# **Muhlenkamp**Memorandum

Issue 119

**Published Third Quarter** 

#### July 2016

# Quarterly Letter

During the second quarter, we earned an average return of -1.35%. For comparison, over the same time period, the S&P 500 Index returned 2.46%, the Nikkei (Japanese stock market index) returned -6.95%, the Euro Stoxx 50 (a European stock market index) returned -1.90%, and the Shanghai Index (China) returned -1.64%. The S&P 500 Index was the best of the bunch even before the United Kingdom voted to leave the European Union on 23 June, and it widened the gap with the rest of the world after that event.

In general, our holdings with exposure to the business or credit cycle did poorly in the second quarter, as did drug companies. Our technology companies have done well, and the money we put to work in select energy and healthcare companies in the first quarter has generally done quite well for us. We are pleased to own no financials, which have performed poorly this year and were hit particularly hard in the aftermath of the British referendum.

Most of the second quarter was marked by rising stock and crude oil prices as both markets rebounded off of their February lows. The S&P 500 Index hit 2119 on 8 June, 2016, just short of the 2126 level it achieved in both May and July of 2015, before declining into quarter's end. The price of crude oil crested just above \$50 per barrel late in June, before similarly declining into quarter's end. The Federal Reserve kept short-term interest rates unchanged during the quarter (citing the risk of volatility due to the Britain vote; they sure got that one right!), and long-term interest rates declined during the quarter with the yield on the 30-year Treasury moving from 2.6% in April to 2.43% at the end of June. The spread between high-yield (junk) bond yields and Treasury yields continued to narrow throughout most of the second quarter, continuing the move we saw at the end of the first quarter. That remains a



Muhlenkamp & Company, Inc. Intelligent Investment Management positive development. First quarter company earnings (which were reported during the second quarter) were generally in line with expectations, but, again, both aggregate revenues and earnings declined on a yearover-year basis. By our count, that's four straight quarters of declining year-over-year revenues and three quarters of declining year-over-year earnings. As in the previous quarter, declines were worst in the energy sector, but fully half of the 10 sectors saw declining earnings and revenues-it's not just energy that's experiencing weakness. The weakness in much of the industrial part of our economy that we identified in late 2015 remains and has neither improved nor worsened noticeably.

It seems like every quarter something big happens for us to talk about, this quarter was no exception. The UK voted itself out of the European Union on 23 June. The markets (currency markets, equity markets, commodity markets) reacted violently to the development on 24 June-a bunch of market participants must have been caught by surprise. We believe that this is a great big sign that the previously unthinkable can no longer be dismissed and must now be considered possible, that the range of possible outcomes as we look at the future is now broader than it was a month ago and our ability to see clearly has diminished. We think other market participants will come to the same conclusion and adjust their actions accordingly. In other words, we think investor psychology has probably changed, which will probably change the markets. We're keeping an open mind as we think about the impact.

Our expectations going forward are for negative interest rates in Europe and Japan to continue, encouraging investors in those countries to leave home and invest in the United States (tending to support U.S. stock prices and keep Treasury rates low), while simultaneously damaging their banks. We expect U.S. economic growth to be less than 2% with inflation below 2%, and think it is unlikely that the Federal Reserve will raise interest rates in the near future. A recession in the near future is quite possible. We'll be watching to see if the spread between



high-yield (junk) bonds and Treasury bonds widens back out, and to see if the Treasury yield curve, which has flattened quite a bit, flattens more or inverts. We're also keeping a sharp eye out for effects from the exit of the UK from the European Union.

We continue to hold a large cash reserve and look for good opportunities to put that cash to work. We know those opportunities are coming, we just don't know when.

Until next quarter,

Ron Muhlenkamp and Jeff Muhlenkamp 🖾

The comments made by Ron and Jeff Muhlenkamp in this commentary are opinions and are not intended to be investment advice or a forecast of future events.

The S&P 500 is a widely recognized, unmanaged index of common stock prices. The figures for the S&P 500 reflect all dividends reinvested but does not reflect any deductions for fees, expenses, or taxes. It is not possible to invest directly in an index.

