#### JACKSONVILLE POLICE AND FIRE PENSION FUND FINANCIAL INVESTMENT AND ADVISORY COMMITTEE (FIAC) MEETING AGENDA – NOVEMBER 10, 2016 RICHARD "DICK" COHEE BOARD ROOM

#### PFPF MISSION STATEMENT

To provide long term benefits to participants and their beneficiaries

#### **PRESENT**

Eric "Brian" Smith Jr., FIAC Chair Craig Lewis Sr., FIAC Secretary Rob Kowkabany, FIAC Rodney Van Pelt, FIAC

#### **STAFF**

Timothy H. Johnson, Executive Director – Plan Administrator – *conference call* Dan Holmes, Summit Strategies
Beth McCague, Consultant
Devin Carter, Chief Financial Officer
Steve Lundy, Economic Research Analyst

#### CITY REPRESENTATIVES INVITED

Joey Greive, City Treasurer

#### **EXCUSED**

Debbie Manning, Executive Assistant

<u>NOTE</u>: Any person requiring a special accommodation to participate in the meeting because of disability shall contact the Executive Assistant at (904) 255-7373, at least five business days in advance of the meeting to make appropriate arrangements.

- I. CALL TO ORDER
- II. PUBLIC SPEAKING PERIOD
- III. <u>APPROVAL OF OCTOBER 14, 2016 FIAC MEETING SUMMARY AND OCTOBER 12, 2016 SPECIAL MEETING SUMMARY OF THE FIAC AND BOARD OF TRUSTEE'S</u>

Police and Fire Pension Fund FIAC Meeting Agenda November 10, 2016

#### IV. EXECUTIVE DIRECTOR'S REPORT – Timothy H. Johnson

- Fifth FIAC Member Resume for Tracey A. Devine
- Pension Plan Comparison
- Draft for News Releases
  - PFPF Announces New Actuary
  - o PFPF Reports Preliminary 2015-2016 Fiscal Year Investment Returns
- 2017 PFPF Calendar

#### V. INVESTMENT CONSULTANT REPORTS - Dan Holmes w Summit Strategies

- Investment Performance Review Third Quarter September 30, 2016
- Approval of Investment Guidelines for Neuberger Berman & Loomis
- Eagle and Brown Advisory Review
- Net Fee Performance by Asset Classification
- Watch List Discussion

#### VI. <u>NEW BUSINESS</u>

#### **VII. ADJOURNMENT**

<u>NOTE</u>: If any person decides to appeal any decision made with respect to any matter considered at this public meeting such person will need a record of proceedings, and for such purpose such person may need to ensure that a verbatim record of the proceedings is made at their own expense and that such record includes the testimony and evidence on which the appeal is based. The public meeting may be continued to a date, time, and place to be specified on the record at the meeting.

#### ADDITIONAL ITEMS MAY BE ADDED / OR CHANGED PRIOR TO MEETING

#### JACKSONVILLE POLICE AND FIRE PENSION FUND FINANCIAL INVESTMENT AND ADVISORY COMMITTEE (FIAC) MEETING SUMMARY – OCTOBER 14, 2016 RICHARD "DICK" COHEE BOARD ROOM

#### **PFPF MISSION STATEMENT**

To provide long term benefits to participants and their beneficiaries

#### **PRESENT**

Eric "Brian" Smith Jr., FIAC Chair Craig Lewis Sr., FIAC Secretary Rob Kowkabany, FIAC

#### **STAFF**

Timothy H. Johnson, Executive Director – Plan Administrator Dan Holmes, Summit Strategies – *via phone*Beth McCague, Consultant
Devin Carter, Chief Financial Officer
Debbie Manning, Executive Assistant

#### **CITY REPRESENTATIVES INVITED**

Joey Greive, City Treasurer

#### **EXCUSED**

Rodney Van Pelt, FIAC Steve Lundy, Economic Research Analyst

<u>NOTE</u>: Any person requiring a special accommodation to participate in the meeting because of disability shall contact the Executive Assistant at (904) 255-7373, at least five business days in advance of the meeting to make appropriate arrangements.

#### I. CALL TO ORDER

CHAIRMAN SMITH CALLED THE MEETING TO ORDER AT 3:33PM

#### II. PUBLIC SPEAKING PERIOD

THERE WERE NO REQUESTS FOR PUBLIC SPEAKING. THE PUBLIC SPEAKING PERIOD WAS CLOSED.

#### III. APPROVAL OF SEPTEMBER 9, 2016 FIAC MEETING SUMMARY

A MOTION WAS MADE BY ROB KOWKABANY TO APPROVE THE FIAC MEETING SUMMARY OF SEPTEMBER 9, 2016. SECONDED BY CRAIG LEWIS. VOTE WAS UNANIMOUS.

IV. <u>EXECUTIVE DIRECTOR'S REPORT</u> – Tim Johnson / Beth McCague / Steve Lundy

#### **REVIEWED OUT OF ORDER FROM AGENDA:**

1. Actuarial Interview Evaluations

TIM JOHNSON STATED THAT DEVIN CARTER DID A GREAT JOB COORDINATING THE ACTUARY INTERVIEWS AND PROVIDING THE EVALUATION MATRIX WHICH IS INCLUDED IN YOUR BOARD BOOK.

IT WAS DECIDED THE FIAC IS MEETING SEPARATELY FROM THE BOARD TO DISCUSS THEIR RECOMMENDATION. FIAC CHAIRMAN SMITH WILL MAKE THAT PRESENTATION AT THE NEXT BOARD MEETING ON OCTOBER 21<sup>ST</sup>.

DEVIN CARTER CONFIRMED THAT HE DID A REFERENCE CHECK ON THE FIRMS INTERVIEWED.

CHAIRMAN SMITH SAID DEVIN WHITTLED DOWN THE FIRMS FROM THE FIRST GROUP OF APPLICANTS AND FELT THAT THE THREE INTERVIEWED WERE THE TOP.

CHAIRMAN SMITH SAID THERE WAS A THIN LINE BETWEEN TWO OF THE FIRMS.

ROB KOWKABANY SAID TWO OF THE FIRMS HAD GOOD ASSUMPTIONS AND BOTH CLEARLY DID THEIR HOMEWORK, SPLITTING HAIRS FOR EITHER.

BETH MCCAGUE'S PREFERENCE WAS GRS. THEY SEEMED TO HAVE MANY MORE RESOURCES AVAILABLE.

CHAIRMAN SMITH REALLY LIKED NYHART. THEY DID THEIR HOMEWORK ON HOUSE BILL 1297. HE THOUGHT THEY WOULD BE GOOD WITH THE TRANSITION. BOTH LEADS WERE EXPERIENCED. THEY HAD THE HIGHEST COST BUT INDICATED THEY WOULD NEGOTIATE FEES.

REGARDING GRS, CHAIRMAN SMITH SAID THEIR LEAD HAD 22 CLIENTS WHICH HE FELT WAS A HEAVY LOAD. HE LIKED THAT THEY WERE EMPLOYEE OWNED AND

ALSO DID THEIR HOMEWORK ON HB1297. THEY ALREADY WORK WITH POLICE AND FIRE PENSION FUNDS THROUGHOUT THE STATE.

CHAIRMAN SMITH SAID HE SCORED GRS ONE POINT HIGHER ON THE EVALUATION. BUT HIS GUT WAS WITH NYHART.

TIM JOHNSON SAID BOTH GROUPS WERE CLOSE.

CRAIG LEWIS WAS UNABLE TO ATTEND THE SPECIAL MEETING FOR THE INTERVIEWS. HE LISTENED TO THE DISCUSSION FROM THE COMMITTEE AND STAFF AND SAID HE WOULD DEFER TO TIM JOHNSON FOR BALANCING THE FACTORS FOR THE RECOMMENDATION FOR AN ACTUARY.

THERE WAS DISCUSSION REGARDING FIDUCIARY RESPONSIBILITY OF THE FIRMS. CHAIRMAN SMITH SUGGESTED WE CONTACT NYHART AND GRS FOR CLARIFICATION ON THIS ISSUE AS THIS COULD BE A DETERMINING FACTOR. BOTH FIRMS WERE CALLED DURING THE MEETING AND WERE AVAILABLE FOR FURTHER DISCUSSION.

BOTH FIRMS RESPONDED TO SEVERAL QUESTIONS WHILE ON THE PHONE. THEY ADDRESSED THE ISSUE OF ACTING AS A FIDUCIARY SIMILARLY. BOTH AGREED THEY WOULD PUT THE FUND'S INTEREST FIRST AND WOULD ACT AS A FIDUCIARY AS TO THE ACTURIAL WORK THEY PRESENTED.

BOTH FIRMS WERE ASKED ABOUT THE ACCESSIBILITY OF THEIR SOFTWARE SYSTEM TO STAFF FOR THE PURPOSES OF RUNNING VARIOUS SCENARIOS. NYHART RESPONDED THAT THEIR SOFTWARE WAS USED FOR THE PURPOSE OF HELPING THEIR CONSULTANTS ASSIST CLIENTS. GRS INDICATED THEIR SOFTWARE WAS AVAILABLE TO THEIR CLIENTS' STAFF WHO COULD USE IT INDEPENDENTLY.

BOTH FIRMS USE PROVAL ACUTARIAL SOFTWARE. IN ADDITION, GRS HAS DEVELOPED ITS OWN SOFTWARE. GRS INDICATED IT WOULD USE ITS PROPRIETARY SOFTWARE IF WE ELECT TO HIRE THEM AS OUR ACTUARY AND WOULD BACK UP THEIR RESULTS BY USING PROVAL.

AFTER A LENGTHY DISCUSSION, ROB KOWKABANY MADE A MOTION THAT FIAC RECOMMEND TO THE BOARD THAT GRS BE CHOSEN AS THE NEW FUND ACTUARY WITH A THREE YEAR CONTRACT, COVERING 2017-2018-2019, WITH A 3% ANNUAL ESCULATOR. SECONDED BY CRAIG LEWIS. VOTE WAS UNANIMOUS.

CHAIRMAN SMITH WOULD MAKE A PRESENTATION TO THE BOARD OF TRUSTEES AT THEIR NEXT MEETING AS TO WHY FIAC CHOSE GRS OVER NYHART. IT WAS NOTED THAT FEES WOULD BE NEGOTIATED WITH GRS.

TIM JOHNSON SAID GOOD WORK BY EVERYONE ON THIS PROCESS.

2. Pension Plan Comparison

DEFERRED TO NEXT MONTH FOR DISCUSSION AS RODNEY VANPELT ORIGINALLY REQUESTED THE COMPARISON AND COULD NOT ATTEND THIS MEETING.

3. Annual Cycle of Work

#### RECEIVED AS INFORMATION

4. Monthly Status Report

TIM JOHNSON BRIEFLY REVIEWED THE MONTHLY STATUS REPORT WITH THE COMMITTEE. CAPITAL FINANCIAL STRATEGIES HAS AN INTEREST IN MEMBER EDUCATION. INVITE THEM TO THE FIRST DROP WORKSHOP ON OCTOBER 26<sup>TH</sup>.

#### V. INVESTMENT CONSULTANT REPORTS – Dan Holmes w Summit Strategies

- Economic & Capital Market Update September, 2016
- Flash Report September 30, 2016
- Eagle and Brown Advisory Review (watch list)

DUE TO THE LENGTHY YET IMPORTANT DISCUSSION REGARDING THE ACTUARY SELECTION, WE WERE UNABLE TO REVIEW THE REPORTS WITH DAN HOLMES.

WE CALLED DAN BEFORE THE MEETING ENDED. THE EAGLE AND BROWN REVIEW IS NOT TIME SENSITIVE SO THIS CAN BE DEFERRED. DAN WILL BE ATTENDING THE NOVEMBER MEETING FOR FURTHER DISCUSSION.

TIM ASKED THE COMMITTEE TO THINK ABOUT SUB-COMMITTEES. HIS VISION FOR FIAC IS FOR THE BOARD OF TRUSTEES TO GET TO KNOW FIAC AND FEEL COMFORTABLE WITH THEIR RECOMMENDATIONS. HE ASKED FIAC TO THINK ABOUT HOW WE TELL OUR STORY, HOW WE GET THE WORD OUT.

#### **VI. NEW BUSINESS**

#### VII. ADJOURNMENT

#### CHAIRMAN SMITH ADJOURNED THE MEETING AT 5:25PM

<u>NOTE</u>: If any person decides to appeal any decision made with respect to any matter considered at this public meeting such person will need a record of proceedings, and for such purpose such person may need to ensure that a verbatim record of the proceedings is made at

their own expense and that such record includes the testimony and evidence on which the appeal is based. The public meeting may be continued to a date, time, and place to be specified on the record at the meeting.

### TO BE APPROVED AT THE NEXT FIAC MEETING ON NOVEMBER 10, 2016

Craig Lewis, Secretary

#### JACKSONVILLE POLICE AND FIRE PENSION FUND BOARD OF TRUSTEES & FIAC SPECIAL MEETING SUMMARY – OCTOBER 12, 2016 RICHARD "DICK" COHEE BOARD ROOM

#### **PFPF MISSION STATEMENT:**

To provide long term benefits to participants and their beneficiaries

#### **BOARD OF TRUSTEES**

Lt. Richard Tuten III, Chairman Richard Patsy, Board Secretary Willard Payne, Trustee

#### FINANCIAL INVESTMENT AND ADVISORY COMMITTEE

Eric "Brian" Smith Jr., FIAC Chairman Rob Kowkabany, FIAC

#### **STAFF**

Timothy H. Johnson, Executive Director - Administrator Devin Carter, Chief Financial Officer Beth McCague, Consultant Steve Lundy, Economic Research Analyst Debbie Manning, Executive Assistant

#### <u>CITY REPRESENTATIVES INVITED</u>

Anna Brosche, City Council Liaison

#### **GUESTS**

Joey Greive, City Treasurer Randy Wyse, Jax. Association of Fire Fighters

#### **EXCUSED**

Chris Brown, Trustee William E. Scheu, Trustee Craig Lewis Sr., FIAC Secretary Rodney VanPelt, FIAC Police and Fire Pension Fund Board of Trustees & FIAC Special Meeting Summary October 12, 2016

<u>NOTE</u>: Any person requiring a special accommodation to participate in the meeting because of disability shall contact the Executive Assistant at (904) 255-7373, at least five business days in advance of the meeting to make appropriate arrangements.

#### I. CALL TO ORDER

CHAIRMAN TUTEN CALLED THE MEETING TO ORDER AT 10:07

#### II. PUBLIC SPEAKING PERIOD

THERE WERE NO REQUESTS FOR PUBLIC SPEAKING

TIM JOHNSON BRIEFLY DISCUSSED WITH THE BOARD OF TRUSTEES AND THE COMMITTEE HOW THE PROCESS WOULD WORK WITH THE INTERVIEWS. THEY HAVE THE BOARD BOOK BEFORE THEM WITH INFORMATION ABOUT THE FIRMS. AN EVALUATION MATRIX WAS HANDED OUT FOR EACH ATTENDEE TO COMPLETE FOR EACH OF THE CONSULTANTS INTERVIEWED. THE MATRIX WOULD BE PICKED UP AT THE END OF THE MEETING.

#### III. SCHEDULED INTERVIEW TIMES

o 10:00am - 11:00am - The Nyhart Company, Inc.

THE NYHART COMPANY'S PRESENTATION BEGAN AT APPROXIMATELY 10:15AM, WITH DAVID HARRIS AND HEATH MERLAK, BOTH SENIOR CONSULTANTS WHO HAVE BEEN WITH NYHART SINCE 2011. THEY WOULD BE THE TWO CONSULTANTS WORKING WITH US OUT OF THE ATLANTA OFFICE IF HIRED.

THEY HAVE WORKED WITH A LARGE TRANSITION SUCH AS OURS OUT OF MIAMI, MR. STANLEY'S FIRM WHOM BETH MCCAGUE WAS FAMILIAR WITH. THEY RETAINED 18 OUT OF 20 OF MR. STANLEY'S CLIENTS. DAVID HARRIS WAS THE CO-CONSULTANT IN THAT TRANSITION.

NYHART USES PROVAL SOFTWARE SYSTEM. JARMON USES ANOTHER SYSTEM.

THEY WOULD LIKE TO DO A PARALLEL EVALUATION WITH JARMON FOR 2016. NYHART REPLICATION WOULD BE AT NO CHARGE TO THE FUND HOWEVER, JARMON MAY CHARGE. AT THE END OF JANUARY THEY WOULD START WORKING WITH JARMON.

THEY DON'T NICKLE AND DIME THEIR CLIENTS. FEES MAY BE HIGHER THAN OTHERS BUT THEY HAVE EXPERIENCE, RESPONSIVENESS, RESULTS ON A

Police and Fire Pension Fund Board of Trustees & FIAC Special Meeting Summary October 12, 2016

TIMELY BASIS, THEY RUN SMOOTHLY AS THEY DON'T LIKE SURPRISES, AND THEY COMMUNICATE FAR IN ADVANCE. NYHART WORKS FOR THE BOARD IN PARTNERSHIP WITH US.

NYHART WOULD LIKE TO HAVE THE FUND IN THEIR PORTFOLIO. IF THEIR FEES ARE OFF THE MARK, THEY CAN BE DISCUSSED.

NYPASS IS A SERVICE THAT NYHART CAN PROVIDE AND CAN BE SET UP FOR THE ADMINISTRATION AND PARTICIPANTS. THERE IS AN ADDITIONAL FEE FOR THIS SERVICE, BUT IT IS AVAILABLE.

NYHART TAKES THE TIME TO INVESTIGATE AND THINK THROUGH THE PROCESS. THEY TALK WITH THEIR CLIENTS AND ASK HOW THAY CAN BE OF ASSISTANCE.

#### **END OF PRESENTATION**

o 11:15am – 12:15pm – Gabriel Roeder Smith & Company

GABRIEL ROEDER SMITH & COMPANY BEGAN THEIR PRESENTATION AT APPROXIMATELY 11:41AM. PETE STRONG AND JEFF AMROSE WOULD BE OUR CONSULTANTS, WITH PETE BEING THE LEAD CONSULTANT.

THE COMPANY GAVE A THOROUGH PRESENTATION INCLUDING DETAILED ANALYSIS OF THE IMPACT OF HB1297. IN PARTICULAR, THEY NOTED THAT THE LEGISLATION DOES NOT STIPULATE HOW FUTURE UNFUNDED LIABILITY AMOUNTS GENERATED IN FUTURE YEARS WOULD BE AMORTIZED. IN ADDITION THEY PROVIDED ANAYSIS OF A 30 YEAR AMORTIZATION OF CURRENT UNFUNDED LIABILITIES ON A 30 YEAR LEVEL PAYMENT VS MORTGAGE STYLE AMORTIZATION.

THEY ALSO USE PROVAL SOFTWARE TO SUPPORT THEIR CONSULTANT SERVICES, AND IN ADDITION TO PROVAL, THEY HAVE DEVELOPED PROPRIETARY SOFTWARE THAT IS AVAILABLE TO STAFF MEMBERS WHICH ALLOWS STAFF TO RUN SENSITIVITY ANALYSIS ON THEIR OWN.

THEY ALSO HAVE SOFTWARE AVAILABLE THAT LETS MEMBERS ANALYZE THEIR OWN BENEFITS AND PROJECT RETIREMENT BENEFITS, HOWEVER, THERE IS AN ADDITIONAL COST FOR THIS SOFTWARE.

JEFF AND PETE INDICATED THEY ARE OPEN TO GIVING FIXED PRICE QUOTES FOR ANY ASSIGNMENTS OUTSIDE OF THE ANNUAL ACTUARIAL REPORTS. ADDITIONAL SERVICES ARE AVAILABLE FOR A SMALL FEE OR FLAT FEE, OR THROWN IN FOR FREE FOR LARGE CLIENTS.

