

November 21, 2019

City of Fort Pierce
International Growth

Important Disclosures – Institutional International Growth Fund

Performance cited represents past performance. Past performance does not guarantee future results and current performance may be lower or higher than the data quoted. Returns shown assume reinvestment of dividends and capital gains. Investment returns and principal will fluctuate with market and economic conditions and you may have a gain or loss when you sell shares. Class N shares are available to the general public. Class I and Class R6 shares are available only to investors who meet certain eligibility requirements. For the most current month-end performance information, please call +1 800 742 7272, or visit our Web site at www.williamblairfunds.com.

The information about the William Blair Fund's holdings contained in this presentation are as of the date specified on the holdings page and are subject to change thereafter. Information about the Fund's holdings should not be considered investment advice. There is no guarantee that the Fund will continue to hold any one particular security or stay invested in any one particular sector. Holdings are subject to change at any time.

This content is for informational and educational purposes only and not intended as investment advice or a recommendation to buy or sell any security. Investment advice and recommendations can be provided only after careful consideration of an investor's objectives, guidelines, and restrictions.

Risk

The Fund's returns will vary, and you could lose money by investing in the Fund. The Fund holds equities which may decline in value due to both real and perceived general market, economic, and industry conditions. International investing involves special risk considerations, including currency fluctuations, lower liquidity, economic and political risk. Investing in emerging markets can increase these risks, including higher volatility and lower liquidity. Investing in smaller and medium capitalization companies involves special risks, including higher volatility and lower liquidity. Small and medium capitalization stocks are also more sensitive to purchase/sale transactions and changes in the issuer's financial condition. Individual securities may not perform as expected or a strategy used by the Adviser may fail to produce its intended result. Diversification does not ensure against loss.

Benchmark

The Morgan Stanley Capital International (MSCI) All Country World Ex-U.S. IMI Index (net) is a free float-adjusted market capitalization weighted index that is designed to measure the equity market performance of developed and emerging markets, excluding the United States. This series approximates the minimum possible dividend reinvestment. The Index is unmanaged and does not incur fees or expenses. It is not possible to directly invest in an unmanaged index.

Please carefully consider the Fund's investment objectives, risks, charges, and expenses before investing. This and other information is contained in the Fund's prospectus and summary prospectus, which you may obtain by calling +1 800 742 7272. Read the prospectus and summary prospectus carefully before investing. Investing includes the risk of loss.

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Overview

Photos courtesy of Casey Preyss, Ken McAtamney, Stephanie Braming and Alaina Anderson



William Blair Investment Management at a Glance

We work closely with corporations, public pension funds, retirement plans, Taft-Hartley plans, endowments, foundations, insurance and healthcare companies, and sovereign wealth funds.

Investment Management

- \$54.2 billion in AUM
- 472 clients
- PMs average 16 years at the firm
- Analysts average 11 years at the firm
- 323 employees (55 partners)
- 99 investment professionals

Core Investment Tenets

- Active Management
- Alpha-Seeking
- Long-Term Focus
- Fundamental Orientation
- Disciplined Process
- Research Intensive

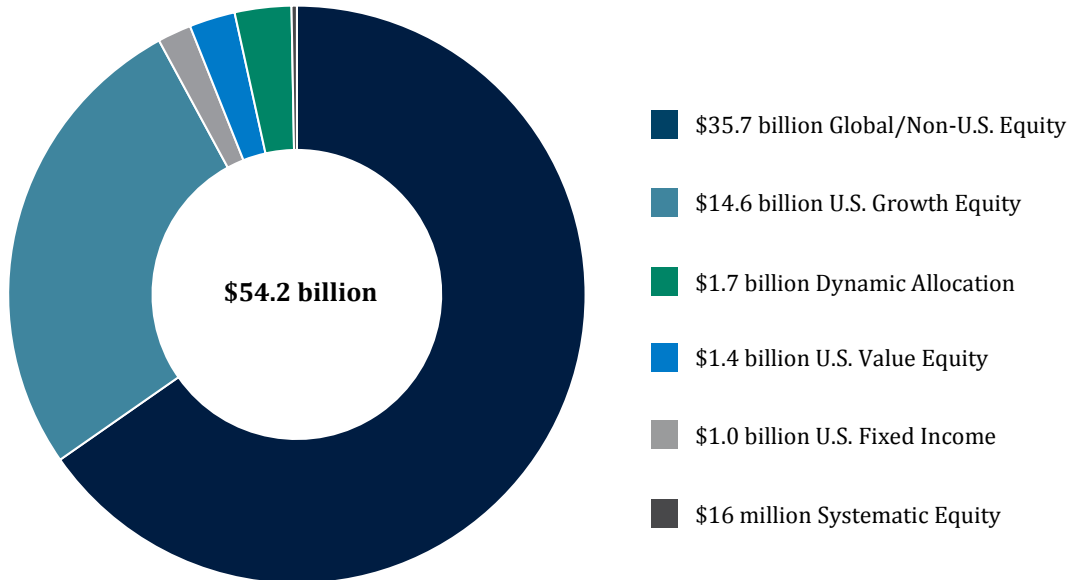


¹Wo Bai Business Consulting (Shanghai) Co., Ltd. is an affiliated company solely providing research to other William Blair affiliates on a consultative basis. As of September 30, 2019

William Blair Investment Management, LLC is headquartered in Chicago and utilizes resources and personnel of its affiliate, William Blair & Company L.L.C. and its participating affiliate, William Blair International, Ltd. William Blair International, Ltd. is an asset manager located in London. William Blair & Company, L.L.C. and certain affiliates maintain sales and client services offices in New York, Sydney, Zurich, and Stockholm and dedicated coverage for Canada.

As used on this page, "William Blair" refers to William Blair Investment Management, LLC and affiliates unless otherwise noted. For more information about William Blair, please see <http://www.williamblair.com/About-William-Blair.aspx>. This material has been distributed for informational purposes only and should not be considered as investment advice or a recommendation of any particular security, strategy, or investment product. Strategy availability may be limited to certain investment vehicles; not all investment vehicles may be available to all investors. Unless otherwise noted, all data shown is as of the date of this material. Assets shown in U.S. dollar.

Institutional Asset Management at William Blair



Representative Client List

Corporate

Boeing Company
Caterpillar Inc.
PGA TOUR, Inc.

Endowment/Foundation

The College of William and Mary Foundation
Indiana University Foundation
Toledo Museum of Art

Healthcare & Not-For-Profit

Advocate/Aurora Healthcare
Kaiser Permanente
Rush University Medical Center

Public Plans and Taft-Hartley

Florida State Board of Administration
Oregon State Treasury
Washington State Investment Board

Sub Advisory

Charles Schwab
Fidelity
Lombard Odier Darier Hentsch

Assets as of September 30, 2019.

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Investment Strategies

Global reach and extensive line of strategies across the asset class spectrum with a wide array of separate account strategies and pooled vehicles

| Teams | Strategies | Investment Professionals | AUM | Philosophy | |
|--|--|---|--------------------------------|----------------|---|
| Global Equity | <ul style="list-style-type: none"> Global Leaders Global Leaders SRI International Growth International Leaders International Leaders ADR International Developed Plus | <ul style="list-style-type: none"> International Small Cap Growth Emerging Markets Growth Emerging Markets Leaders Emerging Markets Small Cap Growth China A-Shares Growth | 9 PMs, 17 analysts | \$35.7b | Believes that an integrated approach and a global perspective to identifying quality growth companies that demonstrate sustainable value creation can produce above-average excess returns. |
| U.S. Equity | <p>U.S. Growth</p> <ul style="list-style-type: none"> All Cap Growth Large Cap Growth Mid Cap Growth SMID Growth Small Cap Growth <p>U.S. Core</p> <ul style="list-style-type: none"> SMID Core <p>U.S. Value</p> <ul style="list-style-type: none"> SMID Value Small Cap Value | | 11 PMs, 20 analysts | \$16.0b | <p>U.S. Growth – Seeks to invest in durable growth businesses when they are attractively valued in the market.</p> <p>U.S. Core– Seeks to invest in durable businesses when they are attractively valued in the market.</p> <p>U.S. Value – Seeks to strike the right balance between valuation and fundamentals and invest in companies whose management teams are good stewards of capital and focused on creating shareholder value.</p> |
| Global Multi-Asset & Currency | <ul style="list-style-type: none"> Macro Allocation Dynamic Diversified Allocation Global Diversified Return Absolute Return Currency | | 2 PMs, 14 analysts | \$1.7b | Employs a global top-down discretionary approach that strives to exploit long and short term fundamental opportunities across equities, bonds and currencies. |
| Fixed Income | <ul style="list-style-type: none"> Core Intermediate Low Duration Sustainable Fixed Income | | 4 PMs/analysts | \$1.0b | Invests in bonds with compelling yields and strong fundamental characteristics in niches of the market that tend to get overlooked by large bond market participants. |
| Systematic Strategies | <ul style="list-style-type: none"> Systematic International All Cap Core Systematic International Core Systematic Emerging Markets All Cap Core | | 2 PMs, 5 analysts | \$16m | Uses a quantitative approach based on William Blair’s traditional fundamental stock selection philosophy. |

As of September 30, 2019.

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Active Never Rests – Ownership, Culture, and Investment Approach

Our client-focused approach underpins each of three key fundamental pillars

Ownership

- 100% active employee-owned
- Alignment of interests; no outside influences or constantly changing short-term priorities
- Stable and entrepreneurial environment helps retain top talent
- Client focus; we build client relationships that last year after year rather than quarter to quarter

Culture

- Stability and evolution; we evolve with you
- Collaborative environment where investment professionals can thrive
- Professionals incented to seek long-term success for clients
- Transparency and an unwavering commitment to active investing and strong client outcomes

Investment Approach

- Unique voices and shared values; autonomous investment teams have freedom and flexibility to deliver high-conviction active management
- Deep intellectual curiosity and conviction promotes ongoing investment process improvements while each team stays true to its investment philosophy
- Consistent, rigorous, and repeatable process enables teams to seek performance our clients expect



ESG at William Blair

Experience

- Natural alignment with our quality-focused investment approach
- \$8.7 billion in mandates with client-specific ESG objectives¹

Commitment

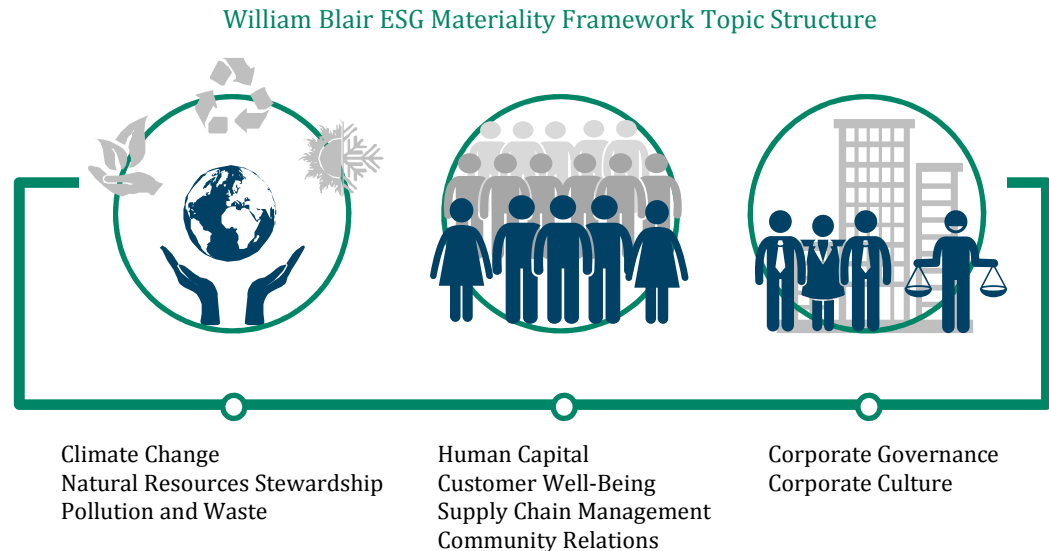
- PRI signatory since 2011²
- Tier 1 signatory of UK Stewardship Code
- US Investor Stewardship Group signatory
- Oversight by Director of Sustainable Investing and ESG working group

Signatory of:



Integration

- Material ESG factors are inputs in our holistic assessment of a company's opportunities and risks
- Proprietary ESG materiality framework focuses fundamental analysis on most relevant ESG factors at the industry level
- Seamless incorporation through our Summit research platform



¹As of September 30, 2019. Includes separate accounts with client-specific screening criteria.

²A+ rated for Equity Incorporation as per 2019 PRI Assessment Report. William Blair & Company, L.L.C. is signatory to the UN-supported PRI and UK Stewardship Code.

Global Portfolio Strategies

Our single, integrated investment platform is directed toward achieving portfolio objectives across all of our strategies

| | | Global | International | Emerging Markets |
|------------------|--|------------------------------------|---|--|
| Leaders | High quality portfolios of leading companies across the corporate life cycle | Global Leaders \$2.9 billion | International Leaders \$6.4 billion | Emerging Markets Leaders \$4.4 billion |
| | | Global Leaders SRI \$55 million | International Leaders ADR \$180 million / \$483 million AUA ¹ | |
| All Cap | Broad exposure across all market caps | | International Growth \$13.4 billion (closed) ² | Emerging Markets Growth \$4.6 billion |
| Small Cap | Broad exposure to small cap companies | | International Small Cap Growth \$2.6 billion (closed) ² | Emerging Markets Small Cap Growth \$1.1 billion (closed) ² |
| China A | Locally-traded companies in China | | | China A-Shares Growth \$121 million |

¹Assets Under Advisement (AUA) consists of assets managed by third parties in accordance with model portfolios provided by William Blair. William Blair does not have investment discretion or trading authority over these assets.

²Capacity management is an integral component of our investment process.

Assets as of September 30, 2019.

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Global Investment Team

One team, one philosophy, one process

Portfolio Management¹

Global Leaders

Andy Flynn, CFA, Partner (14/29)
Ken McAtamney, Partner (14/29)

International Leaders / International Growth

Simon Fennell, Partner (8/27)
Ken McAtamney, Partner (14/29)

International Leaders ADR

Alaina Anderson, CFA, Partner (13/18)
David Merjan, CFA, Partner (21/32)

International Small Cap

Simon Fennell, Partner (8/27)
Andy Flynn, CFA, Partner (14/29)

Emerging Markets Leaders

Todd McClone, CFA, Partner (19/27)
Jack Murphy, CFA, Partner (14/23)

Emerging Markets Growth/ Emerging Small Cap Growth

Todd McClone, CFA, Partner (19/27)
Casey Preyss, CFA, Partner (19/20)

China A-Shares Growth

Casey Preyss, CFA, Partner (19/20)
Vivian Lin Thurston, CFA, Partner (4/23)

Portfolio Specialists

Ryan Dimas, CFA, CAIA (20/24)
Romina Graiver (7/20)
Blake Pontius, CFA (14/22)
Emily George (8/9)

Global Fundamental Research Analysts²

Consumer

Kwesi Smith, CFA (4/15)
Rita Spitz, CFA, Partner (33/41)
Adam Dettmer, CFA (2/5)
Michael Patchen, CFA (<1, 7)
Armando Tamez (<1, 2)

Financials

Joel Gomberg, CFA, Partner (22/25)
D.J. Neiman, CFA, Partner³ (17/21)
Daniel Hill, CFA (14/14)
Kristin Rowland, CFA (8/22)

Healthcare

Thomas Sternberg, CFA, Partner (15/17)
Camilla Oxhamre Cruse, Ph.D. (5/13)
Richard Reznick, Ph.D. (9/9)
Emily Stent, CFA (1/4)

Industrials, Energy & Materials

Andrew Siepker, CFA, Partner (13/15)
Anil Daka, CFA (8/11)
Ben Loss, CFA (8/9)
Monika Budyn (6/10)
Esteban Gonzalez-Rosell (<1/9)

Information Technology

William Benton, CFA, CPA, Partner (22/22)
Drew Buckley, CFA, CPA (11/13)
Jayesh Kannan, CFA (1/6)
Grant Parsons, CPA (<1, 3)
Kalpiti Shah, CFA (<1/4)

Real Assets

Alaina Anderson, CFA, Partner (13/18)

China Generalists

Vivian Lin Thurston, CFA, Partner (4/23)
Richard Reznick, Ph.D. (9/9)

Emerging Markets Small Cap Generalists

Greg Scolaro, CFA, CPA (5/5)
Bryan Shea (10/10)
Jo Wang (1/9)

Strategy Research²

Hugo Scott-Gall (1/26)³
Olga Bitel, Partner (10/17)
Alexa Davis (1/4)
Gurviri Grewal (<1, 5)

Systematic Research²

Spiro Voulgaris, Partner (12/29)
Andrew Kominik, CFA (16/19)
Jeff Hill (5/21)
Andrew Wickman, CFA (4/9)
Scott Akeson (4/4)

Technologist

Darragh Grogan (11/13)

Trading⁵

Asia/Pacific

Nathan Fisher, CFA (4/15)
Daniel Iannessa (14/16)
Malik Nicholson (5/13)

Europe

Nicola Hynds (11/24)
Simon Johnstone (7/19)

Americas and FX

Terry O'Bryan, Partner⁴ (12/21)

Portfolio & Trade Order Management

Joe Emanuele (2/4)
Tim Randick (12/12)

International Trade Data Specialists

Kristin Gaffud (14/17)
Michael LaDuke (9/12)

(Years at William Blair/Years in Industry)

1. Portfolio Management team average 14 years at William Blair and 26 years in the industry. 2. Global Fundamental Research Team average 13 years at William Blair and 17 years in the industry. 3. D.J. Neiman and Hugo Scott-Gall also serve as Co-Directors of Research. 4. Terry O'Bryan also serves as the Head of Global Equity Trading. 5. Traders, excluding Portfolio and Trade Order Management and International Trade Specialists, average 9 years at William Blair and 19 years in the industry. *Italics indicate Associate role.* As of November 2019.

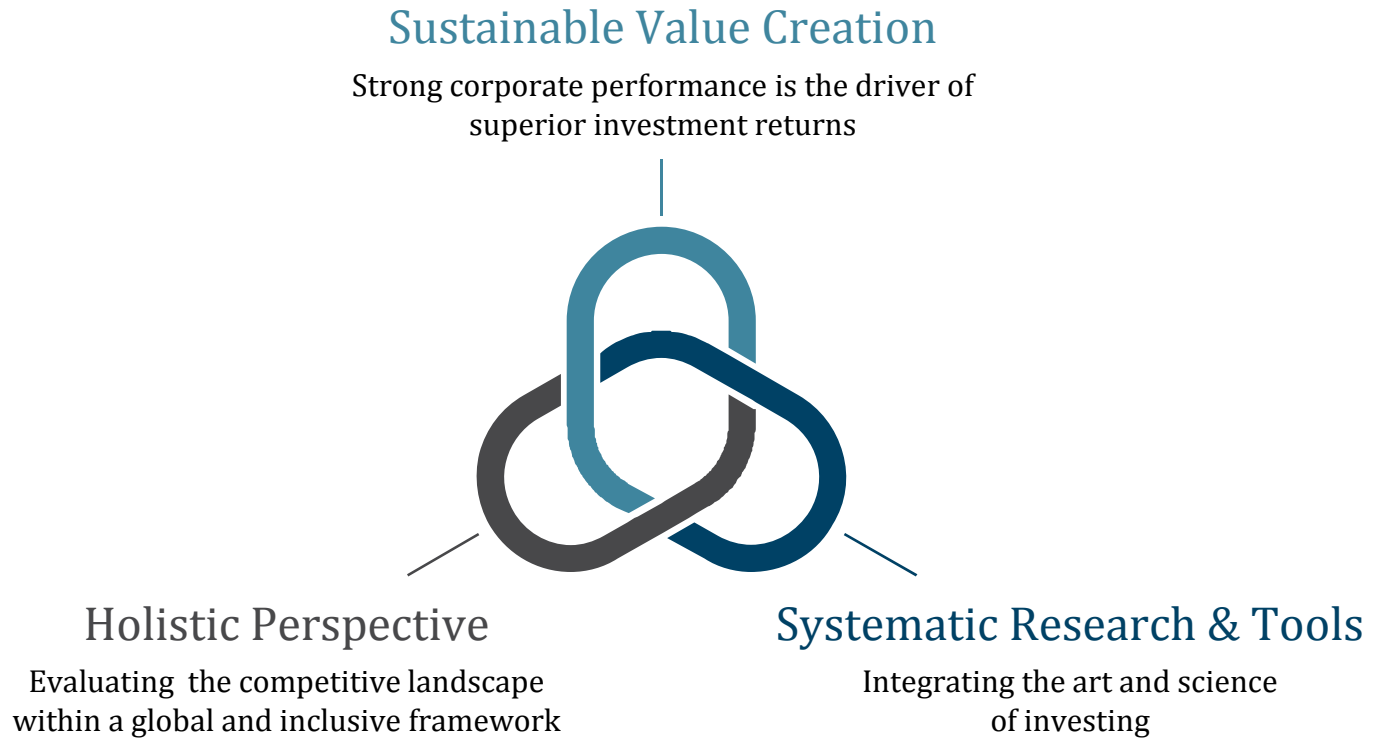
Philosophy and Process

Photos courtesy of Tommy Sternberg, Casey Preyss, Vivian Thurston



Investment Philosophy

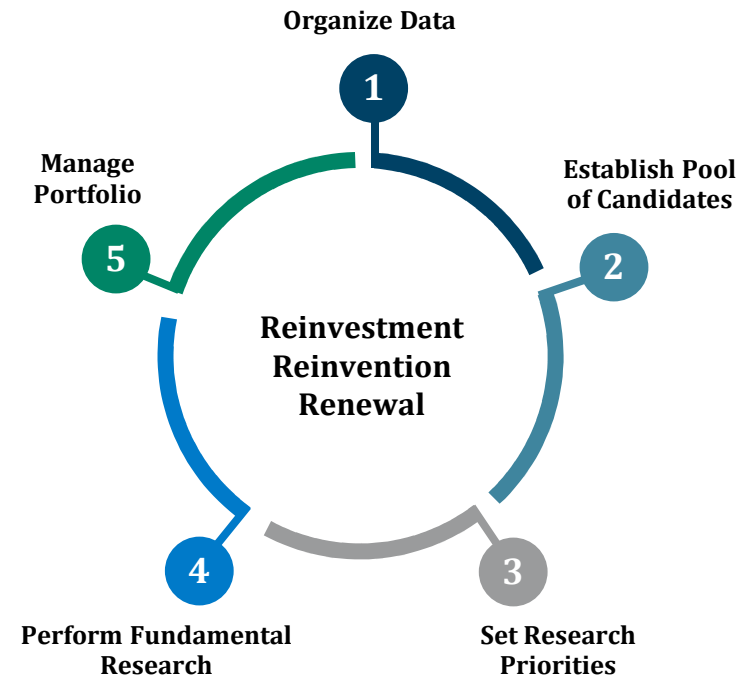
We believe an integrated investment platform directed towards identifying companies with strong corporate performance will drive superior long-term investment returns