"Spread" refers to the difference in the number of percentage points or basis points in yield. The level of risk correlates with the potential for returns.

Nikkei is short for Japan's Nikkei 225 Stock Average, the leading and most-respected index of Japanese stocks. It is a price-weighted index comprising Japan's top 225 blue-chip companies traded on the Tokyo Stock Exchange. The Nikkei is equivalent to the Dow Jones Industrial Average (DJIA) Index in the United States.

*Euro Stoxx 50 is a market capitalization-weighted stock index of 50 large, blue-chip European companies operating within Eurozone nations.* 

The Shanghai Stock Exchange (SSE) is the largest stock exchange in mainland China, run by the China Securities Regulatory Commission (CSRC). Stocks, funds, and bonds are all traded on the Exchange, which has listing requirements including that a company must be in business and earning a profit for at least three years before joining the exchange.

# Letter to My Daughters: On Passive Investing

By Tony Muhlenkamp

Passive investing is a way of investing that doesn't entail any forecasting, minimizes investing fees, and tries to avoid the adverse consequences of failing to correctly anticipate the future. I think of it as a way of implementing the conclusions of the Efficient Market Hypothesis (EMH) and Modern Portfolio Theory (MPT).

Burton Malkiel describes the EMH as buying and holding a portfolio of broadbased low-cost market index funds and believes it is still the best game in town. He contends that while the market may not always be rational in the short run, it always is over the long haul.<sup>1</sup>

MPT attempts to maximize the expected returns of a portfolio for a given level of portfolio risk, or equivalently minimize risk for a given level of expected return, by carefully choosing the proportions of

various assets to include in the portfolio. The objective is to select a collection of investment assets that has collectively lower risk than any individual asset.

Both models make sense in theory and can work well in combination. I think a purely passive investment strategy is to keep living expenses for one year in the bank, allocate the rest of your money, 50% to a total stock market index fund and 50% to a total bond market index fund, and, then, rebalance every thirteen months. It's simple, it's rational, and it's consistent.

I just don't know anyone that can do it. Start with the fact that there are thousands of index funds to choose from. The mere act of choosing WHICH index funds to use is a "forecast" of sorts, as is deciding how much to invest in each of the index funds you own. Then there's rebalancing, which is taking money from what has gone up recently and adding to what has gone down. Failure to rebalance is "forecasting," as is holding more money in the bank, as is moving money more often than the once a year needed to rebalance. Anything other than 50/50 is "active" versus "passive" management.

Jared Dillian has a nice take on the problems with passive investing in his article *Ahoy Polloi.*<sup>2</sup>

So why is passive investing so hard to practice? As Dillian says, "everyone chickens out."

I've been reading a history of behavioral economics by Richard Thaler at the same time I'm reading histories of capitalist and conservative thought by Jerry Z. Muller. Thaler's book is a personal account of events he experienced and witnessed, while Muller is surveying a broad field of thinkers from the last couple of hundred years. Both men illustrate that assuming all people are all rational all the time is a bad idea when creating economic and political models to govern policy making. Thaler refers to this all-rational-all-the-time person as "Homo Economicus."

I think assuming all people are all rational all the time is a bad idea when creating investment models as well. The Efficient Market Hypothesis and Modern Portfolio Theory need the same Homo Economicus investor for their models to work. I agree markets are rational in the long haul, but people are emotional ALL THE TIME. I think they are rational in working for their own best interests, but they can be unsure and emotional about what ACTUALLY furthers their own best interest. So, even if the index funds do well over time and in any given year, the index fund investor is still subject to moving money in and out at the wrong times, or not having ENOUGH money in the index when it does well. Having an index fund that does 12% in a year does no good if 90% of your money is in cash earning 0%.