Police and Fire Pension Fund Board of Trustees & FIAC **Special Meeting Summary** October 12, 2016

#### **END OF PRESENTATION**

o 12:30pm - 1:30pm - Foster & Foster

FOSTER & FOSTER BEGAN THEIR PRESENTATION AT APPROXIMATELY 1:10PM. BRAD HEINRICHS, HAS BEEN PRESIDENT FOR 11 YRS. AND SPOKE TO THE **BOARD AND COMMITTEE.** 

FOSTER & FOSTER IS PASSIONATE ABOUT PENSIONS. THEY USE THE PROVAL SOFTWARE SYSTEM. UPDATES HAPPEN IMMEDIATELY. IT'S THE GOLD STANDARD IN SOFTWARE – THE BEST SOFTWARE.

MANY ADDITIONAL SERVICES ARE AVAILABLE TO THEIR CLIENTS INCLUDING THE PLAN MODELER WHICH CAN BE CUSTOMIZED FOR US. THERE IS A CHARGE FOR ALL ADDITIONAL SERVICES OVER AND ABOVE THEIR FEE.

**END OF PRESENTATION** 

#### IV. ADJOURNMENT

#### CHAIRMAN TUTEN ADJOURNED THE MEETING AT APPROX. 2:30PM

**NOTE:** If any person decides to appeal any decision made with respect to any matter considered at this public meeting such person will need a record of proceedings, and for such purpose such person may need to ensure that a verbatim record of the proceedings is made at their own expense and that such record includes the testimony and evidence on which the appeal is based. The public meeting may be continued to a date, time, and place to be specified on the record at the meeting.

TO BE APPROVED AT THE NEXT BOARD OF TRUSTEE MEETING ON OCTOBER 21, 2016

Rick Patsy, Board Secretary

TO BE APPROVED AT THE NEXT FIAC **MEETING ON NOVEMBER 10, 2016** 

Craig Lewis, FIAC Secretary

#### **Tracey Alden Devine**

116 Coastal Oak Circle Ponte Vedra Beach, FL 32082

(904) 625-6440

#### SUMMARY

traceydevine@comcast.net

Tenured investment professional with success at creating the strategic vision and fulfilling all affiliated research tasks supporting a viable investment platform meeting the long term investment objectives for a fiduciary client base. Numerous and varied research assignments pertaining to asset allocation, manager due diligence and portfolio management have culminated in the development of meaningful portfolio guidance. Career has engaged a sincere inquisitiveness, as well as providing an opportunity to demonstrate effective analytical, leadership and collaboration skills.

#### PROFESSIONAL EXPERIENCE

#### SUNTRUST BANK

Senior Research Analyst, SVP, Investment Advisory Group, Private Wealth Management 2014 - Present Manage a list of recommended money managers meeting the unique needs of the Bank, Endowment & Foundation, Brokerage and Family Wealth clients. Emphasis placed on proprietary research exhibiting discipline and long-term focus.

- Responsible for evaluating money manager's investment capabilities encompassing quantitative and qualitative assessments.
- Fulfill new manager searches to meet targeted needs. Due diligence includes full review of the firm, key professionals, operations/trading functions, regulatory compliance, investment process, performance, and pricing of various investment structures. Comprehensive review and on-site visit is mandatory. Develop comprehensive research reports for presentation to Research Team.
- Monitor all managers on recommended list with formal quarterly and annual reviews. Quarterly reviews entail verifying firm, key professional or AUM changes. Additionally, assess performance attribution and factor analysis to determine if manager is performing in line with expectations given market environment. Annually, conduct a thorough review by way of full questionnaires, on-site visits and conference calls to verify the manager and firm remain sound. Recommend retention or removal to Research Team and Investment Policy Committee(s).
- Rigorous risk management is embedded within all aspects of the due diligence process, whether it is firm related, operationally oriented or risk-adjusted performance.

#### LEGACY TRUST FAMILY WEALTH OFFICE

Director, Investment Research & Consulting

2012 - 2014

Developed and directed the investment strategy, portfolio management and client consulting for a HNW clientele.

- Research asset classes, ascertain strategic and tactical asset allocation and fulfill manager due diligence.
- Determine all portfolio management decisions. Manage for results. Consult with existing clients delivering quarterly investment reviews entailing an economic and market outlook as a backdrop to portfolio management decisions and performance.
- Assist in new client acquisition. Accountable for conveying investment expertise and insights towards winning new business opportunities.
- Establish new internal processes to streamline portfolio management steps towards more efficiency and timely implementation of trades.

#### **WACHOVIA BANK**

Managing Director, SVP, Investment Strategy & Research, Wealth Management 2004 – 2009 Directed the development and full execution of a managed money investment solution for Wachovia Wealth Management, the nation's 5th largest wealth manager (\$65+ billion AUM).

- Developed an investment solution providing taxable and tax-exempt clients an award winning investment strategy and managed money platform. As the engine behind the "Advantage" investment strategy and platform, I was commended by the President of Wealth Management, President of the Trust Company and the CIO for directly influencing winning sales and revenue performance, compliance improvement and most importantly, measurable increase in client satisfaction and loyalty.
- Charged with formulating and managing the Investment Strategy for Wealth Management division to include the development of a Client Value Proposition, Investment Philosophy, as well as the development of a fully diversified Strategic and Tactical Asset Allocation methodology. New investment strategy provided sales and service teams a much improved, competitive offering for our clients.

- Formulated and managed a proprietary Due Diligence Research process supporting a comprehensive list of money managers. Expanded the investment platform by incorporating proprietary in-depth asset class analysis and money manager due diligence covering more than 16 distinct asset classes.
- Actively managed and marketed discretionary mutual fund model portfolios (\$3 billion+ AUM), addressing senior management's desire to provide all clients' access to Advantage Portfolios' design.
- Hired, led and collaborated with a team of research analysts; via a shared vision the team most effectively linked day-to-day tasks to the larger vision.
- Created marketing and educational tools supporting the field of advisors. Traveled extensively for due diligence meetings and internal client training. Routinely participated as an SME in high profile client meetings.
- Effectively partnered with extensive list of internal teams leveraging each team's insights and expertise (investment professionals, risk management, operations, performance measurement, finance, asset management, brokerage research, retirement services, institutional sales, etc.)
- Credited by senior management for my role behind Wachovia's Wealth Investment Platform ("Advantage") winning "Platform of The Year" in 2006. (Wachovia Wealth Management was recognized by Private Asset Management, a publication of Institutional Investor, Inc., as the 2006 Platform Provider of the Year).

Director of Research, VP, Portfolio Strategies, Trust Division

1997 - 2004

Created a new fiduciary research division and proprietary due diligence discipline pertaining to the analysis of money managers utilized throughout fiduciary focused bank channels.

- Addressing the Bank's need to build an open architecture investment solution, designed a new asset allocation methodology, new manager due diligence process and new investment policy supporting the analysis of hedge fund of funds.
- Successfully implemented new investment strategy, to include: contracts and contractual process supporting business relationships between the Bank and external money management entities, all collateral materials utilized internally and with client, operational steps and risk management oversight.
- Hired, contracted and partnered with leading consultants, in an effort to maximize their expertise and expense savings (Callan Associates, Wilshire Associates, Evaluation Associates, LCG Associates and Ivy Asset Management).
- Commended by Office of the Comptroller of the Currency (OCC) for our proprietary research processes' comprehensiveness, structure and strict discipline.

Portfolio Manager/Portfolio Manager Associate, AVP, Trust Division Managed investment related decisions for 250+ personal trust relationships. 1993 – 1997

- Managed clients' asset allocation needs, developing individual investment policy statements, fulfilling portfolio construction, monitoring and compliance requirements.
- Assigned the privilege of managing some of the Trust departments highest profile clients due to ability to meet unique research requirements such as customized manager due diligence and searches.

*Investment Officer, Brokerage Division* 

1987 – 1989

Registered Broker servicing client accounts via comprehensive range of financial services utilizing brokerage product array.

• Fulfilled all levels of trade execution, to include equities, options, bonds and funds; created a formal Traders Manual for brokerage division, providing greater structure to process.

#### MERRILL LYNCH, PIERCE FENNER & SMITH

1985 - 1986

Financial Consultant

Prospected, advised, and serviced client accounts.

• Full knowledge of investment capabilities; conducted investment strategy seminars for both existing and prospective clients, which resulted in new clients.

#### **EDUCATION**

University of North Florida, Coggin College of Business Kaplan University, Bachelor of Science Business Administration, Summa cum Laude

#### **BUSINESS ASSOCIATIONS**

# Pension Plan Comparison

October 11, 2016 - By Steve Lundy							
	Group IA	Group IB	Jax PFPF: Group II	FRS	Tampa Fire & Police		
Criteria for Group Status	Member of the Fund as of June 19, 2015 with 20 or more years of service	Member of the Fund as of June 19, 2015 with less than 20 years of service	Hired after June 19, 2015	N/A	N/A		
Retirement Benefit	3% each year for 1st 20 years; 2% each additional year; based on last 2 years of pensionable pay.	3% each year for 1st 20 years; 2% each additional year; based on last 2 years of pensionable pay. If member has less than 5 years of service as of June 19, 2015, based on last 4 years of pensionable pay.	2.5% each year until 30 years of service (steep reductions for early retirement after 25 years); based on last 5 years of pensionable pay.	3.0% each year; based on the average of the highest 8 fiscal years of salary.	3.15% each year until maximum of 100% of average earnings (highest 3 years of last 10 years of pay).		
Active Member Contribution	8%; increases to 10% when across the board raises occur.	8%; increases to 10% when across the board raises occur.	10%	3%	12.5%		
Normal Retirement	20 years of service at 60% of Final Average Earnings calculated based on last 2 years of pensionable pay (52 pay periods).	20 years of service at 60% of Final Average Earnings calculated based on last 2 years of pensionable pay (52 pay periods) for members with at least 5 years of service as of June 19, 2015; or last 4 years of pensionable pay (104 pay periods) for members with less than 5 years of service as of June 19, 2015.	30 years of service at 75% of Final Average Earnings calculated based on last 5 years of pensionable pay (130 pay periods); Pay up to \$99,999.99, adjusted for inflation annually.	Age 60 with at least 8 years of service or 30 years of service regardless of age.	After at least 10 years of service, but benefits not paid until at least 46 years of age.		
Full Retirement	30 years of service at 80% of Final Average Earnings.	30 years of service at 80% of Final Average Earnings.	Same as normal	Same as normal	Same as normal		
Vesting	Vested at 5 years, commencing on date of eligible retirement (20 years).	Vested at 5 years, commencing on date of eligible retirement (20 years).	Vested at 10 years, benefit commencing at age 62.	Vested at 8 years. Benefit commences at time eligible for early or normal retirement. Early retirement penalty of 5% per year less than normal retirement.	Vested at 10 years, benefit commencing at age 46.		
Survivor Benefit	75% of retiree's pension pay; \$200 per child per month benefit; orphan benefit 75% of pension pay.	75% of retiree's pension pay; \$200 per child per month benefit; orphan benefit 75% of pension pay.	75% of retiree's normal retirement pension pay; \$200 per child per month benefit; orphan benefit 75% of pension pay.	Depends on option selected; 1: Refund of member's contributions if contributions exceed total amount of retirement benefits received; 2: Survivor gets same benefit as member until the 10th year after member's retirement; 3: Survivor receives same reduced benefit as member until death; 4: Upon death of member OR beneficiary reduced benefit is reduced further to 2/3.	Depends on option selected; 1: Refund of member's contributions if contributions exceed total amount of retirement benefits received; 2: Survivor gets 65% of member's benefit until the 10th year after member's retirement; 3: Joint Annuitant - Upon death of member OR beneficiary reduced benefit continues unaffected.		
Retiree Cost-Of- Living- Adjustment (COLA)	3% annually each January commencing on first January after retirement.	Blended rate equal to 3% for service time prior to June 19, 2015, AND Social Security COLA (not to exceed 6%) for service time after June 19, 2015, commencing on first January after retirement.	Equal to Social Security COLA but not to exceed 1.5%, commencing on third January after retirement.	3% annually each July commencing on first July after retirement (1st COLA prorated).	COLA will increase OR decrease each year according to the net change in the cost-of-living index from the previous year. Cannot be decreased below the level benefits were first determined.		
Disability	60% of last 2 years of pensionable pay (52 pay periods).	60% based on last 2 years of pensionable pay (52 pay periods) for members with more than 5 years of service as of June 19, 2015. If member has less than 5 years of service as of June 19, 2015, based on last 4 years of pensionable pay (104 pay periods).	50% of last 5 years of pensionable pay (130 pay periods).	Minimum 65% for In-Line-of-Duty Disabilities; Minimum 25% for regular disabilities.	In-Line-of-Duty: 65% of current salary plus 1/12th pensionable earnings received within 1 year prior to date of disability. Regular Disability: minimum 25% of current salary OR 2% of average earnings times years of credited service to maximum of 50% of average earnings.		

	Pension Plan Comparison  October 11, 2016 - By Steve Lundy								
	Group IA	Group IB	Jax PFPF: Group II	FRS	Tampa Fire & Police				
Deferred Retirement Option Program (DROP)	Participation up to 5 years (130 pay periods) based on years of service; Available to members with 20 but not exceeding 32 years of service; 8.4% annual interest; 2% qualified member contributions during DROP participation.	Participation up to 5 years (130 pay periods) based on years of service; Available to members with 20 but not exceeding 32 years of service; Annual interest equal to actual performance of Fund measured and applied annually: 2% minimum to 14.4% maximum; 2% qualified member contributions during DROP participation.	BACKDROP - Member may retire with reduced pension benefit as calculated at a previous date (-2% per year less than 30) and receive a lump sum check for the accrued amount of pension benefits had the member actually retired on that date, with interest based on the amount earned by the plan (0-10% annual).	Participation up to 5 years, reduced by one month for each month between normal retirement date and DROP enrollment. 1.3% Annual Interest.	Participation up to 5 years based on years of service; Available to members with 20 but not exceeding 30 years of service; interest positive or negative equal to the Fund's net investment return, or a rate determined by the Board; no member contributions while on DROP.				
Share Plan	active members' accounts; Paid to members with 10	Amount determined annually at the discretion of the Board of Trustees from "Enhanced Benefits" credited to active members' accounts; Paid to members with 10 years of credited service at termination (including entry into DROP or retirement).	Amount determined annually at the discretion of the Board of Trustees from "Enhanced Benefits" credited to active members' accounts; Paid to members with 10 years of credited service at termination (or retirement).	N/A	N/A				
Pre-Retirement Death Benefit	75% of Normal Retirement; \$200 per child per month benefit; orphan benefit 75% of Normal Retirement.	75% of Normal Retirement; \$200 per child per month benefit; orphan benefit 75% of Normal Retirement.	75% of Normal Retirement; \$200 per child per month benefit; orphan benefit 75% of Normal Retirement.	100% if death occurs in the line of duty; Refund of contributions OR monthly benefit dependent on choice of beneficiary option.	COLA will increase OR decrease each year according to the net change in the cost-of-living index from the previous year. Cannot be decreased below the level benefits were first determined.				

<sup>\*</sup>This is an abbreviated summary of the Jax PFPF Plan. Please see underlying law, City Ordinance 121 for the detailed Plan.

<sup>\*\*</sup>https://www.myfrs.com/FRSPro\_ComparePlan.htm

\*\*\*http://www.tampagov.net/sites/default/files/fire-and-police-pension/files/2014\_spd.pdf

# Pension Plan Estimate Comparison BACKDROP & DROP

October 11, 2016 - By Steve Lundy

		October	11, 2010 - by Steve Lundy		
	Group IA	Group IB	Jax PFPF: Group II	FRS	Tampa Fire & Police
Active Member Contribution	8%; increases to 10% when across the board raises occur.	8%; increases to 10% when across the board raises occur.	10%	3%	12.5%
Retirement Benefit	3% each year for 1st 20 years; 2% each additional year; based on last 2 years of pensionable pay.	3% each year for 1st 20 years; 2% each additional year; based on last 2 years of pensionable pay. If member has less than 5 years of service as of June 19, 2015, based on last 4 years of pensionable pay.	2.5% each year until 30 years of service (steep reductions for early retirement after 25 years); based on last 5 years of pensionable pay.	3.0% each year; based on the average of the highest 8 fiscal years of salary.	3.15% each year until maximum of 100% of average earnings (highest 3 years of last 10 years of pay).
Years of Service	Retirement Benefit ESTIMATE 30	Retirement Benefit ESTIMATE 30	Retirement Benefit ESTIMATE 30	Retirement Benefit ESTIMATE 30	Retirement Benefit ESTIMATE 30
Multiplier	80.0%	80.0%	75.0%	90.0%	94.5%
Salary Year 20	75000	75000	75000	75000	75000
Salary Year 21	76500	76500	76500	76500	76500
Salary Year 22	78030	78030	78030	78030	78030
Salary Year 23	79591	79591	79591	79591	79591
Salary Year 24	81182	81182	81182	81182	81182
Salary Year 25	82806	82806	82806	82806	82806
Salary Year 26	84462	84462	84462	84462	84462
Salary Year 27	86151	86151	86151	86151	86151
Salary Year 28	87874	87874	87874	87874	87874
Salary Year 29	89632	89632	89632	89632	89632
AVG Salary Pension Benefit	88753 71003	87030 69624	86185 64639	83716 75345	87886 83052
Normal Retirement	20 years of service at 60% of Final Average Earnings calculated based on last 2 years of pensionable pay (52 pay periods).	20 years of service at 60% of Final Average Earnings calculated based on last 2 years of pensionable pay (52 pay periods) for members with at least 5 years of service as of June 19, 2015; or last 4 years of pensionable pay (104 pay periods) for members with less than 5 years of service as of June 19, 2015.	30 years of service at 75% of Final Average Earnings calculated based on last 5 years of pensionable pay (130 pay periods); Pay up to \$99,999.99, adjusted for inflation annually.	Age 60 with at least 8 years of service or 30 years of service regardless of age.	After at least 10 years of service, but benefits not paid until at least 46 years of age.
Deferred Retirement Option Program (DROP)	Participation up to 5 years (130 pay periods) based on years of service; Available to members with 20 but not exceeding 32 years of service; 8.4% annual interest; 2% qualified member contributions during DROP participation.	Participation up to 5 years (130 pay periods) based on years of service; Available to members with 20 but not exceeding 32 years of service; Annual interest equal to actual performance of Fund measured and applied annually: 2% minimum to 14.4% maximum; 2% qualified member contributions during DROP participation.	BACKDROP - Member may retire with reduced pension benefit as calculated at a previous date (-2% per year less than 30) and receive a lump sum check for the accrued amount of pension benefits had the member actually retired on that date, with interest based on the amount earned by the plan (0-10% annual).	Participation up to 5 years, reduced by one month for each month between normal retirement date and DROP enrollment. 1.3% Annual Interest.	Participation up to 5 years based on years of service; Available to members with 20 but not exceeding 30 years of service; interest positive or negative equal to the Fund's net investment return, or a rate determined by the Board; no member contributions while on DROP.
	DROP ESTIMATE	DROP ESTIMATE	BACKDROP ESTIMATE	DROP ESTIMATE	DROP ESTIMATE
ASSUMPTIONS	Assuming Pension ESTIMATE Above	Assuming Pension ESTIMATE Above	Assuming Pension ESTIMATE Above	Assuming Pension ESTIMATE Above	Assuming Pension ESTIMATE Above
1.500 110110	7.55.5				
			BACKDROP from 35 to 30 Years of Service		
			75.0% Multiplier @ 30y		
	Assuming 3.0% COLA	Assuming 3.0% COLA	(No COLA on BACKDROP)	3.0% COLA	Assuming 3.0% COLA
	8.4% DROP Rate	Assuming 5.0% DROP Rate	Assuming 5.0% Fund Return	1.3% DROP Rate	Assuming 5.0% DROP Rate
Total BACKDROP/DRO	P 465100	418300	375029	412800	498900
Pension Benefit	71003	69624	64639	75345	83052
	6.1	au			

<sup>\*</sup>This is an abbreviated summary of the Jax PFPF Plan. Please see underlying law, City Ordinance 121 for the detailed Plan.

