Memorandum

To	Kentucky Retirement System Investment Committee
From	RVK, Inc.
Subject	2013 Global Equity Market Commentary
Date	April 18, 2014

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Economic Review

The U.S. equity markets began 2013 on a strong note with a rally of returns following the resolution to the Fiscal Cliff in January, and continued to climb through the March 1 sequester date, the start of the automatic government budget cuts. Q1 2013 GDP was revised downwards from first estimate of 2.4% to 1.8% while core inflation remained tepid at 1.7%. Overall economic indicators for the quarter in non-U.S. developed regions were neutral with continued troubling signs within Europe and more positive economic indicators in Asia. In the European markets, Cyprus was the next country to suffer from a significant banking crisis. As part of a bailout deal, the International Monetary Fund ("IMF") called for a one-time levy on deposits, creating fear that such a move would become the template for other peripheral European countries seeking assistance. Historically, Cyprus was a fairly affluent country, but they were also one of the largest holders of Greek debt, the default and settlement of which significantly hurt the country. Elsewhere, the Bank of Japan named a new head, Haruhiko Kuroda, who pledged to end deflation in the country within the next couple years, spurring a rally in Japanese markets.

During the second quarter, the Federal Reserve ("Fed") continued to make full use of another non-traditional policy tool – communication – with various degrees of success, causing market volatility. The Fed announced in May they were considering "tapering" their asset purchase program (Quantitative Easing or "QE" program). At the ensuing June Federal Open Market Committee ("FOMC") meeting press conference, Chairman Ben Bernanke suggested that they may begin to taper QE3 by the end of the year and may end the program by mid-2014 if their economic projections come to pass. Afterward, various Fed Governors' speeches added further clarification to the "tapering" discussion and provided support for the suddenly declining bond markets.

US GDP grew 2.5% in Q2 after growing 1.8% in Q1. Inflation was still below the Fed's target of 2% annual rate, and the unemployment rate declined from 7.6% to 7.3%, mostly due to a decline in labor force

participation.

Slower U.S. economic growth continued in the third quarter coupled with low inflation caused the Fed to keep its $85 billion per month QE purchase program in place, surprising most market participants who expected the Fed to begin a $10-15 billion “taper” of the program. Ben Bernanke’s term as the Fed Chairman was coming to an end in January 2014, and as Larry Summers withdrew his candidacy to replace Bernanke, it paved the way for Vice Chairwoman Janet Yellen, herself a dove like Bernanke, to take over as Chair of the Fed.

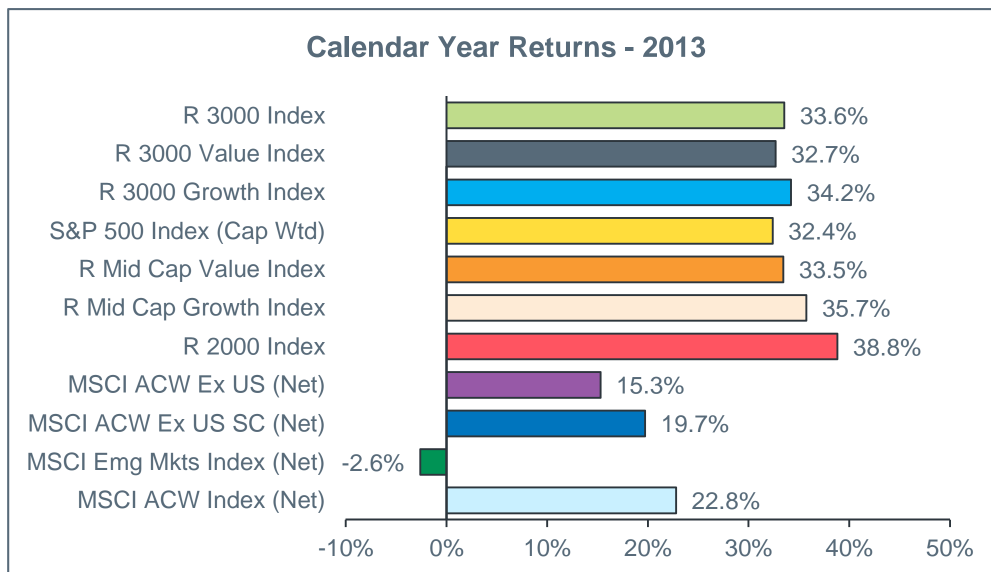
On an embarrassing note, the U.S. Congress missed the deadline to continue to fund discretionary spending, forcing a government shutdown on the last day of the quarter that lasted into the beginning of the fourth quarter. Internationally, despite the increasing threat of U.S. involvement in Syria’s civil war, geopolitical events generally did not adversely affect markets. Final GDP for the third quarter was revised up from an initial reading of 2.8% to 4.1% based on stronger consumer spending and private inventory growth, while inflation remained tepid at 1.7%.