A company called DALBAR sells a report titled "Quantitative Analysis of Investor Behavior" that "has been measuring the and switch into and out of mutual funds over both short- and longterm time frames. The results consistently show that the average investor earns less in many cases, much less—than mutual fund performance reports would suggest."<sup>3</sup> They are trying to quantify the effect that I'm describing. Their technique has come under criticism lately and I don't think their conclusions are definitive, but I do think the conclusions are illustrative. We can see the same phenomenon at work when we look at the "Capital Share Transactions" in a mutual fund annual report and put those cash flows alongside the performance table

effects of investors'

decisions to buy, sell,

showing returns by calendar year. Money seems to always follow performance, which means the INVESTOR is not getting the same performance as the INVESTMENT.

In the last five years more than \$1 trillion has moved into equity products that track indexes, and \$266 billion has been redeemed from funds run by stock pickers. So there is a LOT of money being used to buy indices that have done well lately, without regard to the underlying company fundamentals or economic realities.

So, what to do? I suggest going back to fundamentals, and I will describe that process in future letters. For now, check the books and articles I've mentioned and see if what I've said makes sense.

#### Mutual fund investing involves risk. Principal loss is possible.

Opinions expressed are subject to change at any time, are not guaranteed and should not be considered investment advice.

- <sup>1</sup> Forbes.com, What Does The Efficient Market Hypothesis Have To Say About Asset Bubbles? Answer by Burton Malkiel; June 13, 2014
- <sup>2</sup> The 10th Man, Ahoy, Polloi, by Jared Dillian; April 30, 2015
- <sup>3</sup> Dalbar, Quantitative Analysis of Investor Behavior (QAIB)



# How Retirement Has Changed—Why Saving More and Working Longer will be Necessary

At our May 12 investment seminar, Ron Muhlenkamp addressed the changing landscape of retirement. You may view a video archive of the presentation on our website; if you prefer, call us, and we'll send you a DVD.

Additionally, we recently published the Muhlenkamp Marathon, a financial training workbook that is equally useful to those starting out, as well as to those in retirement. A complimentary copy is available upon request.

#### Ron Muhlenkamp:

It's amazing how rapidly we have come to assume the privilege of "retirement"—it would have been a foreign word to my grandparents. My father adopted it with alacrity—just the idea—but the notion of retirement wasn't fully realized until sometime after World War II.

Following is a brief overview of retirement's "three-legged stool," a metaphor conceived by an actuary for Met Life back in the 1940s:

1. If you are trying to fund a retirement lifestyle that roughly equals what you were spending during your working years, personal savings play a crucial role. Prior to Social Security and Corporate Plans, personal savings and assets were the sole source of "retirement" income. For most people, these assets were insufficient to allow them to live on their own—they lived with their kids.

During the 1950s and '60s, the personal savings rate averaged 10-12% of disposable income. As people came to trust Social Security and pension plans, the rate dropped to 2-3%. Emphasis on personal savings was renewed in 1974 with the introduction of Individual Retirement Accounts (IRAs).

Today, personal savings (as a percentage of disposable income) is on the order of 4-5%.

2. Social Security was signed into law by FDR in 1935 to provide retired workers age 65 or older with continuing

income—not an income you could live on, but to help cover the basics (approximately 35-40% of prior earnings for the average retiree). When enacted, the average life expectancy was 61 years old; plus, for every 1 retiree, there were 37 workers. So, the government could afford paying a stipend.

Today, average life expectancy has increased to age 78, yet the average retirement age has remained 65. Not only are beneficiaries receiving payments for a longer period of time, the worker-to-retiree ratio has narrowed to less than 3:1—you do the math.

3. A company pension was not a benefit available to most employees prior to the advent of Social Security. Things changed in the early 1940s. The Wage and Salary Act of 1942, which froze wages (an attempt to contain wartime inflation), was offset by a War Labor Board ruling in 1943, which encouraged employers to offer pension and health benefits as an alternative means to attract workers. "Defined Benefit" plans, which pay retirees a specified amount of money, became the norm for most working Americans.

