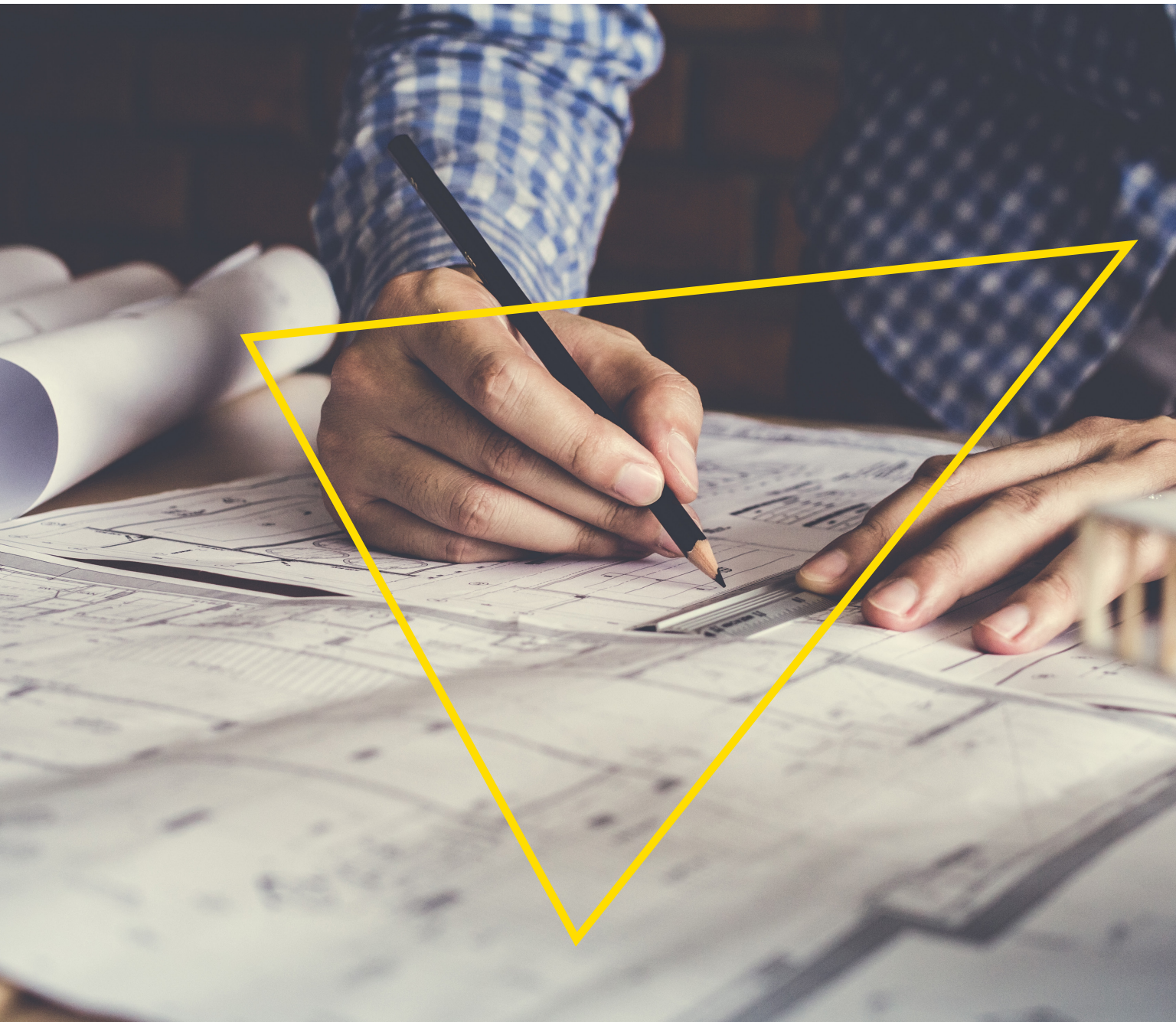
Brown ADVISORY
Thoughtful Investing.