Investment Process

Integrated Fundamental, Systematic and Strategy Research Throughout the Investment Process

- 1 Organize Data**
Rank order global universe of equities by fundamental and technical attributes and utilize systematic research to analyze information
- 2 Establish Pool of Candidates**
Create Eligibility List of 2,800- 3,000 companies through quantitative screens and fundamental analysis
- 3 Set Research Priorities**
Establish Research Agenda of 50-75 companies by identifying opportunities and risks through bottom up research, top down strategy, and portfolio objectives
- 4 Perform Fundamental Research**
Analyze sustainable value creation and determine if fundamentals appear poised to change
- 5 Manage Portfolio**
Weigh risk/reward of buy/sell decision to seek desired outcomes



Portfolio Design: International Growth

September 30, 2019

Benchmark:

MSCI AC World ex-US IMI Index

Position Size:

Dependent on market cap, float, trading volume, price volatility, and fundamental risk/reward

Range:

0.15–4.00% at initial purchase

Number Of Holdings:

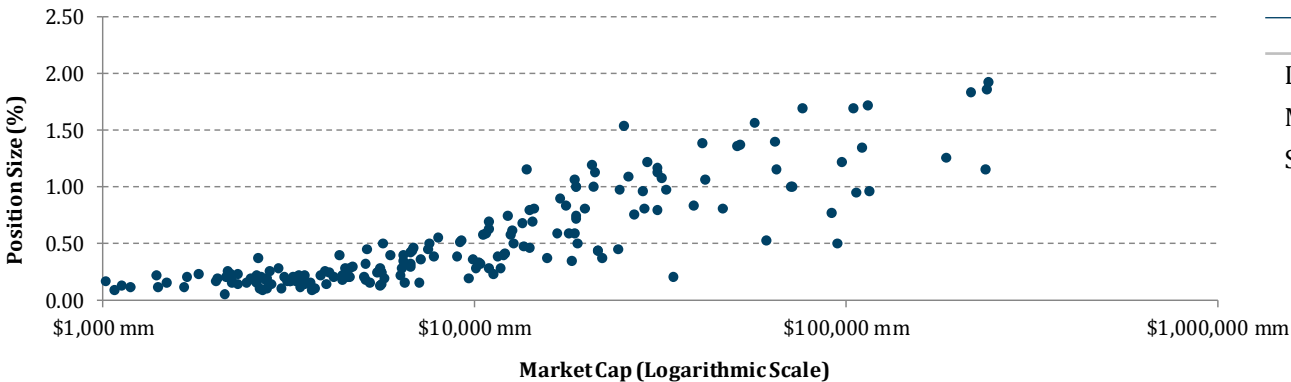
180–240

Sector Exposure

| Sector | Range |
|---------------------|-------|
| Communication Svcs. | 0–20% |
| Discretionary | 5–25% |
| Staples | 0–20% |
| Energy | 5–20% |
| Financials | 5–35% |
| Healthcare | 5–15% |
| Industrials | 5–25% |
| IT | 0–20% |
| Materials | 0–15% |
| Real Estate | 0–10% |
| Utilities | 0–10% |

Geographic Exposure

| Region | Range |
|------------------------|--------|
| Pacific ex-Japan | 0–15% |
| Japan | 5–25% |
| Europe + ME ex-U.K. | 20–50% |
| United Kingdom | 10–30% |
| Canada | 0–15% |
| Emerging Asia | 0–20% |
| EMEA | 0–10% |
| Latin America | 0–15% |
| Total Emerging Markets | 10–35% |



Capitalization

| Market Cap | Range |
|------------|--------|
| Large Cap | 20–70% |
| Mid Cap | 25–55% |
| Small Cap | 10–35% |

Policy ranges subject to change at any time.

Institutional International Growth Fund Portfolio Attributes

As of September 30, 2019

| | Institutional International Growth | MSCI AC World ex-US IMI Index | Difference |
|--------------------------------------|---------------------------------------|----------------------------------|------------|
| Quality | | | |
| Return on Equity (%) | 20.6 | 13.8 | 49% |
| Cash Flow ROIC (%) | 17.5 | 13.3 | 32% |
| Debt/Equity (%) | 70.5 | 91.4 | -23% |
| Growth | | | |
| Long-Term Growth (%) ¹ | 13.0 | 10.1 | 29% |
| 5-Year Historic EPS Growth (%) | 16.2 | 11.3 | 44% |
| Reinvestment Rate (%) | 14.7 | 8.9 | 65% |
| Earnings Trend | | | |
| EPS Est Rev Breadth (%) ² | 0.5 | -3.5 | 4.0 |
| Valuation | | | |
| P/E (next 12 months) | 20.8 | 13.4 | 56% |

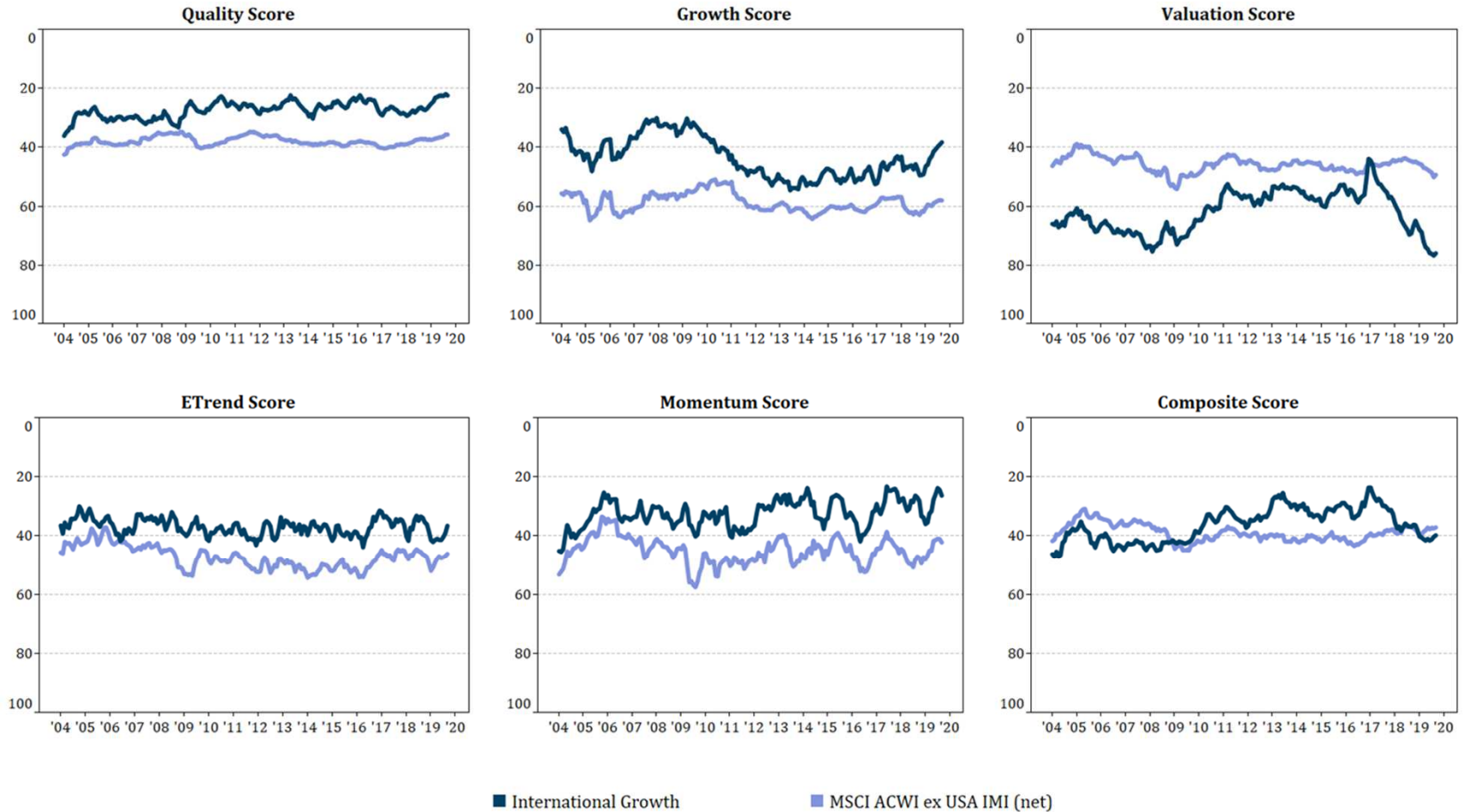
¹This measure represents the weighted average of forecasted growth in earnings expected to be experienced by stocks within the portfolio over the next 3-5 years. This projected earnings growth should not be considered an indication of future performance. From a portfolio perspective, the portfolio P/E ratio and EPS Growth Rate are weighted averages of the individual holdings' P/E ratios and EPS Growth Rates.

²The 1-month EPS Revision Breadth factor represents the trend in the direction of estimate changes. Ranging from -100% to +100%, it is calculated as the number of positive revisions minus the number of negative revisions divided by the total number of estimates.

The index is comparable to the fund in terms of investment approach but contains significantly more securities. Calculated in FactSet. The MSCI AC World ex-US IMI Index is a free float-adjusted market capitalization index designed to measure global developed and emerging market equity performance, excluding the U.S. Not intended as investment advice.

International Growth Portfolio Characteristics

September 30, 2019



Aggregate scores shown above based on William Blair proprietary quantitative model. For individual and composite ranks, 1 is best and 100 is worst.

Portfolio Analytics and Performance

Photos courtesy of Alaina Anderson and D.J. Neiman



Barcelona



Tokyo

Market Performance – Global Equity Markets

September 30, 2019

| | | QTD | YTD | 2018 | 2017 |
|------------------------------|-------------------------------|------|-------|-------|------|
| Regions | AC World (DM+EM) | -0.2 | 15.9 | -10.1 | 23.9 |
| | Developed Markets (DM) | 0.4 | 17.3 | -9.4 | 22.4 |
| | Pacific ex JP | -4.8 | 12.0 | -11.2 | 25.9 |
| | Japan | 3.3 | 11.0 | -13.5 | 25.3 |
| | Europe ex UK | -1.8 | 14.7 | -15.7 | 28.0 |
| | UK | -2.3 | 10.6 | -15.0 | 23.7 |
| | Canada | 0.6 | 21.1 | -17.6 | 15.6 |
| | USA | 1.1 | 19.7 | -5.7 | 20.6 |
| | Emerging Markets (EM) | -4.3 | 5.4 | -15.0 | 36.8 |
| | Asia | -3.6 | 5.2 | -15.9 | 41.8 |
| EMEA | -6.5 | 5.3 | -16.8 | 24.1 | |
| Latin America | -5.3 | 7.2 | -7.2 | 24.8 | |
| Frontier Markets (FM) | -1.5 | 7.6 | -16.6 | 29.9 | |
| Size | Large Cap | 0.1 | 16.2 | -8.6 | 23.9 |
| | Small Cap | -1.2 | 13.6 | -14.4 | 23.8 |
| Sectors | Communication Svcs | 0.1 | 14.8 | -10.9 | 8.2 |
| | Discretionary | -0.1 | 17.0 | -9.8 | 25.0 |
| | Staples | 3.3 | 17.5 | -10.5 | 18.0 |
| | Energy | -6.2 | 5.3 | -14.9 | 5.2 |
| | Financials | -1.2 | 13.0 | -15.7 | 23.1 |
| | Healthcare | -2.1 | 8.0 | 1.2 | 22.0 |
| | Industrials | -1.1 | 17.3 | -15.5 | 26.1 |
| | IT | 2.4 | 28.2 | -6.2 | 41.0 |
| | Materials | -4.5 | 9.5 | -17.3 | 29.3 |
| | Real Estate | 3.6 | 20.3 | -7.8 | 16.2 |
| Utilities | 5.1 | 18.4 | 0.9 | 15.2 | |
| Style | Quality | 2.5 | 6.4 | 13.9 | 4.3 |
| | Valuation | -0.3 | -3.5 | 2.4 | 5.2 |
| | Etrend | 1.7 | 4.8 | 5.4 | 7.8 |
| | Momentum | 2.1 | 5.3 | 3.4 | 13.2 |
| | Growth | -1.1 | 3.3 | -3.0 | 6.7 |
| | Composite | 2.5 | 3.5 | 11.9 | 9.6 |

Regional performance is based on IMI region/country indexes. Sector and style values are based on the MSCI ACWI IMI Index. Size values are based on the MSCI ACWI Index. Style values reflect the Quintile 1 minus Quintile 5 spread of William Blair's proprietary quantitative models. Sectors are based on Global Industry Classification (GICS) sectors. Large Cap and Small Cap based on MSCI Global Investable Market Index Methodology. Data in blue reflects the top 20% (highest) values by region, country, sector, and style. Data in red reflects the bottom 20% (lowest) values by region, country, sector, and style.

Past returns are no guarantee of future performance. A direct investment in an unmanaged index is not possible. The Morgan Stanley Capital International (MSCI) All Country World IMI Index is an unmanaged index that includes developed markets and emerging markets. Calculated in FactSet. All index returns are net of dividends. Name change from Telecommunication Services to Communication Services effective after close of business on 9/28/18; industry and subindustry reclassifications effective 10/1/18.

City of Fort Pierce Retirement and Benefit System Portfolio

As of October 31, 2019

| | |
|---|---------------------|
| Original Investment (10/2/2003) | \$10,392,820 |
| + Contributions | \$0 |
| - Withdrawals | -\$14,727,816 |
| - (Investment Management Fees & Other Expenses ¹) | -\$1,986,518 |
| + Dividend Income and Capital Gain Distribution | \$10,888,975 |
| +/- Market Appreciation/(Depreciation) | \$10,419,505 |
| Market Value | \$14,986,966 |

1. The investment management fee and other expenses are estimates.

Performance Summary

For periods ending October 31, 2019

| Performance (%) | YTD | Annualized | | | | | Since Inception (10/2/2003) | |
|--|---------------|--------------|---------------|--------------|--------------|--------------|--------------------------------|---------------|
| | | 1 Yr | 3 Yr | 5 Yr | 10 Yr | | | |
| Institutional International Growth Fund | 22.54 | 15.68 | 8.76 | 4.70 | 7.33 | 7.26 | | |
| MSCI AC World ex-US IMI Index (net) | 15.35 | 10.93 | 7.93 | 4.01 | 5.16 | 6.87 | | |
| Calendar Year Performance (%) | 2018 | 2017 | 2016 | 2015 | 2014 | 2013 | 2012 | 2011 |
| Institutional Int'l. Growth Fund | -17.50 | 29.53 | -2.40 | 0.09 | -2.66 | 18.90 | 24.11 | -13.66 |
| MSCI AC World ex-US IMI Index (net) | -14.76 | 27.81 | 4.41 | -4.60 | -3.89 | 15.82 | 17.04 | -14.31 |
| Calendar Year Performance (%) | 2010 | 2009 | 2008 | 2007 | 2006 | 2005 | 2004 | 2003 |
| Institutional Int'l. Growth Fund | 20.10 | 42.83 | -51.99 | 18.49 | 23.45 | 22.76 | 18.15 | 11.76 |
| MSCI AC World ex-US IMI Index (net) | 12.73 | 43.60 | -45.99 | 16.13 | 26.51 | 17.68 | 21.93 | 13.43 |

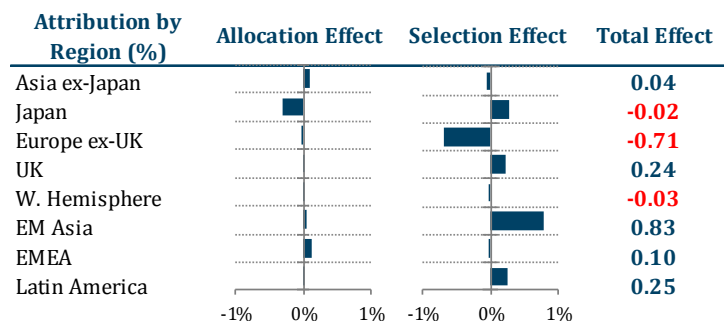
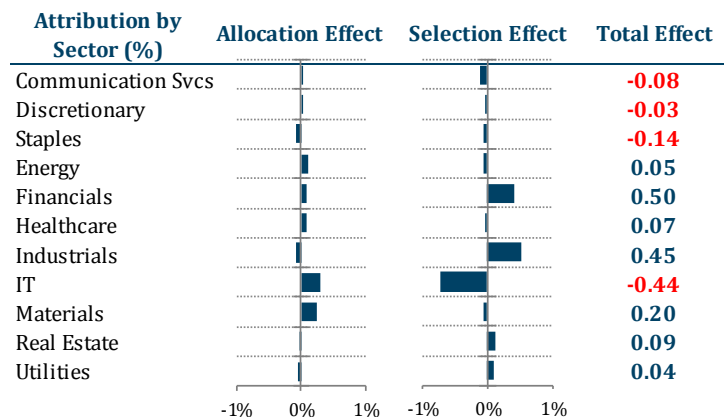
Expense Ratio Gross: 0.97%. Expense ratio shown as of most recent prospectus.

Performance cited represents past performance. Past performance does not guarantee future results and current performance may be lower or higher than the data quoted. Returns shown assume reinvestment of dividends and capital gains. Investment returns and principal will fluctuate with market and economic conditions and you may have a gain or loss when you sell shares. For the most current month-end performance information, please call 1-800-742-7272, or visit our Web site at www.williamblairfunds.com. Institutional Class shares are available to certain institutional investors.

The Morgan Stanley Capital International (MSCI) AC World ex-U.S. IMI Index (net) is a free float-adjusted market capitalization weighted index that is designed to measure the equity market performance of developed and emerging markets, excluding the United States. This series approximates the minimum possible dividend reinvestment. An index is unmanaged, does not incur fees or expenses, and cannot be invested in directly

Performance Attribution QTD – Institutional International Growth Fund

As of September 30, 2019



Top Five Contributors (%)

| Security | Sector | Country | Contribution to Relative Return |
|--------------------------------|-------------|-------------|---------------------------------|
| London Stock Exchange Group PL | Financials | UK | 0.20 |
| Taiwan Semiconductor Manufactu | IT | Taiwan | 0.17 |
| ASML Holding NV | IT | Netherlands | 0.16 |
| Brookfield Asset Management In | Financials | Canada | 0.14 |
| MTU Aero Engines AG | Industrials | Germany | 0.13 |

Top Five Detractors (%)

| Security | Sector | Country | Contribution to Relative Return |
|---------------------|-------------|-------------|---------------------------------|
| AIA Group Ltd | Financials | Hong Kong | -0.15 |
| SAP SE | IT | Germany | -0.12 |
| Sika AG | Materials | Switzerland | -0.11 |
| Airbus SE | Industrials | France | -0.10 |
| BURFORD CAPITAL LTD | Financials | UK | -0.10 |

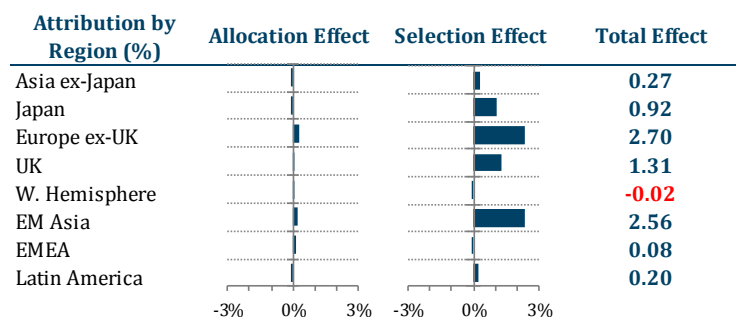
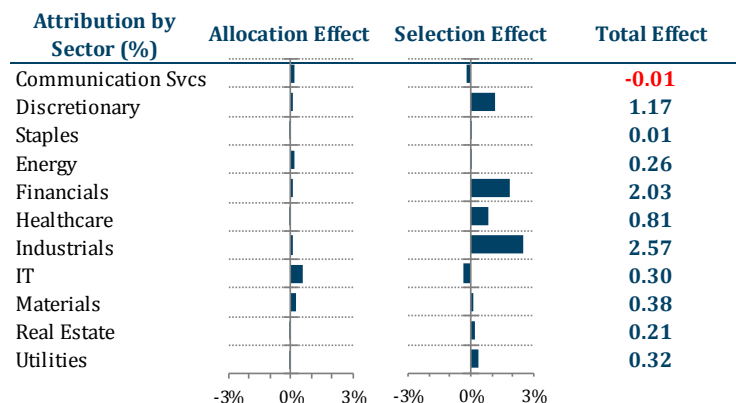
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Attribution by segment is based on estimated returns of equities held within the segments listed. All stocks held during a measurement period, including purchases and sales, are included. Cash is not allocated among segments. Calculations are for attribution analysis only and are not intended to represent simulated performance history. The actual returns may be higher or lower. We calculate attribution using Opturo. Opturo runs transactions-based attribution, taking into account all trading activity. Interaction effect is reallocated into Allocation effect. Sectors based on Global Industry Classification Sectors (GICS). Individual securities listed in this report are for informational purposes only. Holdings are subject to change at any time. This information does not constitute, and should not be construed as, investment advice or recommendations with respect to the securities listed.

The MSCI AC World ex-US IMI Index is a free float-adjusted market capitalization weighted index designed to measure global developed and emerging markets equity performance, excluding the US. An index is unmanaged, does not incur fees or expenses, and cannot be invested in directly.