This succeeded until the 1970s, when double-digit inflation crippled the majority of defined benefit pension plans. Over time, retirees' purchasing power was cut in half, spurring negotiations to double their pension amounts. As a repercussion, pension plans were suddenly 50% underfunded. Additionally, productivity gains took effect (e.g. we produce the same tons of steel as we did in 1960 with one-tenth of the manpower), squeezing workerto-retiree ratios. Established firms with older employees and more retirees were at a serious disadvantage relative to new firms with young employees. These forces culminated in the shift to "Defined Contribution" plans, which have morphed into today's version of a 401(k) plan.

Our fear is that if the U.S. continues on the same economic path for another decade or so, we will have lost an entire generation of growth, which makes the whole idea of retirement problematic—hence, the theme of this seminar: why saving more and working longer will be necessary.

Ron has written extensively about these topics, so if you're interested in learning more about the changing status of Social Security, pensions, or consumer savings and spending, let us know. We are happy to send you the essays.

### Announcements

Archive Available - How Retirement Has Changed—Why Saving More and Working Longer will be Necessary Our May 12, 2016 investment seminar has come and gone, but the information from our presentation remains relevant to those approaching retirement, as well as those just beginning to save for retirement. Visit our website to watch a video of the presentation by portfolio managers Ron and Jeff Muhlenkamp.

#### Request for Email Address

Muhlenkamp & Company regularly publishes information that gets distributed by email only. To be added to our email list, visit our website at www.muhlenkamp.com or call us at (877) 935-5520 extension 4. Your contact information will not be released to any third party.

#### Conference Call September 1, 2016

Join us for conversation with portfolio managers Ron and Jeff Muhlenkamp.

Register to participate in our Conference Call on **Thursday**, **September 1, 2016 from 4:15 p.m.** -**5:00 p.m. ET** by calling (877) 935-5520 extension 4, or by visiting our website.



# **Muhlenkamp**Memorandum

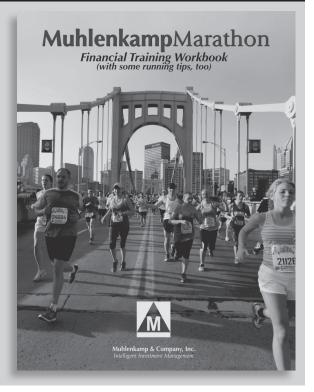
Inside this issue:

- Quarterly Letter
- Letter to My Daughters
- How Retirement Has Changed: Seminar Recap

# Muhlenkamp Marathon – Are you up for the challenge?

There are many similarities between training for a marathon and creating a legacy of financial independence—both take desire, time, effort, and discipline. Training for and completing a full marathon require setting goals, time to train, workouts, learning about best techniques from experienced runners, and sometimes accepting coaching. With discipline and effort, you will lose fat and build up muscle and endurance. Working your way to financial independence takes setting short- and long-term financial goals, time to pay off your debt, time to develop your skills and increase your income, and learning about money and investing. With discipline and effort you can decrease your debt, grow your assets, and develop healthy financial habits.

How do you run a financial marathon to become financially fit and eventually financially independent? ...One mile at a time! Our *Muhlenkamp Marathon Financial Training Workbook* contains 26.2 miles of financial guidance. If you or someone you know needs help getting on the right course financially, request our workbook. Visit www.muhlenkamp.com or call (877)935-5520 extension 4.



# **Muhlenkamp**SMA

# All-Cap Value

#### For the period ended 6/30/16

Muhlenkamp & Company's All-Cap Value SMA (Separately Managed Account) is designed for investors' accounts over \$100,000. We employ full discretion, applying fundamental analysis.

#### **Investment Objective**

We seek to maximize total after-tax return through capital appreciation, and income from dividends and interest, consistent with reasonable risk.

#### **Investment Strategy**

We invest in undervalued assets wherever they may be found. Typically, this results in holding a portfolio of companies we believe are materially undervalued by the market. Bonds may be included in the portfolio if they are a good investment.