BALANCING ACT | A Series Discussing Active Management in Late-Cycle Equity Markets

PART FOUR: FOR GOOD MEASURE

How We Value Global Leaders



The bull market in U.S. stocks is now almost nine years old—the second-longest period on record without a 20% decline in the S&P 500® Index. Returns have been strong and remarkably consistent during this period. From its low point on March 9, 2009, the Index advanced more than 290% through Dec. 31, 2017, and in seven out of nine calendar years between 2009 and 2017, it earned double-digit returns.

Many investors are worried about the age of the bull market, how much longer it can last and what might happen to their investments in a downturn. Volatility in the early part of 2018 is clear evidence of the anxiety that many investors feel at the moment. We can understand these concerns about a market reversal. As of the end of 2017, the S&P 500 Index was trading at roughly 20 times earnings, well above its historical average. The bull market has indeed lasted for some time now, and the current geopolitical environment offers plenty of potential scenarios that could shock the market.

But we can't emphasize strongly enough that it is largely impossible to predict the near-term path of the stock market. Skewing one's portfolio heavily toward a strong bullish or strong bearish belief is speculation, pure and simple. ***We believe that investing in equities should be a balancing act, not an exercise in placing bets on one side of the scale or the other.*** *At any given time, we need to weigh the risk and opportunity we see in the economy, in the stock market and in individual companies—all in an effort to balance the possible positive and negative outcomes of every investment we make.*

Perhaps the risk of a downturn is elevated after a nine-year bull market, but that doesn't mean it makes sense to blindly reduce or eliminate exposure to equities. One's timing needs to be nearly perfect in order to justify a decision to temporarily pull out of the stock market and then re-enter at a later date. As such, we believe strongly in maintaining consistent, permanent allocation to equities as a core mechanism for generating long-term returns.

We also believe that active, selective management of equity portfolios is a powerful tool for directing capital to companies that, in our view, offer a favorable mix of upside potential and downside risk. And if history is any indication, being selective in the stock market often generates particularly strong benefits during time periods when the market or the economy falters.

In this series of articles, members of our research teams will share their perspectives on this philosophy. We will hear equity research analysts talk about risk and opportunity within the sectors they cover, and portfolio managers discuss the dangers of relying too heavily on traditional valuation metrics. We will also talk about tools we use to better understand how our portfolios might behave in a downturn. The common thread in each of these pieces: To the extent that an "aging bull market" conundrum exists, we have no interest in trying to address it through market timing. We believe in a consistent approach to investing at all stages of the market cycle, in which we embrace the value we hope to create through active, selective equity investment.

Part Four:

FOR GOOD MEASURE

MICK DILLON
Portfolio Manager
Global Leaders Strategy

BERTIE THOMSON
Portfolio Manager
Global Leaders Strategy

Valuation is a critical component of active investment management, yet many investors restrict themselves to a very narrow view of valuation by focusing on simple metrics like the price/earnings (P/E) ratio. In this article, Global Leaders portfolio managers Mick Dillon and Bertie Thomson discuss the dangers of oversimplifying valuation. They also explain why they focus squarely on a company's business model as the ultimate measure of its intrinsic value.

When it comes to the thorny issue of valuation, we share the view of one of our favorite financial thinkers, Alfred Rappaport: "Cash is a fact, profit is an opinion." Rappaport, author of the seminal text *Creating Shareholder Value*, made this statement in specific reference to the limitations of using accounting profits vs. cash flow. Accounting profits, or earnings, are subjective, easily manipulated and influenced by the vagaries of accounting, while cash flow is objective and much harder to fudge. For this and other reasons, we believe that earnings are a poor measure of a company's value. This makes ratios like the P/E ratio dangerous as a valuation tool.