Performance Attribution YTD – Institutional International Growth Fund

As of September 30, 2019



Top Five Contributors (%)

| Security | Sector | Country | Contribution to Relative Return |
|--------------------------------|---------------|---------|---------------------------------|
| London Stock Exchange Group PL | Financials | UK | 0.38 |
| Li Ning Co Ltd | Discretionary | China | 0.34 |
| MTU Aero Engines AG | Industrials | Germany | 0.33 |
| Brookfield Asset Management In | Financials | Canada | 0.28 |
| Kweichow Moutai Co Ltd | Staples | China | 0.27 |

Top Five Detractors (%)

| Security | Sector | Country | Contribution to Relative Return |
|---------------------------|------------------------|---------|---------------------------------|
| Rogers Communications Inc | Communication Services | Canada | -0.21 |
| AstraZeneca PLC | Health Care | UK | -0.21 |
| Unilever NV | Staples | UK | -0.19 |
| Yakult Honsha Co Ltd | Staples | Japan | -0.18 |
| Tokio Marine Holdings Inc | Financials | Japan | -0.15 |

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International Growth Strategy Performance in Various Environments

Arithmetic Avg Quarterly Return (%)

| | | <u>Portfolio (Gross)</u> | <u>Benchmark</u> | |
|-----------------------------------|-----------------------|--------------------------|------------------|------------|
| All Quarters (4Q96 - 3Q19) | | 2.8 | 1.6 | |
| <i>Quarters in which:</i> | <i>Outperformance</i> | | | |
| Index Rose | ✓ | 8.8 | 7.3 | (56/92 Qs) |
| Index Declined | ✓ | -6.4 | -7.2 | (36/92 Qs) |
| MSCI Growth (Net) Outperformed | ✓ | 4.0 | 2.0 | (48/92 Qs) |
| MSCI Value(Net) Outperformed | ✓ | 1.6 | 1.3 | (44/92 Qs) |
| MSCI Small Cap (Net) Outperformed | ✓ | 4.5 | 3.2 | (49/92 Qs) |
| MSCI EAFE (Net) Outperformed | ✓ | -1.3 | -1.9 | (40/92 Qs) |
| MSCI EM IMI (Net) Outperformed | ✓ | 5.9 | 4.4 | (48/92 Qs) |

Consistent outperformance in a variety of market environments. Annualized return (gross) of 9.48% vs. 4.85% for the benchmark since we began managing international equity in house (October 1, 1996).

Composite Inception is December 1, 1992. Data above reflects since inception of the strategy's current management style. At this time, changes were made to the portfolio management team and the way the philosophy was implemented. Actual composite inception precedes this date. This information is supplemental to the composite disclosure slide located in the appendix.

Past performance is not indicative of future returns. Performance is shown in U.S. dollar unless otherwise noted. Returns for periods greater than one year are annualized. Gross performance results shown do not reflect the deduction of investment management fees, assume the reinvestment of dividends and capital gains, and are net of transaction costs. Performance results will be reduced by the fees incurred in the management of the account. For example, assuming an annual gross return of 8% and an annual management/advisory fee of .40%, the net annualized total return of the portfolio would be 7.58% over a 5-year period. Net investment performance represents the deduction of the highest possible fee. Investment management fees are described in William Blair's Form ADV Part 2A. The benchmark that best reflects the composite's investment strategy is the MSCI All Country World Ex US Investable Market Index (net), which is a free float-adjusted market capitalization index that is designed to measure equity market performance, net of withholding taxes, in the global developed and emerging markets, excluding the US. Prior to 1995, the MSCI All Country World Ex US Index preceded the current benchmark as returns are unavailable back to composite inception for the current benchmark. International investing involves special risk considerations, including currency fluctuations, lower liquidity, economic and political risk. Based on data from the William Blair International Growth Fund, which is closed to new investors. Calculations are for attribution analysis only and are not intended to represent simulated performance history. Regional attribution is based on estimated US\$ price-only returns of equities held within regions for the period Q4 1996 to Q3 2003. Beginning Q3 2003, the returns represent the estimated total equity-only returns of securities held within regions. All stocks held during a measurement period, including purchases and sales, are included. Cash is not allocated among regions and all returns are exclusive of cash. A rounding discrepancy may occur when calculating backup data. Please see composite disclosure in appendix for a complete description of the composite.

International Growth Strategy

Performance analysis by geography

| Oct 1 96 to Sep 30 19 | Portfolio (Gross) | Index |
|------------------------------|--------------------------|--------------|
| United Kingdom | | |
| Cumulative | 716.1% | 259.7% |
| Annualized | 9.6% | 5.7% |
| Europe + ME ex-UK | | |
| Cumulative | 938.5% | 303.9% |
| Annualized | 10.7% | 6.3% |
| Japan | | |
| Cumulative | 278.5% | 47.5% |
| Annualized | 6.0% | 1.7% |
| Pacific ex-Japan | | |
| Cumulative | 516.5% | 348.9% |
| Annualized | 8.2% | 6.7% |
| Canada | | |
| Cumulative | 1088.1% | 465.5% |
| Annualized | 11.4% | 7.8% |

Composite Inception is December 1, 1992. Data above reflects since inception of the strategy's current management style. At this time, changes were made to the portfolio management team and the way the philosophy was implemented. Actual composite inception precedes this date. This information is supplemental to the composite disclosure slide located in the appendix.

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International Growth Strategy

Performance analysis by subsector

| <u>Oct 1 96 to Sep 30 19</u> | <u>Portfolio (Gross)</u> | <u>Index</u> |
|--|--------------------------|--------------|
| Developed Large/Mid Cap¹ | | |
| Cumulative | 660.9% | 179.6% |
| Annualized | 9.2% | 4.6% |
| Developed Small Cap² | | |
| Cumulative | 952.3% | 262.1% |
| Annualized | 10.8% | 5.8% |
| Emerging Markets³ | | |
| Cumulative | 1037.2% | 176.5% |
| Annualized | 11.1% | 4.5% |

Composite Inception is December 1, 1992. Data above reflects since inception of the strategy's current management style. At this time, changes were made to the portfolio management team and the way the philosophy was implemented. Actual composite inception precedes this date. This information is supplemental to the composite disclosure slide located in the appendix.

Past performance is not indicative of future returns. Performance is shown in U.S. dollar unless otherwise noted. Returns for periods greater than one year are annualized. Gross performance results shown do not reflect the deduction of investment management fees, assume the reinvestment of dividends and capital gains, and are net of transaction costs. Performance results will be reduced by the fees incurred in the management of the account. For example, assuming an annual gross return of 8% and an annual management/advisory fee of .40%, the net annualized total return of the portfolio would be 7.58% over a 5-year period. Net investment performance represents the deduction of the highest possible fee. Investment management fees are described in William Blair's Form ADV Part 2A. The benchmark that best reflects the composite's investment strategy is the MSCI All Country World Ex US Investable Market Index (net), which is a free float-adjusted market capitalization index that is designed to measure equity market performance, net of withholding taxes, in the global developed and emerging markets, excluding the US. Prior to 1995, the MSCI All Country World Ex US Index preceded the current benchmark as returns are unavailable back to composite inception for the current benchmark. International investing involves special risk considerations, including currency fluctuations, lower liquidity, economic and political risk. Based on data from the William Blair International Growth Fund. Calculations are for attribution analysis only and are not intended to represent simulated performance history. Prior to Q3 1998, small cap is defined as companies with a market capitalization of under \$1 billion. From Q3 1998 to Q4 2003, small cap is defined as companies with a market capitalization of under \$1.5 billion. From Q4 2003 to Q4 2007, small cap is defined as companies with a market capitalization of under \$2 billion. Beginning Q4 2007, small cap is defined as companies with a market capitalization of under \$3 billion. Beginning with Q3 2014, small cap is defined as companies with a market capitalization of under \$4 billion, mid cap is adjusted to \$4 billion to \$15 billion, and large cap to over \$15 billion. For the Large/Mid Cap and Small Cap Segments, is a price-only estimate based on the average month-end market values during the quarter prior for Q4 1998. From Q4 1998 to Q4 1999, Large/Mid Cap and Small Cap segment performance is a total-return estimate based on a monthly buy-and-hold calculation. Beginning Q1 2000, Large/Mid Cap and Small Cap segment performance is a total return estimate based on a daily buy-and-hold calculation. Developed market companies without readily available market capitalization data and cash are excluded. Emerging markets return data represents the returns of the Emerging Markets Growth composite until 1/1/2007 and then the emerging portion of international growth thereafter. Indices: (1) MSCI EAFE; (2) MSCI World ex-US Small Cap (Net); (3) MSCI EM IMI. For consistency, index returns prior to Q4 1998 are price-only except for emerging markets. Beginning with Q4 1998, index returns are total return. Source: FactSet Portfolio Analysis and SPAR. Please see composite disclosure in appendix for a complete description of the composite.

Positioning and Strategy

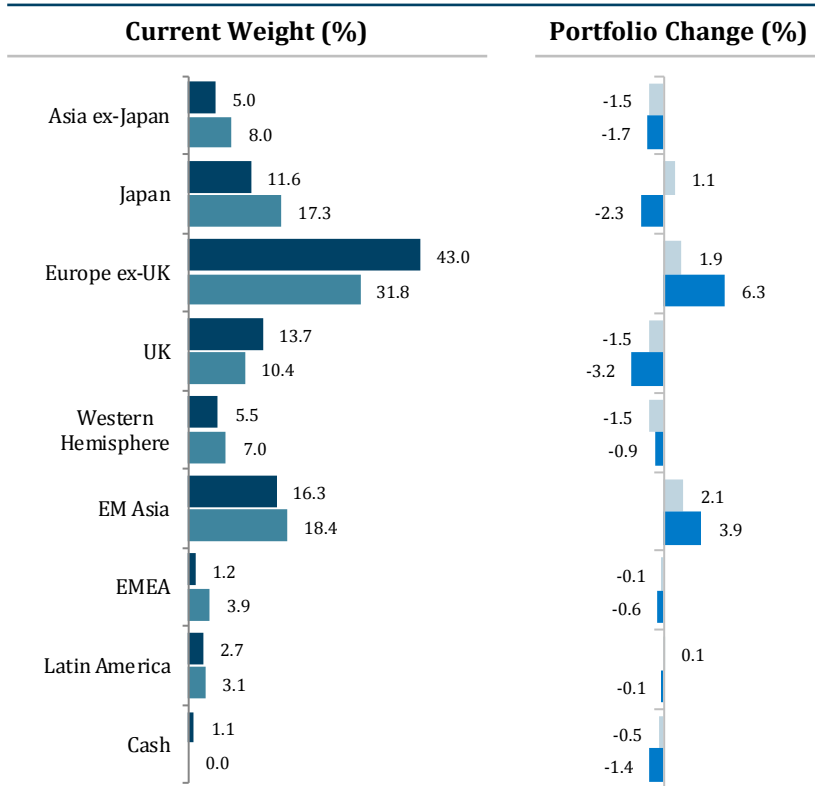
Photos courtesy of Ken McAtamney, Drew Buckley, Joel Gomberg, Andy Flynn and Jack Murphy



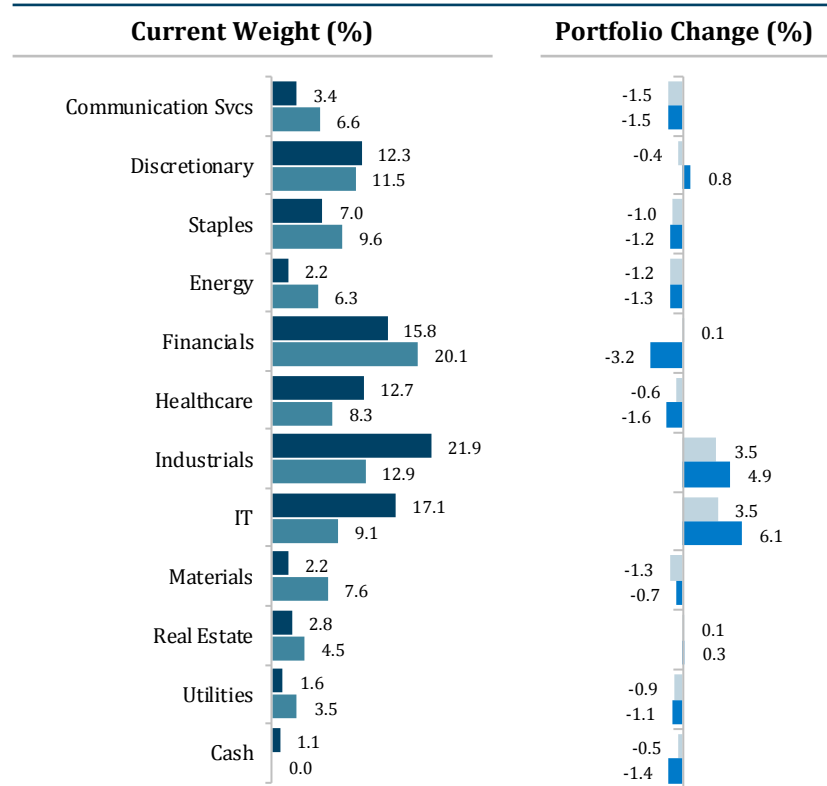
Fund Positioning – Institutional International Growth Fund

As of September 30, 2019

Regional Exposure



Sectoral Exposure



Institutional International Growth Fund
 MSCI AC World ex-US IMI Index
 Difference From Previous Quarter End
 Difference From Previous Year End

Cash incorporates cash equivalents and accruals. Region and sector distribution calculated in Eagle based on Global Industry Classification (GICS) Sectors. The MSCI AC World ex-US IMI Index is a free float-adjusted market capitalization weighted index designed to measure global developed and emerging markets equity performance, excluding the U.S. Not intended as investment advice.

Holdings: Institutional International Growth Fund

September 30, 2019

| | Portfolio Weight | | Portfolio Weight | | Portfolio Weight |
|------------------------------|------------------|------------------------------------|------------------|------------------------------------|------------------|
| Pacific Ex Japan | 4.98 | Europe+ME Ex UK (continued) | | Europe+ME Ex UK (continued) | |
| Australia | 2.63 | Finland | 0.80 | Netherlands (continued) | |
| Csl Ltd | 1.01 | Neste Oyj | 0.80 | Royal Dutch Shell Plc-A Shs | 1.16 |
| Macquarie Group Ltd | 0.82 | France | 10.68 | Koninklijke Philips NV | 1.08 |
| Aristocrat Leisure Ltd | 0.41 | Airbus Se | 1.70 | Wolters Kluwer | 0.82 |
| Goodman Group | 0.38 | Safran SA | 1.38 | Adyen NV | 0.48 |
| Hong Kong | 2.22 | Lvmh Moet Hennessy Louis Vui | 1.35 | Euronext NV | 0.22 |
| Aia Group Ltd | 1.74 | L'Oreal | 1.02 | Spain | 1.76 |
| Galaxy Entertainment Group L | 0.48 | Capgemini Se | 1.01 | Amadeus It Group SA | 1.18 |
| New Zealand | 0.14 | Kering | 0.84 | Acs Actividades Cons Y Serv | 0.58 |
| Auckland Intl Airport Ltd | 0.14 | Dassault Systemes SA | 0.75 | Sweden | 3.05 |
| Japan | 11.56 | Thales SA | 0.75 | Atlas Copco Ab-A Shs | 1.20 |
| Japan | 11.56 | Teleperformance | 0.51 | Hexagon Ab-B Shs | 0.62 |
| Keyence Corp | 1.58 | Hermes International | 0.38 | Fabege AB | 0.23 |
| Hoya Corp | 1.14 | Orpea | 0.29 | Evolution Gaming Group | 0.21 |
| Shiseido Co Ltd | 1.09 | Rubis | 0.19 | Indutrade AB | 0.18 |
| Terumo Corp | 1.01 | Alten SA | 0.18 | Nolato Ab-B Shs | 0.18 |
| Daikin Industries Ltd | 0.99 | Worldline SA | 0.16 | Lifco Ab-B Shs | 0.18 |
| Smc Corp | 0.98 | Ipsen | 0.16 | Nibe Industrier Ab-B Shs | 0.15 |
| Asahi Intecc Co Ltd | 0.46 | Germany | 4.80 | Vitrolife AB | 0.10 |
| Nomura Research Institute Lt | 0.45 | Mtu Aero Engines AG | 1.16 | Switzerland | 6.60 |
| Yakult Honsha Co Ltd | 0.43 | Vonovia Se | 1.10 | Lonza Group Ag-Reg | 1.55 |
| Tis Inc | 0.41 | Sap Se | 0.98 | Novartis Ag-Reg | 1.27 |
| Zozo Inc | 0.30 | Qiagen N.V. | 0.47 | Sika Ag-Reg | 1.01 |
| Misumi Group Inc | 0.30 | Puma Se | 0.36 | Partners Group Holding AG | 0.82 |
| Nitori Holdings Co Ltd | 0.29 | Carl Zeiss Meditec Ag - Br | 0.29 | Temenos Ag - Reg | 0.70 |
| Nihon M&A Center Inc | 0.27 | Grenke AG | 0.15 | Alcon Inc | 0.45 |
| Technopro Holdings Inc | 0.26 | Teamviewer AG | 0.15 | Logitech International-Reg | 0.33 |
| Shimadzu Corp | 0.25 | Kion Group AG | 0.15 | Vat Group AG | 0.20 |
| Benefit One Inc | 0.22 | Ireland | 1.67 | Tecan Group Ag-Reg | 0.15 |
| Harmonic Drive Systems Inc | 0.22 | Kerry Group Plc-A | 0.60 | Belimo Holding Ag-Reg | 0.12 |
| Monotaro Co Ltd | 0.21 | Icon PLC | 0.57 | UK | 13.72 |
| Gmo Payment Gateway Inc | 0.20 | Kingspan Group PLC | 0.50 | United Kingdom | 13.72 |
| Sankyu Inc | 0.18 | Israel | 1.07 | Compass Group PLC | 1.40 |
| Zenkoku Hoshio Co Ltd | 0.17 | Check Point Software Tech | 0.69 | Experian PLC | 1.23 |
| Digital Arts Inc | 0.13 | Wix.Com Ltd | 0.26 | Diageo PLC | 1.23 |
| Europe+ME Ex UK | 42.99 | Cyberark Software Ltd/Israel | 0.12 | London Stock Exchange Group | 0.98 |
| Belgium | 0.34 | Italy | 1.97 | Relx PLC | 0.81 |
| Warehouses De Pauw Sca | 0.21 | Enel Spa | 0.54 | Segro PLC | 0.64 |
| Melexis NV | 0.13 | Ferrari NV | 0.51 | Rentokil Initial PLC | 0.61 |
| Denmark | 4.57 | Banca Generali Spa | 0.24 | Halma PLC | 0.53 |
| Dsv A/S | 0.91 | Amplifon Spa | 0.21 | 3i Group PLC | 0.47 |
| Orsted A/S | 0.85 | Interpump Group Spa | 0.17 | Melrose Industries PLC | 0.42 |
| Novo Nordisk A/S-B | 0.78 | Moncler Spa | 0.16 | Hiscox Ltd | 0.41 |
| Coloplast-B | 0.70 | Technogym Spa | 0.14 | St James's Place PLC | 0.41 |
| Genmab A/S | 0.58 | Luxembourg | 0.22 | Croda International PLC | 0.40 |
| Chr Hansen Holding A/S | 0.39 | Tenaris SA | 0.22 | Greggs PLC | 0.38 |
| Royal Unibrew | 0.22 | Netherlands | 5.46 | Spirax-Sarco Engineering PLC | 0.37 |
| Tryg A/S | 0.14 | Asml Holding NV | 1.71 | Intermediate Capital Group | 0.33 |

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Holdings: Institutional International Growth Fund