#### **Investment Process**

We start with a bottom-up scan of domestic companies, typically looking at most U.S. companies at least four times per year. We add to that an understanding of the sector dynamics in which companies are operating, an assessment of the business cycle, and a review of macroeconomic conditions.

Our primary screening metric is return on shareholder equity (ROE). We are looking for companies with stable returns that can be purchased cheaply, or for companies with improving returns that have not yet been recognized by the market.

We don't believe that a holding period of "forever" is appropriate in all cases, but are comfortable holding companies as long as they continue to meet expectations.

#### **Investment Risk**

We define investment risk as the probability of losing purchasing power over long periods of time, which is quite different from Wall Street's definition of price volatility in very short periods of time. Taxes, inflation, and spending will ALL impact the purchasing power of your assets.



Muhlenkamp & Company, Inc. Intelligent Investment Management

## All-Cap Value Composite Performance (Net of Fees)

|                        |                 |             | Annualized —    |                 |                  |                  |  |
|------------------------|-----------------|-------------|-----------------|-----------------|------------------|------------------|--|
|                        | Year to<br>Date | One<br>Year | Past 3<br>Years | Past 5<br>Years | Past 10<br>Years | Past 15<br>Years |  |
| Return                 | -5.83%          | -12.06%     | 3.45%           | 5.82%           | .93%             | 2.68%            |  |
| S&P 500 Total Return*  | 3.84%           | 3.99%       | 11.66%          | 12.10%          | 7.42%            | 5.75%            |  |
| Consumer Price Index** | 1.57%           | 1.02%       | 1.03%           | 1.23%           | 1.72%            | 2.03%            |  |

\* The S&P 500 is a widely recognized, unmanaged index of common stock prices. The figures for the S&P 500 reflect all dividends reinvested but do not reflect any deductions for fees, expenses, or taxes. One cannot invest directly in an index.

\* Consumer Price Index (CPI) – As of May 2016 – U.S. CPI Urban Consumers NSA (Non-Seasonally Adjusted), Index. The Consumer Price Index tracks the prices paid by urban consumers for goods and services and is generally accepted as a measure of price inflation. Price inflation affects consumers' purchasing power.

Consolidated performance with dividends and other earnings reinvested. Performance figures reflect the deduction of broker commission expenses and the deduction of investment advisory fees. Such fees are described in Part II of the adviser's Form ADV. The advisory fees and any other expenses incurred in the management of the investment advisory account will reduce the client's return. It should not be assumed that recommendations made in the future will be profitable or will equal the performance of the above accounts. A list of all security recommendations made within the past twelve months is available upon request.

## **Top Twenty Holdings**

| iop iwenty molaings                                           |                                            |                   |  |
|---------------------------------------------------------------|--------------------------------------------|-------------------|--|
| Company                                                       | Industry                                   | % of Net<br>Asset |  |
| Alliance Data Systems Corporation                             | IT Services                                | 5.42%             |  |
| Gilead Sciences, Inc.                                         | Biotechnology                              | 3.80%             |  |
| Annaly Capital Management Inc.                                | Real Estate Investment Trusts              | 3.27%             |  |
| SPDR Gold Shares                                              | Exchange Traded Funds                      | 3.11%             |  |
| Apple Inc.                                                    | Technology Hardware, Storage & Peripherals | 3.10%             |  |
| Bristol-Myers Squibb Company                                  | Pharmaceuticals                            | 2.97%             |  |
| Hanesbrands, Inc.                                             | Textiles, Apparel & Luxury Goods           | 2.67%             |  |
| Lannett Company, Inc.                                         | Pharmaceuticals                            | 2.50%             |  |
| ON Semiconductor Corporation                                  | Semiconductors & Semiconductor Equipment   | t 2.50%           |  |
| Celgene Corporation                                           | Biotechnology                              | 2.48%             |  |
| McKesson Corporation                                          | Healthcare Providers & Services            | 2.36%             |  |
| UnitedHealth Group Incorporated                               | Healthcare Providers & Services            | 2.33%             |  |
| PowerShares Buyback Achievers Portfolio Exchange Traded Funds |                                            |                   |  |
| Microsoft Corporation                                         | Software                                   | 2.31%             |  |
| Celanese Corporation - Series A                               | Chemicals                                  | 2.21%             |  |
| NeuStar, Inc., Class A                                        | IT Services                                | 2.18%             |  |
| Teva Pharmaceutical Industries Ltd.                           | Pharmaceuticals                            | 1.82%             |  |
| Biogen Inc.                                                   | Biotechnology                              | 1.80%             |  |
| Pfizer Inc.                                                   | Pharmaceuticals                            | 1.76%             |  |
| Spirit Airlines Inc.                                          | Airlines                                   | 1.75%             |  |