<sup>\*\*</sup>https://www.myfrs.com/FRSPro\_ComparePlan.htm

 $<sup>***</sup> http://www.tampagov.net/sites/default/files/fire-and-police-pension/files/2014\_spd.pdf$ 

<sup>\*\*\*\*</sup>PFPF DROP estimator program was used for all DROP estimates shown above. Estimates may vary from actual results.

#### FOR IMMEDIATE RELEASE

**Contact:** Jacksonville Police and Fire Pension Fund

Timothy H. Johnson, Executive Director - Plan Administrator

(904) 255-7373 (office) thiohnson@coi.net

## JACKSONVILLE POLICE AND FIRE PENSION FUND ANNOUNCES NEW ACTUARY

**JACKSONVILLE, Fla., Nov. 07, 2016 -** The Jacksonville Police and Fire Pension Fund announces the selection of Gabriel Roeder Smith & Company (GRS) as the fund's new actuary.

Board action to approve GRS occurred on October 21<sup>st</sup> following the recommendation of Finance Investment Advisory Committee Chairman Brian Smith who said, "The decision to select a new actuary for the Police and Fire Pension Fund was difficult because we had three excellent firms to interview."

The board voted unanimously to motion to award the contract to GRS.

The actuary shall prepare and present to the PFPF an annual actuarial report which complies with all applicable requirements of the Florida Statutes, Articles of the City Charter, State of Florida, Department of Administration, Division of Retirement, and Department of Insurance, Bureau of Municipal Police Officers and Firefighters' Fund and GASB.

Peter N. Strong, FSA, will serve as the Lead Consulting Actuary. He has more than 20 years of actuarial and benefits consulting experience and holds the designation of Fellow, Society of Actuaries, along with other professional designations. Mr. Strong commented, "The size of this plan makes it a top priority."

GRS is headquartered in Southfield, Michigan, with offices in Dallas, Detroit, Chicago, Denver, Minneapolis, Grand Rapids, and Fort Lauderdale. The firm is a leading provider of actuarial consulting services, focusing on public sector retirement systems.

The performance of this agreement shall commence on January 1, 2017 and shall terminate on December 31, 2019, at which time the PFPF Trustees will have the option to renew.

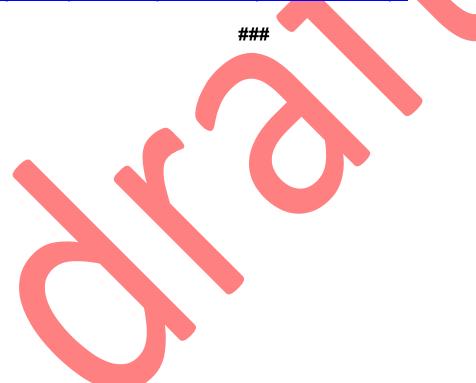
GRS replaces Pension Board Consultants, Inc. which has been the PFPF actuary since 1982.

According to PFPF Executive Director, Tim Johnson, "GRS has the technical foundation, Florida experience and caliber of consultants to do the job.

#### **About The Jacksonville Police and Fire Pension Fund**

The Jacksonville Police and Fire Pension Fund (the 'Fund') is a single-employer contributing defined benefit pension plan covering all full-time police officers and firefighters of the Consolidated City of Jacksonville. The Fund was created in 1937 and is structured as an independent agency of the City of Jacksonville. The Fund controls \$1.6 billion in assets and is administered solely by a five member Board of Trustees.

To learn more about the Jacksonville Police and Fire Pension Fund, visit <a href="http://www.coj.net/departments/police---fire-pension-fund.aspx">http://www.coj.net/departments/police---fire-pension-fund.aspx</a>.



#### **NEWS RELEASE**

#### FOR IMMEDIATE RELEASE

Contact: Jacksonville Police and Fire Pension Fund

Timothy H. Johnson, Executive Director - Plan Administrator

(904) 255-7373 (office) <a href="mailto:thjohnson@coj.net">thjohnson@coj.net</a>

# Jacksonville Police and Fire Pension Fund Reports Preliminary 2015-2016 Fiscal Year Investment Returns

**JACKSONVILLE, Fla., Nov. 07, 2016 -** The Jacksonville Police and Fire Pension Fund today reported a preliminary 10.48 percent net return on investments on a net of fees basis for the 12-month period that ended September 30, 2016. This return translates into greater than \$161 million earned by the Fund for the Fiscal Year after fees. Fund assets at the end of the fiscal year stood at \$1,599,226,126.

According to the Fund's Investment Manager, Dan Holmes of Summit, "Strong returns in energy investments, domestic equities and international equities combined with the Board's asset allocation decisions and long-term focus, allowing for recovery in some of these investments, helped drive the Fund's attractive return."

The Jacksonville Police and Fire Pension Fund achieved a positive net return although there was more market volatility during the past fiscal year than in any year since 2012. The total fund composite outperformed its benchmark by 14 basis points net of fees. The Fund's diversified exposure to many different asset classes allowed it to perform well for the fiscal year.

The ending value of the Jacksonville Police and Fire Pension Fund is based on several factors, and is not based on investment performance alone. Contributions made to the Fund from eligible employees and the City of Jacksonville, monthly payments made to retirees, and the performance of the Fund's investments, among other factors, all influence the ending total value of the Fund.

#### **About The Jacksonville Police and Fire Pension Fund**

The Jacksonville Police and Fire Pension Fund (the 'Fund') is a single-employer contributing defined benefit pension plan covering all full-time police officers and firefighters of the Consolidated City of Jacksonville. The Fund was created in 1937 and is structured as an independent agency of the City of Jacksonville. The Fund controls \$1.6 billion in assets and is administered solely by a five member Board of Trustees.

To learn more about the Jacksonville Police and Fire Pension Fund, visit <a href="http://www.coj.net/departments/police---fire-pension-fund.aspx">http://www.coj.net/departments/police---fire-pension-fund.aspx</a>.



#### POLICE AND FIRE PENSION FUND

#### **Holiday - Meeting Schedules**

2017

Holidays

Advisory Committee

Trustees

FIAC

JANUARY									
S	М	Т	W	Т	F	S			
1	2	3	4	5	6	7			
8	9	10	11	12	13	14			
15	16	17	18	19	20	21			
22	23	24	25	26	27	28			
29	30	31							

FEBRUARY									
S	М	Т	W	Т	F	S			
			1	2	3	4			
5	6	7	8	9	10	11			
12	13	14	15	16	17	18			
19	20	21	22	23	24	25			
26	27	28							
			- 1						

MARCH								
S	М	Т	W	Т	F	S		
			1	2	3	4		
5	6	7	8	9	10	11		
12	13	14	15	16	17	18		
19	20	21	22	23	24	25		
26	27	28	29	30	31			

APRIL								
S	М	Т	W	Т	F	S		
						1		
2	3	4	5	6	7	8		
9	10	11	12	13	14	15		
16	17	18	19	20	21	22		
23	24	25	26	27	28	29		
30								

	MAY									
S	Μ	Т	W	Т	F	S				
	1	2	3	4	5	6				
7	8	9	10	11	12	13				
14	15	16	17	18	19	20				
21	22	23	24	25	26	27				
28	29	30	31							
				- '						

JUNE						
S	Μ	Т	W	Т	F	S
				1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	

JULY						
S	М	Т	W	Т	F	S
						1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30	31				·	

AUGUST												
S	М	Т	W	Т	F	S						
		1	2	3	4	5						
6	7	8	9	10	11	12						
13	14	15	16	17	18	19						
20	21	22	23	24	25	26						
27	28	29	30	30								

	SEPTEMBER													
S	М	Т	W	Т	F	S								
					1	2								
3	4	5	6	7	8	9								
10	11	12	13	14	15	16								
17	18	19	20	21	22	23								
24	25	26	27	28	29	30								

	OCTOBER													
S	М	Т	W	Т	F	S								
1	2	3	4	5	6	7								
8	9	10	11	12	13	14								
15	16	17	18	19	20	21								
22	23	24	25	26	27	28								
29	30	31												
			="											

NOVEMBER												
		NO	V LIVI	DLI								
S	Μ	T	W	Τ	F	S						
			1	2	3	4						
5	6	7	8	9	10	11						
12	13	14	15	16	17	18						
19	20	21	22	23	24	25						
26	27	28	29	30								

	DECEMBER													
S	М	Т	W	Т	F	S								
					1	2								
3	4	5	6	7	8	9								
10	11	12	13	14	15	16								
17	18	19	20	21	22	23								
24	25	26	27	28	29	30								
31														



8182 Maryland Avenue, 6th Floor St. Louis, Missouri 63105 314.727.7211

City of Jacksonville Police & Fire Pension Fund

Investment Performance Review **September 30, 2016** 

#### Table of Contents

3
11
20
44
67
79
89
93
94
96
102

**Executive Summary** 

#### **Economic & Capital Market Highlights**

September 30, 2016

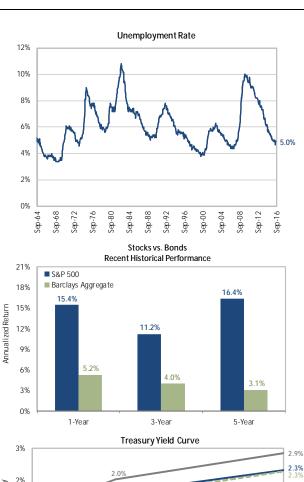
#### Economy

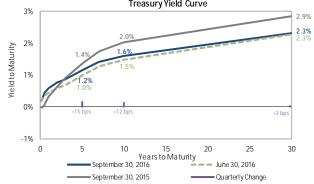
Following a tumultuous second quarter capped off by the United Kingdom's surprise vote to exit the European Union, the third quarter was more subdued in terms of economic developments and financial market movements. The economic data released following Brexit was mostly consistent with that of the recovery since the Global Financial Crisis, with low but steady GDP growth (1.4% annualized in the US for the second quarter). Continued progress and tightening in the labor market (575,000 jobs added in the US during the second quarter, near the average of the expansion) and low but rising wage growth (average hourly earnings up 2.6% year-over-year in September, matching the highest growth of the expansion) increased the likelihood of a Federal Reserve interest rate hike later in 2016. At the end of September the Fed Fund futures market implied a 60% chance of a rate hike at the Fed's December meeting, up from 9% at the end of June. Elsewhere in the world, monetary policy remains easy in developed economies such as Japan and the Eurozone. During the quarter, the Bank of Japan announced it would target a rate of 0% on 10-year government bonds in an attempt to increase the scope of its monetary policy.

#### **Capital Markets**

Despite continued lackluster economic performance, equity markets (particularly in the US) have performed well over the past several years. Global equities (MSCI ACWI IMI, +5.6%) turned in their best quarterly gain since the fourth quarter of 2013, led by emerging markets (MSCI EM, +9.0%). Low but steady economic growth has helped keep equity market volatility muted, and accommodative central bank policies throughout the world continue to act as a tailwind for many major equity markets. Across fixed income markets, credit outperformed government bonds and interest rates rose modestly. The yield on the 10-year Treasury rose 12 basis points to 1.60%, but remains well below the 20-year average of 3.94%.

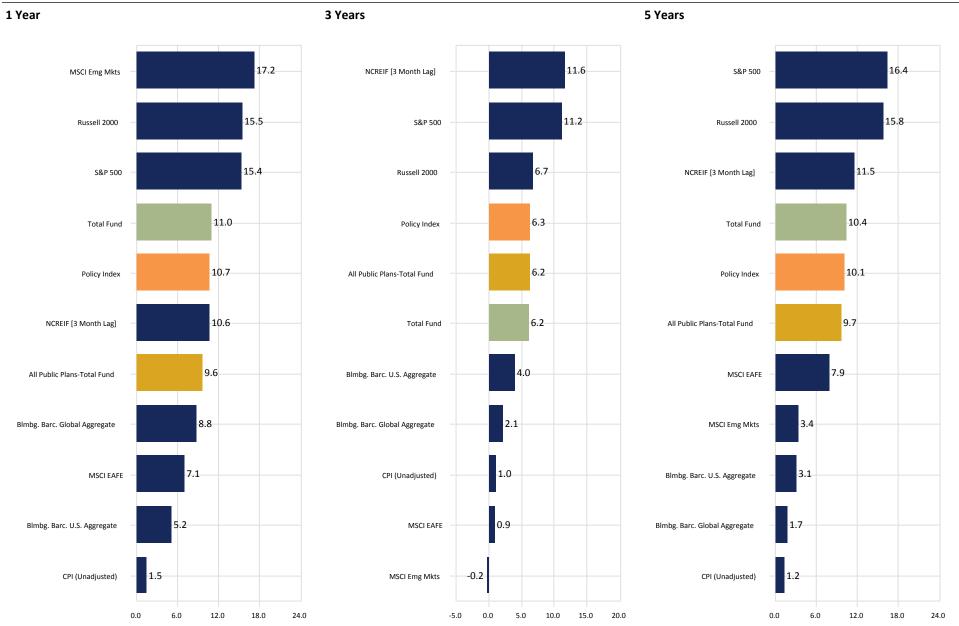
Market Performance (I	Returns in USD)	Quarter	1 Year	3 Year	5 Year
MSCI ACWI IMI	Global Equity	5.6%	12.3%	5.2%	10.9%
Russell 3000	US Equity	4.4%	15.0%	10.4%	16.4%
S&P 500	US Large Cap Equity	3.9%	15.4%	11.2%	16.4%
Russell 1000	US Large Cap Equity	4.0%	14.9%	10.8%	16.4%
Russell 1000 Value	US Large Cap Value Equity	3.5%	16.2%	9.7%	16.2%
Russell 1000 Growth	US Large Cap Growth Equity	4.6%	13.8%	11.8%	16.6%
Russell 2000	US Small Cap Core Equity	9.0%	15.5%	6.7%	15.8%
Russell 2000 Value	US Small Cap Value Equity	8.9%	18.8%	6.8%	15.4%
Russell 2000 Growth	US Small Cap Growth Equity	9.2%	12.1%	6.6%	16.1%
MSCI EAFE	Int'l Developed Large Cap Equity	6.4%	6.5%	0.5%	7.4%
MSCI EAFE Small Cap	Int'l Developed Small Cap Equity	8.6%	12.3%	5.1%	11.1%
MSCI Emerging Markets	Emerging Market Equity	9.0%	16.8%	-0.6%	3.0%
Alerian MLP	Master Limited Partnerships	1.1%	12.7%	-4.8%	5.0%
Barclays Aggregate	US Core Fixed Income	0.5%	5.2%	4.0%	3.1%
Barclays US Treasury	US Treasuries	-0.3%	4.1%	3.4%	2.2%
Barclays US Credit	US Corporate Bonds	1.2%	8.3%	5.4%	4.8%
Barclays US MBS	US Mortgage Backed Securities	0.6%	3.6%	3.6%	2.6%
Barclays US Corp: High Yield	US High Yield Bonds	5.6%	12.7%	5.3%	8.3%
NCREIF ODCE (net)	Core Real Estate	1.8%	9.1%	11.4%	11.3%





**Market Overview** 

September 30, 2016



Asset Allocation & Performance Gross of Fees

September 30, 2016

September 30, 2010	Performance(%) and Percentile Rank																	
	Asset \$	Asset %	3 Month		FYTD		CYTD		1 Year		2 Year		3 Year		5 Year		10 Year	
Total Fund Composite	1,599,226,126	100.00	4.42	7	10.98	13	7.28	22	10.98	13	3.58	77	6.18	53	10.41	24	6.05	41
Total Fund Policy			3.66		10.69		7.70		10.69		3.49		6.28		10.10		5.55	
Excess Return			0.76		0.29		-0.42		0.29		0.09		-0.10		0.31		0.50	
All Public Plans-Total Fund Median			3.38		9.61		6.37		9.61		4.34		6.21		9.70		5.87	
US Equity	642,525,647	40.18	5.09	35	13.47	64	6.83	79	13.47	64	5.87	66	8.46	72	15.29	62	7.54	35
US Equity Index			4.40		14.96		8.18		14.96		6.96		10.44		16.36		7.47	
Excess Return			0.69		-1.49		-1.35		-1.49		-1.09		-1.98		-1.07		0.07	
All Master Trust-US Equity Segment Median			4.66		14.37		8.18		14.37		6.62		9.53		15.73		7.20	
International Equity	333,729,597	20.87	8.56	10	12.05	25	7.70	31	12.05	25	-0.28	61	1.83	55	7.54	65	2.02	88
International Equity Index			7.00		9.80		6.29		9.80		-1.58		0.64		6.52		1.90	
Excess Return			1.56		2.25		1.41		2.25		1.30		1.19		1.02		0.12	
All Master Trust-Intl. Equity Segment Median			6.78		10.31		6.38		10.31		0.13		2.05		8.10		3.38	
Fixed Income	330,054,270	20.64	1.09	51	5.69	58	6.39	53	5.69	58	4.18	49	3.83	63	3.25	70	4.78	68
Blmbg. Barc. U.S. Aggregate			0.46		5.19		5.80		5.19		4.06		4.03		3.08		4.79	
Excess Return			0.63		0.50		0.59		0.50		0.12		-0.20		0.17		-0.01	
All Master Trust-US Fixed Income Segment Median			1.12		6.19		6.64		6.19		4.13		4.30		4.04		5.31	
Real Estate	189,585,522	11.85	2.12	52	9.83	54	6.32	63	9.83	54	12.36	34	12.32	46	12.82	34	7.96	6
NCREIF Fund Index - ODCE [M]			2.07		10.09		6.52		10.09		12.48		12.45		12.40		6.02	
Excess Return			0.05		-0.26		-0.20		-0.26		-0.12		-0.13		0.42		1.94	
All Master Trust-Real Estate Segment Median			2.22		10.21		6.72		10.21		12.05		12.09		12.58		5.42	
NCREIF Property Index			1.77		9.22		6.13		9.22		11.33		11.31		11.18		7.22	
MLPs/Energy	101,576,733	6.35	3.49	70	14.53	35	15.47	76	14.53	35	-12.47	28	1.51	37	11.12	40	-	
S&P MLP Index			2.92		10.12		18.03		10.12		-17.88		-4.38		5.51		-	
Excess Return			0.57		4.41		-2.56		4.41		5.41		5.89		5.61		-	
Master Limited Partnerships (SA+CF) Median			4.45		13.01		20.32		13.01		-14.39		0.03		8.94		-	
Cash	1,754,355	0.11	0.12		0.27		0.22		0.27		0.20		0.70		0.70		3.42	