Discounted cash flow analysis is the foundation of our valuation work. Free cash flow generation should be the key output of any enterprise, so we value every enterprise based on the net present value of its future cash flows. Crucially, this analysis values a business in its entirety by examining the total cash flow produced and separating it between different claimants, most notably creditors, and the last to get paid—ourselves the shareholders. This also means we implicitly bring a company's balance sheet into the valuation equation. We believe that investors who ignore an enterprise's sources of financing when valuing it do so at their peril. As we discuss in this article, we focus on cash flow—its sustainability, its likely growth trajectory and the portion we are entitled to as equity owners. This is a cornerstone of our investment philosophy and the starting point for all of our investment decisions. During our valuation work, based on cash flow analysis, we focus on absolute valuation as opposed to short-cut valuation metrics relative to benchmarks or peer groups.

Most market participants forget that multiples are valuation shorthand that embed several of a company's key value drivers into a single number. Simple ratios like P/E create mental shortcuts that appeal to our automatic and responsive mode of thinking. Daniel Kahneman famously distinguishes this as *System 1* thinking, which he describes as fast, instinctive and emotional, from our slower, more deliberate and logical *System 2* thought process.

Heavy users of P/E multiples deride the complexity of using discounted cash flow analysis. They forget that the multiple still encompasses this complexity, or they simply choose not to verify the many assumptions buried in the single ratio on which they rely. Left unchecked, the human mind prefers the easy way out—the path of least mental resistance.

One of the key embedded assumptions within the P/E ratio is return on invested capital (ROIC). ROIC is a measure of financial productivity; we view it as the missing link between sales and free cash flow. The higher the ROIC, the more free cash flow is produced per unit of sales. Companies only create value when their ROIC exceeds their blended cost of capital—in other words, when a unit of the company's free cash flow exceeds the capital unit cost of generating it. ROIC is also a key determinant of a company's sustainable growth level, which is a function of the reinvestment rate of its cash flow and the expected return on that reinvestment. For example, a company with a 10% ROIC needs to reinvest 100% of its cash flow to grow at 10%, whereas a 20% ROIC company will need only a 50% reinvestment rate to grow at the same level of 10% (20% ROIC x 50% reinvestment rate). The 20% ROIC company clearly has more flexibility because of its higher ROIC. It can decide to invest more cash flow to drive higher growth or keep reinvesting at 50% and use the excess cash flow to improve its balance sheet. In this example, there is no prize for guessing that the company with a 20% ROIC is more valuable than the one with a 10% ROIC, all else being equal. ROIC, reinvestment rates and sustainable growth rates are three variables that largely slip below the radar in the one-eyed world of the multiple-focused investor.