Composite holdings are subject to change and are not recommendations to buy or sell any security.

Composite Top Twenty Holdings are presented as supplemental information to the fully compliant presentation on the next page.

Return on Equity (ROE) is a company's net income (earnings), divided by the owner's equity in the business (book value).

## **Portfolio Managers**

Ronald H. Muhlenkamp, Portfolio Manager, CFA, has been active in professional investment management since 1968. He is a graduate



of both M.I.T. and the Harvard Business School.



Jeffrey P. Muhlenkamp, Investment Analyst and Co-Manager, has been active in professional investment management since 2008.

He is a graduate of both the United States Military Academy and Chapman University.

#### **Investment Adviser**

Muhlenkamp & Company, Inc. 5000 Stonewood Drive, Suite 300 Wexford, PA 15090-8395 (877)935-5520 info@muhlenkamp.com

#### www.muhlenkamp.com

### SMA Facts

Average Number of Equity Holdings Cash & Cash Equivalents Portfolio Turnover

*t* Trailing 12 months

SMA Facts are presented as supplemental information.

## **SMA Information**

The All-Cap Value Composite was created in December 2003 and includes fee-paying accounts over \$100,000, full discretion, under management for at least one full quarter which are invested in the All-Cap Value strategy. The composite excludes the Muhlenkamp Fund and any wrap fee account.

Minimum Initial Investment \$100,000.00 Management Fee\* 1% (first \$1 million); 0.5% on the remainder

\* May vary by account.

Muhlenkamp & Company serves individual and institutional investors through our no-load mutual fund and separately managed accounts.

## Muhlenkamp & Company, Inc. All-Cap Value Composite Annual Disclosure Presentation

| Total<br>Firm Composite |                               |                               |                          | ANNUAL PE          | RFORMANCE        | THREE-YEAR ANNUALIZED<br>STANDARD DEVIATION* |           |                                  |                           |
|-------------------------|-------------------------------|-------------------------------|--------------------------|--------------------|------------------|----------------------------------------------|-----------|----------------------------------|---------------------------|
| Year<br>End             | Assets<br>(USD)<br>(millions) | Assets<br>(USD)<br>(millions) | Number<br>of<br>Accounts | Composite<br>Gross | Composite<br>Net | S&P 500<br>Total Return<br>Index             | Composite | S&P 500<br>Total Return<br>Index | Composite<br>Dispersion** |
| 2015                    | 422                           | 48                            | 67                       | (4.66)             | (5.45)           | 1.38                                         | 10.41     | 10.47                            | 0.68                      |
| 2014                    | 541                           | 51                            | 67                       | 10.27              | 9.37             | 13.69                                        | 9.55      | 8.97                             | 2.06                      |
| 2013                    | 585                           | 50                            | 60                       | 35.50              | 34.39            | 32.39                                        | 11.29     | 11.94                            | 3.13                      |
| 2012                    | 491                           | 41                            | 66                       | 11.29              | 10.34            | 16.00                                        | 12.02     | 15.09                            | 1.14                      |
| 2011                    | 555                           | 45                            | 74                       | (2.84)             | (3.67)           | 2.11                                         | 16.60     | 18.70                            | 0.85                      |
| 2010                    | 724                           | 59                            | 82                       | 2.96               | 2.15             | 15.06                                        |           |                                  | 1.45                      |
| 2009                    | 839                           | 90                            | 107                      | 32.68              | 31.72            | 26.46                                        |           |                                  | 2.80                      |
| 2008                    | 759                           | 112                           | 155                      | (40.53)            | (40.94)          | (37.00)                                      |           |                                  | 1.97                      |
| 2007                    | 1886                          | 327                           | 289                      | (7.61)             | (8.19)           | 5.49                                         |           |                                  | 3.77                      |
| 2006                    | 3393                          | 371                           | 337                      | 6.09               | 5.34             | 15.79                                        |           |                                  | 3.70                      |
| 2005                    | 3471                          | 287                           | 289                      | 10.04              | 9.22             | 4.91                                         |           |                                  | 3.38                      |
| 2004                    | 2261                          | 197                           | 206                      | 24.54              | 23.56            | 10.88                                        |           |                                  | 3.33                      |
| 2003                    | 1350                          | 132                           | 167                      | 43.36              | 42.10            | 28.68                                        |           |                                  | 5.57                      |
| 2002                    | 742                           | 81                            | 139                      | (19.80)            | (20.49)          | (22.06)                                      |           |                                  | 3.65                      |
| 2001                    | 699                           | 97                            | 124                      | (2.72)             | (3.51)           | (11.93)                                      |           |                                  | 5.16                      |