Summit Strategies Group

Asset Allocation & Performance Gross of Fees

September 30, 2016

		Performance(%) and Percentile Rank																	
	Asset \$	Asset %	3 Month		FYTD		CYTD		1 Year		3 Year		5 Year		10 Year		Since Inception		Inception Date
US Equity																			
NT S&P 500 Index Fund	165,659,609	10.36	3.85	63	15.50	22	7.88	32	15.50	22	11.23	30	16.42	42	7.26	62	5.23	87	Jan-1999
S&P 500			3.85		15.43		7.84		15.43		11.16		16.37		7.24		5.22		_
Excess Return			0.00		0.07		0.04		0.07		0.07		0.05		0.02		0.01		
IM U.S. Large Cap Equity (SA+CF) Median			4.33		13.19		6.61		13.19		10.36		16.19		7.49		6.38		
Eagle Capital Management	173,637,760	10.86	5.09	34	10.29	77	3.47	87	10.29	77	9.50	43	16.44	32	-		12.31	15	Apr-2011
Russell 1000 Value Index			3.48		16.19		10.00		16.19		9.70		16.15		-		10.85		_
Excess Return			1.61		-5.90		-6.53		-5.90		-0.20		0.29		-		1.46		
IM U.S. Large Cap Value Equity (SA+CF) Median			4.10		13.12		7.58		13.12		9.13		15.58		-		10.59		
Brown Investment Advisory	85,568,469	5.35	3.69	81	10.33	68	2.34	74	10.33	68	-		-		-		7.60	83	Nov-2013
Russell 1000 Growth Index			4.58		13.76		6.00		13.76		-		-		-		10.53		
Excess Return			-0.89		-3.43		-3.66		-3.43		-		-		-		-2.93		-
IM U.S. Large Cap Growth Equity (SA+CF) Median			5.15		11.69		4.45		11.69		-		-		-		9.60		
Sawgrass Asset Management	87,446,789	5.47	0.58	100	11.61	51	5.22	36	11.61	51	_		_		_		9.72	48	Nov-2013
Russell 1000 Growth Index	07,1.0,703	5	4.58	100	13.76	31	6.00	30	13.76	01	-		_		_		10.53		2015
Excess Return			-4.00		-2.15		-0.78		-2.15		-		-		-		-0.81		_
IM U.S. Large Cap Growth Equity (SA+CF) Median			5.15		11.69		4.45		11.69		-		-		-		9.60		
Pinnacle	66,022,157	4.13	10.41	8	12.53	37	1.89	93	12.53	37	6.78	57	17.03	18			21.14	15	Mar-2009
Russell 2500 Growth Index	00,022,137	4.13	6.98	0	11.02	37	6.95	93	11.02	37	7.43	37	16.20	10	_		19.68	13	IVIdI-2005
Excess Return			3.43		1.51		-5.06		1.51		-0.65		0.83		_		1.46		_
IM U.S. SMID Cap Growth Equity (SA+CF) Median			5.68		9.51		6.46		9.51		7.03		15.59		_		18.96		
Wedge Capital Mgmt	64,190,864	4.01																	
International Equity																			
NT EAFE Index Fund	82,791,648	5.18	6.48	65	6.81	77	2.10	77	6.81	77	0.77	71	_		_		5.34	58	Apr-2012
MSCI EAFE Index (Net)	,,		6.43		6.52		1.73		6.52		0.48		_		_		5.02		
Excess Return			0.05		0.29		0.37		0.29		0.29		-		-		0.32		_
IM International Equity (SA+CF) Median			7.26		11.24		6.22		11.24		2.18		-		-		5.74		
Baillie Gifford	97,966,173	6.13	11.48	2	15.76	15	8.95	9	15.76	15	2.32	65	10.46	33			5.20	46	Mar-2011
MSCI EAFE Growth Index (Net)	37,300,173	0.13	4.96	2	9.47	13	2.63	9	9.47	13	2.39	03	8.73	33	_		3.95	40	IVIAI - 2011
Excess Return			6.52		6.29		6.32		6.29		-0.07		1.73		_		1.25		-
IM International Growth Equity (SA+CF) Median			6.78		9.58		3.81		9.58		3.18		9.53		_		4.99		
, ,, ,	64.424.454	4.04				27		2.4		27									C 2012
Silchester  ASSI FAFF Value Index (Not)	64,131,151	4.01	6.76 7.99	57	9.16	37	5.58 <i>0.82</i>	34	9.16	37	4.09	14	-		-		6.10 <i>0.99</i>	14	Sep-2013
MSCI EAFE Value Index (Net) Excess Return			-1.23		3.52 5.64		4.76		3.52 5.64		-1.49 5.58						5.11		=
IM International Large Cap Value Equity (SA+CF) Median			7.03		8.35		4.70		8.35		1.51				_		3.58		
•											1.51		-		-				
Acadian Emerging Mkts Equity II Fund	88,840,625	5.56	9.79	25	16.40	58	17.04	33	16.40	58	-		-		-		-0.42	59	Jan-2014
MSCI Emerging Markets (Net)			9.03		16.78		16.02		16.78		-		-		-		-1.27		=
Excess Return IM Emerging Markets Equity (SA+CF) Median			0.76 8.63		-0.38 17.15		1.02 15.46		-0.38 17.15		-		-		-		0.85 0.05		
. , , , ,			2.00														2.00		
Fixed Income	425 224 525	7.00	0.46		F 22	F.C	F 07		F 22	F.C	4.00	F2					204		F=b 2012
NTGI Aggregate Bond Index	125,231,526	7.83	0.46	68	5.23	56	5.87	54	5.23	56	4.08	53	-		-		2.94 2.94	60	Feb-2013
Blmbg. Barc. U.S. Aggregate Excess Return			0.46		5.19 0.04		5.80 0.07		5.19 0.04		4.03 0.05						0.00		-
IM U.S. Fixed Income (SA+CF) Median			0.00		5.66		6.17		5.66		4.19		-		-		3.28		
THE O.S. LINES INCOME (SATELY INICUISIT			0.03		5.00		0.17		5.00		4.13		-		-		3.20		

Summit Strategies Group

Asset Allocation & Performance Gross of Fees

September 30, 2016

		Performance(%) and Percentile Rank																	
																	Since		Inception
	Asset \$	Asset %	3 Month		FYTD		CYTD		1 Year		3 Year		5 Year		10 Year		Inception		Date
Fixed Income (continued) Eaton Vance Instl Senior Loan Trust S&P/LSTA Leverage Loan Index	41,168,899	2.57	2.89 3.07	49	5.67 5.46	53	7.82 7.72	30	5.67 5.46	53	3.47 3.39	90	-		-		3.55 3.47	89	Mar-2013
Excess Return			-0.18		0.21		0.10		0.21		0.08		_		_		0.08		-
IM U.S. Bank Loans (SA+CF) Median			2.88		5.73		7.22		5.73		3.93		-		-		4.02		
Thompson Siegel Fixed Thompson Policy Index	163,653,845	10.23	1.25 0.46	8	6.14 5.19	28	6.52 5.80	31	6.14 5.19	28	4.34 4.03	49	4.14 3.08	22	5.40 <i>4.71</i>	36	6.38 <i>6.15</i>	65	Aug-1991
Excess Return			0.79		0.95		0.72		0.95		0.31		1.06		0.69		0.23		-
IM U.S. Broad Market Core Fixed Income (SA+CF) Median			0.68		5.62		6.13		5.62		4.31		3.66		5.22		6.49		
Real Estate																			
JP Morgan	144,301,596	9.02	2.06	50	9.67	78	6.09	89	9.67	78	12.09	73	12.71	53	6.74	20	8.29	24	Apr-2005
NCREIF Fund Index - ODCE [M] Excess Return			2.07		10.09 -0.42		6.52 -0.43		10.09 -0.42		12.45		12.40		6.02 0.72		7.63		-
IM U.S. Private Real Estate (SA+CF) Median			- <mark>0.01</mark> 2.06		-0.42 10.89		-0.43 6.91		-0.42 10.89		-0.36 12.83		0.31 12.79		0.72 5.96		0.66 7.73		
, ,													12.79		5.90				
Principal Global Investments	45,283,926	2.83	2.30	31	10.35	66	7.09	43	10.35	66	13.06	43	-		-		13.42	52	Apr-2013
NCREIF Fund Index - ODCE [M]			2.07		10.09		6.52		10.09		12.45		-		-		12.91		_
Excess Return			0.23		0.26		0.57		0.26		0.61		-		-		0.51		
IM U.S. Open End Private Real Estate (SA+CF) Median			2.06		10.89		6.91		10.89		12.83		-		-		13.50		
MLPs/Energy																			
Harvest MLP	51,449,602	3.22	4.39	52	13.44	45	17.93	70	13.44	45	1.41	38	11.26	39	-		10.28	14	Mar-2011
S&P MLP Index			2.92		10.12		18.03		10.12		-4.38		5.51		-		3.38		_
Excess Return			1.47		3.32		-0.10		3.32		5.79		5.75		-		6.90		
Master Limited Partnerships (SA+CF) Median			4.45		13.01		20.32		13.01		0.03		8.94		-		6.56		
Tortoise MLP	50,127,131	3.13	2.57	76	15.68	21	13.04	83	15.68	21	1.50	37	10.91	41	-		9.53	28	Mar-2011
S&P MLP Index			2.92		10.12		18.03		10.12		-4.38		5.51		-		3.38		_
Excess Return			-0.35		5.56		-4.99		5.56		5.88		5.40		-		6.15		
Master Limited Partnerships (SA+CF) Median			4.45		13.01		20.32		13.01		0.03		8.94		-		6.56		
Cash	1,754,355	0.11	0.12		0.27		0.22		0.27		0.70		0.70		3.42		8.52		Dec-1998

Summit Strategies Group

Asset Allocation

September 30, 2016

	Equity	/	Fixed Income		Illiquid A	sset	Cash & Cash E	quivalents	Total Fur	ıd	
	(\$)	%	(\$)	%	(\$)	%	(\$)	%	(\$)	%	
Total Fund Composite	952,283,235	59.55	327,570,192	20.48	289,337,941	18.09	30,034,757	1.88	1,599,226,126	100.00	
US Equity	618,554,966	96.27	-	-	-	-	23,970,681	3.73	642,525,647	40.18	
NT S&P 500 Index Fund	165,658,377	100.00	-	-	-	-	1,233	0.00	165,659,609	10.36	
Eagle Capital Management	157,075,186	90.46	-	-	-	-	16,562,573	9.54	173,637,760	10.86	
Brown Investment Advisory	82,098,076	95.94	-	-	-	-	3,470,393	4.06	85,568,469	5.35	
Sawgrass Asset Management	83,984,325	96.04	-	-	-	-	3,462,464	3.96	87,446,789	5.47	
Pinnacle	65,548,139	99.28	-	-	-	-	474,018	0.72	66,022,157	4.13	
Wedge Capital Mgmt	64,190,864	100.00	-	-	-	-	-	-	64,190,864	4.01	
International Equity	333,728,269	100.00	-	-	-	-	1,329	0.00	333,729,597	20.87	
NT EAFE Index Fund	82,790,319	100.00	-	-	-	-	1,329	0.00	82,791,648	5.18	
Baillie Gifford	97,966,173	100.00	-	-	-	-	-	0.00	97,966,173	6.13	
Silchester	64,131,151	100.00	-	-	-	-	-	-	64,131,151	4.01	
Acadian Emerging Mkts Equity II Fund	88,840,625	100.00	-	-	-	-	-	-	88,840,625	5.56	
Fixed Income	-	-	327,570,192	99.25	-	_	2,484,078	0.75	330,054,270	20.64	
NTGI Aggregate Bond Index	-	-	125,230,036	100.00	-	-	1,491	0.00	125,231,526	7.83	
Eaton Vance Instl Senior Loan Trust	-	-	41,148,793	99.95	-	-	20,106	0.05	41,168,899	2.57	
Thompson Siegel Fixed	-	-	161,191,364	98.50	-	-	2,462,481	1.50	163,653,845	10.23	
Real Estate	-	-	-	-	189,585,522	100.00	-	-	189,585,522	11.85	
JP Morgan	-	-	-	-	144,301,596	100.00	-	-	144,301,596	9.02	
Principal Global Investments	-	-	-	-	45,283,926	100.00	-	-	45,283,926	2.83	
MLPs/Energy	-	-	-	-	99,752,419	98.20	1,824,314	1.80	101,576,733	6.35	
Harvest MLP	-	-	-	-	50,695,798	98.53	753,804	1.47	51,449,602	3.22	
Tortoise MLP	-	-	-	-	49,056,621	97.86	1,070,510	2.14	50,127,131	3.13	
Cash	-	-	-	-	-	-	1,754,355	100.00	1,754,355	0.11	

Fee Schedule

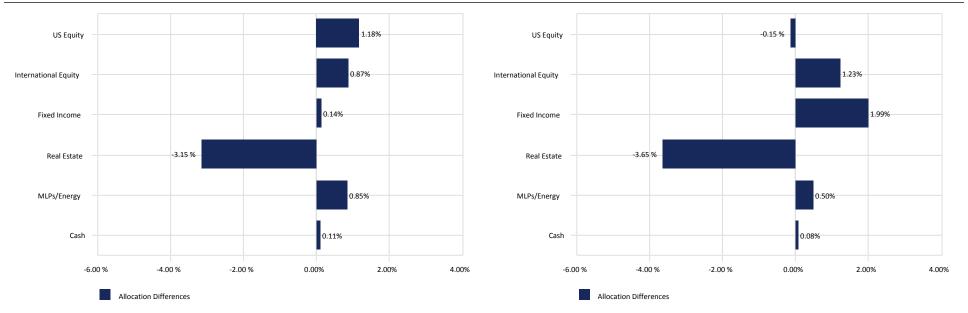
1 Quarter Ending September 30, 2016

	Market Value As of 07/01/2016	Net Transfers	Contributions	Distributions	Fees	Expenses	Market Value As of 09/30/2016	Return On Investment
NT S&P 500 Index Fund	86,222,860	76,081,746	-	-	-	-	165,659,609	3,355,003
Eagle Capital Management	103,489,561	63,980,919	-	-	-195,073	-3,840	173,637,760	6,366,192
Brown Investment Advisory	73,004,734	9,920,782	-	-	-73,620	-1,356	85,568,469	2,717,929
Sawgrass Asset Management	108,149,858	-21,478,253	-	-	-53,927	-1,545	87,446,789	830,656
Pinnacle	88,391,834	-29,835,257	-	-	-164,743	-779	66,022,157	7,631,102
Wedge Capital Mgmt	-	64,695,586	-	-	-	-	64,190,864	-504,722
NT EAFE Index Fund	118,487,732	-43,300,000	-	-	-	-	82,791,648	7,603,915
Baillie Gifford	87,878,482	-	-	-	-	-	97,966,173	10,087,691
Silchester	60,188,677	-	-	-	-122,136	-	64,131,151	4,064,610
Acadian Emerging Mkts Equity II Fund	80,915,365	233,391	-	-	-233,391	-	88,840,625	7,925,260
NTGI Aggregate Bond Index	166,589,541	-42,200,000	-	-	-	-	125,231,526	841,986
Eaton Vance Instl Senior Loan Trust	40,012,678	-	-	-	-	-6	41,168,899	1,156,228
Thompson Siegel Fixed	161,627,113	69,985	-	-	-69,985	-603	163,653,845	2,027,335
JP Morgan	141,384,164	665,022	-	-	-665,022	-	144,301,596	2,917,432
Principal Global Investments	44,356,291	-	-	-	-90,135	-	45,283,926	1,017,770
Harvest MLP	49,287,201	88,658	-	-	-88,658	-506	51,449,602	2,162,907
Tortoise MLP	48,869,271	91,629	-	-	-91,629	-312	50,127,131	1,258,173
Cash	1,388,981	105,566,904	-	-104,500,000	-	-711,008	1,754,355	9,478

**Total Fund** 

Asset Allocation vs. Target Allocation

September 30, 2016

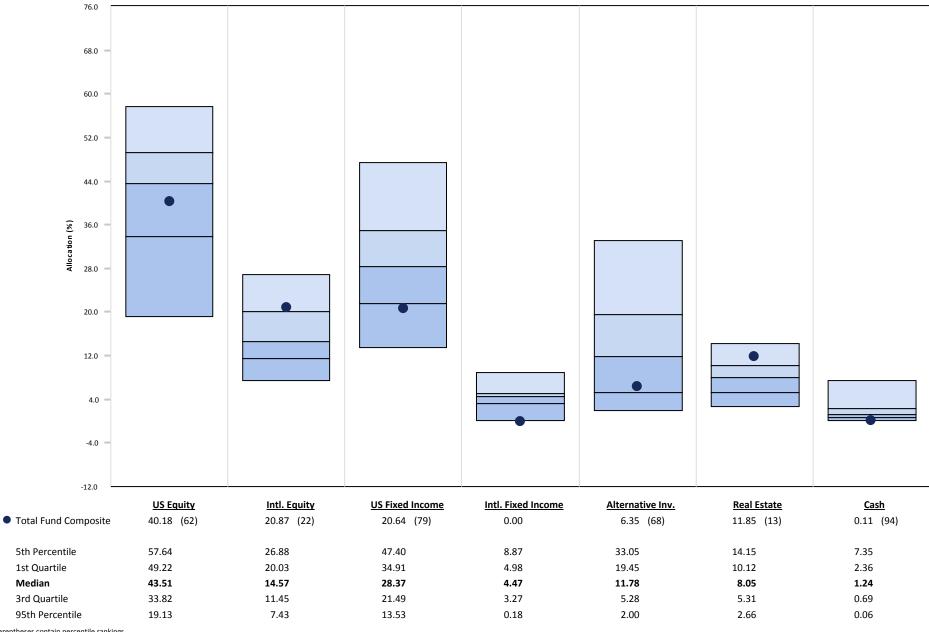


September 30, 2016	June 30, 2016
--------------------	---------------

	Market Value	<u>Allocation</u>	<u>Target</u>		Market Value	<u>Allocation</u>	<u>Target</u>
	<u>(\$)</u>	<u>(%)</u>	<u>(%)</u>		<u>(\$)</u>	<u>(%)</u>	<u>(%)</u>
US Equity	642,525,647	40.18	39.00	US Equity	636,040,652	38.85	39.00
International Equity	333,729,597	20.87	20.00	International Equity	347,470,257	21.23	20.00
Fixed Income	330,054,270	20.64	20.50	Fixed Income	368,229,746	22.49	20.50
Real Estate	189,585,522	11.85	15.00	Real Estate	185,740,455	11.35	15.00
MLPs/Energy	101,576,733	6.35	5.50	MLPs/Energy	98,156,472	6.00	5.50
Cash	1,754,355	0.11	0.00	Cash	1,388,981	0.08	0.00
Total Fund	1,599,226,126	100.00	100.00	Total Fund	1,637,026,562	100.00	100.00