As the fourth quarter of the year began, the U.S. once again flirted with default in October as Republicans and Democrats clashed over appropriations and the debt ceiling. After a 16-day federal shut-down, both sides came to an interim agreement on appropriations and postponed the debt ceiling until February 7, 2014.

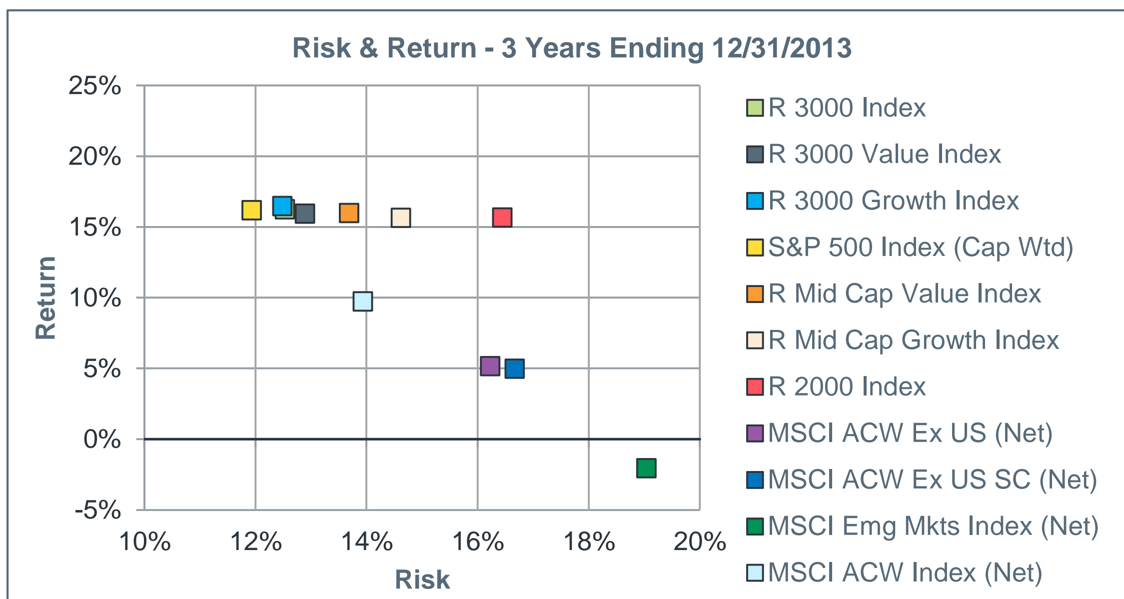
After the Fed surprised markets in September by not reducing the pace of their QE program, positive economic news in the final quarter of the year allowed the Fed to move forward with a modest reduction in purchases from $85 billion per month to $75 billion. The Fed scheduled the reduction of the purchase of $40 billion in Treasury bonds and $35 billion in mortgage-backed securities to begin in January 2014. While the Fed expected to continue to reduce asset purchases throughout 2014, they tied further reductions in purchases to prevailing economic data, which made the timeline for a full exit from QE unknown. The Fed also asserted that the Federal Funds Rate would remain at 0.00-0.25% even after unemployment has reached the 6.5% threshold.