September 30, 2019

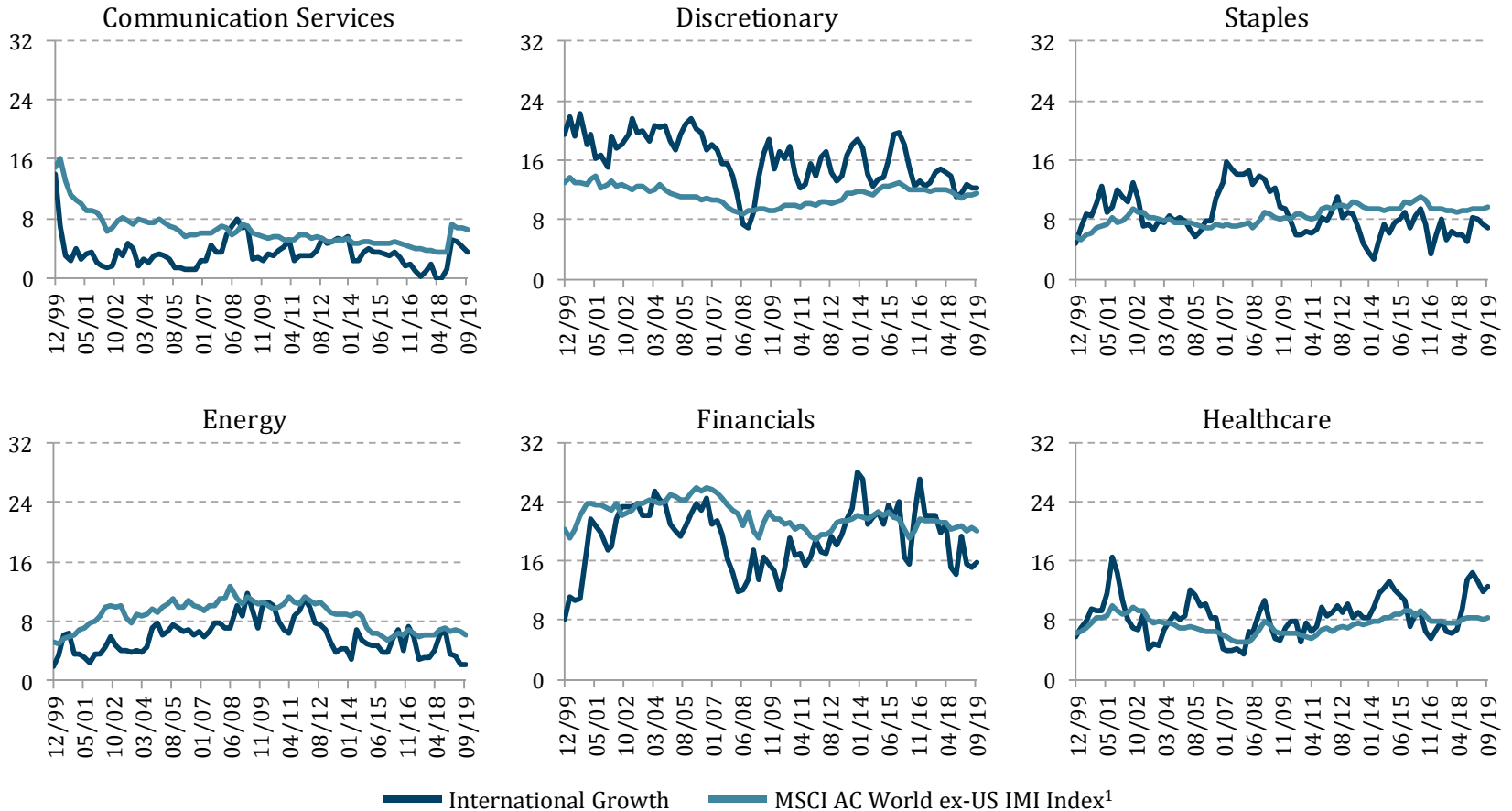
| | Portfolio Weight | | Portfolio Weight |
|-----------------------------------|------------------|------------------------------|------------------|
| UK (continued) | | EM Asia (continued) | |
| United Kingdom (continued) | | Indonesia | 1.14 |
| Intertek Group PLC | 0.29 | Bank Central Asia Tbk Pt | 1.14 |
| Aveva Group PLC | 0.29 | South Korea | 0.55 |
| Avast PLC | 0.27 | Samsung Sdi Co Ltd | 0.34 |
| Beazley PLC | 0.25 | Kakao Corp | 0.20 |
| Victrex PLC | 0.24 | Taiwan | 2.76 |
| Rotork PLC | 0.23 | Taiwan Semiconductor-Sp Adr | 1.84 |
| Wh Smith PLC | 0.21 | Mediatek Inc | 0.59 |
| Weir Group Plc/The | 0.21 | Eclat Textile Company Ltd | 0.17 |
| Big Yellow Group PLC | 0.21 | Globalwafers Co Ltd | 0.16 |
| Ssp Group PLC | 0.18 | Thailand | 0.44 |
| Fevertree Drinks PLC | 0.18 | Tisco Financial-Foreign | 0.23 |
| Softcat PLC | 0.16 | Airports Of Thailand Pcl-For | 0.21 |
| Renishaw PLC | 0.13 | EMEA | 1.22 |
| Abcam PLC | 0.12 | Russia | 0.39 |
| Close Brothers Group PLC | 0.11 | Yandex Nv-A | 0.39 |
| Burford Capital Ltd | 0.06 | South Africa | 0.59 |
| W Hemisphere | 5.50 | Rmb Holdings Ltd | 0.23 |
| Canada | 5.50 | Bid Corp Ltd | 0.16 |
| Brookfield Asset Manage-CI A | 1.36 | Mr Price Group Ltd | 0.10 |
| Canadian Natl Railway Co | 1.16 | Bidvest Group Ltd | 0.09 |
| Toronto-Dominion Bank | 0.96 | United Arab Emirates | 0.24 |
| Canadian Pacific Railway Ltd | 0.80 | First Abu Dhabi Bank Pjsc | 0.24 |
| Alimentation Couche-Tard -B | 0.77 | Latin America | 2.67 |
| Lululemon Athletica Inc | 0.44 | Argentina | 0.17 |
| EM Asia | 16.26 | Globant SA | 0.17 |
| China | 9.64 | Brazil | 1.72 |
| Tencent Holdings Ltd | 1.93 | B3 Sa-Brasil Bolsa Balcao | 0.44 |
| Alibaba Group Holding-Sp Adr | 1.87 | Irb Brasil Resseguros SA | 0.29 |
| Ping An Insurance Group Co-H | 1.41 | Notre Dame Intermed Par SA | 0.29 |
| China Merchants Bank-H | 1.07 | Magazine Luiza SA | 0.26 |
| Netease Inc-Adr | 0.73 | Localiza Rent A Car | 0.23 |
| Kweichow Moutai Co Ltd-A | 0.52 | Lojas Renner S.A. | 0.21 |
| Li Ning Co Ltd | 0.51 | Mexico | 0.18 |
| Shenzhen International Group | 0.36 | Grupo Aeroportuario Sur-Adr | 0.18 |
| China Mengniu Dairy Co | 0.33 | Peru | 0.60 |
| Centre Testing Intl Group-A | 0.24 | Credicorp Ltd | 0.60 |
| Country Garden Services Hold | 0.23 | Cash | 1.09 |
| Huazhu Group Ltd-Adr | 0.19 | Total | 100.00 |
| Tencent Music Entertainm-Adr | 0.13 | | |
| Vitasoy Intl Holdings Ltd | 0.11 | | |
| India | 1.74 | | |
| Hdfc Bank Limited | 0.51 | | |
| Hindustan Unilever Ltd | 0.36 | | |
| Maruti Suzuki India Ltd | 0.30 | | |
| Titan Co Ltd | 0.25 | | |
| Pidilite Industries Ltd | 0.20 | | |
| Hexaware Technologies Ltd | 0.14 | | |

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Historical International Growth Sector Weightings

September 30, 2019

% of Portfolio



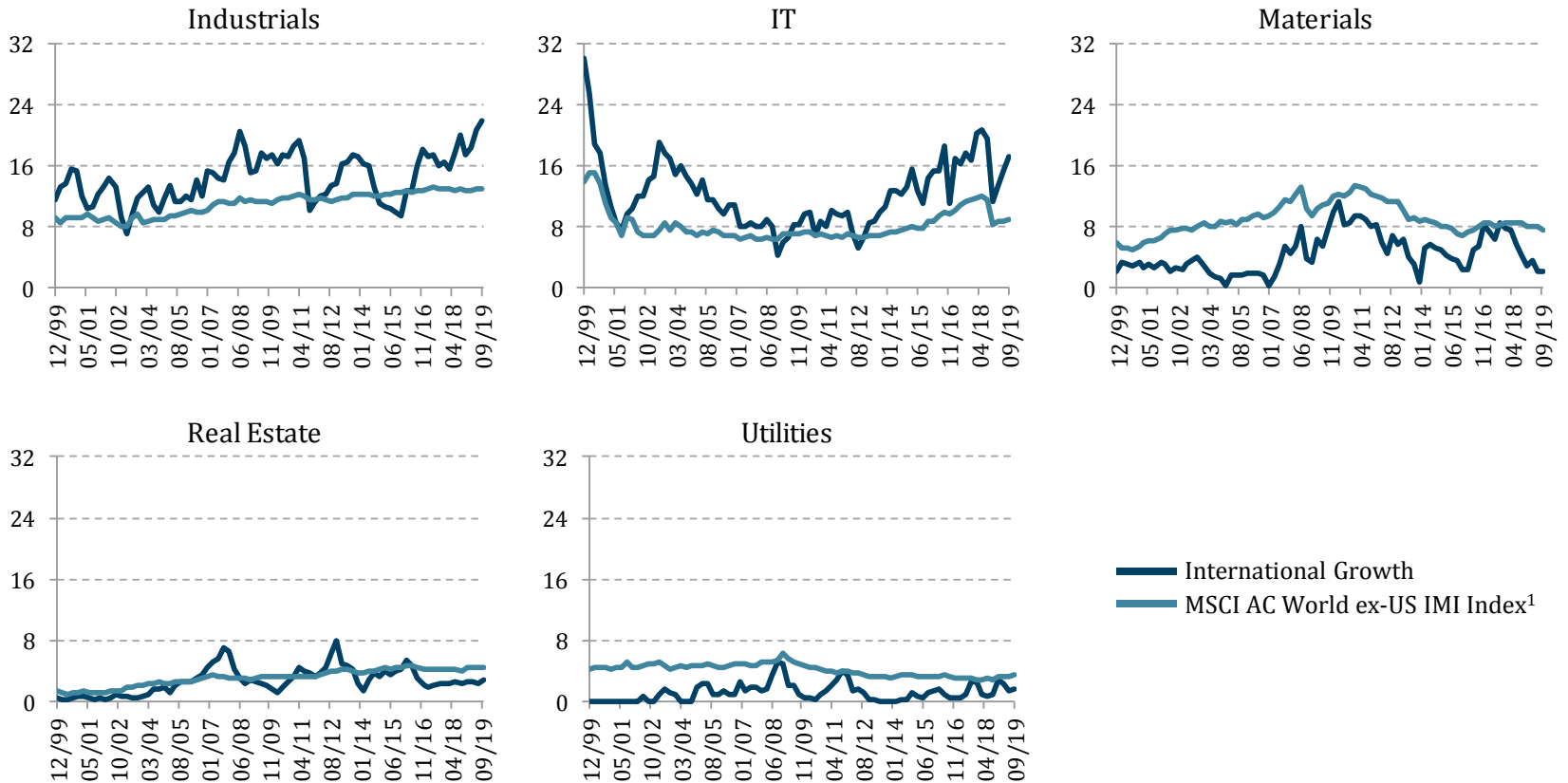
¹Prior to March 31, 2003, benchmark data is taken from the MSCI AC World ex-US Index.

The data shown above is based on the strategy's representative portfolio. Calculated in Eagle. The index is comparable to the strategy in terms of investment approach but contains significantly more securities. Cash incorporates cash equivalents and accruals. Cash is a residual of the stock selection process. Sectors based on GICS (Global Industry Classification Sectors).

Historical International Growth Sector Weightings

September 30, 2019

% of Portfolio



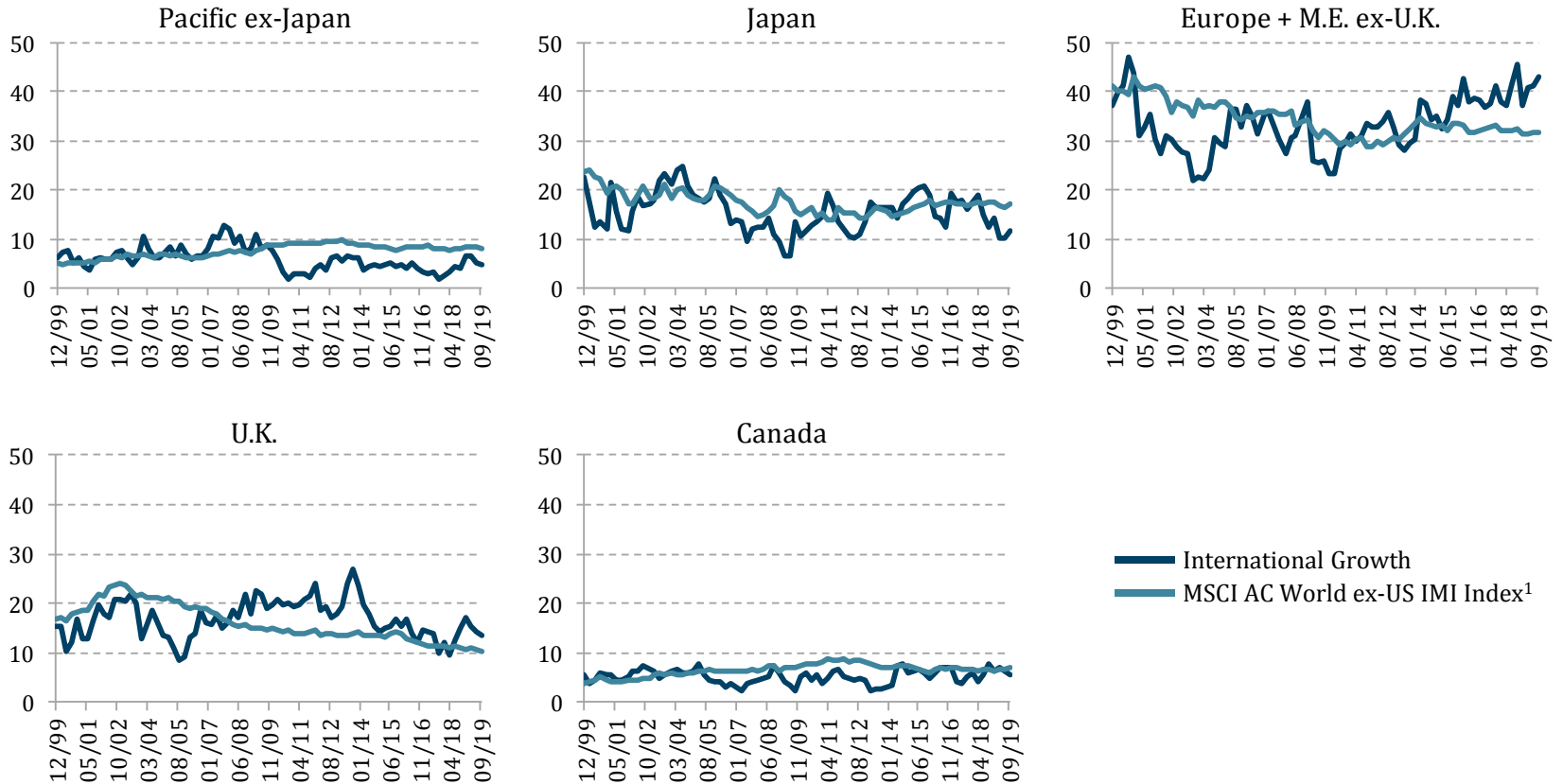
¹Prior to March 31, 2003, benchmark data is taken from the MSCI AC World ex-US Index.

The data shown above is based on the strategy's representative portfolio. Calculated in Eagle. The index is comparable to the strategy in terms of investment approach but contains significantly more securities. Cash incorporates cash equivalents and accruals. Cash is a residual of the stock selection process. Sectors based on GICS (Global Industry Classification Sectors).

Historical International Growth Regional Weightings

September 30, 2019

% of Portfolio



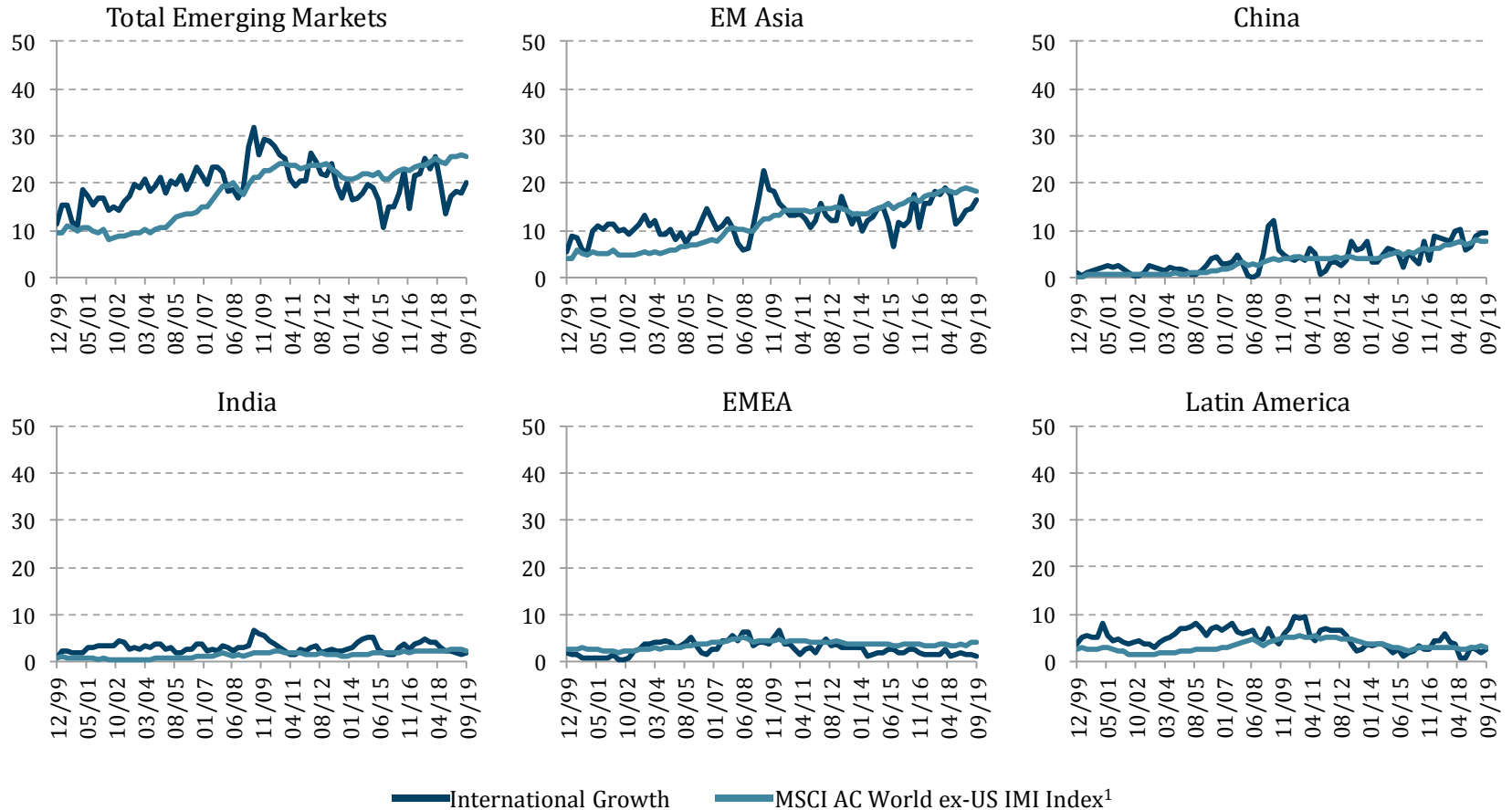
¹Prior to March 31, 2003, benchmark data is taken from the MSCI AC World ex-US Index.

The data shown above is based on the strategy's representative portfolio. Calculated in Eagle. The index is comparable to the strategy in terms of investment approach but contains significantly more securities. Cash incorporates cash equivalents and accruals. Cash is a residual of the stock selection process.

Historical International Growth Regional Weightings

September 30, 2019

% of Portfolio



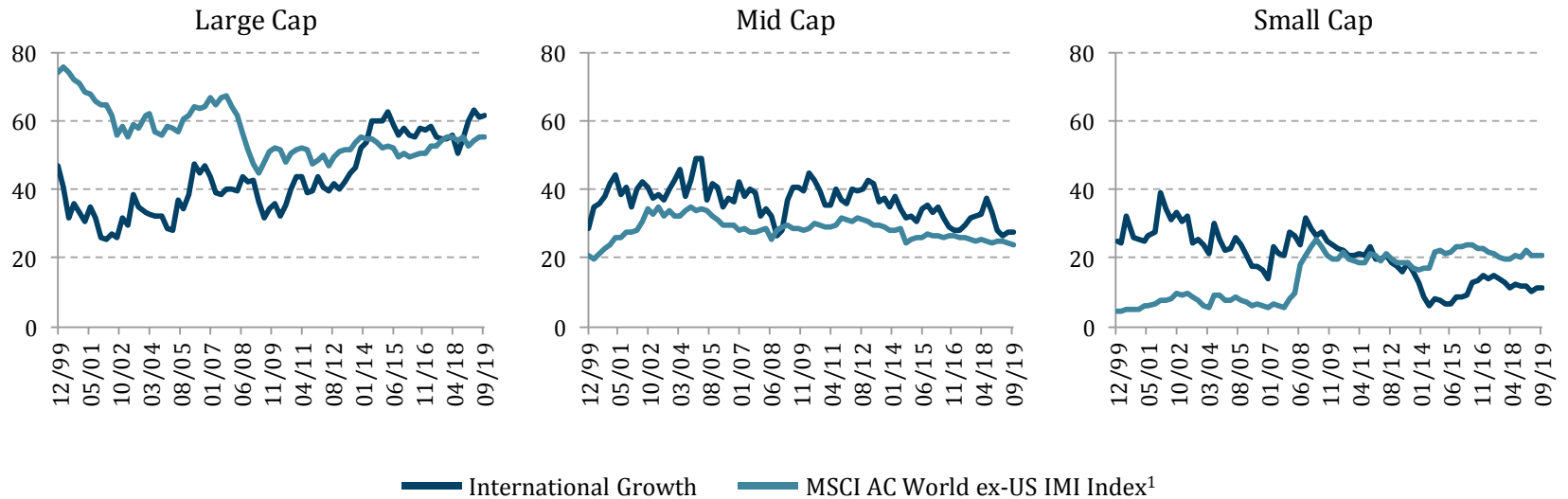
¹Prior to March 31, 2003, benchmark data is taken from the MSCI AC World ex-US Index.

The data shown above is based on the strategy's representative portfolio. Calculated in Eagle. The index is comparable to the strategy in terms of investment approach but contains significantly more securities. Cash incorporates cash equivalents and accruals. Cash is a residual of the stock selection process.

Historical International Growth Market Cap Weightings

September 30, 2019

% of Portfolio



¹Prior to March 31, 2003, benchmark data is taken from the MSCI AC World ex-US Index. Beginning with 3Q 1998, market caps were defined by small, mid, and large caps as \$1.5 billion, \$1.5 billion to \$10 billion, and over \$10 billion, respectively. Beginning with 1Q 2004, these figures were adjusted to \$2 billion, \$2 billion to \$12 billion, and over \$12 billion. Beginning with 4Q 2007, these figures were adjusted to \$3 billion, \$3 billion to \$15 billion, and over \$15 billion. Beginning with 3Q 2014, these figures were adjusted to \$4 billion, \$4 billion to \$15 billion, and over \$15 billion. The data shown above is based on the strategy's representative portfolio. Calculated in Eagle. The index is comparable to the strategy in terms of investment approach but contains significantly more securities. Cash incorporates cash equivalents and accruals. Cash is a residual of the stock selection process.