All Public Plans-Total Fund

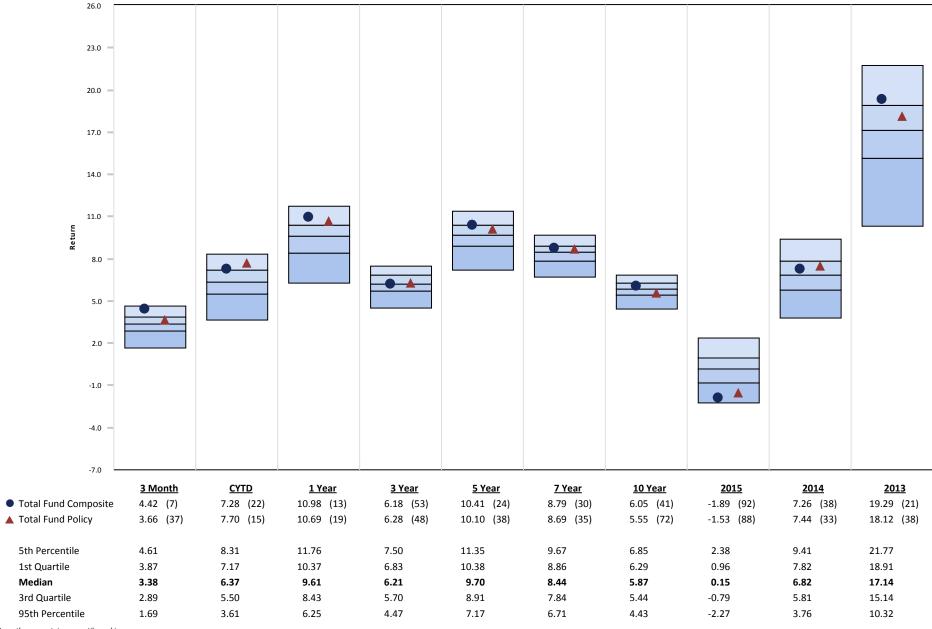
September 30, 2016



 $Parentheses\ contain\ percentile\ rankings.$ 

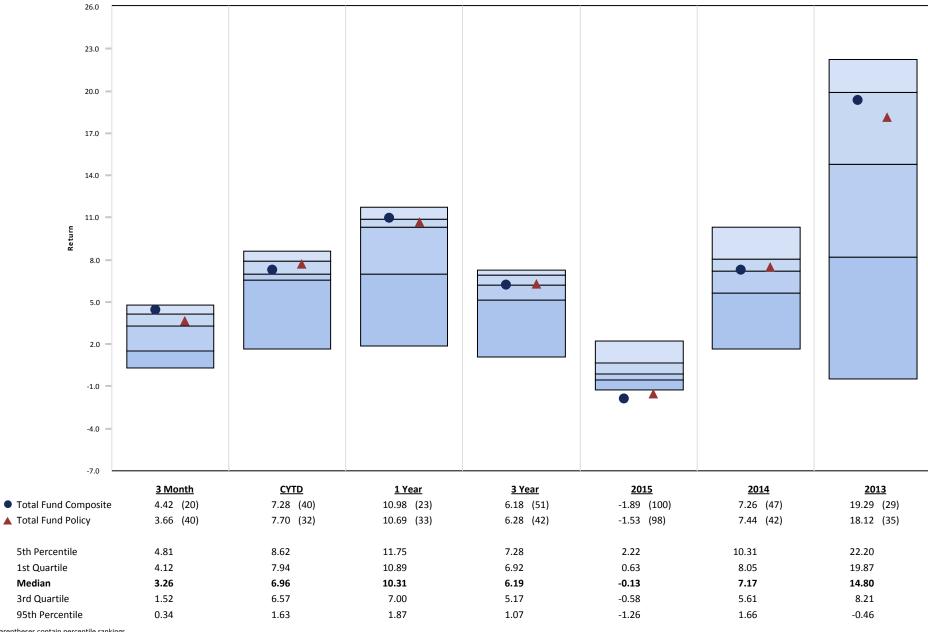
All Public Plans-Total Fund

September 30, 2016



 $Parentheses\ contain\ percentile\ rankings.$ 

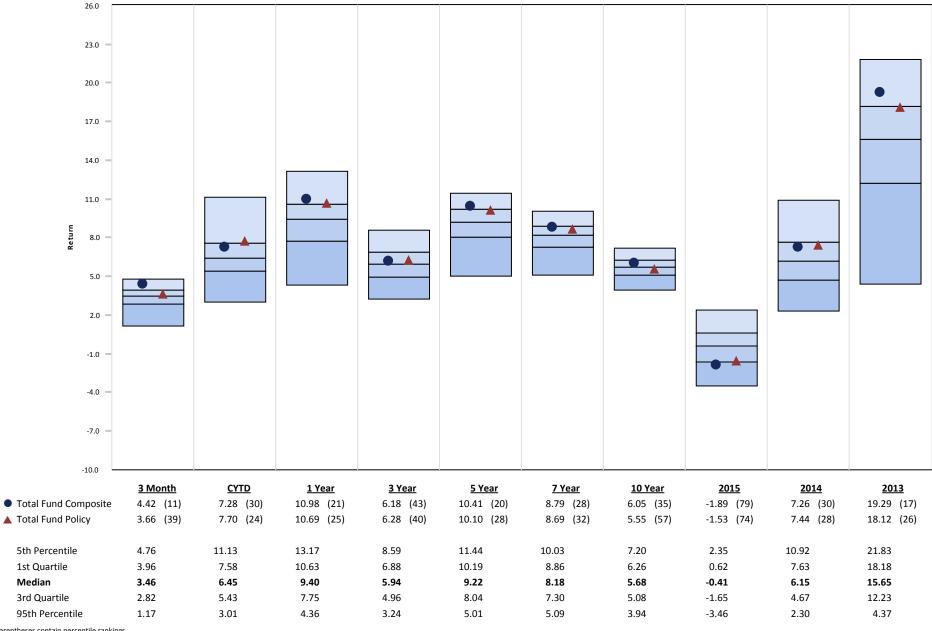
Public Plans \$500 M to \$2 B excluding Alternatives except Real Estate September 30, 2016



Parentheses contain percentile rankings.

All Master Trust - Total Fund

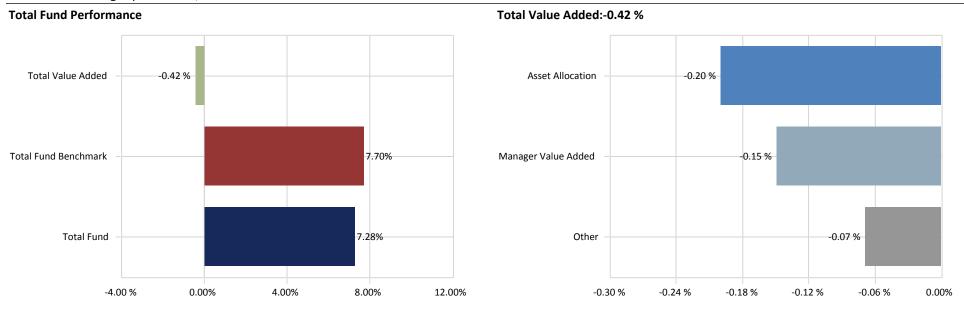
September 30, 2016

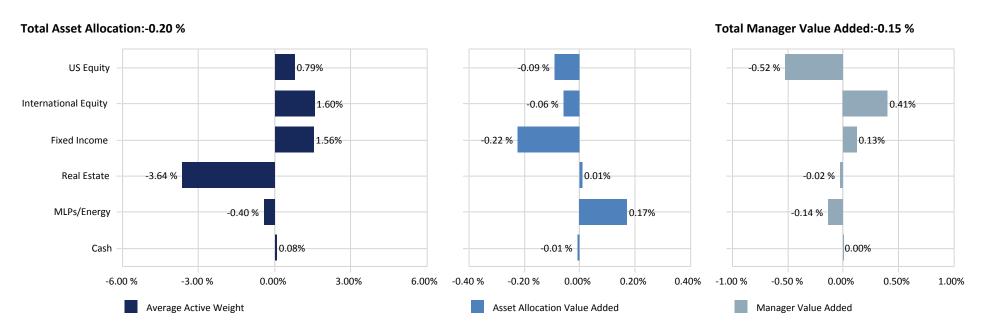


 $Parentheses\ contain\ percentile\ rankings.$ 

**Total Fund Attribution** 

Year To Date Ending September 30, 2016

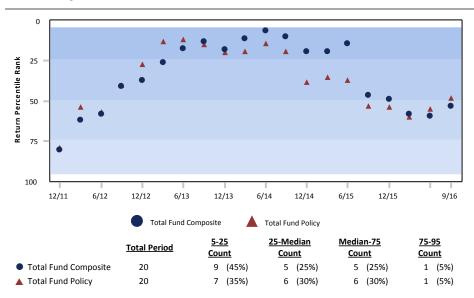




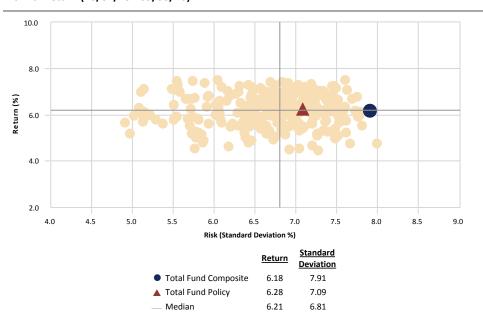
## **Total Fund Composite**

September 30, 2016

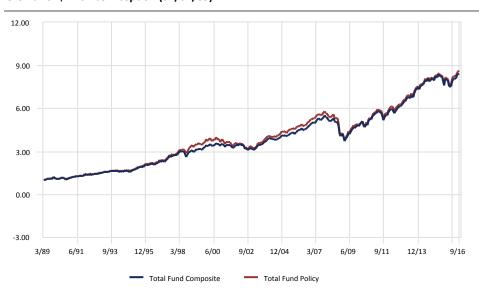
### 3 Year Rolling Return Rank



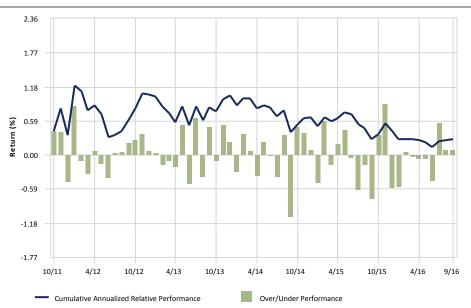
### Risk vs. Return (10/01/13 - 09/30/16)



## Growth of \$1 - Since Inception (04/01/89)



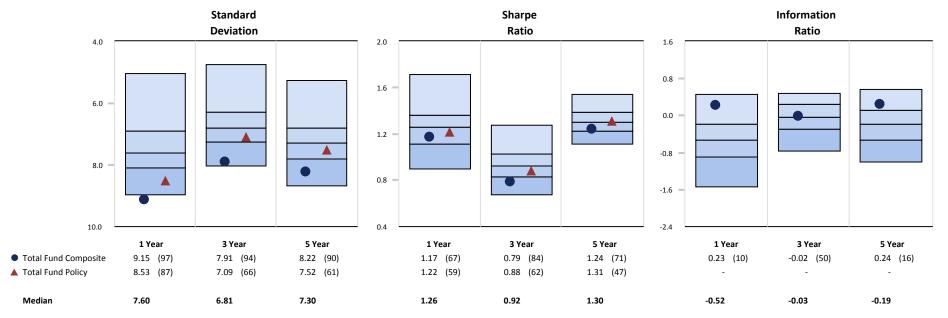
## **Relative Performance vs. Total Fund Policy**



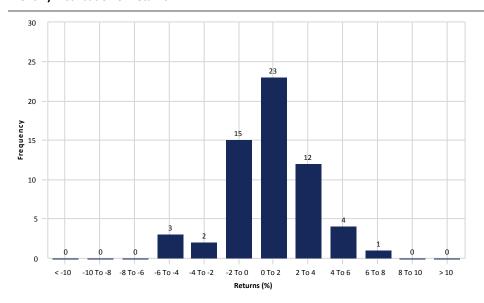
**Total Fund Composite** 

September 30, 2016

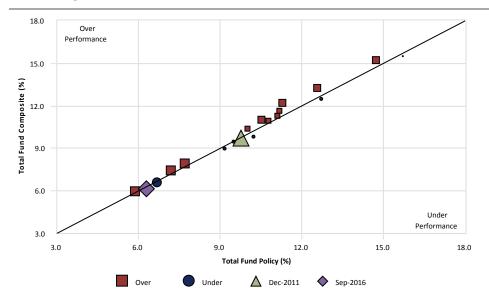
## Peer Group Analysis: All Public Plans-Total Fund



### **Monthly Distribution of Returns**



## 3 Year Rolling Under/Over Performance



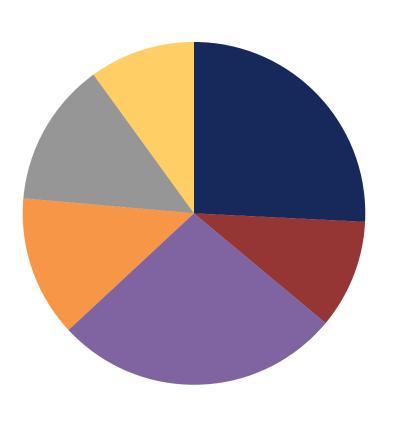
**US Equity** 

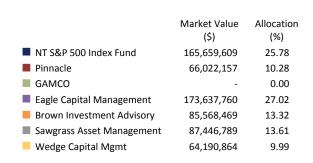
US Equity vs. Russell 3000 Index

September 30, 2016

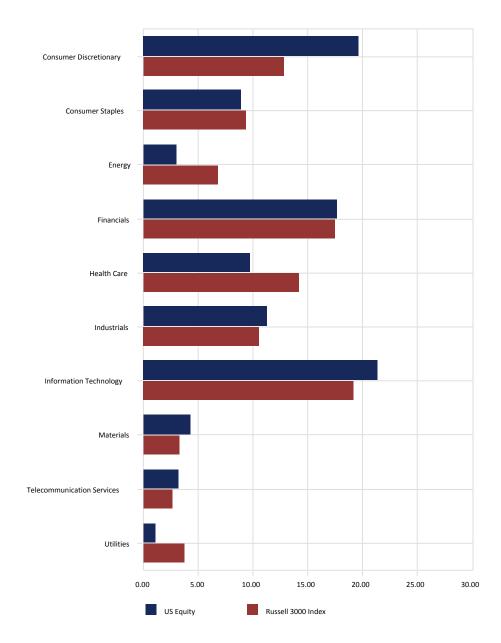
## **Manager Allocation**

## September 30, 2016: \$642,525,647





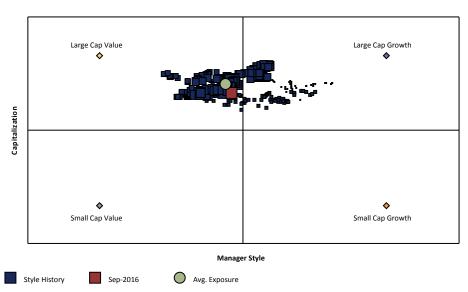
## **Sector Allocation - Holdings Based**



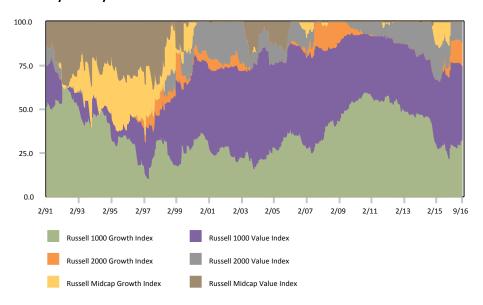
US Equity vs. Russell 3000 Index

September 30, 2016

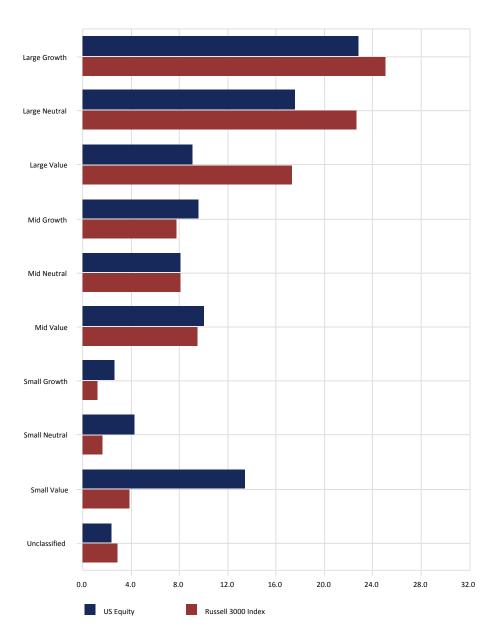
## **Style Analysis - Returns Based**



## **3 Year Style Analysis**



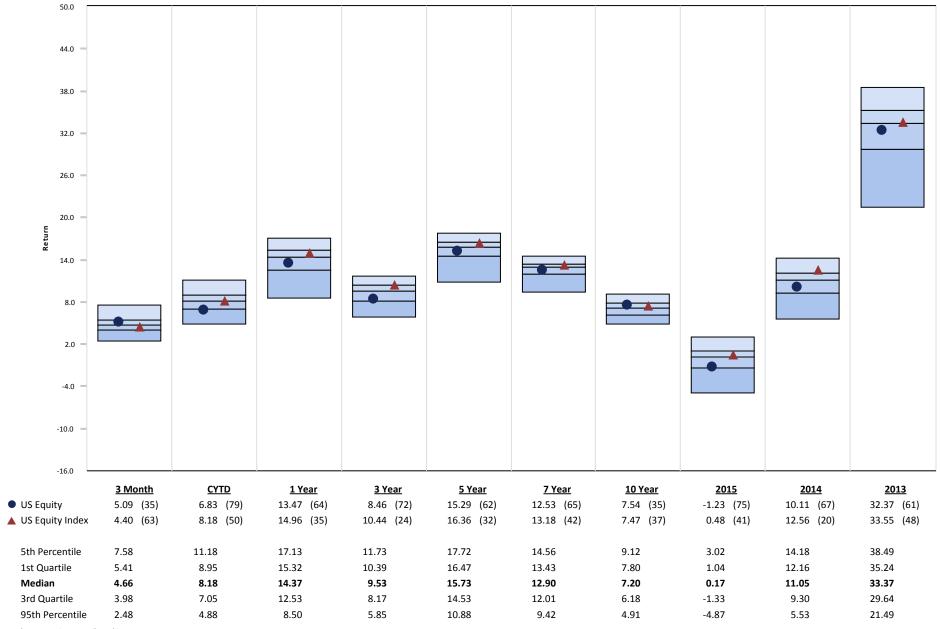
## **Style Allocation - Holdings Based**



Summit Strategies Group

All Master Trust-US Equity Segment

September 30, 2016

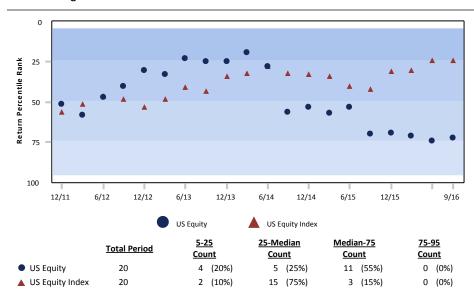


Parentheses contain percentile rankings.