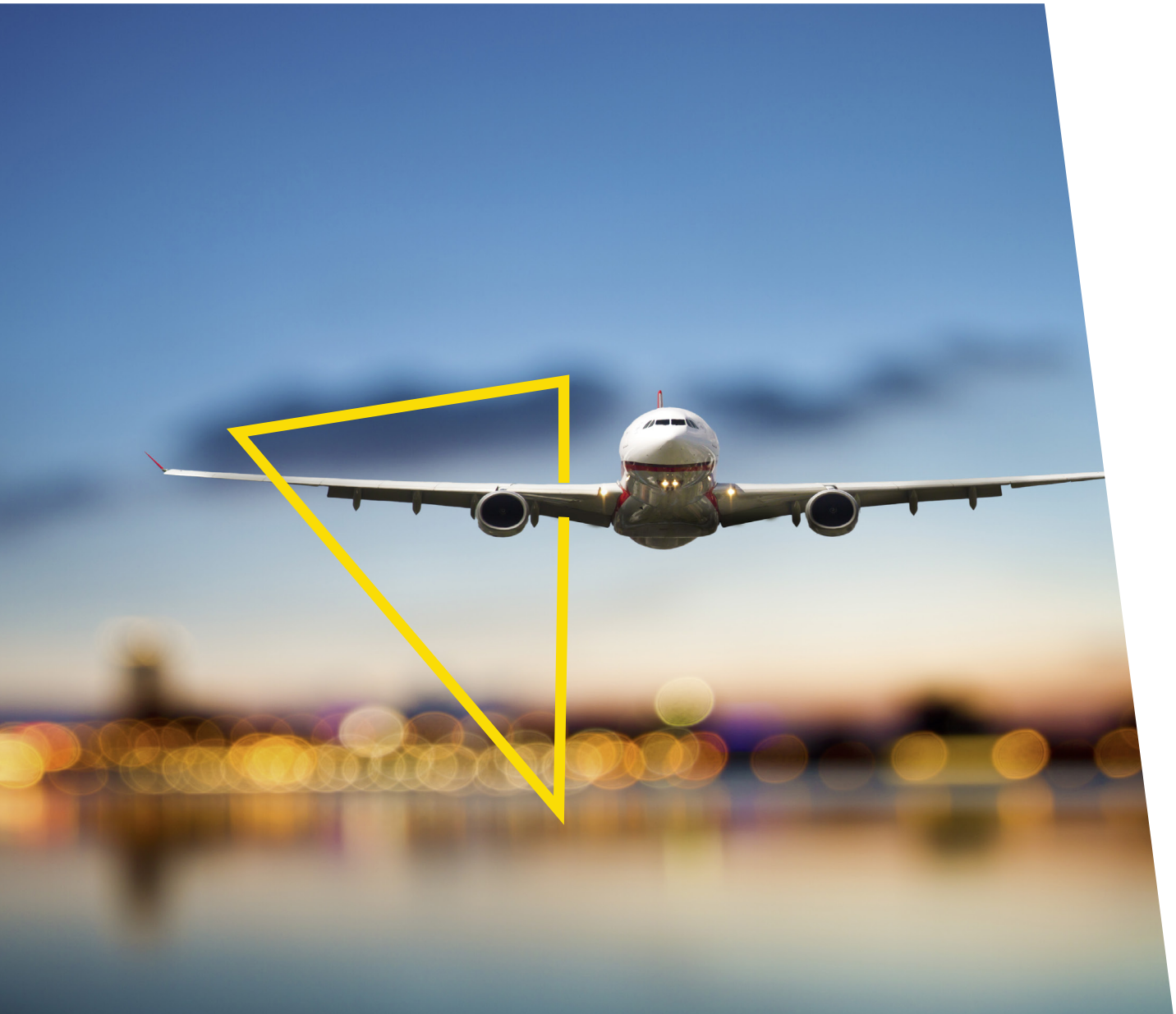
Given our approach, we are naturally wary of the investment community's overreliance on P/E and other valuation multiples. Although widely used by most investors, P/E ratios have a number of limitations. As already mentioned, earnings are based on accounting. Managers can easily manipulate conventionally accepted non-GAAP adjusted earnings figures with a multitude of perfectly legal techniques; subjective omission or reclassification of certain costs is perhaps the most obvious example. In addition, the P/E multiple crucially ignores the structure of a balance sheet. As an example, two companies with similar outlooks may both trade at 15 times earnings, but one may have no debt, while the other's debt levels may be double or triple that of its equity value. Again, it is obvious that the first company is more valuable despite the P/E parity.

ROIC, reinvestment rates and sustainable growth rates are three variables that largely slip below the radar of the multiple-focused investor.

Lastly, P/E ratios ignore a company's competitive advantages and they ignore how a company's advantages manifest in its ability to sustain its ROIC. Competitive forces dictate that a company's ROIC will trend towards its cost of capital over time. We look for highly productive, high-ROIC companies and we look for "fade-resistant" businesses that can leverage competitive advantages to generate excess returns for extended periods. Competitive advantage and fade periods can be expressed in discounted cash flow analysis, but like the other factors discussed above, they are buried invisibly within a price multiple.