Market Overview/Strategy

Photos courtesy of Vivian Thurston and Andrew Siepker



London



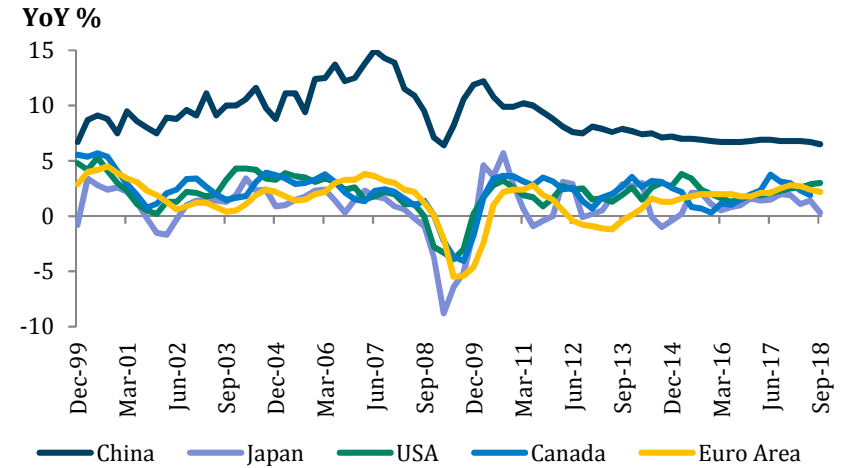
Mumbai

Global Equity Market Environment

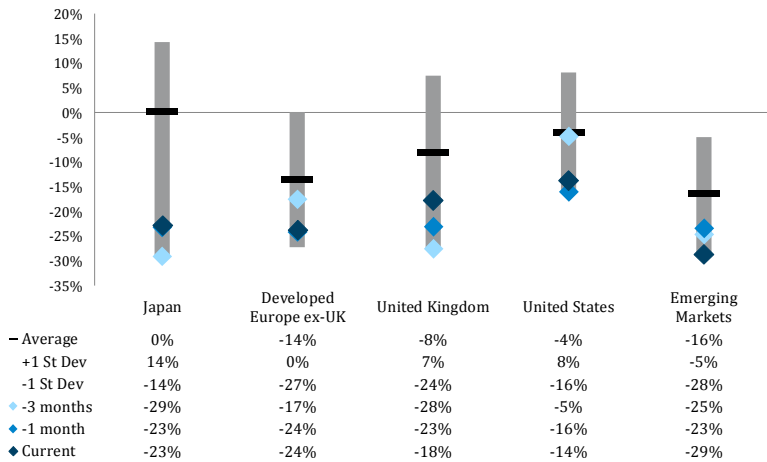
Regional Valuations FY2 P/E vs 10 Year History



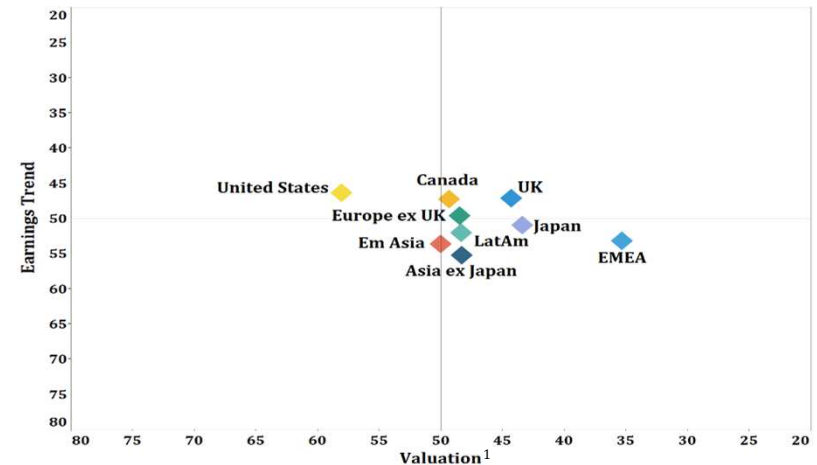
Real GDP Growth by Region - YoY (%)



Regional Earnings Revisions vs 10 Year History

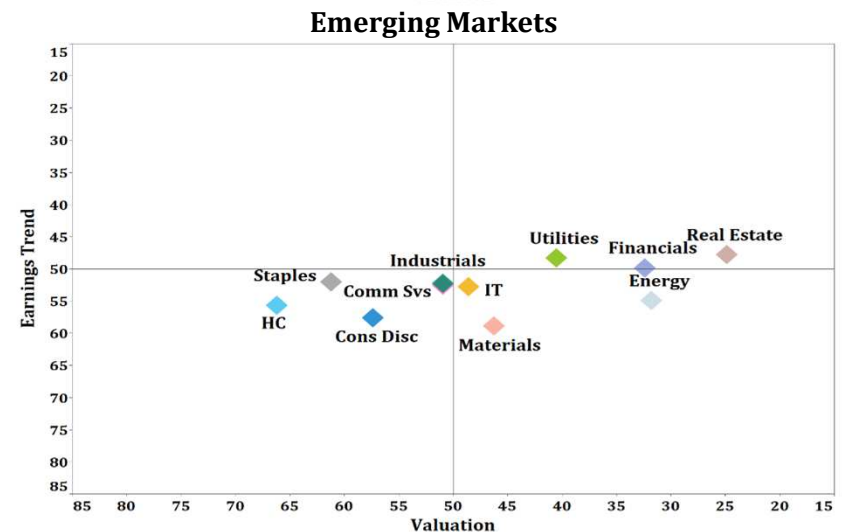
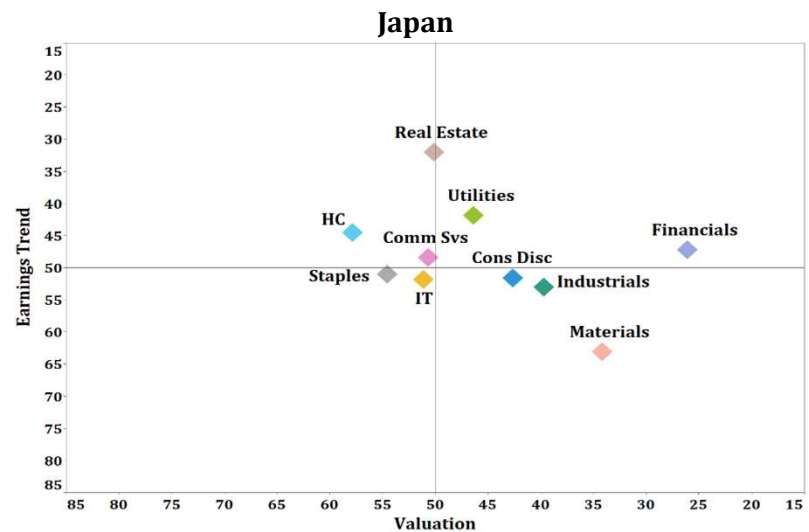
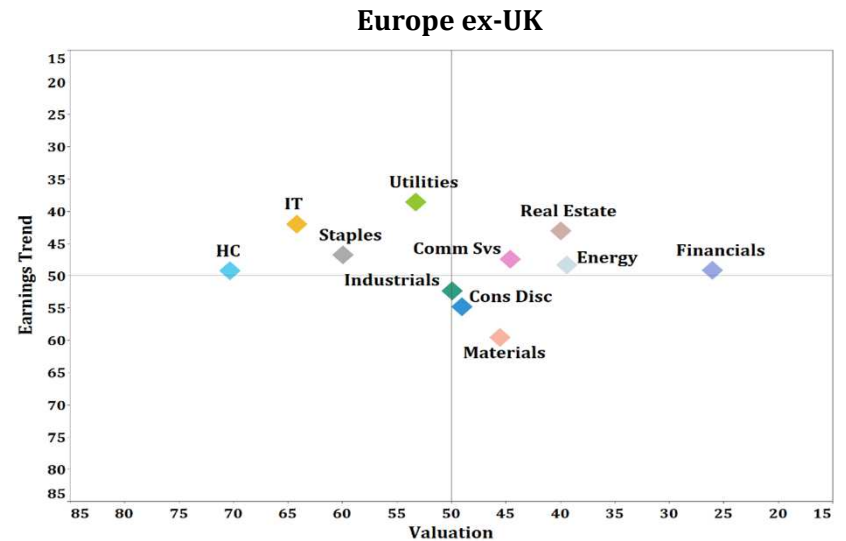
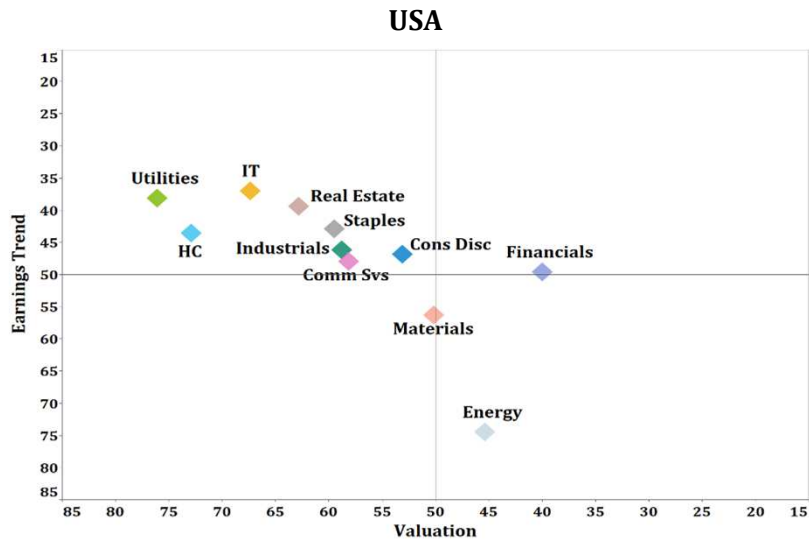


Global Earnings Trend and Valuation Score by Region



¹Scores based on William Blair Investment Management's proprietary research management & investment process platform. 1 is Best, 100 is Worst. Based on the MSCI AC World IMI. Sectors based on Global Industry Classification Sectors (GICS). Data as of September 2019. Source: Bloomberg, William Blair Quantitative Models, Datastream, FactSet.

Earnings and Valuations



Note: Scores based on William Blair Investment Management's proprietary research management & investment process platform. 1 is Best, 100 is Worst. Based on the MSCI AC World IMI. Sectors based on Global Industry Classification Sectors (GICS). Data as of September 2019. William Blair Quantitative Models, Datastream, FactSet.

Global Macroeconomic Scorecard

- Growth continues to decelerate across developed markets
- Manufacturing PMIs orders minus inventories have been hampered by weakness in Germany
- Industrial activity has started to improve in China and India
- Consumer spending has improved across most developed markets
- China retail sales have also improved

| Countries | Supply Side Indicators | | | | | | | | | Demand Side Indicators | | | | | |
|------------|-------------------------|-------|-------|--------------------|-------|-------|-------------------------------|-------|-------|-----------------------------------|-------|-------|-------------------------------|-------|-------|
| | IP volume, YoY % change | | | manufacturing PMIs | | | m. PMIs: orders - inventories | | | retail sales volume, YoY % change | | | autos, mn units, YoY % change | | |
| | latest | 1-m Δ | 3-m Δ | latest | 1-m Δ | 3-m Δ | latest | 1-m Δ | 3-m Δ | latest | 1-m Δ | 3-m Δ | latest | 1-m Δ | 3-m Δ |
| DMs | 0.1 | -0.1 | -0.4 | 48.6 | -0.2 | -0.3 | -0.9 | -0.1 | -0.1 | | | | | | |
| US | 0.7 | -0.5 | -0.9 | 51.1 | 0.8 | 0.5 | 2.6 | 0.1 | 0.9 | 1.9 | 0.4 | 0.3 | 0.0 | -0.2 | 1.5 |
| Euro Area | -1.6 | -0.4 | -1.2 | 45.7 | -1.3 | -1.9 | -4.7 | -0.7 | -2.2 | 2.2 | 0.2 | 0.3 | -5.3 | -3.6 | -4.5 |
| Germany | -4.5 | -0.4 | -2.9 | 41.7 | -1.8 | -3.3 | -9.4 | -1.5 | -4.6 | 3.1 | 0.5 | 1.0 | 0.7 | -3.2 | -2.8 |
| UK | -0.3 | 0.2 | -0.3 | 48.3 | 0.9 | 0.3 | -4.5 | 0.2 | 0.0 | 3.2 | 0.1 | -1.4 | -1.5 | 2.1 | 3.1 |
| Japan | -1.8 | -0.7 | -0.3 | 48.9 | -0.4 | -0.5 | 0.2 | 0.3 | 1.3 | -0.3 | 0.5 | -0.5 | 7.9 | 4.6 | 4.8 |
| Canada | 0.0 | -0.9 | -0.3 | 51.0 | 1.9 | 1.8 | -1.8 | -0.8 | -0.9 | -1.2 | -0.8 | -2.2 | -4.8 | 1.3 | -1.3 |
| EMs | 1.8 | 0.0 | -0.4 | 51.0 | 0.6 | 1.1 | 0.9 | -0.3 | -0.3 | | | | | | |
| Brazil | -3.6 | -3.7 | -4.4 | 53.4 | 0.9 | 2.4 | 4.9 | 1.6 | 5.9 | 1.7 | 1.5 | 1.2 | 5.7 | -0.1 | -6.0 |
| China | 5.2 | -0.2 | -1.1 | 51.4 | 1.0 | 2.0 | 0.5 | -0.4 | -0.4 | 5.5 | -0.4 | -0.1 | -6.4 | 3.2 | 7.5 |
| India | 3.3 | 0.4 | 1.3 | 51.4 | 0.0 | -0.7 | 6.0 | -0.4 | -1.3 | | | | -26.7 | -3.7 | -13.2 |
| Indonesia | 5.2 | 1.6 | 1.3 | 49.1 | 0.1 | -1.5 | -2.9 | -0.9 | -3.1 | 2.8 | -1.4 | -5.8 | -9.2 | 1.7 | 6.2 |
| Korea | -2.1 | -0.1 | -0.5 | 48.0 | -1.0 | 0.5 | -0.8 | 0.9 | 1.3 | 0.7 | -0.1 | -1.0 | -7.6 | -2.2 | -2.6 |
| Mexico | -2.7 | -0.8 | -1.4 | 49.1 | 0.1 | -0.1 | -2.5 | 0.2 | -0.2 | 2.0 | -0.2 | 0.2 | -11.5 | -1.0 | -1.6 |
| Russia | 3.1 | 0.7 | 0.8 | 46.3 | -2.8 | -2.3 | | | | 1.2 | -0.2 | -0.7 | -1.3 | 1.1 | 3.0 |
| S. Africa | -1.4 | -2.4 | -3.4 | 49.2 | -0.5 | -0.5 | | | | 1.9 | -0.3 | 0.5 | -5.0 | 1.4 | -4.7 |
| Taiwan | 1.9 | 1.4 | 5.2 | 50.0 | 2.1 | 4.5 | -1.3 | -0.9 | -1.4 | | | | | | |
| Thailand | | | | 50.6 | 0.6 | 0.0 | 1.1 | -0.1 | -2.0 | | | | | | |
| Turkey | -3.3 | 0.2 | 0.3 | 50.0 | 2.0 | 2.1 | -0.1 | 0.8 | 2.9 | -2.3 | 0.9 | 2.3 | -34.5 | 1.3 | 7.0 |

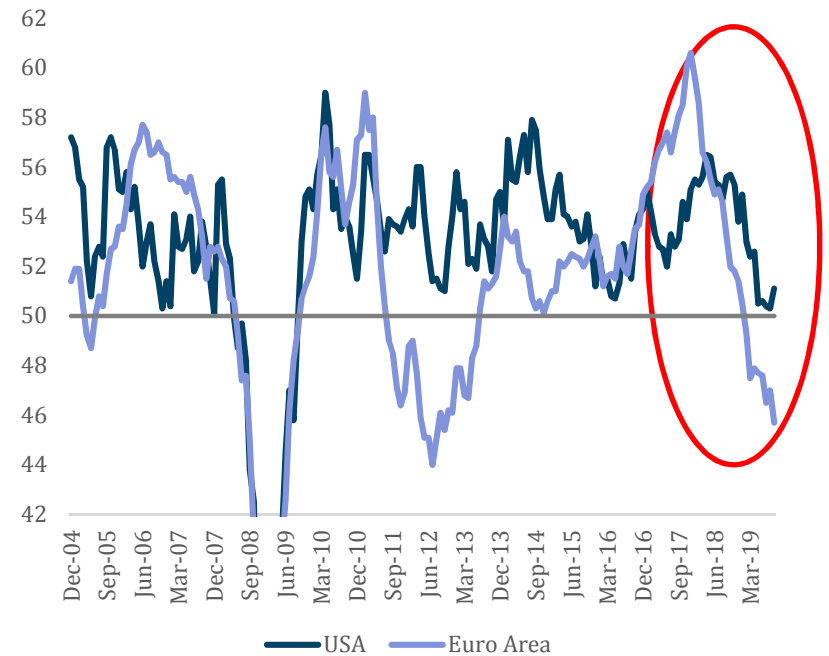
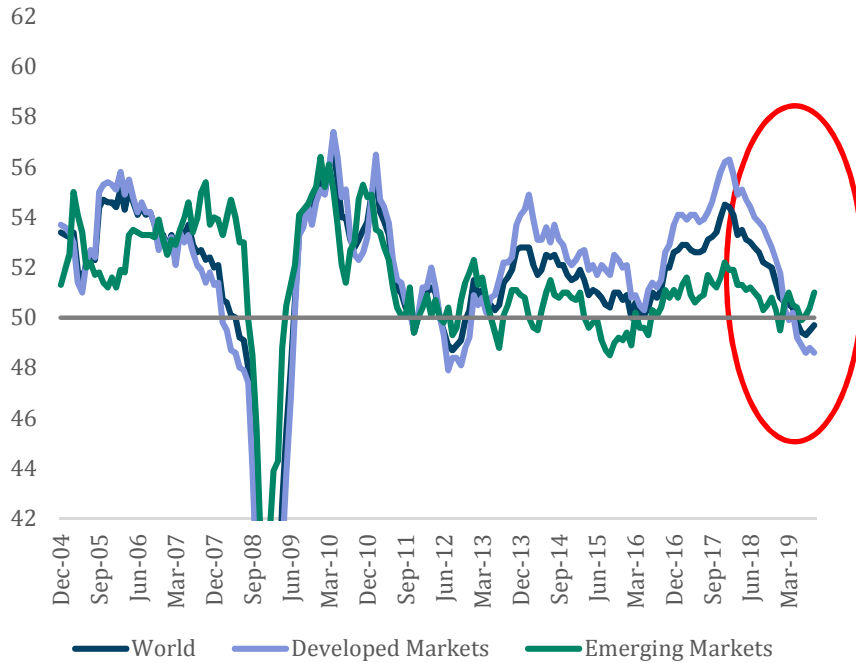
Improving Growth

Weakening Growth

Data as of September 2019
Source: Bloomberg, Markit.

Growth Has Significantly Decelerated

Global Manufacturing PMIs



Data as of September 2019.
Source: Markit.

Appendix



Chicago



London



Zurich



Sydney

Investing in Our Communities

Deep philanthropic commitments across the globe

We are committed to serving our neighbors and being a long-term partner to the communities where we live and work.

We also support our employees' philanthropic initiatives by matching their personal financial contributions and providing support for those that serve on charitable boards.



Civic



Cultural



Music Institute of Chicago's ArtsLink program.



Education



Health



Bunker Labs



Whole Kids Foundation



Midtown Educational Foundation



Hands On London



Anne Frank Education Center in Frankfurt

Sample Research Report

Recommendation Report

ABC Corporation (ABC DC)

Outperform

Vivian Lin Thurston

Date of Recommendation: 4/13/2015

| Investment Management Research | | Global Quant Scores | |
|--------------------------------|----------------------------------|-----------------------------------|-------|
| Rating | Outperform | Composite | 22 |
| | <i>Leader</i> | Quality | 2 |
| Symbol | ABC DC | Valuation | 85 |
| Exchange | COPENHAGEN STOCK EXCHANGE | Earnings Trend | 18 |
| Headquarters | Denmark | Price Momentum | 4 |
| Focus Country | Denmark | Volatility | 29 |
| GICS Sector | Consumer Discretionary | [Scale: 1 = Best 100 = Worst] | |
| GICS Industry | Textiles, Apparel & Luxury Goods | Blair LTG Estimate | 15.2% |

Investment Conclusion (Last Modified: 10/21/2015)

What is the mix of long term characteristics, current fundamentals and thematic considerations that make the stock attractive? What is the case for sustaining or enhancing fundamental expectations and valuation? Are you currently recommending purchase or anticipating a development that would suggest a better opportunity is likely in the foreseeable future?

Business Activities and Segment Analysis (Last Modified: 10/21/2015)

Briefly describe the company's primary business units, products or end markets. Frame in terms of clarifying the mix of revenues and profits.

| Financial/Trading Data | | Estimate Summary | | |
|---------------------------|----------|------------------|---------------|---------------|
| Price (DKK) | 760.00 | GAAP | Street | Author |
| Market Cap (\$ mm) | 95,514 | LTG (DKK) | 21.7 | 25.0 |
| Mkt Cap Float Adj (\$ mm) | 80,890.6 | EPS FYA(DKK) | 24.70 | 9.32 |
| YTD % Change | 52.8 | FY1 | 34.09 | 15.97 |
| Shares Outstanding (mm) | 122.3 | FY2 | 46.91 | 20.53 |
| Dividend Yield (%) | 1.2 | FY3 | 55.25 | 23.10 |
| 3mo ADT Value (\$ m) | 378.80 | P/E FYA | 30.8 | 28.7 |
| IM Holdings (USD) | | FY1 | 22.3 | 16.8 |
| | | FY2 | 16.2 | 13.0 |
| | | FY3 | 13.8 | 11.6 |
| | | REV FYA(DKK) | 11,942 | 6,652 |
| | | FY1 | 16,160 | 8,780 |
| | | FY2 | 18,909 | 9,936 |
| | | FY3 | 21,415 | 10,927 |

All report statistics are as of most recent close.

FYA Reported: 12/31/2014

Author Date: 11/25/2013

For illustrative purposes only.

