI, he was co-head of research and lead portfolio manager for the U.S. equity funds at Quantitative Investment Strategies group at Goldman Sachs Asset Management. He began his career as an assistant professor at University of North Carolina teaching econometrics. Stan holds a Phd in Economics from Rutgers University.

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Remy Briand is responsible for research on all MSCI-branded products at MSCI Inc., a leading global provider of investment decision support tools, including indexes and portfolio risk, and performance analytics. In this capacity, Remy is in charge of the continual expansion, refinement and improvement of all MSCI indexes. Remy is also leading the MSCI ESG Research business, which provides Environmental, Social and Governance (ESG) rating and compliance products to investors globally.

ASIA SPOTLIGHT

Christopher Ryan
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Christopher Ryan is Managing Director and Head of MSCI Asia Pacific based in Hong Kong. Chris is responsible for driving MSCI's growth in the APAC region. Chris has more than 33 years of experience in financial services, having worked in the investment management industry since 1983. He has served in senior management positions for Asian divisions of global firms and regional investment management firms, including HSBC, ING, Fidelity, and Perpetual.

HOW TO ANALYZE AN ETF USING BARRA PORTFOLIO MANAGER

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Lei is a member of the Client Coverage team at MSCI. His major responsibilities include analytic product implementation, client relationship management and custom analytic project delivery based on client's specific needs. Prior to join MSCI in January 2014, Lei worked at Scotia Bank, the third largest bank in Canada, as a quantitative risk manager. Lei holds a Master of Quantitative Finance degree from University of Waterloo.

IPD'S GLOBAL DATA STANDARDS CONSULTATION

IPD's standardized reporting is expanded through IPD's Global Data Standards initiative. This standardizes a much wider range of market data, and provides more effective tools for global investors. The initial stages of this development have seen the implementation of five key initiatives to IPD's Global Data Standards.

1. Establishing a list of key financial variables
2. Standardized methodology for performance excluding currency impacts
3. Standardized methodology for index rebalancing
4. Global standardization of fund level performance
5. Improving transparency on the robustness of indexes

To download IPD's Global Data Standards overview, please visit **ipd.com/research**

FEEDBACK NOTES CONSULTATION 1 AND 2:

BRINGING GLOBAL CONSISTENCY TO REAL ESTATE PERFORMANCE MEASUREMENT

Following on from the IPD Global Data Standards consultations that took place in March (Consultation 1) and October (Consultation 2) last year, clients of IPD products have been provided with feedback notes containing a collection of comments received from clients, and with the steps MSCI will take to address each of them.

A similar note about the most recent consultation, which closed in the first week of February, will soon be available for clients.

If you wish to know more about the consultations and feedback notes, please find the documents at the Reporting Portal or contact your Client Consultant directly.

MSCI

ABOUT MSCI

MSCI is a leading provider of investment decision support tools to over 6,000 clients worldwide, ranging from large pension to boutique hedge funds. We offer a range of products and services – including indexes, portfolio risk and performance analytics, and ESG data and research – from a number of internationally recognized brands such as Barra, RiskMetrics and IPD. Located in 23 countries around the world, and with over 2,600 employees, MSCI is dedicated to supporting the increasingly complex needs of the investment community with groundbreaking new products, high quality data, superior distribution and dedicated client support.

INDEXES

MSCI has been at the forefront of index construction and maintenance for more than 40 years, launching its first global equity indexes in 1969. Today, MSCI offers a family of more than 160,000 consistent and comparable indexes which are used by investors around the world to develop and benchmark their global equity portfolios.

PORTFOLIO CONSTRUCTION

Equity and multi-asset class portfolio analytics products help asset managers and owners measure, manage, and optimize their risk and performance across multiple portfolios. Robust analytics are powered by the range of equity, fixed income, derivative and alternative investment risk and return attribution models.

RISK AND PERFORMANCE

Multi-asset, position-based risk, performance analytics and wealth management products and reporting services enable clients to measure and quantify portfolio risk across security types, geographies and markets. MSCI's offering is well known for its Value at Risk methodologies, as well as being a leading provider of credit liquidity and counterparty risk systems.

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TO FIND OUT MORE, PLEASE VISIT

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MSCI

THE FINANCIAL IMPLICATIONS OF CLIMATE CHANGE

THE MSCI GLOBAL LOW CARBON TARGET INDEXES

Climate change presents one of the biggest economic and political challenges of the 21st century, and investors are exploring the potential impact of these changes on financial assets. Of particular interest may be the long-term portfolio implications of "carbon stranded assets" - assets that may lose economic value before the end of their expected life because of changes associated with the transition to a low carbon economy.

To find out more, please visit
msci.com/resources/event/webinar/the_financial_implications_of_climate_change_msci_global_low_carbon_target_indexes.html

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