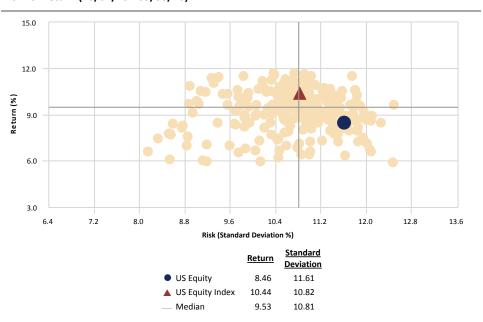
**US Equity** 

September 30, 2016

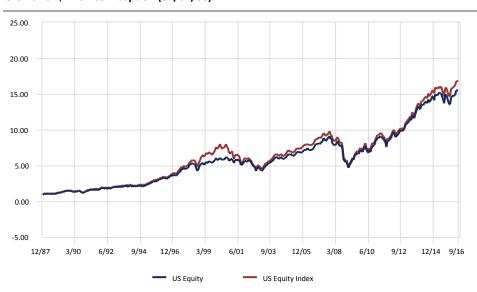
### 3 Year Rolling Return Rank



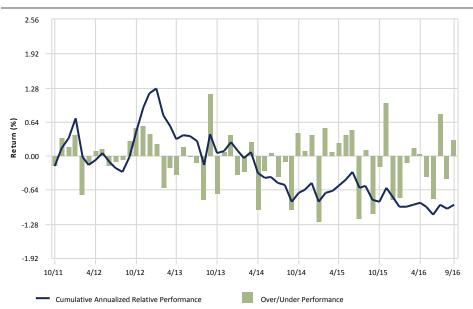
### Risk vs. Return (10/01/13 - 09/30/16)



## Growth of \$1 - Since Inception (01/01/88)



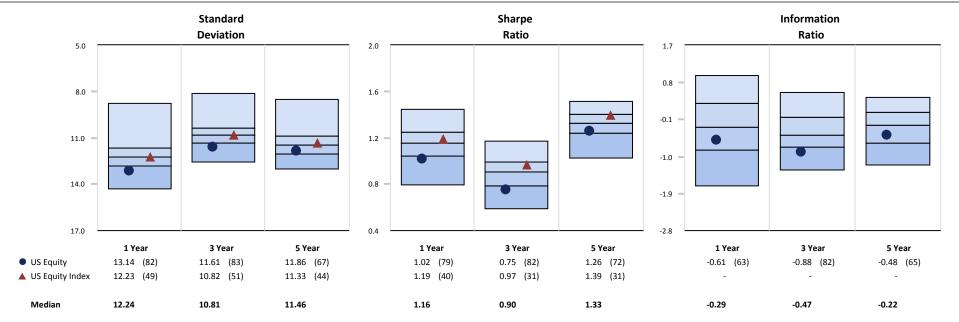
## **Relative Performance vs. US Equity Index**



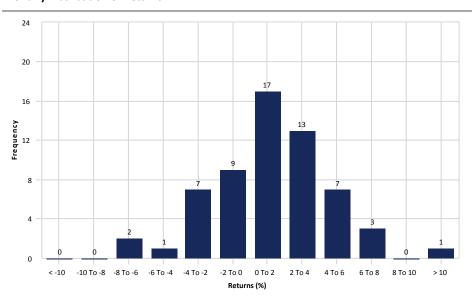
**US Equity** 

September 30, 2016

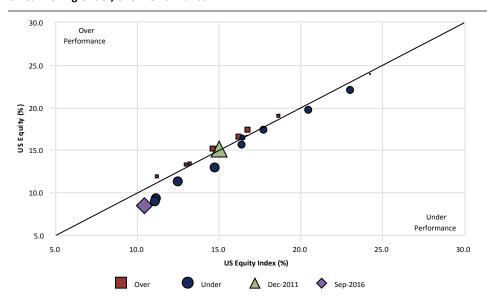
## Peer Group Analysis: All Master Trust-US Equity Segment



### **Monthly Distribution of Returns**



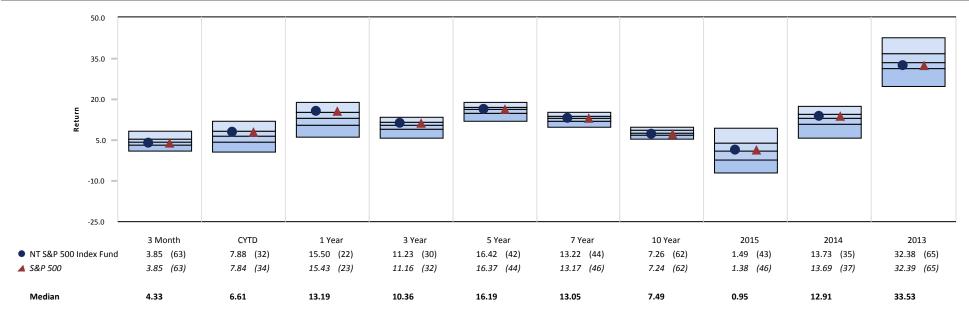
## 3 Year Rolling Under/Over Performance



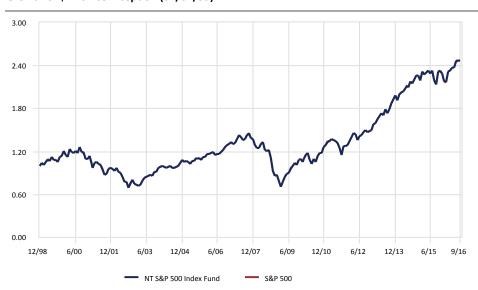
NT S&P 500 Index Fund

September 30, 2016

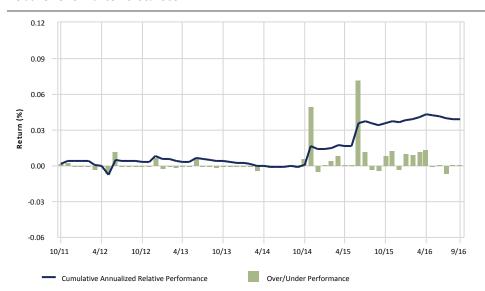
### Peer Group Analysis - IM U.S. Large Cap Equity (SA+CF)



### Growth of \$1 - Since Inception (01/01/99)



#### Relative Performance vs. S&P 500



gross of fees

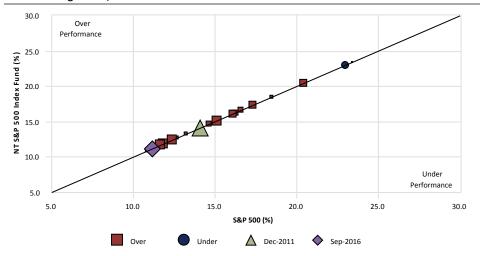
## NT S&P 500 Index Fund

September 30, 2016

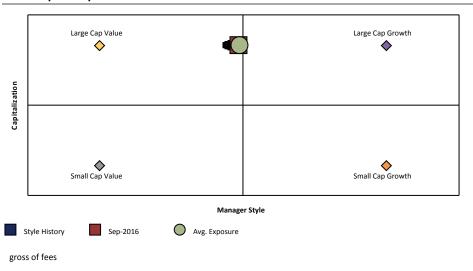
#### **3 Year Portfolio Statistics**

	Simple Alpha	Alpha	Beta	R-Squared	Tracking Error	Information Ratio	Sharpe Ratio	Consistency	Up Capture	Down Capture	Actual Correlation
NT S&P 500 Index Fund	0.07	0.06	1.00	1.00	0.05	1.24	1.05	55.56	100.18	99.72	1.00
S&P 500	0.00	0.00	1.00	1.00	0.00	-	1.04	0.00	100.00	100.00	1.00
90 Day US Treasury Bill	-11.08	0.09	0.00	0.00	10.68	-1.04	-	36.11	0.26	-0.35	-0.07

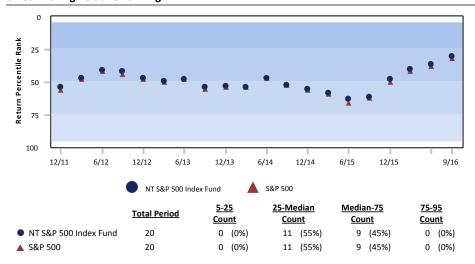
## 3 Year Rolling Under/Over Performance



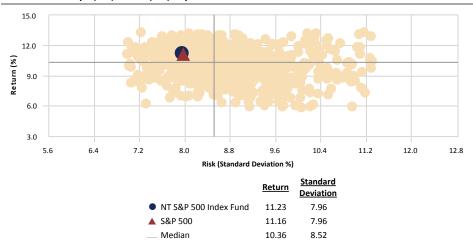
## 3 Year Style Analysis



### 3 Year Rolling Relative Ranking



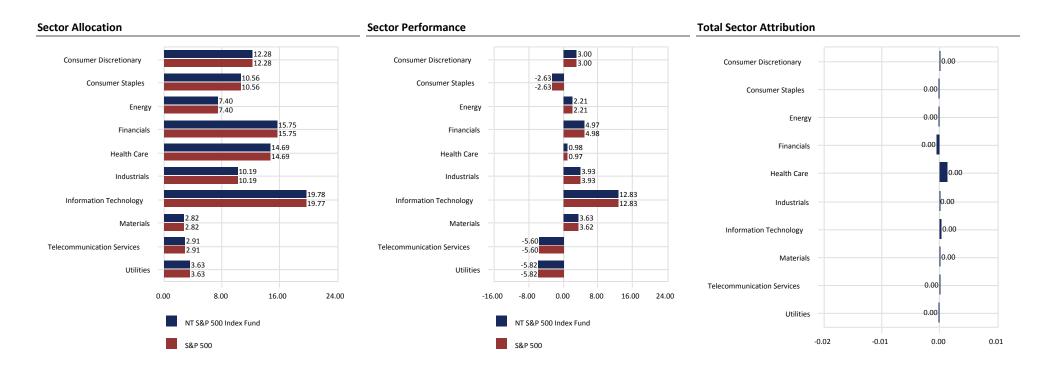
## Risk vs. Return (10/01/13 - 09/30/16)



NT S&P 500 Index Fund vs. S&P 500

September 30, 2016

Ten Best Performers					Ten Worst Performers				
	Portfolio Weight (%)	Benchmark Weight (%)	Active Weight (%)	Quarterly Return (%)		Portfolio Weight (%)	Benchmark Weight (%)	Active Weight (%)	Quarterly Return (%)
Seagate Technology Plc	0.06	0.06	0.00	61.02	Diamond Offshore Drilling Inc.	0.01	0.01	0.00	-27.62
NetApp Inc	0.05	0.05	0.00	46.76	Bristol-Myers Squibb Co	0.48	0.48	0.00	-26.69
Chesapeake Energy Corp	0.02	0.02	0.00	46.50	Tractor Supply Co	0.05	0.05	0.00	-25.93
NVIDIA Corp	0.20	0.20	0.00	46.02	Dollar General Corp	0.10	0.10	0.00	-25.28
Williams Cos Inc. (The)	0.11	0.11	0.00	43.01	NRG Energy Inc	0.02	0.02	0.00	-25.06
eBay Inc.	0.18	0.18	0.00	40.54	Stericycle Inc	0.04	0.04	0.00	-23.03
Nordstrom Inc.	0.03	0.03	0.00	37.33	Kroger Co. (The)	0.15	0.15	0.00	-19.03
Autodesk Inc.	0.08	0.08	0.00	33.60	First Solar Inc	0.02	0.02	0.00	-18.54
State Street Corp	0.14	0.14	0.00	29.85	Campbell Soup Co	0.06	0.06	0.00	-17.40
American Airlines Group Inc	0.10	0.10	0.00	29.70	Paragon Offshore Plc	0.00	0.00	0.00	-17.33
% of Portfolio	0.97	0.97			% of Portfolio	0.93	0.93		

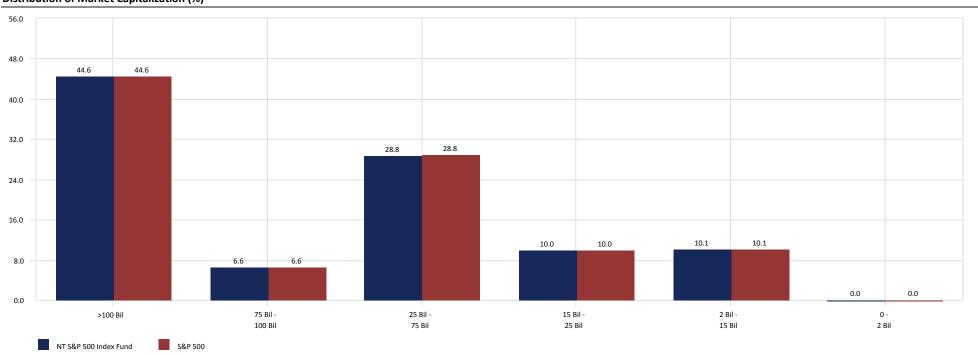


NT S&P 500 Index Fund vs. S&P 500

September 30, 2016

Portfolio Characteristics			Top Ten Equity Holdings				
	Portfolio	Benchmark		Portfolio	Benchmark	Active	Quarterly
Wtd. Avg. Mkt. Cap (\$000)	144,115,865	144,117,870		Weight	Weight	Weight	Return
Median Mkt. Cap (\$000)	18,949,567	18,963,906		(%)	(%)	(%)	(%)
Price/Earnings ratio	19.72	19.72	Apple Inc	3.25	3.25	0.00	18.89
Price/Book ratio	3.16	3.16	Microsoft Corp	2.39	2.39	0.00	13.27
5 Yr. EPS Growth Rate (%)	7.76	7.76	Exxon Mobil Corp	1.93	1.93	0.00	-6.08
Current Yield (%)	2.14	2.14	Amazon.com Inc	1.76	1.76	0.00	17.00
` '			Johnson & Johnson	1.73	1.72	0.01	-1.96
Beta (5 Years, Monthly)	1.00	1.00	Facebook Inc	1.59	1.59	0.00	12.24
Number of Stocks	511	505	Berkshire Hathaway Inc	1.46	1.46	0.00	-0.22
			General Electric Co	1.42		0.00	-5.18
					1.42		
			AT&T Inc	1.33	1.33	0.00	-4.97
			JPMorgan Chase & Co	1.29	1.28	0.01	8.00
			% of Portfolio	18.15	18.13		

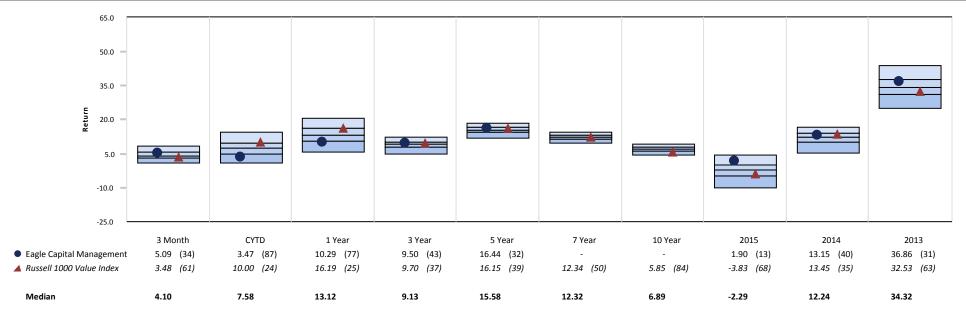
## Distribution of Market Capitalization (%)



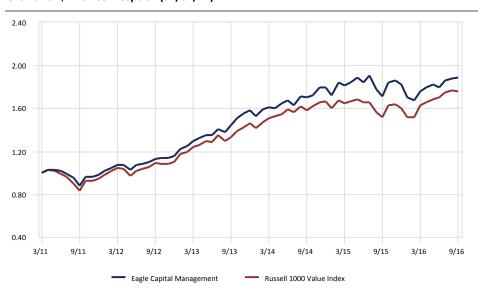
Eagle Capital Management

September 30, 2016

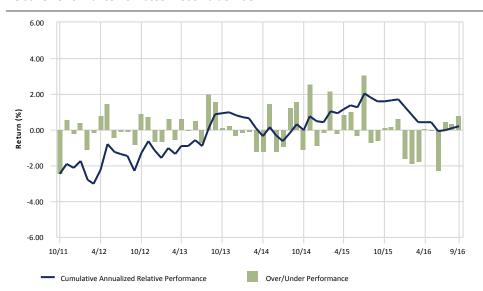
### Peer Group Analysis - IM U.S. Large Cap Value Equity (SA+CF)



### Growth of \$1 - Since Inception (04/01/11)



#### Relative Performance vs. Russell 1000 Value Index



gross of fees

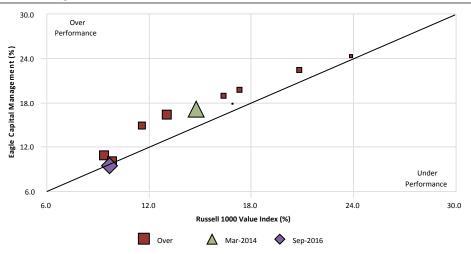
## Eagle Capital Management

September 30, 2016

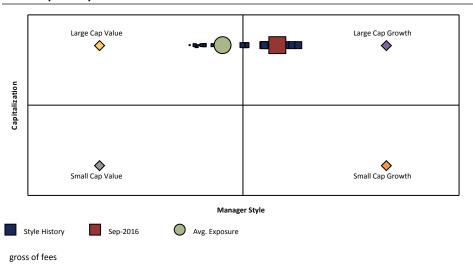
#### 3 Year Portfolio Statistics

	Simple Alpha	Alpha	Beta	R-Squared	Tracking Error	Information Ratio	Sharpe Ratio	Consistency	Up Capture	Down Capture	Actual Correlation
Eagle Capital Management	-0.21	-0.51	1.05	0.87	4.25	-0.01	0.82	47.22	105.70	111.52	0.93
Russell 1000 Value Index	0.00	0.00	1.00	1.00	0.00	-	0.92	0.00	100.00	100.00	1.00
90 Day US Treasury Bill	-9.62	0.09	0.00	0.00	10.58	-0.92	-	33.33	0.20	-0.44	-0.01

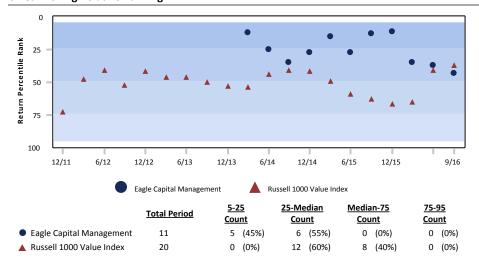
## 3 Year Rolling Under/Over Performance



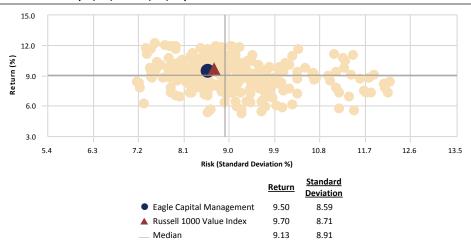
#### 3 Year Style Analysis



### **3 Year Rolling Relative Ranking**

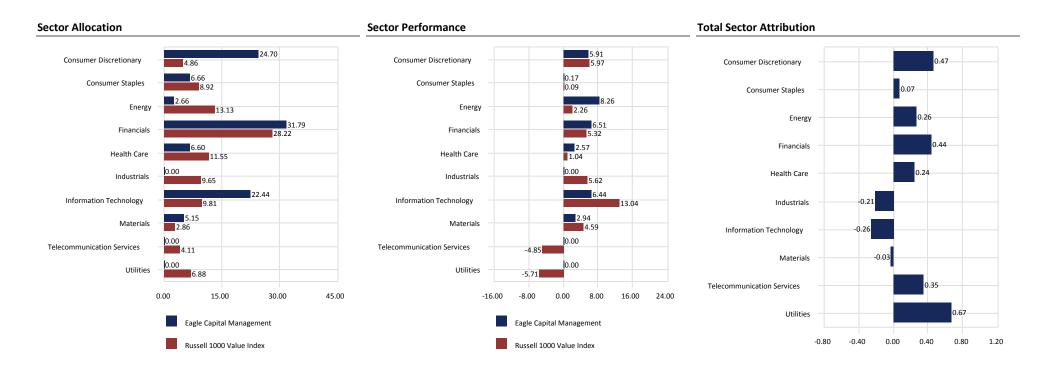


## Risk vs. Return (10/01/13 - 09/30/16)



Eagle Capital Management vs. Russell 1000 Value Index September 30, 2016

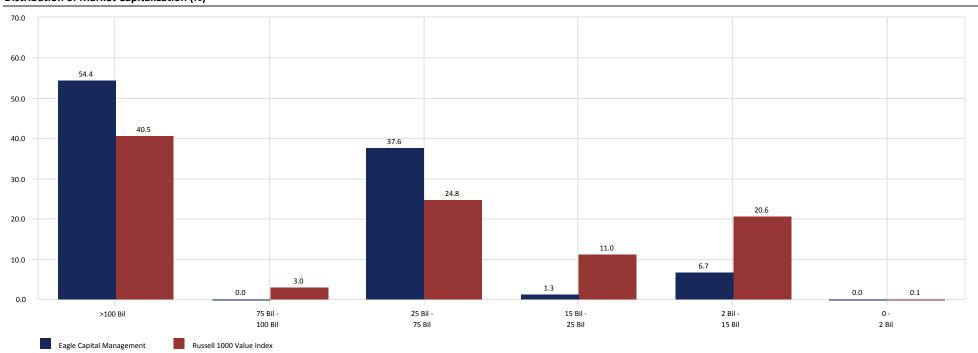
Ten Best Performers					Ten Worst Performers				
	Portfolio Weight (%)	Benchmark Weight (%)	Active Weight (%)	Quarterly Return (%)		Portfolio Weight (%)	Benchmark Weight (%)	Active Weight (%)	Quarterly Return (%)
Morgan Stanley	1.58	0.44	1.14	24.25	Liberty Global Plc LiLAC Group	0.45	0.00	0.45	-13.67
Anadarko Petroleum Corp	1.24	0.31	0.93	19.09	Twenty-First Century Fox Inc	2.70	0.06	2.64	-9.79
Bank of America Corp	2.50	1.54	0.96	18.48	Twenty-First Century Fox Inc	2.14	0.03	2.11	-8.55
Amazon.com Inc	5.30	0.00	5.30	17.00	Oracle Corp	7.15	1.01	6.14	-3.68
Liberty Global Plc Global Group	7.06	0.00	7.06	15.32	Mondelez International Inc	3.13	0.63	2.50	-3.12
Alphabet Inc	1.35	0.00	1.35	14.29	Berkley (W R) Corp	1.58	0.05	1.53	-2.53
Microsoft Corp	7.03	0.00	7.03	13.27	Unitedhealth Group Inc	3.73	0.00	3.73	-0.39
Alphabet Inc	5.70	0.00	5.70	12.31	Berkshire Hathaway Inc	7.53	2.62	4.91	-0.22
Citigroup Inc	5.81	1.33	4.48	11.82	Noble Energy Inc	1.28	0.15	1.13	-0.06
Goldman Sachs Group Inc (The)	2.16	0.60	1.56	8.96	Marriott International Inc.	3.13	0.05	3.08	1.74
% of Portfolio	39.73	4.22			% of Portfolio	32.82	4.60		