Although using multiples for valuation presents numerous problems, they do have certain uses. They aid speedy comparisons between similar business models when factors such as ROIC, growth and fade are part of the discussion. With this in mind, we consciously view multiples as outputs rather than inputs of the key variables of value creation. Accordingly, we frequently use multiples as a means of asking ourselves what the equity market seems to be pricing into a company's share price. This involves deconstructing multiples into the core variables of ROIC, growth, reinvestment and fade, which helps us ask thoughtful questions about the implied values, even if we cannot derive definitive answers. This can be a useful complement to our primary approach of discounted cash flow analysis, as we try to reverse engineer the expectations implied by a company's share price.

Arguably, the biggest benefit that we derive from P/E multiples is the frequent inefficiency that occurs in a stock's price when investors overly focus on this shorthand valuation technique. For example, we largely avoid "hot" investments with high P/E multiples; in many cases, investors justify these multiples by looking at near-term earnings growth, without realizing that a company is destroying value because its ROIC is actually below its cost of capital and that its growth trajectory would require an unsustainably high reinvestment rate. Conversely, short-term investors may be put off by an artificially high P/E multiple when a company is undergoing a business model transition, but by using discounted cash flow analysis, we may see a path for significant long-term value creation. In these and other situations, the market's myopia regarding multiples can create opportunities for the long-sighted, cash flow-centric investor.



At the end of last year, the portfolio traded at a discount to its benchmark on a free cash flow yield basis—while offering double the sales growth and triple the ROIC.

Portfolio Attributes as of Dec. 31, 2017

Global Leaders Representative Account

CHARACTERISTICS		GLOBAL LEADERS REP ACCOUNT	RUSSELL GLOBAL LARGE-CAP INDEX
P/E Ratio (NTW)	Weighted Average	22.4x	21.7x
FCF Yield (LFY ex. financials)	Average	4.1%	3.7%
Sales Growth (3-Yr. CAGR)	Weighted Average	9.9%	5.4%
ROIC (LFY ex. financials)	Average	31.2%	11.7%

Source: FactSet®. Past performance is not indicative of future results. Portfolio attributes include cash and cash equivalents. Portfolio information is based on a representative Global Leaders account and is provided as supplemental information.

We will close by saying simply that the proof is in the pudding. We believe that the Global Leaders portfolio represents an attractive investment opportunity when viewed through the lens we use in our valuation work. As shown in the table above, our portfolio was essentially in line with its benchmark in terms of P/E ratio at the end of 2017. However, when looking at free cash flow yield (which, as discussed above, we consider a far more accurate measure of value), the portfolio was trading at nearly a 10% discount to its benchmark. Alongside this valuation discount, the portfolio's sales growth was nearly double that of the benchmark, and its ROIC was nearly three times as high.

This favorable profile is indicative of a group of businesses that have been highly productive with capital and offer strong potential for sustainable and fade-resistant growth. When we measure value based on the inputs of value creation rather than a single output, we see a portfolio that offers attractive absolute and relative characteristics.

By focusing on crucial variables such as ROIC, reinvestment rate and fade, we are confident that we can outperform a market that we believe leans too heavily on the shorthand of valuation multiples.

Global Leaders Composite

Year	Composite Total Gross Returns (%)	Composite Total Net Returns (%)	Benchmark Returns (%)	Composite 3-Yr Annualized Standard Deviation (%)	Benchmark 3-Yr Annualized Standard Deviation (%)	Portfolios in Composite at End of Year	Composite Dispersion (%)	Composite Assets ($USD Millions)	GIPS Firm Assets ($USD Millions)
2016	-0.6	-1.4	8.1	N/A	N/A	2	N/A	38	30,417
2015*	1.2	0.7	-7.1	N/A	N/A	2	N/A	24	43,746

* Return is for period May 1, 2015, through December 31, 2015

Brown Advisory Institutional claims compliance with the Global Investment Performance Standards (GIPS®) and has prepared and presented this report in compliance with the GIPS standards. Brown Advisory Institutional has been independently verified for the periods from January 1, 1993 through December 31, 2016. The Verification reports are available upon request. 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. Verification does not ensure the accuracy of any specific composite presentation. GIPS® is a registered trademark owned by CFA Institute.