Sample Research Report

Recommendation Report

ABC Corporation (ABC DC)

Outperform

Vivian Lin Thurston

Date of Recommendation: 4/13/2015

Investment Analysis

Qualitative Assessment: Management / Business Model (Last Modified: 10/21/2015)

Quality Model : 2

Evaluate the company relative to peers, competitors and general corporate standards - How strong is management and how durable is the business model? 1) Rate management on execution, control, strategy, continuity, culture and values, and stakeholder commitment. 2) Assess the strengths of the business model. Does the company have a sustainable competitive advantage? Proprietary products? Dominant or improving market share? Best-in-class cost structure? Unique asset base? 3) Review the company's financial performance - margins, returns, cash flow and balance sheet strength.

Decomposition of Long Term Growth Outlook (Last Modified: 10/21/2015)

Blair LTG Estimate (%) : 15.2

What is the likely range of earnings growth over the next 3-5 years? What is the composition of growth in terms of organic vs. acquired, price vs. volume, revenue vs. margin expansion? Are growth projections realistic or biased? Are there any issues that argue for a different growth metric other than EPS?

Current Fundamental Performance / Expectations (Last Modified: 10/21/2015)

ETrend Model : 18

Assess current growth trends in the context of valuation and long term expectations. What is the direction of forecasts? Are operating and reporting earnings in line? How predictable are near term earnings? If current and expected growth is below the long term nor, what are the prospects for improvement?

Valuation (Last Modified: 10/21/2015)

Valuation Model : 85

Assess valuation relative to market expectations considering future growth, incremental returns, historic and comparable norms. What are the valuation variables (cyclicality, risk)? What is or may be changing to drive a re-rating- growth potential, profitability, risk, competition, management?

Governance / Environmental / Social Considerations (Last Modified: 10/21/2015)

GMI Global: B GMI Home: C GMI Sector: B

MSCI IVA Rating: AA Goldman Sachs ESG Rating: -

Highlight any overall conclusions or concerns.

Governance Considerations (Last Modified: 10/21/2015)

GMI Global: B GMI Home: C GMI Sector: B

The key focus is on transparency, oversight, shareholder value creation, accounting policies. Does the company practice good governance? How are executives compensated? Is it in line with shareholder interests and executive performance? Are there concerns about alignment of interests between management and outside shareholders (particularly when the company is closely held)? Is the board focused on shareholder interests and is it accountable? Is there an independent audit function and, if so, has it found significant issues? Does it report on these issues for shareholders? How conservative/aggressive are accounting practices?

Environmental Considerations (Last Modified: 10/21/2015)

GMI Global: A GMI Home: B GMI Sector: B

The key focus is on resource management, product innovation, renewable energy/water use, reporting. Is this relevant? What is the company's environment reporting / disclosure? Does it use resources effectively and minimize impact of operations? Have there been any past environmental issues? Any areas of concern?

Social Considerations (Last Modified: 10/21/2015)

GMI Global: C GMI Home: C GMI Sector: C

For illustrative purposes only.

Sample Research Report

Recommendation Report

ABC Corporation (ABC DC)

Outperform

Vivian Lin Thurston

Date of Recommendation: 4/13/2015

The key focus is on human rights at the company and the supply chain, labor/management relations, product/workplace safety and community relations. What is the relationship between labor and management? Are there any other areas of concern here, including the company's history and policy supporting human rights, workplace safety, product safety, community relations, resource use, or specific political risks?

Accounting / Disclosure / Transparency (Last Modified: 10/21/2015)

How does the company rate on these issues? Any concerns about corporate structure, shareholder rights, compensation, hidden risks, information flow, board of directors?

Thematic Issues / Risks (Last Modified: 10/21/2015)

What market trends or sector issues are reflected in the company's risk/reward picture? What exogenous developments might affect the fundamentals or valuation?

Key Metrics / Events / Catalysts (Last Modified: 10/21/2015)

Any identifiable milestones, events or conditions that may provide feedback on the stock's prospects?

Contact With Management (Last Modified: 10/21/2015)

Highlight any recent interactions with management. How well do we know this management team?

For illustrative purposes only.

Sample Research Report

Quant Model Factors

| | | | |
|---------------------|----------------------------------|------------------------|-----------|
| Focus Country | Denmark | Eligibility List | Yes |
| GICS Sector | Consumer Discretionary | Research Agenda | No |
| GICS Industry | Textiles, Apparel & Luxury Goods | IM Hldgs (USD) (as of) | |
| GICS Industry Group | Consumer Durables & Apparel | Market Cap (USD mm) | 95,514.00 |

ABC Corporation (ABC DC)

Outperform

Vivian Lin Thurston

4/13/2015

| Composite Model | Value | Percentile | Ind Rel |
|---|-------|------------|---------|
| COMPOSITE MODEL SCORE | - | 22 | - |
| Quality Model | Value | Percentile | Ind Rel |
| QUALITY MODEL SCORE | - | 2 | 1 |
| <i>Sustainable Value Creation</i> | - | 1 | 1 |
| Cash Flow ROIC | 47.2 | 3 | 2 |
| Cash Flow ROIC 3 Year Avg | 44.3 | 3 | 2 |
| ROE LTM (Financials Only) | - | - | - |
| Productivity Factor (ex. Financials, Ind Rel) | - | 2 | 2 |
| Oper ROA 5 yr Avg (%) | 31.3 | 2 | 4 |
| ROE 5yr Avg (%) | 44.1 | 3 | 2 |
| FCF Margin 3 Year Avg (ex Financials, Ind Grp Rel) | 25.0 | 3 | 4 |
| Gross Profit / Assets (ex Financials, Ind Grp Rel) | 84.3 | 5 | 5 |
| EVA Margin (Ind Grp Rel) | 22.7 | 2 | 2 |
| <i>Earnings Quality</i> | - | 49 | 33 |
| Balance Sheet Accruals Component | 52 | 46 | 32 |
| Cash Flow Accruals | 6.9 | 62 | 42 |
| NTM EPS Standard Error 3 Year Average | 2.2 | 31 | 21 |
| <i>Financial Strength</i> | - | 21 | 16 |
| Altman Z-Score (Ind Grp Rel) | 6.8 | 4 | 2 |
| Merton Distance to Default (Ind Grp Rel - Higher is better) | 12.2 | 25 | 11 |
| Net Debt / EBITDA (ex Financials, Ind Grp Rel) | .1 | 49 | 38 |
| <i>Banks Only</i> | - | - | - |
| Tangible Equity to Assets | - | - | - |
| NPL to Loans | - | - | - |
| Cost Income Ratio | - | - | - |
| Risk Adjusted Income | - | - | - |
| Loans to Deposits | - | - | - |
| Tier 1 Factor | - | - | - |
| Pretax Income plus Loan Loss Reserves/Market Cap | - | - | - |
| 1 Year Change in Loan Loss Reserves/Assets | - | - | - |

| Valuation | Value | Percentile | Ind Rel |
|--|-------|------------|---------|
| VALUATION MODEL SCORE | - | 85 | 71 |
| <i>Earnings / Cash Flow Based Factors</i> | - | 85 | 70 |
| Free Cash Flow Yield (ex Financials) | 3.4 | 50 | 40 |
| Enterprise Value / EBITDA (ex Financials) | 18.8 | 86 | 74 |
| Dividend Yield | 1.2 | 80 | 68 |
| Cash Flow Yield Rel to 3 yr Avg (ex Financials) | 70.2 | 80 | 63 |
| Price / NTM Earnings | 17.0 | 56 | 51 |
| <i>Asset-Based Factors</i> | - | 100 | 99 |
| Enterprise Value / Sales (Ind Rel, ex Financials) | 6.9 | 93 | 94 |
| Price to Tangible Book | 108.6 | 100 | 98 |
| Enterprise Value / Invested Capital | 12.8 | 99 | 97 |
| <i>Model-Based Factors</i> | - | 52 | 38 |
| EVA PRVIt | 60 | 39 | 30 |
| StarMine Intrinsic Value (IV) Model | 1.0 | 71 | 53 |
| StarMine Ind Rel Valuation | - | 75 | 74 |
| AFG Percent to Target Current | 92.1 | 11 | 5 |
| Earnings Trend Model | Value | Percentile | Ind Rel |
| EARNINGS TREND MODEL SCORE | - | 18 | 9 |
| <i>Earnings Revisions</i> | - | 15 | 9 |
| StarMine ARM | 80 | 21 | 13 |
| 3M EPS FY1 Revisions / Book Value per Share 3M Ago | .7 | 9 | 6 |
| 3M EPS FY2 Revisions / Book Value per Share 3M Ago | .2 | 17 | 11 |
| EPS Est Rev Breadth 1 month (%) | .0 | 38 | 26 |
| <i>Momentum</i> | - | 47 | 32 |
| EVA Momentum | 7.4 | 9 | 1 |
| Quality Momentum (6M Change in Percentile) | -1 | 61 | 44 |
| FY0 - FY5 Growth Momentum (6M Change in Growth Rate) | 2.1 | 19 | 13 |
| 3M Change in 3M Revision (FY1 and FY2 Avg) | -2.4 | 92 | 90 |
| <i>Earnings Surprise</i> | - | 42 | 35 |
| Standardized Unexpected Earnings (SUE) | .3 | 46 | 38 |
| StarMine Predicted Surprise | .5 | 31 | 14 |

For illustrative purposes only.

Sample Research Report

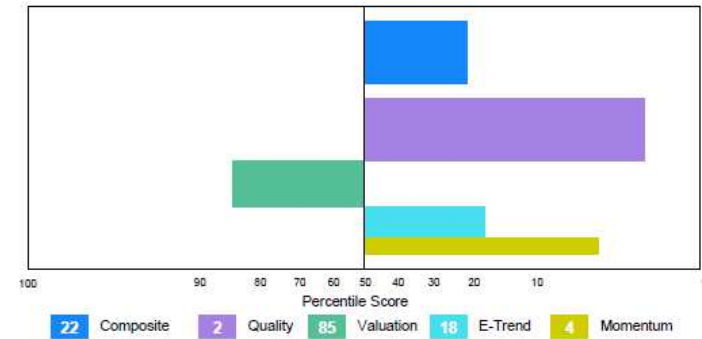
| Quant Model Factors | | | | ABC Corporation (ABC DC) | |
|---------------------|----------------------------------|-------------------------|-----------|--------------------------|--|
| Focus Country | Denmark | Eligibility List | | Yes | Outperform Vivian Lin Thurston 4/13/2015 |
| GICS Sector | Consumer Discretionary | Research Agenda | | No | |
| GICS Industry | Textiles, Apparel & Luxury Goods | IM Hldgs (USD) (as of) | | | |
| GICS Industry Group | Consumer Durables & Apparel | Market Cap (USD mm) | 95,514.00 | | |

| Momentum Model | Value | Percentile | Ind Rel |
|--|-------|------------|---------|
| MOMENTUM MODEL SCORE | - | 4 | 5 |
| 12 Month Volatility Adjusted Return | 39.4 | 5 | 7 |
| 6 Month Sharpe Ratio | 1.6 | 4 | 6 |
| Industry Group Percentage of 1 Year Range | .5 | 34 | 32 |
| 6 Month Region - Sector Volatility Adjusted Return | -6.7 | 49 | 36 |
| 9 Month Sharpe Ratio | 2.0 | 4 | 6 |

| Growth Model (%) | Value | Percentile | Ind Rel |
|---|-------|------------|---------|
| Blair LTG Estimate | 15.2 | - | - |
| Historical Growth | 19.0 | - | - |
| 6 Year Avg Trend Growth (FY-2 to FY+3) | 19.6 | - | - |
| 10 Year Avg Trend Growth (FY-6 to FY +3) | 8.3 | - | - |
| FY0 to FY+5 Expected Growth Trend | 15.9 | - | - |
| FY+1 to FY+5 Expected Growth Trend | 12.2 | - | - |
| <i>IBES Consensus LTG Estimate (for display only)</i> | 21.7 | - | - |

| Volatility Model | Value | Percentile | Ind Rel |
|----------------------------------|-------|------------|---------|
| VOLATILITY MODEL SCORE | - | 29 | - |
| ROE Range/Avg | - | 41 | - |
| Operating Margin Range/Avg | - | 16 | - |
| CF ROIC Range/Avg | - | 35 | - |
| EPS FY1 Coefficient of Variation | - | 23 | - |
| EPS FY2 Coefficient of Variation | - | 55 | - |
| EPS FY1 Dispersion | - | 51 | - |
| EPS FY2 Dispersion | - | 26 | - |

| Model History (GICS Industry) | Short Term | Long Term |
|-------------------------------|------------|-----------|
| Composite | ☆☆☆☆☆☆ | ☆☆☆☆☆☆ |
| Quality | ☆☆ | ☆☆☆☆☆☆ |
| Valuation | ☆☆ | ☆☆ |
| Earnings Trend | ☆☆☆☆☆☆ | ☆☆☆☆ |
| Momentum | ☆☆☆☆ | ☆☆☆☆ |
| Growth | ☆☆☆☆ | ☆☆ |



For illustrative purposes only.

Biographies – Global Investment Team

Portfolio Management



Alaina Anderson, CFA
Partner

Alaina Anderson is a portfolio manager for the International Leaders ADR strategy and a global research analyst covering real-estate, utilities, and engineering companies.

Before joining William Blair in 2006, she was a senior analyst in the investments department of the MacArthur Foundation, where she provided research support for internally managed portfolios and was involved in investment manager due diligence, selection, and monitoring for the foundation's U.S., non-U.S., and hedge-fund portfolios. Before joining the MacArthur Foundation, Alaina was an investor relations consultant with Ashton Partners and a financial advisor with UBS Painewebber. She is a fellow of Leadership Greater Chicago, a board member of the North Lawndale Employment Network, and a member of the CFA Institute and the CFA Society of Chicago.



Simon Fennell
Partner

Simon Fennell is a portfolio manager for William Blair's International Growth, International Small Cap Growth, and International Leaders strategies.

He joined William Blair in 2011 as a technology, media, and telecommunications research analyst focusing on idea generation and strategy more broadly. Before joining William Blair, Simon was a managing director in the equities division at Goldman Sachs in London and Boston, responsible for institutional equity research coverage for European and international stocks. Previously, Simon was in the corporate finance group at Lehman Brothers in London and Hong Kong, working in the M&A and debt capital markets groups.



Andrew G. Flynn, CFA
Partner

Andy Flynn is a portfolio manager for William Blair's International Small Cap Growth and Global Leaders strategies.

Since joining William Blair in 2005, Andy has served as a U.S. industrials and consumer analyst and a non-U.S. consumer, healthcare, and IT analyst. He was also a portfolio manager for the firm's Global Small Cap Growth strategy. Before joining the firm, Andy was a senior equity analyst and portfolio manager at Northern Trust, where he specialized in mid- and small-capitalization growth companies. Before that, he was a senior equity analyst at Scudder Kemper Investments and a research assistant at Fidelity Investments. Andy is a member of the CFA Institute and the CFA Society of Chicago.



Kenneth J. McAtamney
Partner

Ken McAtamney is a portfolio manager for William Blair's International Growth, Global Leaders, and International Leaders strategies.

He was previously co-director of research and a mid-large-cap industrials and healthcare analyst. Before joining William Blair in 2005, Ken was a vice president at Goldman Sachs and Co., where he was responsible for institutional equity research coverage for both international and domestic equity. Before that, he was a corporate banking officer with NBD Bank.

Education: B.S., Wharton School at the University of Pennsylvania; M.B.A., University of Chicago's Booth School of Business

M.A., University of Edinburgh; M.B.A., Cornell University's Samuel Curtis Johnson Graduate School of Management

B.A., economics, University of Kansas; M.B.A. finance emphasis, University of North Carolina at Chapel Hill

B.A., Michigan State University; M.B.A., Indiana University

Biographies – Global Investment Team

Portfolio Management



Todd M. McClone, CFA
Partner

Todd McClone is a portfolio manager for William Blair's Emerging Markets strategies.

Before joining the firm in 2000, he was a senior research analyst specializing in international equity for Strong Capital Management. Previously, he was a corporate finance research analyst with Piper Jaffray, where he worked with the corporate banking financials team on a variety of transactions, including initial public offerings, mergers and acquisitions, and subordinated debt offerings. He also issued fairness opinions and conducted private company valuations.



David Merjan, CFA
Partner

David Merjan is a portfolio manager for William Blair's International Leaders ADR strategy.

Before joining William Blair in 1998, he worked for Hughes Electronics in Los Angeles in various capacities, including in the corporate treasury department, where he focused on international mergers and acquisitions and managed corporate currency and interest-rate portfolios. He also managed an international equity fund in the pension management subsidiary of Hughes. David is a member of the CFA Institute.



Jack Murphy, CFA
Partner

Jack Murphy is a portfolio manager for William Blair's Emerging Markets Leaders strategy.

Previously, he was director of research for the Global Equity team and a research analyst covering mid-large-cap non-U.S. consumer stocks. He joined William Blair in 2005 as a sell-side research analyst focusing on e-commerce and hardline retailers. Previously, he was an equity research analyst covering a broad range of retail companies for Credit Suisse First Boston for nearly six years. Before that, he was an equity research analyst at Lehman Brothers and an equity research associate at Salomon Brothers. Before that, he was a financial analyst for General Electric Capital, having graduated from GE's financial management program.



Casey K. Preyss, CFA
Partner

Casey Preyss is a portfolio manager for William Blair's Emerging Markets Growth, Emerging Markets Small Cap Growth, and China A-Shares Growth strategies.

Since joining William Blair in 2000, he has been a research analyst covering industrials, IT, and resources stocks. Before taking on fundamental research responsibilities for William Blair's global equity team, Casey was a quantitative analyst. Before joining the firm, he was an international equity research sales associate with Thomas White International.

Education: B.B.A. and B.A., University of Wisconsin–Madison

B.A., Dickinson College; M.I.M., American Graduate School of International Management

B.A., economics, magna cum laude, Villanova University.

B.S.B.A., The Ohio State University; M.B.A., University of Chicago's Booth School of Business

Biographies – Global Investment Team

Portfolio Management



Vivian Lin Thurston,
CFA
Partner

Vivian Lin Thurston is a portfolio manager for William Blair's China A-Shares Growth strategy and a global research analyst covering Chinese equities.

Previously, she was a global research analyst covering large-cap consumer companies. Before joining William Blair, Vivian was vice president and consumer sector head at Calamos Investments. Before that, she was an executive director and senior investment analyst at UBS Global Asset Management/Brinson Partners, where she was responsible for stock selection and research for consumer sectors in the United States and emerging markets. Vivian also held roles at Mesirow Financial, China Agribusiness Development Trust and Investment Corporation, and Vanke. She is a member of the CFA Institute and the CFA Society of Chicago. She is also the founder and chairman of the board of the Chinese Finance Association of America, a 501(c) nonprofit organization.

Education: B.A., sociology, Peking University; M.A., sociology and M.S., finance, University of Illinois Urbana-Champaign

Biographies – Global Investment Team

Portfolio Specialists



Ryan Dimas, CFA, CAIA

Ryan Dimas is a portfolio specialist for William Blair’s global equity strategies.

In this role, Ryan participates in the team’s decision-making meetings, conducts portfolio analysis, and is responsible for communicating portfolio structure and outlook to clients, consultants, and prospects. Previously, for 17 years, Ryan led the investment manager research effort for William Blair Select, a team that was responsible for the selection and ongoing evaluation of third-party investment managers. In 2016, Ryan was named chief investment strategist and chair of the asset allocation investment committee for investment counseling, where he worked closely with investment counseling teams on strategic and tactical recommendations that were implemented within portfolios. He is a member of the CFA Society of Chicago and is a CFA and CAIA charterholder.



Romina Graiver

Romina Graiver is a portfolio specialist for William Blair’s global equity strategies.

In this role, she participates in the team’s decision-making meetings, conducts portfolio analysis, and is responsible for communicating portfolio structure and outlook to clients, consultants, and prospects. Previously at William Blair, she was a senior client relationship manager. Before joining William Blair in 2012, Romina was deputy head of the international equity investment team at BNP Paribas Investment Partners, where she was responsible for product development and investor communication. Before taking on that role, she was a product specialist for model-driven equity investments and a marketing manager.



Blake Pontius, CFA

Blake Pontius is director of sustainable investing and a global portfolio specialist.

In this role, he coordinates the firm’s integration of environmental, social and governance (ESG) factors in its investment processes and provides analytical support to portfolio managers on the global equity team. He is also responsible for communicating investment strategy and portfolio positioning to clients, consultants, and prospects. Previously at William Blair, Blake was a relationship manager responsible for institutional clients invested in the firm’s global/international and emerging market equity strategies. Before joining William Blair in 2005, Blake worked at UBS Asset Management and Mercer. He is a member of the CFA Institute and the CFA Society of Chicago.

Education: B.A., finance, Arizona State University

B.Sc., international business and an M.Sc., economics, University of Pantheon-Sorbonne, Paris, France

B.A., economics, with honors, Michigan State University; M.B.A. in finance, with distinction, from DePaul University

Biographies – Global Investment Team

Research



**William Benton, CFA,
CPA**
Partner

William Benton is a global equity research analyst. He covers mid- and large-cap technology, media, and communication services companies.

Before joining William Blair Investment Management in 2007, William was a technology research analyst with the firm's sell-side research group for 10 years. In this position, he was twice named "Best on the Street" in The Wall Street Journal's annual analyst survey. Before joining William Blair in 1997, he worked at SBC Warburg, U.S. Cellular, May Company, and Monsanto. He is a member of the CFA Society of Chicago and holds the CMA and CPA designations.



Drew Buckley, CFA

Drew Buckley is a global equity research analyst. He covers small-cap technology, media, and communication services companies.

Before joining William Blair in 2008 as a global research associate focused on technology, media, and telecommunications stocks, he spent two years as a senior associate in Ernst & Young LLP's investment management assurance practice. Drew is a member of the CFA Society of Chicago and holds the certified public accountant (CPA) designation.



Anil Daka, CFA

Anil Daka is a global equity research analyst. He covers midcap industrial companies.

Before joining the firm in 2011, Anil was an equity analyst at Morningstar, where he was responsible for equity research coverage in the global industrials sector. He is a member of the CFA Institute and the CFA Society of Chicago.