Eagle Capital Management vs. Russell 1000 Value Index September 30, 2016

Portfolio Characteristics			Top Ten Equity Holdings				
	Portfolio	Benchmark		Portfolio	Benchmark	Active	Quarterly
Wtd. Avg. Mkt. Cap (\$000)	178,479,187	112,504,866		Weight	Weight	Weight	Return
Median Mkt. Cap (\$000)	62,002,035	8,043,688		(%)	(%)	(%)	(%)
Price/Earnings ratio	18.92	17.03	Berkshire Hathaway Inc	7.53	2.62	4.91	-0.22
Price/Book ratio	2.95	2.11	Oracle Corp	7.15	1.01	6.14	-3.68
5 Yr. EPS Growth Rate (%)	7.99	3.84	Liberty Global Plc Global Group	7.06	0.00	7.06	15.32
• •			Microsoft Corp	7.03	0.00	7.03	13.27
Current Yield (%)	1.17	2.61	Citigroup Inc	5.81	1.33	4.48	11.82
Beta (5 Years, Monthly)	0.92	1.00	Alphabet Inc	5.70	0.00	5.70	12.31
Number of Stocks	28	687	Aon PLC	5.51	0.00	5.51	3.29
			Ecolab Inc.	5.45	0.00	5.45	2.94
			Amazon.com Inc	5.30	0.00	5.30	17.00
			JPMorgan Chase & Co	5.10	2.33	2.77	8.00
			% of Portfolio	61.64	7.29		

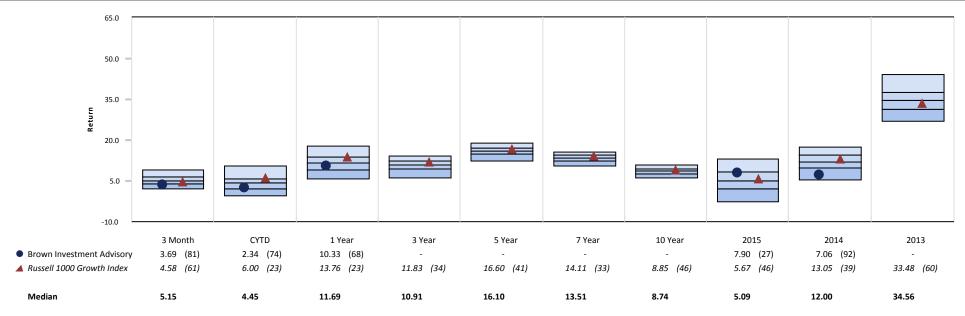
## Distribution of Market Capitalization (%)



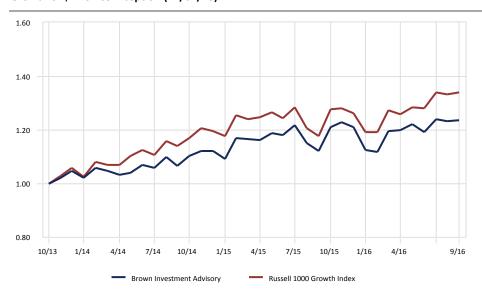
**Brown Investment Advisory** 

September 30, 2016

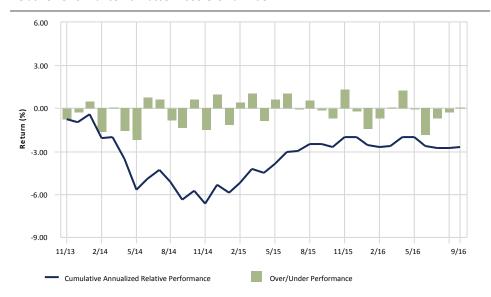
### Peer Group Analysis - IM U.S. Large Cap Growth Equity (SA+CF)



### Growth of \$1 - Since Inception (11/01/13)



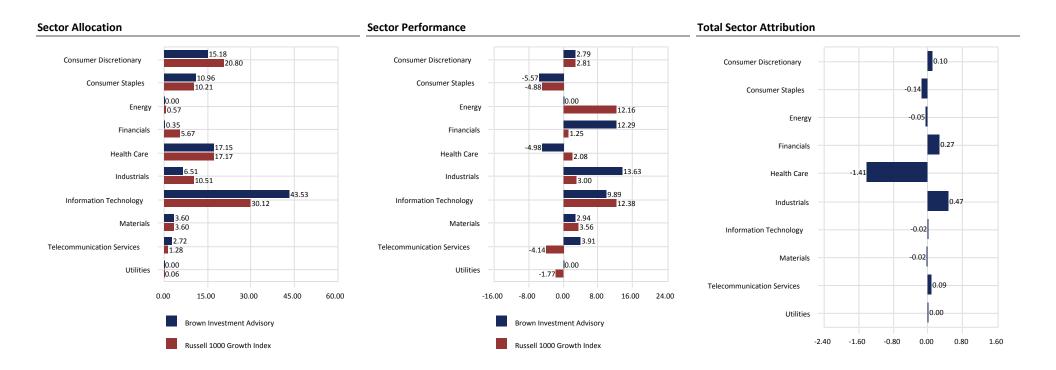
#### Relative Performance vs. Russell 1000 Growth Index



gross of fees

Brown Investment Advisory vs. Russell 1000 Growth Index September 30, 2016

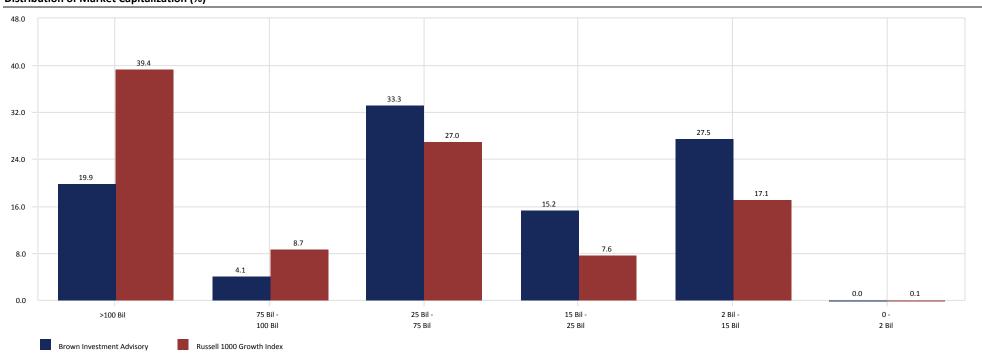
Ten Best Performers					Ten Worst Performers				
	Portfolio Weight (%)	Benchmark Weight (%)	Active Weight (%)	Quarterly Return (%)		Portfolio Weight (%)	Benchmark Weight (%)	Active Weight (%)	Quarterly Return (%)
NetSuite Inc	2.92	0.04	2.88	52.05	Cognizant Technology Solutions Corp	2.15	0.27	1.88	-16.65
NXP Semiconductors NV	3.54	0.00	3.54	30.22	DaVita Inc	2.34	0.04	2.30	-14.55
FleetCor Technologies Inc	2.88	0.15	2.73	21.38	Mead Johnson Nutrition Co	2.95	0.05	2.90	-12.47
Amazon.com Inc	5.19	3.10	2.09	17.00	Genpact Ltd	2.23	0.03	2.20	-10.77
Wabtec Corp	2.46	0.07	2.39	16.42	salesforce.com Inc	3.29	0.43	2.86	-10.17
Alphabet Inc	1.71	2.25	-0.54	14.29	Under Armour Inc	1.41	0.06	1.35	-6.98
Amphenol Corp	3.62	0.18	3.44	13.50	Akamai Technologies Inc	2.23	0.08	2.15	-5.26
Adobe Systems Inc	3.17	0.50	2.67	13.31	Starbucks Corp	4.11	0.73	3.38	-4.88
Alphabet Inc	3.10	2.19	0.91	12.31	Under Armour Inc	1.03	0.07	0.96	-3.61
Facebook Inc	4.92	2.74	2.18	12.24	Costco Wholesale Corp	3.71	0.63	3.08	-2.63
% of Portfolio	33.51	11.22			% of Portfolio	25.45	2.39		



Brown Investment Advisory vs. Russell 1000 Growth Index September 30, 2016

Portfolio Characteristics			Top Ten Equity Holdings			
	Portfolio	Benchmark		Portfolio	Benchmark	Active
Wtd. Avg. Mkt. Cap (\$000)	90,534,091	147,012,431		Weight	Weight	Weight
Median Mkt. Cap (\$000)	20,042,427	9,004,538		(%)	(%)	(%)
Price/Earnings ratio	35.46	23.31	Amazon.com Inc	5.19	3.10	2.09
Price/Book ratio	5.19	5.49	Visa Inc	4.95	1.50	3.45
5 Yr. EPS Growth Rate (%)	12.93	11.74	Facebook Inc	4.92	2.74	2.18
( )			Starbucks Corp	4.11	0.73	3.38
Current Yield (%)	0.39	1.54	Danaher Corp	3.93	0.12	3.81
Beta	-	1.00	Intuitive Surgical Inc	3.80	0.26	3.54
Number of Stocks	33	599	<b>o</b>			
			Costco Wholesale Corp	3.71	0.63	3.08
			Estee Lauder Companies Inc. (The)	3.69	0.18	3.51
			Amphenol Corp	3.62	0.18	3.44
			Ecolab Inc.	3.56	0.30	3.26

### Distribution of Market Capitalization (%)



% of Portfolio

41.48

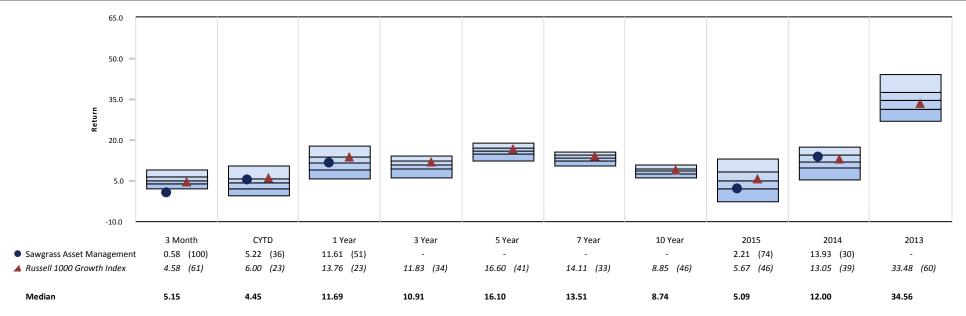
9.74

Quarterly Return (%) 17.00 11.69 12.24 -4.88 1.62 9.59 -2.63 -2.38 13.50 2.94

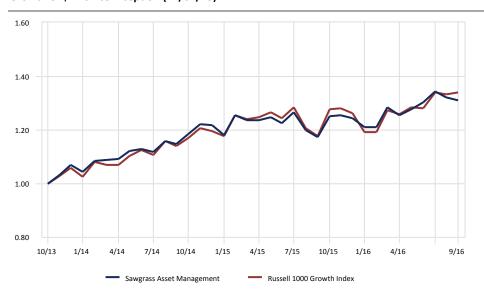
Sawgrass Asset Management

September 30, 2016

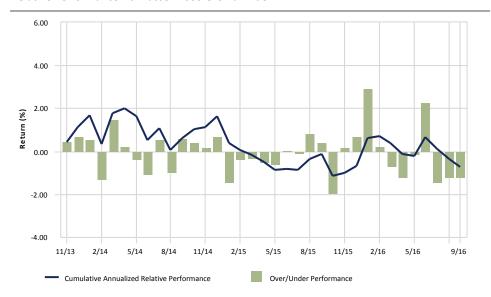
## Peer Group Analysis - IM U.S. Large Cap Growth Equity (SA+CF)



### Growth of \$1 - Since Inception (11/01/13)



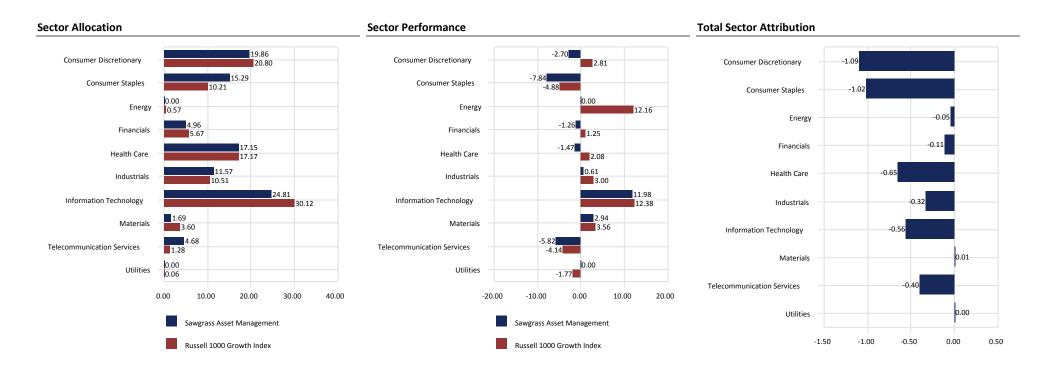
#### Relative Performance vs. Russell 1000 Growth Index



gross of fees

Sawgrass Asset Management vs. Russell 1000 Growth Index September 30, 2016

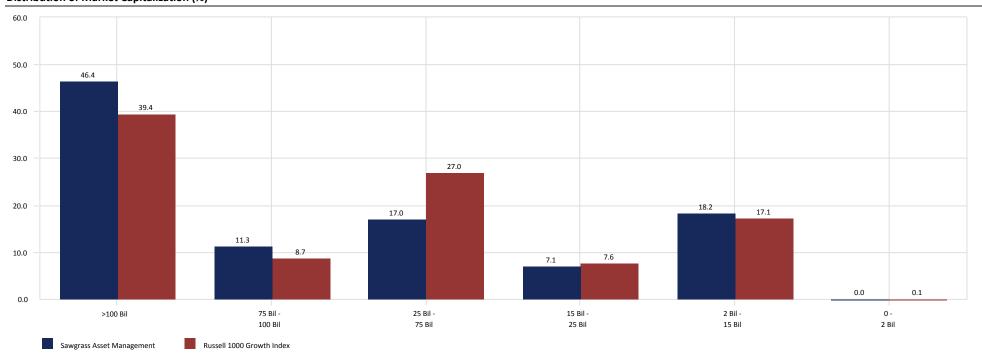
Ten Best Performers					Ten Worst Performers				
	Portfolio Weight (%)	Benchmark Weight (%)	Active Weight (%)	Quarterly Return (%)		Portfolio Weight (%)	Benchmark Weight (%)	Active Weight (%)	Quarterly Return (%)
Varian Medical Systems Inc	1.28	0.09	1.19	21.04	Kroger Co. (The)	0.98	0.27	0.71	-19.03
Apple Inc	5.11	5.40	-0.29	18.89	Dollar Tree Inc	2.65	0.17	2.48	-16.25
Intel Corp	2.27	0.15	2.12	15.96	McKesson Corp	1.91	0.36	1.55	-10.52
Mastercard Inc	2.70	0.93	1.77	15.82	General Mills Inc.	1.39	0.36	1.03	-9.83
FedEx Corp.	1.17	0.41	0.76	15.37	Henry Schein Inc	1.01	0.13	0.88	-7.82
Alphabet Inc	4.99	2.25	2.74	14.29	Express Scripts Holding Co	0.72	0.37	0.35	-6.95
Microsoft Corp	5.11	4.15	0.96	13.27	CVS Health Corp	2.98	0.86	2.12	-6.64
Citrix Systems Inc.	2.38	0.13	2.25	6.41	Verizon Communications Inc	3.92	1.01	2.91	-5.98
Celgene Corp	1.85	0.76	1.09	5.98	McCormick & Co Inc	1.50	0.11	1.39	-5.95
Laboratory Corporation of America Holdings	3.10	0.06	3.04	5.54	Coca-Cola Co (The)	2.96	1.17	1.79	-5.87
% of Portfolio	29.96	14.33			% of Portfolio	20.02	4.81		



Sawgrass Asset Management vs. Russell 1000 Growth Index September 30, 2016

Portfolio Characteristics			Top Ten Equity Holdings				
	Portfolio	Benchmark		Portfolio	Benchmark	Active	Quarterly
Wtd. Avg. Mkt. Cap (\$000)	156,937,537	147,012,431		Weight	Weight	Weight	Return
Median Mkt. Cap (\$000)	51,617,593	9,004,538		(%)	(%)	(%)	(%)
Price/Earnings ratio	21.64	23.31	Apple Inc	5.11	5.40	-0.29	18.89
Price/Book ratio	4.98	5.49	Microsoft Corp	5.11	4.15	0.96	13.27
5 Yr. EPS Growth Rate (%)	9.91	11.74	Alphabet Inc	4.99	2.25	2.74	14.29
Current Yield (%)		1.54	Verizon Communications Inc	3.92	1.01	2.91	-5.98
, ,	1.58		Laboratory Corporation of America Holdings	3.10	0.06	3.04	5.54
Beta	-	1.00	Comcast Corp	3.09	1.41	1.68	2.19
Number of Stocks	46	599	CVS Health Corp	2.98	0.86	2.12	-6.64
			•				
			McDonald's Corp	2.97	0.96	2.01	-3.40
			Coca-Cola Co (The)	2.96	1.17	1.79	-5.87
			AutoZone Inc	2.77	0.21	2.56	-3.21
			% of Portfolio	37.00	17.48		