Global Equity Markets Review

Global economic reforms, a need for growth, and a return to basic fundamental investing were among the several factors that contributed to the strength of the equity markets both domestically and globally in 2013. The following chart illustrates the passive returns earned by each asset class included within the KRS Global Equity Portfolio for calendar year 2013.



Over the trailing three-year, the indices generated the following return and risk characteristics:



The **1st quarter** was a strong quarter for U.S. equities. The S&P 500 Index gained 10.6% for the first three months of the year, resulting in one of its best quarters in history. On March 28, the S&P 500 surpassed its all-time high set in October 2007, having recuperated all of its losses from the 2008 financial crisis.

Active managers had a difficult time keeping pace with their passive benchmarks during the first quarter. The Russell 1000 Index ranked in the 33rd percentile, the Russell 1000 Growth in the 28th percentile, and the Russell 1000 Value in the 18th percentile.

Value outperformed growth in large cap, due in large part to strong returns within the financial sector. However, growth outperformed value in small cap. Defensive parts of the market outperformed cyclical sectors with healthcare, consumer staples, and utilities driving performance while materials and technology were laggards. Accompanying a defensively led market was a period of low volatility. Realized volatility was 10.3% in the first quarter, well below the average realized volatility of 15.7% since 1928, as measured by the S&P 500 Index.

U.S. equity markets handily outpaced their foreign counterparts, essentially doubling the returns of the MSCI EAFE and ACW indices. Within the developed non-U.S. markets, small cap outperformed large cap (EAFE small cap 8.4% vs EAFE 5.1%). The performance of active managers was mixed relative to benchmarks, with a lack of exposure to emerging markets serving as the key driver to excess returns. Spreads between sector and country performance widened with the best performing sector, healthcare, up 12.2% while the worst performing sector, materials, was down -7.2%. Japan posted an impressive 11.7% return for the quarter, which was a headwind for those managers that perpetually have an underweight to Japan.

Compared to emerging markets, developed non-U.S. markets dramatically outperformed as the MSCI Emerging Markets index was down -1.6% for the quarter. Countries within the EM index posted negative returns for the quarter with the exception of the Asia EM region. Indonesia, Thailand, and the Philippines were the best performing countries. With little signs of meaningful, sustainable growth around the globe, Asia was one of the few bright spots with growth potential.

During the **2nd quarter**, active manager returns improved relative to index returns. Value strategies continued to outpace growth in large cap equity, and growth continued to outperform value in small cap. The strength among small cap stocks was due in part to a relative weakness of REITs and utilities in value and the strength of biotech in growth.

Developed non-U.S. equities and emerging markets contracted during the quarter. Active manager performance continued to be affected by allocations within emerging markets, evidenced by the performance of the MSCI ACW ex U.S. Index versus the MSCI EAFE index (-3.1% vs.- 1.0%). Three main market events garnered the attention of investors during the quarter:

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- Japan was one of the strongest performing markets as a result of reforms implemented by new elected Prime Minister, Shinzo Abe. The Japanese stock market was up over 15% through June 30, supported by a mix of aggressive policies to raise consumer prices (reflation), boost borrowing and spending, and improve competitiveness of exports.

- Emerging Markets saw a sharp decline during the quarter, led by the largest economies within the asset class, based particularly on concerns surrounding slowing growth in the second largest economy in the world, China.

- The improving U.S. dollar hurt non U.S. returns.

In the **3rd quarter**, many investors experienced strong relative performance from their active U.S. large cap managers with growth leading value. Within large cap value, the benchmark's (Russell 1000 Value) meaningful weighting to a weak financials sector was a tailwind for managers that took an active underweight to the sector, generating some excess returns during the quarter. Also, many value managers sought "value" in the depressed healthcare sector that rebounded from a sell off stemming from exaggerated fears about the impact of the new healthcare regulations.

Within the large cap growth space, secular growth themes were priced at a premium as investors prepared for a lower level of total global growth. Companies that had been priced low due to global growth concerns, such as consumer discretionary, energy and industrial stocks, were strong contributors for the quarter. Active managers that were positioned in safe harbor sectors trailed the market as stocks that offered little in terms of growth or multiple expansion continued a downward price trend.