Joel Gomberg, CFA
Partner

Joel Gomberg is a global equity research analyst. He covers mid- and large-cap financials companies.

Previously, he was an equity analyst following the finance industry, including commercial banks, global investment banks, exchanges, retail brokers, and commercial property service companies, and was group head of the financials sector. In this role, Joel was included in The Wall Street Journal's annual analyst survey, "Best on the Street," three times. Before joining William Blair in 1997, Joel was an equity analyst at Duff & Phelps and Howe Barnes Investments, where he covered specialty finance and bank stocks. He also worked at Northern Trust Company, primarily in commercial banking and credit policy.

Education: B.S., finance, University of Illinois Urbana-Champaign; M.B.A., Dartmouth College's Amos Tuck School of Business Administration, where he was a Tuck Scholar

B.S., business, University of Colorado–Boulder

B.Tech., metallurgical engineering, Indian Institute of Technology; M.B.A. from the University of North Carolina

B.S., University of Illinois at Urbana-Champaign; M.B.A. from the University of Chicago's Booth School of Business

Biographies – Global Investment Team

Research



Daniel Hill, CFA

Daniel Hill is a global equity research analyst. He covers small cap financial companies.

He was previously a global generalist research analyst and an international and global research associate supporting the global financial team under the guidance of research analysts. Daniel joined William Blair in 2005 as an investment accountant. He is a member of the CFA Institute and the CFA Society of Chicago.



Benjamin Loss, CFA

Benjamin Loss is a global equity research analyst. He covers energy and materials companies.

Before joining William Blair in 2011 as a global research associate focused on energy and materials, Benjamin was a sell-side research associate at Morgan Keegan. He is a member of the CFA Institute and the CFA Society of Chicago.



**D.J. Neiman, CFA
Partner**

D.J. Neiman is co-director of research for the global equity team. He is also a global equity research analyst covering small- and mid cap financial companies.

Before joining Investment Management in 2009, D.J. was an analyst in the firm's sell-side research group, covering the financials sector with a focus on the asset-management and advisory investment-banking industries. Previously, D.J. was a senior accountant with William Blair Funds and a fund analyst at Scudder Kemper Investments. He is a member of the CFA Institute and the CFA Society of Chicago.



**Camilla Oxhamre Cruse,
Ph.D**

Camilla Oxhamre Cruse is a global equity research analyst. She covers small- and mid cap healthcare companies.

Camilla joined William Blair in 2014. She previously spent six years at Carnegie Investment Bank, where she was a sell-side research analyst focusing on the Nordic pharma and biotech industry. She has a scientific background.

Education: B.S., finance, University of Nebraska; M.B.A. from Northwestern University's Kellogg Graduate School of Management

B.S., accounting, summa cum laude, University of Maine; M.S., finance, Vanderbilt University

B.S., Miami University; M.B.A., with high distinction, University of Michigan's Ross School of Business

M.B.A., finance, Hawaii Pacific University; Ph.D., medicine, Karolinska Institute; M.Sc., biochemistry, Lund University

Biographies – Global Investment Team

Research



Richard Reznick, Ph.D.

Richard Reznick is a global equity research analyst. In this role, he covers Chinese equities with a focus on small-cap healthcare companies.

Before joining William Blair in 2010 as an equity research associate focused primarily on the biotechnology sector, Richard was a product specialist in Abbott Laboratories' diagnostics division.



Greg Scolaro, CFA, CPA

Greg Scolaro is a global equity research analyst. He covers emerging market small-cap companies.

Previously, he was a research associate covering global technology, media, and telecommunications stocks. Before joining the firm in 2014, Greg was an auditor in the technology sector at KPMG Chicago. He is a member of the CFA Institute and the CFA Society of Chicago.



Bryan Shea

Bryan Shea is a global equity research analyst. He covers emerging markets small-cap companies.

He joined the firm in 2009. Previously, he was an associate focusing on global consumer stocks and a sell-side research associate focusing on several subsectors within the consumer sectors. Before joining William Blair, Bryan was an associate at Madison Capital Funding, where he provided a variety of cash-flow-based, leveraged-capital products to private-equity sponsors. Before that, he was an analyst at Lincoln International, where he worked on mergers and acquisitions, issued fairness opinions, and conducted private company valuations.



**Andrew J. Siepker, CFA
Partner**

Andrew Siepker is a global equity research analyst. He covers large-cap industrial companies.

Previously, he was a research analyst conducting non-U.S. consumer research and worked on William Blair's sell-side as a research associate focused on e-commerce and hardline retailers. Before joining William Blair in 2006, Andy was a financial analyst in a finance training program at First Data Corporation. He is a member of the CFA Institute and the CFA Society of Chicago.

Education: B.S., biology, University of Illinois at Urbana-Champaign; Ph.D., biology, Yale University

B.S. and M.S., accountancy, University of Illinois Urbana-Champaign

B.S., finance, with honors, Indiana University; M.B.A., Northwestern University's Kellogg School of Management

B.S., finance, with highest distinction, University of Nebraska

Biographies – Global Investment Team

Research



Kwesi Smith, CFA

Kwesi Smith is a global equity research analyst. He covers large-cap consumer companies.

Before joining the firm in 2015, Kwesi was an equity research analyst for TimesSquare Capital Management for 10 years. In this role, he supported the firm's research efforts across a variety of sectors, including healthcare, technology, media/cable, defense, and consumer, before focusing on healthcare. Before that, Kwesi worked at MetLife Investments as a technology, media/cable, and telecom fixed-income research analyst and provided credit analysis across a variety of fixed-income asset classes, including high yield, private placement, leveraged finance, and investment-grade public corporates. He is on the governing board of 3Arts and Breakthrough. He is also a member of the CFA Institute and the CFA Society of Chicago.



Rita Spitz, CFA
Partner

Rita Spitz is a global equity research analyst. She covers small-cap consumer companies.

Previously, she was a research analyst covering U.S. large- and midcap consumer stocks, and she served as director of research from 2001 to 2008. Rita joined William Blair in 1986 as a sell-side research analyst covering advertising and marketing firms, a role she held for 13 years. She is a member of the CFA Society of Chicago, the CFA Institute, and The Economic Club of Chicago. She has also served on the advisory groups of several financial accounting standards boards since 2002, and is currently a board member of the Transition Resource Group for Revenue Recognition and a trustee of The Joffrey Ballet.



Thomas A. Sternberg,
CFA
Partner

Tommy Sternberg is a global equity research analyst. He covers large-cap healthcare companies.

Previously, he was a research associate focused on the healthcare industry. Before joining William Blair in 2004, Tommy spent two years as an equity analyst in Oak Brook Bank's investment management and trust department. He is a member of the CFA Institute and the CFA Society of Chicago.

Education: B.S., University of Virginia's McIntire School of Commerce

B.B.A., finance and Spanish, University of Wisconsin-Madison; M.B.A., University of Chicago's Booth School of Business

B.S., economics, Duke University; M.B.A., University of Chicago's Booth School of Business

Biographies – Global Investment Team

Systematic Research



Jeffrey Hill

Jeffrey Hill is a senior quantitative business analyst on the systematic research team.

In this role, he provides the team with business and technical support, focusing on portfolio attribution. Before joining William Blair in 2014, Jeff spent 15 years on the global investment services team at UBS Global Asset Management. In this role, he managed an international development team focused on building bespoke risk-management, portfolio-rebalancing, and asset-allocation solutions. Because these solutions were used both within UBS and for external clients, Jeff also functioned as the bridge between the technical, investment, and sales teams.



Andrew Kominik, CFA

Andrew Kominik is the liquidity and investment risk manager.

In this role, Andrew identifies, aggregates, and monitors investment-related risks across William Blair Investment Management. He also is a senior quantitative analyst on the systematic research team, where he spearheaded the development of William Blair's proprietary equity risk models and continues to maintain and enhance them. Previously, Andrew was a quantitative portfolio analyst, portfolio construction analyst, and marketing analyst. Before joining William Blair in 2003, he worked in institutional marketing at Columbia Management Group. Andrew is a CFA charterholder and a member of the CFA Institute and the CFA Society of Chicago.



Spiro Voulgaris
Partner

Spiro Voulgaris is a senior quantitative analyst and systematic equity portfolio manager.

He joined William Blair in 2007. Before joining the firm, Spiro was a senior quantitative analyst with Neuberger Berman for five years and subsequently worked alongside the same investment professionals for an additional three years while with Northern Trust. He was also with Lehman Brothers for six years, where he was a strategist and quantitative analyst for its global and U.S. investment strategy teams in London and New York. Before that, Spiro spent three years as a research analyst with the Center for Research in Securities Prices (CRSP).



Andrew Wickman, CFA

Andrew Wickman is a quantitative research analyst on the systematic research team.

In this role, he develops and programs multifactor quantitative models that are used by fundamental equity analysts and portfolio managers. He also produces research for the team's portfolio strategy thought leaders. Before joining William Blair in 2015, Andrew was a consultant at FactSet Research Systems for four years; in this role, he supported investment management research analysts and portfolio managers. He is a member of the CFA Institute and the CFA Society of Chicago.

Education: B.S., industrial technology, Illinois State University

B.A., history, Brandeis University; M.B.A., finance and econometrics/statistics, University of Chicago's Booth School of Business

B.A., economics, University of Chicago; M.B.A., statistics and international finance, University of Chicago's Booth School of Business

B.S., economics, University of Kentucky

Biographies – Global Investment Team

Strategy Research and Technology



Olga Bitel
Partner

Olga Bitel is a global strategist.

She is responsible for economic research and analysis across all regions and sectors. She distills macroeconomic and geopolitical developments into actionable insights for global equity portfolios within a multifaceted strategic framework. In addition, she provides insights about cyclical turning points and structural trends as inputs into portfolio construction in predominantly bottom-up investment approaches. Before joining William Blair in 2009, Olga was a senior economist at the National Institute of Economic and Social Research in London, United Kingdom, where she produced macroeconomic forecasts for most Asian economies and led thematic research projects for some of the world's best-known international organizations, including the Organization of the Petroleum Exporting Countries and the International Monetary Fund.

Education: B.A., University of Chicago; M.Sc., economics, London School of Economics and Political Science



Hugo Scott-Gall

Hugo Scott-Gall is co-director of research for the global equity team. He is also a thematic strategist.

He is responsible for researching longer-term trends affecting corporate performance and developing systematic solutions for broad investment challenges. Before joining William Blair in 2018, Hugo was a managing director and head of the thematic research team at Goldman Sachs that investigated thematic changes, analyzed their effects across industries, and sought to identify long-term structurally advantaged companies. He produced *Fortnightly Thoughts*, a publication offering thematic insights, and *GS Sustain*, a long-term-focused publication that sought to identify best-in-breed companies. He also oversaw *GS Dataworks*, a team that used alternative data to augment fundamental research. Before his move into thematic research, Hugo was an equity research analyst covering European transportation companies. Before Goldman Sachs, he was an equity research analyst at Fidelity Investments.



Darragh Grogan

Darragh Grogan is a technologist on the global equity team.

In this role, he works with William Blair's IT development team to implement technological improvements into the investment process. Before joining William Blair in 2008 as a software engineer supporting trading and reconciliation, Darragh was a senior software engineer at Accenture and Fidelity.

B.Com. and a higher diploma in applied science (software development and design), National University of Ireland in Galway; M.S., advanced software engineering, University College Dublin

Biographies – Client Service Team

Douglas J. Kryscio, CFA, Partner

Doug Kryscio is head of North America client service at William Blair Investment Management. Previously at William Blair, he was a senior client relationship manager. Before joining the firm in 2011, he was at Mercer Investment Consulting for 11 years, most recently as a partner, and earlier as a business leader for the Midwest and Great Lakes markets. Before joining Mercer, Doug was a portfolio manager at First Chicago. He is a member of the CFA Institute and the CFA Society of Chicago. Doug received a B.B.A. in finance, with department honors, from the University of Kentucky and an M.B.A. in finance, with distinction, from DePaul University. He was a member of Phi Kappa Phi and Delta Mu Delta National Honor Society.

Julie Stevens, CFA

Julie Stevens is the head of client service for William Blair Investment Management. She has been a member of the client service team since May 2004, and was previously a member of the operations team. Before joining William Blair in 2000, Julie spent three years as a financial analyst for Bank One's asset liability management department. She is a member of the CFA Institute and the CFA Society of Chicago. Julie received a B.S. from Indiana University and an M.B.A. from the University of Chicago's Booth School of Business.

Julie Rancourt

Julie Rancourt is a senior client relationship manager with William Blair Investment Management. Before joining William Blair in 2018, she was a relationship manager with Wellington Management. In this role, she was responsible for institutional client coverage, including public funds, endowments, foundations, and corporate pension plans. Before joining Wellington Management in 2015, Julie was a managing director and senior client portfolio manager in the global fixed income, currency, and commodities group at J.P.Morgan Asset Management. In this role, she was responsible for investment strategy, performance, and attribution communication to institutional clients. Julie received a B.S. in business administration, with a focus on finance, from Villanova University.

Stephen J. Weeks, Partner

Steve Weeks is a senior client relationship manager with William Blair Investment Management. Before joining William Blair in 2015, he was senior vice president of marketing, consultant relations, and client services at Columbus Circle Investors (CCI). Before joining CCI in April 2005, he was a director and senior investment specialist for Principal Global Investors and one of the founding partners of GlobeFlex Capital, where he was responsible for institutional marketing and client service. He is a current board advisor of the National Conference on Public Employee Retirement Systems (NCPERS). He received a B.S. in finance from the University of Arizona.

James Dominguez

James Dominguez is a client relationship manager with William Blair Investment Management. Before joining the firm in 2016, he was a vice president and relationship manager for Northern Trust Asset Management, working with public pension plans and Taft-Hartley plans. While at Northern Trust, James also served as an associate relationship manager in the institutional sales and client service group and a senior investment manager liaison with investment operations. Before joining Northern Trust, James was the managing director of a national employment and training organization, where he oversaw the service delivery of five workforce programs for the City of Chicago's Mayor's Office of Workforce Development. He received a B.A. in psychology from Roosevelt University and an M.B.A. in financial analysis from DePaul University's Kellstadt Graduate School of Business.

Cliff Kalish, CFA

Cliff Kalish is a client relationship manager with William Blair Investment Management. Before joining William Blair in 2011, Cliff was a client relationship manager at Calamos Investments for six years and a research analyst at Ellwood Associates for five years. Cliff is a member of the CFA Institute and the CFA Society of Chicago. He received a B.S. in consumer economics with an option in finance from the University of Illinois at Urbana-Champaign.

Dana Denizman

Dana Denizman is a senior client services associate, responsible for both international and domestic accounts. She joined William Blair in 1999 as a member of the small-cap growth team and has been a member of the client service team since May 2004. Previously, she spent four years at PaineWebber in various positions, including a registered sales assistant and branch office administrator, and was a member of the firm's management development program. Before that, Dana spent four years at American Century as a client service representative. Dana received a B.A. from the University of Iowa.

Biographies – Client Service Team

Jennifer Raketich

Jennifer Raketich is a senior client service associate, responsible for both international and domestic accounts, with William Blair Investment Management. She joined the firm in 2014. Previously, she spent eight years at Northern Trust in various positions, including senior consultant and senior account manager for the corporate and institutional services team. She received a B.S. from DePaul University and an M.B.A. from Saint Xavier University's Graham School of Management.

Thomas Riesenberg

Tom Riesenberg is a senior client service associate with William Blair Investment Management. In this role, he is responsible for both international and domestic accounts. Previously, Tom was an international accounting analyst for three years. Before joining the firm in November 2014, Tom was a financial reporting analyst at The Northern Trust Company for four years. He received a B.S.B.A. in finance from Creighton University.

Matt Brady, CFA

Matt Brady is a client services associate, responsible for both international and domestic accounts, with William Blair Investment Management. He joined William Blair in May 2015. Previously, Matt was an analyst on the product development and management team for BMO Global Asset Management. He is a member of the CFA Institute and CFA Society of Chicago. He received a B.B.A. in finance and risk management from the University of Wisconsin–Madison.

Luke Hepler, CFA

Luke Hepler is a client services associate, responsible for both international and domestic accounts. He joined William Blair in 2015. Previously, Luke was a research analyst at Ellwood Associates. He is a member of the CFA Institute and the CFA Society of Chicago. He received a B.S. in finance from Northern Michigan University.

Glossary – Terms

Active Share: A measure of the percentage of stock holdings in a manager's portfolio that differ from the benchmark index.

Alpha: A measure of a portfolio's return in excess of the market return, after both have been adjusted for risk. It is a mathematical estimate of the amount of return expected from a portfolio above and beyond the market return at any point in time. For example, an alpha of 1.25 indicates that a stock is projected to rise 1.25% in price in a year over the return of the market, or the return when the market return is zero. When an investment price is low relative to its alpha, it is undervalued, and considered a good selection.

Beta: A quantitative measure of the volatility of the portfolio relative to the overall market, represented by a comparable benchmark. A beta above 1 is more volatile than the overall market, while a beta below 1 is less volatile, and could be expected to rise and fall more slowly than the market.

CFROI (Cash Flow Return on Invested Capital): A measure of how effectively a company generates cash flow based on legacy capital investment.

Developed Markets: Using the Morgan Stanley Capital International (MSCI) geographic definition, this region includes: United Kingdom, Europe (Austria, Belgium, Denmark, Finland, France, Germany, Greece, Ireland, Italy, Netherlands, Norway, Spain, Sweden and Switzerland), Japan, Pacific Asia (Australia, Hong Kong, New Zealand, and Singapore) and the Western Hemisphere (Canada and other Americas).

Debt to Total Capital Ratio: This figure is the percentage of each company's invested capital that consists of debt. Companies with a high Debt to Total Capital level may be considered more risky. From a portfolio perspective, the portfolio Debt to Total Capital Ratio is a weighted average of the individual holdings' Debt to Total Capital Ratio.

Emerging Markets: Using MSCI's geographic definition, this region includes: Emerging Markets Asia (China, India, Indonesia, Malaysia, S Korea, Taiwan, and Thailand), Emerging Markets Europe, Mid-East and Africa (Czech Republic, Hungary, Poland, Russia, Turkey, Egypt, Morocco, and S Africa), and Latin America (Argentina, Brazil, Chile, Columbia, Mexico, Peru and Venezuela).

EPS Estimate Revision Breadth: A 1-month factor representing the trend in the direction of estimate changes. Range from -100% to +100%, it is calculated as the number of positive revisions minus the number of negative revisions divided by the total number of estimates.

EPS (Earnings Per Share) Growth Rate (Projected): This measure represents the weighted average of forecasted growth in earnings expected to be experienced by the stocks within the portfolio over the next year. From a portfolio perspective, the portfolio EPS Growth Rate is a weighted average of the individual holdings' EPS Growth Rate.

EPS Growth Rate (5-Year Historic): The weighted average earnings per share growth for stocks within the portfolio over the past 5 years.

EV/EBITDA (Enterprise Value/Earnings Before Interest, Taxes and Depreciation-Amortization): The EV/EBITDA ratio is useful for global comparisons because it ignores the distorting effects of individual countries' taxation policies. It's used to find attractive takeover candidates. Enterprise value is a better measure than market cap for takeovers because it takes into account the debt which the acquirer will have to assume. Therefore, a company with a low EV/EBITDA ratio can be viewed as a good takeover candidate.

EV/IC: (Enterprise Value/Invested Capital) Ratio: Enterprise Value (EV), which is market capitalization minus cash plus debt divided by Invested Capital (IC), which is the sum of common stock, preferred stock and long-term debt. This number will get you a simple multiple. If it is below 1.0, then it means that the company is selling below book value and theoretically below its liquidation value.

Information Ratio: A measure of risk-adjusted return. The annualized excess return of the portfolio relative to a respective benchmark, divided by the annualized tracking error relative to that same benchmark. The higher the measure, the higher the risk-adjusted return.

Integrated: Constructs a portfolio of the top 20% of stocks based on William Blair's multi-factor composite model, which uses Earnings Trend, Momentum, Quality, and Valuation factors. The portfolio is rebalanced on a monthly basis and weights stocks based on relative market capitalization.

PBVn (Price/Book Value) Ratio: The PBV Ratio measures the value of a company's common stock relative to its shareholder's equity. A price-to-book multiple above one means that the price of the company's common stock is higher than its common shareholder's equity. A price-to-book multiple below one means that the price of the company's common stock are less than its break-up value, and the shares may be undervalued.

PCF (Price/CashFlow): Some analysts favor the price/cash flow over the price-earnings (PE) ratio as a measure of a company's value. Cash flow is a measure of a company's financial health. It equals cash receipts minus cash payments over a given period of time.

P/E (Price/Earnings) Ratio: This is the most common measure of how expensive a stock is. Simply, it is the cost an investor in a given stock must pay per dollar of current annual earnings. A high P/E generally indicates that the market is paying more to obtain the stock because it has confidence in the company's ability to increase its earnings. Conversely, a low P/E often indicates that the market has less confidence that the company's earnings will increase rapidly or steadily, and therefore will not pay as much for its stock.

R-squared: A measurement of how closely the portfolio's performance correlates with the performance of its benchmark, such as the MSC AC World Free ex US Index. In other words, it is a measurement of what portion of a portfolio's performance can be explained by the performance of the overall market or index. Ranges from 0 to 1, where 0 indicates no correlation and 1 indicates perfect correlation.

Risk (Standard Deviation): A measure of the portfolio's risk. A higher standard deviation represents a greater dispersion of returns, and thus a greater amount of risk. The annualized standard deviation is calculated using monthly returns.

Silo: Constructs portfolios using the top 20% of stocks based on each of the four sub-models used to construct William Blair's composite model, then averages the returns coming from each of the four portfolios. The portfolios are rebalanced on a monthly basis and weights stocks based on relative market capitalization. (The Equal Weighted strategy equally weights the returns coming from each of the sub-portfolios; the Optimized approach weights Quality 5%, Valuation 60%, Earnings Treng 5%, and Momentum 30%. The optimization was based on a monte-carlo simulation that sought an optimal weighting of each sub-portfolios to achieve the highest return).