1. For the purpose of complying with the GIPS standards, the firm is defined as Brown Advisory Institutional, the Institutional and Balanced Institutional asset management divisions of Brown Advisory. As of July 1, 2016, the firm was redefined to exclude the Brown Advisory Private Client division, due to an evolution of the three distinct business lines.
2. The Global Leaders Composite aims to achieve capital appreciation by investing primarily in global equities. The strategy will invest in equity securities of companies that the portfolio manager believes are leaders within their industry or country, as demonstrated by an ability to deliver high relative return on invested capital over time.
3. This composite was created in 2015.
4. The benchmark is the Russell Global Large-Cap Net Index. This index offers investors access to the large-cap segment of the entire global equity universe. The index is constructed to provide a comprehensive and unbiased barometer for the large-cap segment and is completely reconstituted annually to accurately reflect the changes in the market over time. Russell® is a trademark/service mark of the London Stock Exchange Group companies. One cannot invest directly in an index. Benchmark returns are not covered by the report of the independent verifiers. Benchmark returns are not covered by the report of the independent verifiers.
5. The dispersion of annual returns is measured by the equal weighted standard deviation of portfolio returns. The composite dispersion is not applicable (N/A) for periods where there were five or fewer accounts in the composite for the entire period.
6. Gross-of-fees performance returns are presented before management fees but after all trading commissions, and gross of foreign withholding taxes (if applicable). Net-of-fee performance returns reflect the deduction of actual management fees and all trading commissions. Other expenses can reduce returns to investors. The standard management fee schedule is as follows: 0.80% on the first $25 million; 0.70% on the next $25 million; 0.65% on the next $50 million; and 0.50% on the balance over $100 million. Further information regarding investment advisory fees is described in Part II A of the firm's form ADV. Actual fees paid by accounts in the composite may differ from the current fee schedule.
7. The three-year annualized ex-post standard deviation measures the variability of the composite (using gross returns) and the benchmark for the 36-month period ended on December 31. The 3 year annualized standard deviation is not presented as of December 31, 2015, because 36 monthly returns for the composite were not available (NA) and the composite did not exist.
8. Valuations and performance returns are computed and stated in U.S. Dollars. All returns reflect the reinvestment of income and other earnings.
9. A complete list of composite descriptions, policies for valuing portfolios, calculating performance, and preparing compliant presentations are available upon request.
10. Past performance does not indicate future results.
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The Russell Global Large-Cap Net Index offers investors access to the large-cap segment of the entire global equity universe. The Russell Global Large Cap index is constructed to provide a comprehensive and unbiased barometer for the large-cap segment and is completely reconstituted annually to accurately reflect the changes in the market over time. All Russell indices mentioned above are trademarks/service marks of the Frank Russell Company. Russell® is a trademark of the Frank Russell Company. One cannot invest directly in an index.

All financial statistics and ratios are calculated using information from Factsetas of the report date unless otherwise noted. FactSet® is a registered trademark of FactSetResearch Systems, Inc.

Price-Earnings Ratio (P/E Ratio) is the ratio of the share of a company's stock compared to its per-share earnings. P/E calculations presented use NTM (next twelve months) earnings estimates.

ROIC is a measure of determining a company's financial performance. It is calculated as NOPAT/IC; where NOPAT (net operating profit after tax) is (EBIT + Operating Leases Due 1-Yr)*(1-Cash Tax Rate) and IC (invested capital) is Total Debt + Total Equity + Total Unfunded Pension + (Operating Leases Due 1-Yr * 8) –ExcessCash. ROIC calculations presented use LFY (last fiscal year) and exclude financial services.

FCF Yield is a measure of financial performance calculated as operating cash flow minus capital expenditures. FCF yield calculations presented use LFY and exclude financial services.
Sales Growth Rate is based on reported company revenue for the past three years at the end of the current quarter, provided as a historical average.

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