Within U.S. small cap equity, growth continued to lead value, which was hurt by poor performing financials. In the first five months of 2013, the slow growth environment was driven by defensive names and higher yielding sectors. The 3rd quarter was driven more by the health care sector, with seven of the top 15 best performing names in the Russell 2000 were from this sector (several names appreciated over 200%!). Biotechnology did very well for the quarter based on drug approvals and key M&A activity, but biotech tends to be a difficult sector for managers to embrace given the unpredictable nature of the sector, but clearly a win for those managers that had exposure.

Both developed non-U.S. and emerging markets were up for the quarter despite a negative month in August as riskier stocks rallied. Small cap outperformed large cap within the developed non-U.S. space but lagged within the emerging markets. All countries within the developed non-U.S. markets were positive for the quarter including Japan, which continued to perform well albeit not as strongly as the "rally" during the first half of the year. Currencies played a significant role in U.S. dollar performance as the dollar depreciated during the quarter,

especially relative to developed non-U.S. markets. In local terms, the MSCI EAFE Index only returned 7.5% versus the USD denominated index which returned 11.6%.

The quarter also marked a meaningful turning point for active managers who began focusing more on stock fundamentals and less on macro themes. Europe in particular showed signs of emergence from their long recession.

Emerging markets bounced back for the quarter and were in positive territory returning 5.9% for the quarter, although they continued to lag developed non-U.S. markets. Indonesia was by far the worst country for the quarter returning a -23.9%. Other negative countries were Turkey and India. Most other emerging market countries were positive although there was a wide dispersion among them. China remained in positive territory for the quarter.

The year ended on a high note for stocks globally. During the **4th quarter**, investors saw decreases in unemployment, upward revisions to GDP, and continued strength in housing and consumer spending, all of which continued to drive the domestic equity market. Based on returns, domestic equity was the best broad strategy of the year, while bonds, emerging markets, commodities, and gold were all negative for the year. Among large cap names, the high volatility, high beta names were the strongest performers for the year, and high momentum stocks were particularly strong in the fourth quarter. The environment for active management improved as intra-stock correlations fell to long-term averages and fundamental factors outweighed macro factors. Finally, growth outperformed value for the year across all market capitalizations.

The smaller end of the U.S. market cap spectrum outperformed the larger end for the calendar year, with the Russell 2000 Index having its fourth best year ever, and the growth index topping core by 4.5%. Micro Cap led the domestic indices, returning 45.6%, while the Russell Top 200 posted a return of 32.4%. Similar to large cap, smaller cap stock returns were driven by faster earnings growth rates, higher P/E multiples, technology, cyclical producer durables, and materials processing companies.

During the 4th quarter, developed non-U.S. and emerging markets trailed the performance of U.S. stocks. Developed non-U.S. stocks had a strong quarter but was outpaced almost two-fold by the U.S. market. However, with the valuation of the MSCI EAFE Index below the level it reached at its peak in 2007, investors felt optimistic about the prospects of investing outside of the United States. On the developing side, emerging markets were generally positive for the quarter albeit lower than developed markets. Following a theme similar to developed non-U.S., valuations in the emerging countries were compelling enough to attract more investors back to the region during the second half of the year.

KRS Global Equity Portfolio

Overview Summary

The Kentucky Retirement System Pension Plans (comprised on five distinct pension plans: KERS non-hazardous and hazardous, CERS non-hazardous and hazardous, and SPRS) have an average target allocation of 43.4%[1] to global equities and the Insurance Plans (same distinct plans) have a target of 44.0% to global equities as highlighted below:

	Pension		Insurance	
	Actual	Target	Actual	Target
Global Equity	**45.5%**	**43.4%**	**49.2%**	**44.0%**
U.S. Equity	*22.3%*	*20.5%*	*25.5%*	*20.0%*
Non-U.S. Equity	*20.4%*	*20.0%*	*20.2%*	*20.0%*
Emerging Markets	*2.8%*	*2.9%*	*3.5%*	*4.0%*
Global Fixed Income	18.3%	19.3%	17.7%	20.0%
Real Return	9.3%	10.0%	9.8%	10.0%
Real Estate	3.4%	4.5%	3.7%	5.0%
Absolute Return	10.3%	10.0%	9.7%	10.0%
Private Equity	10.0%	10.0%	5.5%	10.0%
Cash Equivalents	3.0%	2.8%	4.4%	1.0%
Total	100.0%	100.0%	100.0%	100.0%

The U.S. and developed non-U.S. portfolios performed well in 2013 on an absolute and relative basis while the emerging markets portfolio closely matched its benchmark and posted a negative absolute return for the year:

	Pension		Insurance	
	Portfolio	Index	Portfolio	Index
U.S. Equity	33.7%	33.5%	33.6%	33.5%
Non-U.S. Equity	18.3%	15.8%	17.9%	15.8%
Emerging Markets	-2.3%	-2.3%	-2.3%	-2.3%

Note: Returns are net of fees.

The U.S., Non-U.S., and Emerging Markets portfolio benchmarks are the Russell 3000 Index, the MSCI All Country World ex U.S. Index, and the MSCI Emerging Markets Index, respectively.

[1] KERS non-hazardous pension plan's target asset allocation is more conservative than the other pension plans, and the differences are averaged into a blended total pension plan target allocation.

Overall, the three equity portfolios performed in line with expectations by meeting or exceeding their respective benchmarks, net of fees.

Focusing on the pension plan (returns for the insurance plan are similar if not exactly the same in some cases), the notably strong managers were Westfield Capital (All Cap U.S. Growth: 38.9% versus 34.2% and ranked in the 20th percentile of its peer group), INVESCO Structured Core Equity (U.S. Large Cap Core: 35.3% versus 32.4% and ranked in the 25th percentile of its peer group), The Boston Company Non-U.S. Value (All Country World ex U.S.: 19.9% versus 15.8% and ranked in the 69th percentile of its peer group), Pyramis International Growth (All Country World ex U.S.: 19.3% versus 15.8% and ranked in the 71st percentile of its peer group), and Wellington Emerging Markets Equity (Emerging Markets: 0.3% versus -2.3% and ranked in the 45th percentile of its peer group).

Notable underperforming managers were Sasco Capital (U.S. Mid Cap Value: 32.4% versus 33.5% and ranked in the 79th percentile of its peer group), Geneva Capital (U.S. Mid Cap Growth: 31.6% versus 35.7% and ranked in the 78th percentile of its peer group), and Aberdeen (Emerging Markets: -5.8% versus -2.3% and ranked in the 88th percentile of its peer group).

Portfolio Modifications and Updates

At the May 7, 2013 Investment Committee Meeting, Staff and RVK presented a comprehensive structure study of the Non-U.S. Equity portfolios of the pension and insurance plans. The study sought the following:

- Establish a structure designed to outperform the MSCI All Country World Index, excluding the U.S.
- Optimize the balance between active and passive mandates within the developed non-U.S. market and emerging market portfolios
- Identify unintended active investment biases
- Ensure active mandates are significantly differentiated

As a result of the study, RVK and Staff recommended that KRS implement a core and satellite structure that establishes a foundation of low-cost market beta exposure complemented by less constrained, excess return oriented investment mandates. RVK and Staff first recommended a 45% allocation to incumbent BlackRock Asset Management's passively-managed ACW ex U.S. product. Second, Staff and RVK initiated a search for non-U.S. equity investment managers to complement the incumbent managers: Pyramis Global Advisors (growth) and The Boston Company Asset Management (value).

At the February 14, 2014 Investment Committee Meeting, Staff and RVK recommended a slate of managers that the Committee voted to fund:

- American Century – Growth
- Franklin Templeton – Growth
- LSV Asset Management – Value
- Lazard Asset Management – Value

Staff is currently working toward reallocating assets and funding the new managers in a prudent and efficient manner.