Sortino Ratio: A modification of the Sharpe ratio that differentiates harmful volatility from general volatility by taking into account the standard deviation of negative asset returns, called downside deviation. The Sortino ratio subtracts the risk-free rate of return from the portfolio's return, and then divides that by the downside deviation. A large Sortino ratio indicates there is a low probability of a large loss.

Sharpe-Ratio: A risk-adjusted measure calculated using standard deviation and excess return (Portfolio return – Risk Free Rate) to determine reward per unit of risk. The higher the Sharpe ratio, the better the portfolio's historic risk-adjusted performance.

Tracking Error: Tracking Error measures the extent to which a portfolio tracks its benchmark. The tracking error of an index portfolio should be lower than that of an active portfolio. The tracking error will always be greater than zero if the portfolio is anything other than a replication of the benchmark.

Trailing 1-Year Turnover: This figure reflects the portfolio's trading activity by calculating the amount of the portfolio's holdings bought or sold over the prior year, expressed as a percentage of the portfolio's average market value. Turnover figures may be related to the amount of trading costs experienced by the portfolio.

Weighted Average Market Capitalization: Market capitalization refers to the total market value of each company's outstanding shares. The Weighted Average Market Capitalization for a portfolio is calculated as the average market capitalization of the stocks within the portfolio, weighted by the amount of each stock owned.

Weighted Median Market Capitalization: This calculation represents the median market capitalization of the stocks in the portfolio, weighted by the amount of each stock owned.

Glossary – Indices

Bloomberg Barclays U.S. Aggregate Bond Index: A broad-based benchmark that measures the investment grade, U.S. dollar-denominated, fixed-rate taxable bond market, including Treasuries, government-related and corporate securities, mortgage-backed securities (agency fixed-rate and hybrid ARM pass-throughs), asset-backed securities and commercial mortgage backed securities.

Bloomberg Barclays Intermediate Govt./Credit Bond Index (formerly the Lehman Index): A fixed-rate government and corporate bonds rated investment grade or higher.

Bloomberg Barclay's Multiverse Index: Provides a broad-based measure of the global fixed-income bond market. The index represents the union of the Global Aggregate Index and the Global High-Yield Index and captures investment grade and high yield securities in all eligible currencies. Standalone indices such as the Euro Floating-Rate ABS Index and the Chinese Aggregate Index are excluded. The Multiverse Index family includes a wide range of standard and customized sub-indices by sector, quality, maturity, and country.

Bloomberg Barclays U.S. Intermediate Aggregate Bond Index: A broad-based benchmark that measures the investment grade, U.S. dollar-denominated, fixed-rate taxable bond market, including Treasuries, government-related and corporate securities, mortgage-backed securities (agency fixed-rate and hybrid ARM pass-throughs), asset-backed securities and commercial mortgage backed securities with maturities between one and 10 years.

ICE BofAML 1-Year U.S. Treasury Note Index: An unmanaged index comprised of a single U.S. Treasury Bill issued at the beginning of each month and held for a full month. Each month the index is rebalanced and the issue selected is the outstanding U.S. Treasury Note that matures closest to, but not beyond one year from the rebalancing date.

ICE BofAML 3-Month Treasury Bill Index: An unmanaged market index of U.S. Treasury securities maturing in 90 days that assumes reinvestment of all income.

J.P. Morgan Cash Index: Measures the total return of a rolling investment in a notional fixed income instrument with a maturity of three months. The deposit rates used in the calculation of the JP Morgan Cash Index are LIBOR or similar local reference rates.

Merrill Lynch 1-Year U.S. Treasury Note Index: Comprised of a single U.S. Treasury Bill issued at the beginning of each month and held for a full month. Each month the index is rebalanced and the issue selected is the outstanding U.S. Treasury Note that matures closest to, but not beyond one year from the rebalancing date.

Merrill Lynch 3-Month Treasury Bill Index: An unmanaged index market index of U.S. Treasury securities maturing in 90 days that assumes reinvestment of all income.

MSCI (Morgan Stanley Capital International): MSCI indices are the most widely used benchmarks by global portfolio managers. MSCI offers international investors performance benchmarks for 51 national stock markets as well as regional, sector, industry group, and industry aggregations.

MSCI China A Onshore Index: A free-float weighted equity index, designed to measure performance of China A share securities listed on either the Shanghai or Shenzhen Stock Exchanges.

MSCI All Country World ex-US EAFE Index: An unmanaged index that includes developed and emerging markets outside the United States.

MSCI All Country World ex-US Small Cap Index: A free float-adjusted market capitalization index designed to measure global developed and emerging market small capitalization equity performance, excluding the U.S.

MSCI EAFE Index: A free float-adjusted market capitalization index which captures large and mid cap representation across Developed Markets countries around the world, excluding the U.S. and Canada.

MSCI EAFE IMI Index: A free float-adjusted market capitalization index which captures large, mid and small cap representation across Developed Markets countries around the world, excluding the U.S. and Canada.

MSCI EAFE Growth Index: A free float-adjusted market capitalization index that is designed to measure the equity market performance of developed markets, excluding the U.S. & Canada.

MSCI All Country World ex-US Index: An unmanaged index that includes developed and emerging markets, excluding the U.S.

MSCI All Country World ex-US Growth Index: A free float-adjusted market capitalization index that is designed to provide a broad measure of equity-market performance throughout the world, excluding the U.S. It includes those MSCI All Country World ex-US securities with higher price-to-book ratios and higher forecasted growth rates.

MSCI All Country World ex-US IMI Index: A free float-adjusted market capitalization index that is designed to measure equity market performance in the global developed and emerging markets, excluding the U.S.

MSCI All Country World IMI Index: A free float-adjusted market capitalization index that is designed to measure equity market performance in the global developed and emerging markets.

MSCI All Country World ex-US IMI Growth Index: A free float-adjusted market capitalization index that is designed to measure equity market performance in the global developed and emerging markets, excluding the U.S. It includes those MSCI All Country World ex-US IMI Index securities with higher price-to-book ratios and higher forecasted growth rates.

MSCI World ex-US Growth Index: A free float-adjusted market capitalization weighted index that is designed to measure the equity market performance of developed markets, excluding the U.S., with higher price-to-book ratios and higher forecasted growth rates.

MSCI World ex-US Index: A free float-adjusted market capitalization weighted index that is designed to measure the equity market performance of developed markets, excluding the U.S.

MSCI Emerging Markets Index: A free float-adjusted market capitalization index that is designed to measure equity market performance in the global emerging markets.

MSCI Emerging Markets IMI Index: A free float-adjusted market capitalization index which captures large, mid and small cap equity market performance in the global emerging markets.

MSCI Emerging Markets Small Cap Index: A free float-adjusted market capitalization index that is designed to measure equity market performance of small cap companies in emerging markets.

MSCI Emerging Markets Large Cap Index: A free float-adjusted market capitalization index that is designed to measure equity market performance of large cap companies in emerging markets.

MSCI World ex-US Small Cap Index: An unmanaged index that includes non-US developed markets.

Russell 1000 Index: Measures the performance of the 1000 largest companies in the Russell 3000 Index, which represents approximately 90% of the total market capitalization of the U.S. market.

Russell 1000 Growth Index: Measures the performance of those Russell 1000 companies with higher price-to-book ratios and higher forecasted growth values.

Russell 1000 Value Index: Measures the performance of the large cap value segment of the U.S. equity universe. It includes those Russell 1000 companies with lower price-to-book ratios and lower forecasted growth values.

Russell 2000 Index: Measures the performance of the 2000 smallest companies in the Russell 3000 index, which represents approximately 8% of the total market capitalization of the Russell 3000 index.

Russell 2000 Growth Index: Measures the performance of those Russell 2000 companies with higher price-to book ratios and higher forecasted growth values.

Russell 2000 Value Index: Measures the performance of those Russell 2000 companies with lower price-to-book ratios and lower forecasted growth values.

Russell 2500 Index: Measures the performance of the 2500 smallest companies in the Russell 3000 Index.

Russell 2500 Growth Index: Measures the performance of those Russell 2500 companies with higher price-to book ratios and higher forecasted growth values.

Russell 2500 Value Index: Measures the performance of those Russell 2500 companies with lower price-to book ratios and lower forecasted growth values.

Russell 3000 Index: Measures the performance of the 3000 largest U.S. companies based on total market capitalization, which represents approximately 98% of the investable U.S. equity market.

Russell 3000 Growth Index: Measures the performance of those Russell 3000 companies with higher price-to-book ratios and higher forecasted growth values.

Russell Midcap Index: Measures the performance of the 800 smallest companies in the Russell 1000 Index, which represent approximately 27% of the total market capitalization of the Russell 1000 companies.

Russell Midcap Growth Index: Measures the performance of those Russell Midcap companies with higher price-to-book ratios and higher forecasted growth values.

Russell Midcap Value Index: Measures the performance of the mid-cap value segment of the U.S. equity universe. It includes those Russell Midcap Index companies with lower price-to-book ratios and lower forecasted growth values.

S&P 500 Index: The Standard & Poor's 500 Index (S&P 500) is an index of 500 stocks chosen for market size, liquidity and industry grouping, among other factors. The S&P 500 is designed to be a leading indicator of U.S. equities and is meant to reflect the risk/return characteristics of the large cap universe. Companies included in the index are selected by the S&P Index Committee, a team of analysts and economists at Standard & Poor's. The S&P 500 is a market value weighted index—each stock's weight is proportionate to its market value.

A direct investment in an unmanaged index is not possible.

Important Disclosures

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Performance cited represents past performance. Past Performance does not guarantee future results.

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As used in this document, "William Blair" refers to William Blair Investment Management, LLC and affiliates unless otherwise noted.

Quantitative Models – Definitions

| Factor | Examples |
|---|--|
| <p>Quality</p> | |
| <p>The William Blair Quality Model attempts to put into quantitative terms one of the cornerstones of the firm’s investment philosophy: identifying high quality companies. The score combines measurements of sustainable value creation, earnings quality, and financial strength.</p> | <p>Cash Flow ROIC Cash Flow Accruals Net Debt/EBITDA</p> |
| <p>Valuation</p> | |
| <p>The William Blair Valuation Model combines varying metrics used to characterize the relationship between the stock’s trading price and its intrinsic value. By going beyond using only one or two measures, the model attempts to build a more holistic version of a stock’s worth vis-a-vis the market. The score combines measurements of earnings/cash flow based, asset-based, and model-based factors.</p> | <p>Free Cash Flow Yield Price/NTM Earnings Enterprise Value/Sales EVA Dimensions PRVit score</p> |
| <p>Earnings Trend</p> | |
| <p>The William Blair Earnings Trend Model captures information about short- and medium-term changes in analyst estimates in an attempt to anticipate future estimate changes and stock performance. The score combines measurements of earnings revisions, momentum, and earnings surprise.</p> | <p>3 Month EPS Revisions EVA Momentum Standardized Unexpected Earnings (SUE)</p> |
| <p>Momentum</p> | |
| <p>The William Blair Momentum Model combines information about short- and medium-term performance trends for each stock in order to identify stocks that may be able to persist in outperformance over the near term.</p> | <p>12 Month Volatility Adjusted Return 6 Month Sharpe Ratio</p> |
| <p>Growth</p> | |
| <p>The William Blair Growth Model builds a long-term growth estimate based on a combination of realized and forecast growth rates. The inputs and results of this model are not limited to earnings, but instead cast a broader net to include measures of a firm’s overall growth. In addition to providing a Growth Model score, the growth rate generated by the model is used as an input into other models.</p> | <p>Historical & Expected Growth 6 & 10 Year Average Trend Growth</p> |
| <p>Volatility</p> | |
| <p>The William Blair Volatility Model captures the variability in short- and long-term fundamental returns which include ROE, Margins, and EPS.</p> | <p>ROE Range/Average Coefficient of Variation & Dispersion of EPS</p> |
| <p>Composite</p> | |
| <p>The William Blair Composite Model produces an aggregate score from the Quality, Valuation, Earnings Trend, and Momentum models using a proprietary weighting mix.</p> | |

William Blair proprietary quantitative model.

Composite Presentation Report

International Growth

| Calendar Year | Composite Gross Return (%) | Composite Net Return (%) | MSCI AC ex US IMI (net) -Linked Return (%) | Composite 3-Yr Std Dev (%) | Benchmark 3-Yr Std Dev (%) | Number of Portfolios | Dispersion (%) | Composite Assets End of Period \$(mm) | Percentage of Total Firm Assets (%) |
|---------------|----------------------------|--------------------------|--|----------------------------|----------------------------|----------------------|----------------|---------------------------------------|-------------------------------------|
| 2009 | 46.32 | 45.01 | 43.60 | 26.53 | 25.52 | 23 | 0.73 | 9,739.15 | 26.58 |
| 2010 | 21.19 | 20.22 | 12.73 | 27.77 | 27.57 | 40 | 0.77 | 14,599.87 | 33.04 |
| 2011 | -13.05 | -13.74 | -14.31 | 20.43 | 22.79 | 41 | 0.52 | 11,567.14 | 28.08 |
| 2012 | 23.94 | 22.95 | 17.04 | 18.02 | 19.29 | 41 | 0.58 | 14,265.48 | 28.75 |
| 2013 | 21.14 | 20.17 | 15.82 | 15.41 | 16.24 | 40 | 0.27 | 16,962.01 | 27.35 |
| 2014 | -1.40 | -2.18 | -3.89 | 12.03 | 12.78 | 38 | 0.23 | 15,481.25 | 24.55 |
| 2015 | 0.46 | -0.34 | -4.60 | 10.94 | 11.95 | 36 | 0.29 | 15,242.21 | 23.53 |
| 2016 | -1.40 | -2.18 | 4.41 | 11.22 | 12.38 | 40 | 0.30 | 14,279.91 | 22.01 |
| 2017 | 30.95 | 29.90 | 27.81 | 11.01 | 11.77 | 38 | 0.34 | 16,350.96 | 22.23 |
| 2018 | -16.88 | -17.54 | -14.76 | 12.29 | 11.47 | 36 | 0.24 | 12,464.52 | 25.50 |

Disclosures:

William Blair Investment Management claims compliance with the Global Investment Performance Standards (GIPS®) and has prepared and presented this report in compliance with the GIPS standards. William Blair Investment Management has been independently verified for the periods January 1, 1993 through December 31, 2018. 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 International Growth Composite has been examined for the periods presented through December 31, 2018. The verification and performance examination reports are available upon request.

For purposes of compliance with GIPS, the Firm is defined as all portfolios managed by William Blair Investment Management ("WBIM"), a distinct operating unit within William Blair. WBIM currently operates as William Blair Investment Management, LLC, an investment adviser registered with the United States Securities and Exchange Commission ("SEC"). Registration with the SEC does not imply a certain level of skill or training. WBIM primarily manages assets for institutional investors. Through 2017, WBIM included an additional sub unit, named IM Counseling, which primarily managed assets for private wealth investors, under an affiliated registered investment adviser.

The International Growth strategy invests in a broad range of companies based in developed and emerging markets outside of the United States. Companies have had and are expected to maintain superior growth, profitability and quality relative to local markets. The strategy will occasionally include the use of forward currency contracts to hedge some of the foreign currency exposure which accompanies investment in foreign currency-denominated securities.

The benchmark that best reflects the composite's investment strategy is the MSCI All Country World Ex US Investable Market Index (net), which is a free float-adjusted market capitalization index that is designed to measure equity market performance, net of withholding taxes, in the global developed and emerging markets, excluding the US. Prior to 1995, the MSCI All Country World Ex US Index preceded the current benchmark as returns are unavailable back to composite inception for the current benchmark.

Portfolios must have an initial market value greater than or equal to \$1 million to be included in the composite. New portfolios are added to the composite at the beginning of the month following the first full calendar month under management. Prior to July 2007, new portfolios were added to the composite at the beginning of the quarter following two full calendar months under management. Portfolios will be excluded from the composite the first month immediately following the last complete month of authorized management by the Firm. Portfolios are removed from this composite, in the event of a significant cash flow, for the month during which the flow occurs. Portfolios are typically added back into the composite the following month. A portfolio is determined to have a significant cash flow if the accumulated net external flows of cash and/or securities during a month total more than 25% of the beginning of month portfolio market value. Additional information regarding the treatment of significant cash flows is available upon request.

Portfolio and composite returns are calculated daily. Prior to January 2009, portfolio returns were calculated monthly using a time-weighted monthly linked return formula with adjustments for cash flows and composites were calculated monthly by weighting portfolio returns based on beginning of month market value. Valuations and returns are denominated in U.S. Dollars. Accrual accounting is used for dividends. The dividend accruals included in portfolio valuations are net of applicable withholding taxes. Pending withholding tax reclaims are not accrued for in the portfolio valuations. Composite dispersion measures represent the consistency of a firm's composite performance with respect to the individual portfolio returns within a composite. The dispersion of annual returns is measured by the asset-weighted standard deviation of the gross returns in the composite. Dispersion includes only those portfolios that have been included in the composite for the entire year. The three-year annualized standard deviation measures the variability of the gross composite returns and the benchmark returns over the preceding 36-month period. This statistic is not presented until there are 36 months of performance available.

Performance results are stated gross and net of the maximum management fee for the strategy as of the time the composite return was calculated. Actual fees may vary depending on, among other things, the applicable fee schedule and portfolio size. The current separate account management fee schedule is as follows:

Up to \$20,000,000: 0.80%
 Next \$30,000,000: 0.60%
 Next \$50,000,000: 0.50%
 Next \$50,000,000: 0.45%
 Next \$50,000,000: 0.40%
 Over \$200,000,000: 0.30%

The International Growth Composite was created in October 2001. From creation through July 2014, the composite was named International Growth All Cap Growth. The composite performance inception date is December 1, 1992. A complete list and description of firm composites is available upon request. Additional information regarding policies for valuing portfolios, calculating performance and preparing compliant presentations is also available upon request. Past performance is not indicative of future results.

International Growth Performance Summary

As of September 30, 2019

| Composite Performance (%) | Qtr | YTD | Annualized | | | | | | | Strategy Inception | | |
|---|--------------|--------------|--------------|-------------|-------------|-------------|-----------------------------|-------------|--------------|--------------------|--|--|
| | | | 1 Yr | 3 Yr | 5 Yr | 10 Yr | Since Oct 1 96 ¹ | (Dec 1 92) | | | | |
| International Growth (Gross of fees) | -1.05 | 18.99 | -0.12 | 7.58 | 4.93 | 7.72 | 9.48 | 9.48 | 10.12 | | | |
| International Growth (Net of fees) | -1.25 | 18.28 | -0.91 | 6.73 | 4.09 | 6.86 | 8.55 | 8.55 | 9.17 | | | |
| MSCI AC World ex-US IMI Index | -1.72 | 11.38 | -1.84 | 6.10 | 3.05 | 4.66 | 4.85 | 4.85 | 6.07 | | | |
| Relative Performance (Gross of fees) | 0.66 | 7.60 | 1.72 | 1.48 | 1.88 | 3.06 | 4.63 | 4.63 | 4.04 | | | |

| Annual Composite Performance (%) | 2018 | 2017 | 2016 | 2015 | 2014 | 2013 | 2012 | 2011 | 2010 | 2009 | 2008 | 2007 |
|---|---------------|--------------|--------------|--------------|--------------|--------------|--------------|---------------|--------------|--------------|---------------|--------------|
| International Growth (Gross of fees) | -16.88 | 30.95 | -1.40 | 0.46 | -1.40 | 21.14 | 23.94 | -13.05 | 21.19 | 46.32 | -52.27 | 19.73 |
| International Growth (Net of fees) | -17.54 | 29.90 | -2.18 | -0.34 | -2.18 | 20.17 | 22.95 | -13.74 | 20.22 | 45.01 | -52.73 | 18.68 |
| MSCI AC World ex-US IMI Index | -14.76 | 27.81 | 4.41 | -4.60 | -3.89 | 15.82 | 17.04 | -14.31 | 12.73 | 43.60 | -45.99 | 16.13 |

| Annual Composite Performance (%) | 2006 | 2005 | 2004 | 2003 | 2002 | 2001 | 2000 | 1999 | 1998 | 1997 | 1996 ² |
|---|--------------|--------------|--------------|--------------|---------------|---------------|--------------|---------------|--------------|-------------|-------------------|
| International Growth (Gross of fees) | 25.04 | 23.07 | 20.12 | 44.10 | -13.79 | -12.99 | -6.23 | 100.28 | 12.92 | 9.97 | 2.94 |
| International Growth (Net of fees) | 23.95 | 21.99 | 19.07 | 42.85 | -14.57 | -13.77 | -7.07 | 98.59 | 11.92 | 9.00 | 2.71 |
| MSCI AC World ex-US IMI Index | 26.51 | 17.68 | 21.93 | 42.34 | -12.94 | -19.83 | -19.44 | 37.72 | 11.97 | -3.30 | 0.16 |

¹Reflects the inception of the strategy's current management style. At this time, changes were made to the portfolio management team and the way the philosophy was implemented. Actual composite inception precedes this date. This information is supplemental to the composite disclosure slide located in the appendix.

²Partial year performance from December 1 to December 31, 1992.

Past performance is not indicative of future returns. Performance is shown in U.S. dollar unless otherwise noted. Net investment performance represents the deduction of the highest possible fee. Actual client net returns may be higher or lower depending on fees charged to your account and the amount invested.

Returns for periods greater than one year are annualized. Gross performance results shown do not reflect the deduction of investment management fees, assume the reinvestment of dividends and capital gains, and are net of transaction costs. Performance results will be reduced by the fees incurred in the management of the account. For example, assuming an annual gross return of 8% and an annual management/advisory fee of .40%, the net annualized total return of the portfolio would be 7.58% over a 5-year period. Net investment performance represents the deduction of the highest possible fee. Investment management fees are described in William Blair's Form ADV Part 2A. The benchmark that best reflects the composite's investment strategy is the MSCI All Country World Ex US Investable Market Index (net), which is a free float-adjusted market capitalization index that is designed to measure equity market performance, net of withholding taxes, in the global developed and emerging markets, excluding the US. Prior to 1995, the MSCI All Country World Ex US Index preceded the current benchmark as returns are unavailable back to composite inception for the current benchmark. International investing involves special risk considerations, including currency fluctuations, lower liquidity, economic and political risk. Please see composite disclosure in appendix for a complete description of the composite.