The objective of this All-Cap Value Composite is to maximize total after-tax return, consistent with reasonable risk—using a strategy of investing in highly profitable companies, as measured by Return on Equity (ROE), that sell at value prices, as measured by Price-to-Earnings Ratios (P/E).

Muhlenkamp & Company, Inc. ("Muhlenkamp") claims compliance with the Global Investment Performance Standards (GIPS®) and has prepared and presented this report in compliance with the GIPS standards. Muhlenkamp has been independently verified for the periods December 31, 1993 through June 30, 2015 by Ashland Partners & Company LLP.

Verification assesses whether (1) the firm has complied with all the composite construction requirements of the GIPS standards on a firm-wide basis and (2) the firm's policies and procedures are designed to calculate and present performance in compliance with the GIPS standards. The All-Cap Value Composite has been examined for the periods December 31, 1993 through June 30, 2015. The verification and performance examination reports are available upon request.

Muhlenkamp is an independent registered investment advisory firm registered with the Securities and Exchange Commission. The firm's list of composite descriptions is available upon request.

Returns are based on fully discretionary accounts under management, including those accounts no longer with the firm. Composite may invest in American Depositary Receipts (ADRs).\*\*\* Accounts may be shown gross or net of withholding tax on foreign dividends based on the custodian. Past performance is not indicative of future results.

The U.S. dollar is the currency used to express performance. Returns are expressed as percentages and are presented gross and net of management fees and include the reinvestment of all income. Net of fee performance was calculated using actual management fees. The annual Composite dispersion presented is an asset-weighted standard deviation calculated for the accounts in the Composite the entire year. Policies for valuing portfolios, calculating performance, and preparing compliant presentations are available upon request.

- \* **Three-Year Annualized Standard Deviation** is a measure of volatility, calculated by taking the standard deviation of 36 monthly returns, then multiplying the result by the square root of 12 to annualize it. Since standard deviation measures the dispersion of a set of numbers from its mean, higher results indicate more variation in monthly returns over the trailing three years.
- \*\* Composite Dispersion is a measure of the similarity of returns among accounts in the Composite. It is the standard deviation of the annual returns for all accounts which were in the Composite for the entire year.
- \*\*\* American Depositary Receipts (ADRs) are shares that trade in U.S. markets, but represent shares of a foreign company. A bank (the depository) purchases a number of the foreign shares and holds them in a trust or similar account; in turn, the bank issues shares tradable in the U.S. that represent an interest in the foreign company. The ratio of ADRs to foreign shares is set by the bank. ADRs do not mitigate currency risk, but can reduce transaction costs and simplify trading compared to buying the local shares in the foreign markets.

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28 37.10% 22.71% ‡