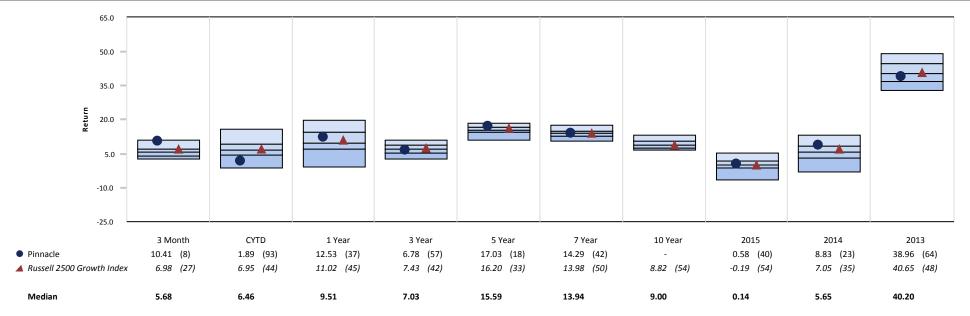
## Distribution of Market Capitalization (%)



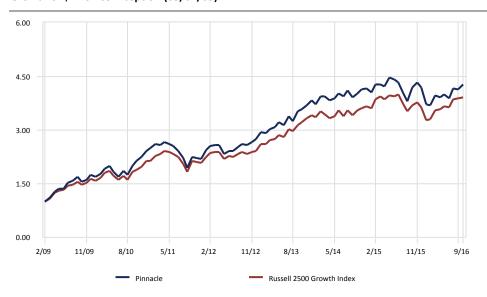
Pinnacle

September 30, 2016

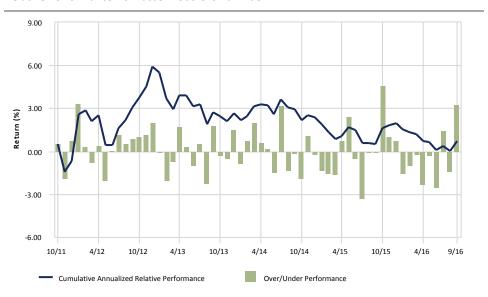
## Peer Group Analysis - IM U.S. SMID Cap Growth Equity (SA+CF)



### Growth of \$1 - Since Inception (03/01/09)



#### Relative Performance vs. Russell 2500 Growth Index



gross of fees

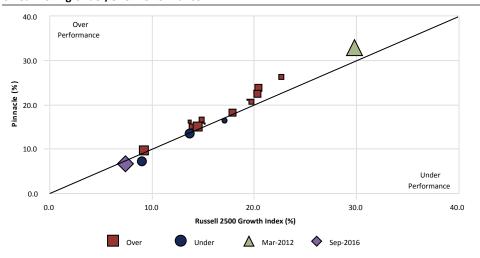
## Pinnacle

September 30, 2016

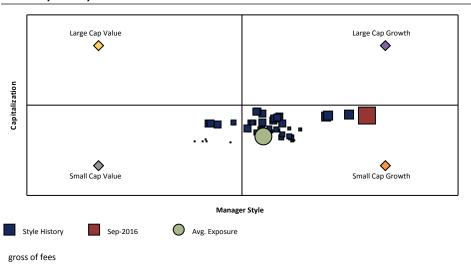
#### **3 Year Portfolio Statistics**

	Simple Alpha	Alpha	Beta	R-Squared	Tracking Error	Information Ratio	Sharpe Ratio	Consistency	Up Capture	Down Capture	Actual Correlation
Pinnacle	-0.65	-0.42	1.00	0.85	5.94	-0.07	0.51	38.89	98.08	99.89	0.92
Russell 2500 Growth Index	0.00	0.00	1.00	1.00	0.00	-	0.58	0.00	100.00	100.00	1.00
90 Day US Treasury Bill	-7.34	0.09	0.00	0.00	13.92	-0.58	-	36.11	0.17	-0.28	-0.02

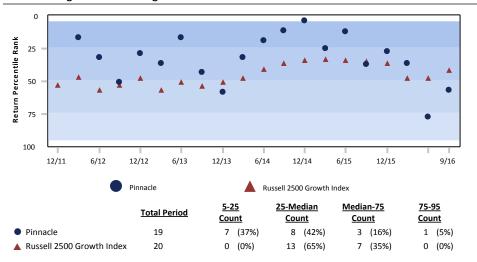
## 3 Year Rolling Under/Over Performance



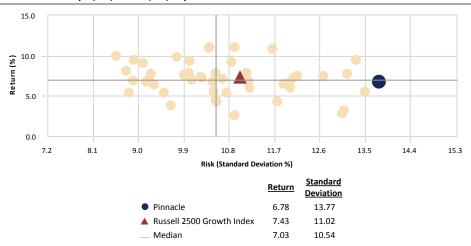
### 3 Year Style Analysis



### 3 Year Rolling Relative Ranking



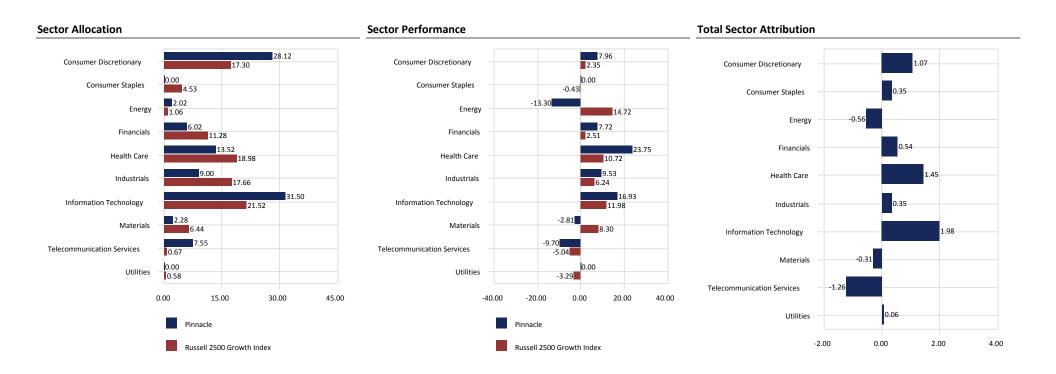
## Risk vs. Return (10/01/13 - 09/30/16)



Pinnacle vs. Russell 2500 Growth Index

September 30, 2016

Ten Best Performers					Ten Worst Performers				
	Portfolio Weight (%)	Benchmark Weight (%)	Active Weight (%)	Quarterly Return (%)		Portfolio Weight (%)	Benchmark Weight (%)	Active Weight (%)	Quarterly Return (%)
Harmonic Inc	1.11	0.00	1.11	108.07	Myriad Genetics Inc	0.71	0.07	0.64	-32.74
PTC Therapeutics Inc	0.20	0.00	0.20	99.57	Cameco Corp	0.77	0.00	0.77	-21.03
Array BioPharma Inc	0.86	0.00	0.86	89.61	Gannett Co Inc	0.59	0.00	0.59	-14.57
Lumentum Holdings Inc	2.26	0.11	2.15	72.60	AMC Networks Inc	1.48	0.17	1.31	-14.17
Prothena Corp Plc	0.95	0.11	0.84	71.54	Rowan Companies plc	0.47	0.00	0.47	-14.16
Ionis Pharmaceuticals Inc	1.87	0.24	1.63	57.32	CyrusOne Inc	0.94	0.16	0.78	-13.86
GoPro Inc	0.97	0.00	0.97	54.30	ImmunoGen Inc	0.18	0.01	0.17	-12.99
Progenics Pharmaceuticals Inc	0.68	0.02	0.66	50.00	Cincinnati Bell Inc	1.85	0.00	1.85	-10.72
Ambarella Inc	1.35	0.05	1.30	44.87	FireEye Inc	0.99	0.03	0.96	-10.56
Sotheby's	1.12	0.06	1.06	38.76	Level 3 Communications Inc	2.45	0.00	2.45	-9.92
% of Portfolio	11.37	0.59			% of Portfolio	10.43	0.44		

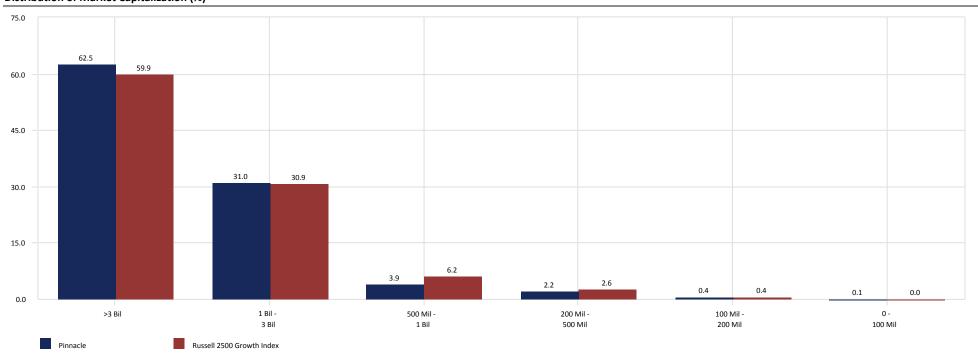


Pinnacle vs. Russell 2500 Growth Index

September 30, 2016

Portfolio Characteristics			Top Ten Equity Holdings				
	Portfolio	Benchmark		Portfolio	Benchmark	Active	Quarterly
Wtd. Avg. Mkt. Cap (\$000)	8,129,146	4,175,150		Weight	Weight	Weight	Return
Median Mkt. Cap (\$000)	2,509,959	1,201,524		(%)	(%)	(%)	(%)
Price/Earnings ratio	16.68	24.69	Lam Research Corp	4.65	0.00	4.65	13.03
Price/Book ratio	2.70	4.27	Qorvo Inc	4.01	0.00	4.01	0.87
5 Yr. EPS Growth Rate (%)	6.66	12.80	Royal Caribbean Cruises Ltd	3.76	0.00	3.76	12.34
Current Yield (%)	1.05	0.96	Regeneron Pharmaceuticals Inc	3.45	0.00	3.45	15.12
· ,	1.06	1.00	ARRIS International plc	3.09	0.07	3.02	35.16
Beta (5 Years, Monthly)			Trimble Inc	2.77	0.31	2.46	17.24
Number of Stocks	76	1,442	Las Vegas Sands Corp	2.63	0.00	2.63	34.00
			Discovery Communications Inc	2.60	0.00	2.60	10.31
			Level 3 Communications Inc	2.45	0.00	2.45	-9.92
			Cummins Inc.	2.40	0.00	2.40	14.90
			% of Portfolio	31.81	0.38		

## Distribution of Market Capitalization (%)

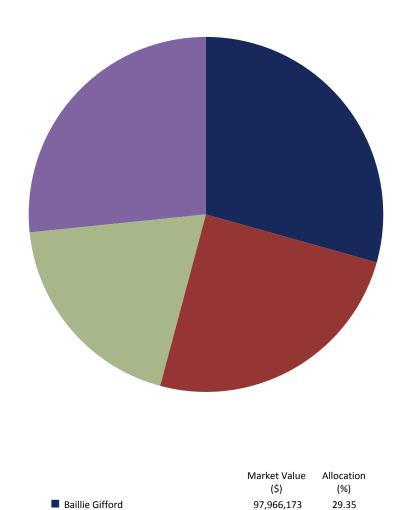


**International Equity** 

International Equity vs. MSCI AC World ex USA (Net) September 30, 2016

**Manager Allocation** 





82,791,648

64,131,151

88,840,625

24.81

19.22

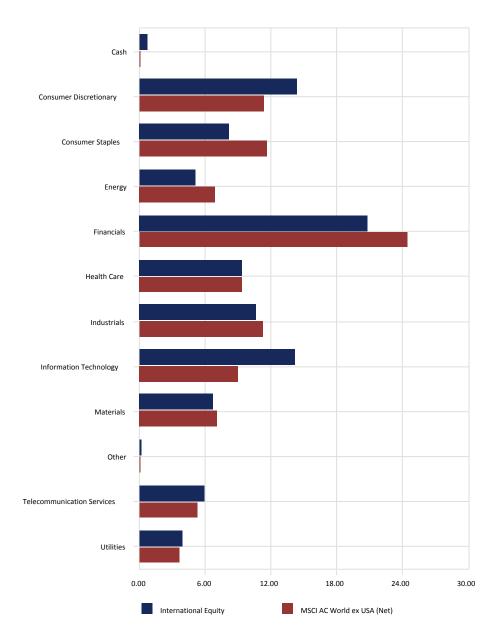
26.62

■ NT EAFE Index Fund

Acadian Emerging Mkts Equity II Fund

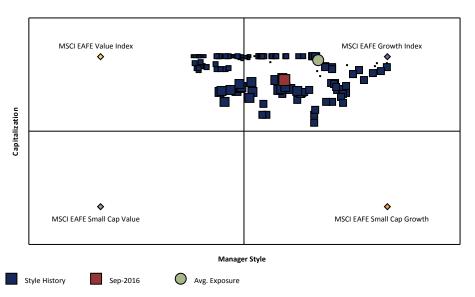
Silchester

## **Sector Allocation - Holdings Based**

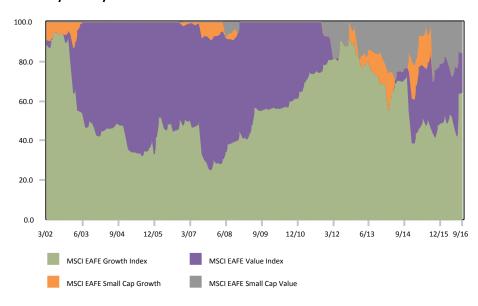


International Equity vs. MSCI AC World ex USA (Net) September 30, 2016

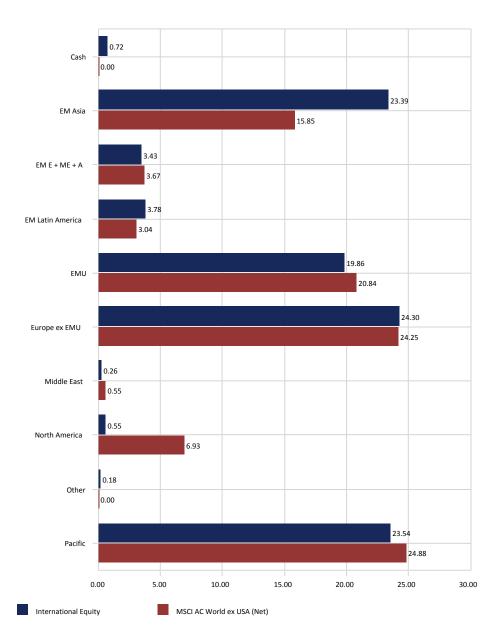
## Style Analysis - Returns Based



## **3 Year Style Analysis**



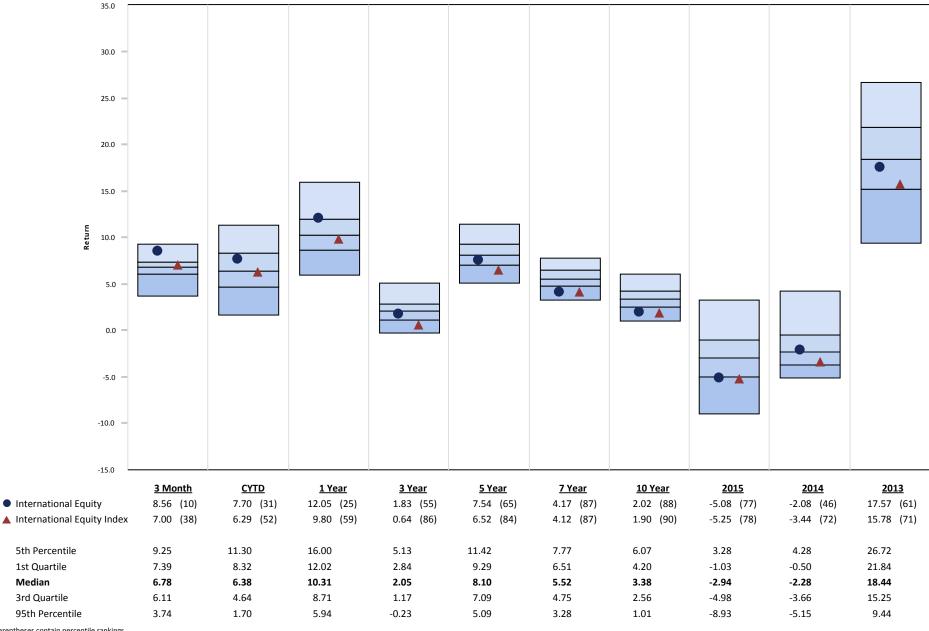
## **Region Allocation - Holdings Based**



Summit Strategies Group

All Master Trust-Intl. Equity Segment

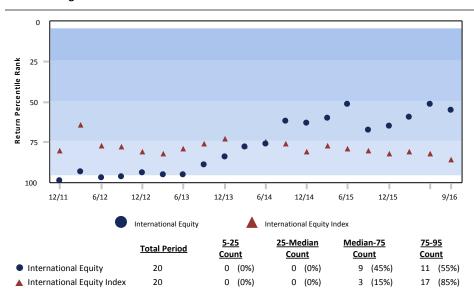
September 30, 2016



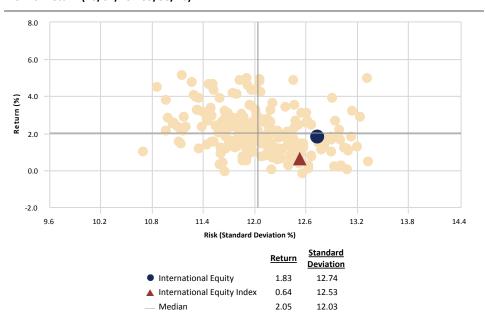
 $Parentheses\ contain\ percentile\ rankings.$ 

## International Equity September 30, 2016

### 3 Year Rolling Return Rank



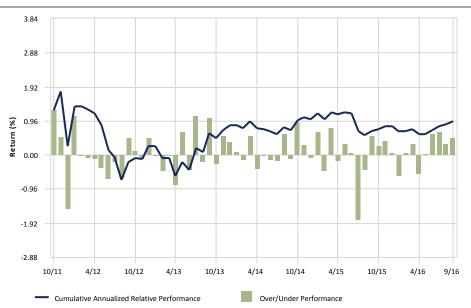
### Risk vs. Return (10/01/13 - 09/30/16)



## Growth of \$1 - Since Inception (02/01/99)

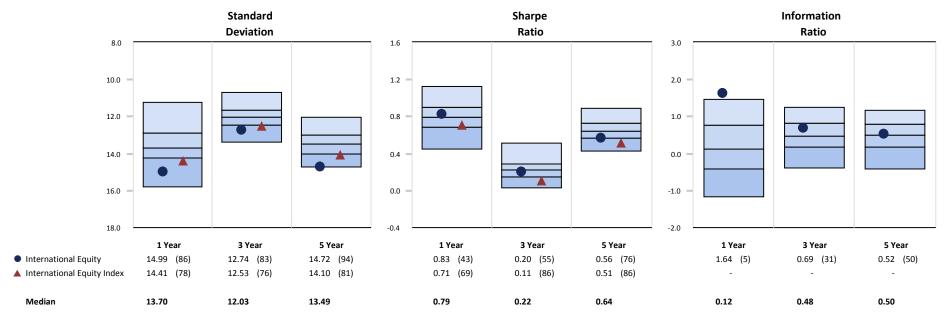


## **Relative Performance vs. International Equity Index**

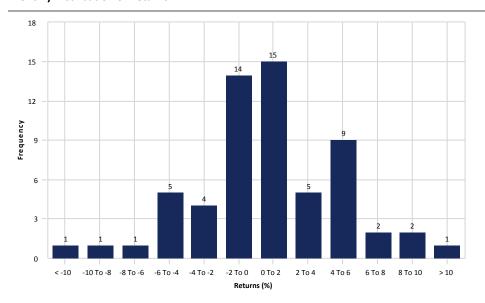


International Equity September 30, 2016

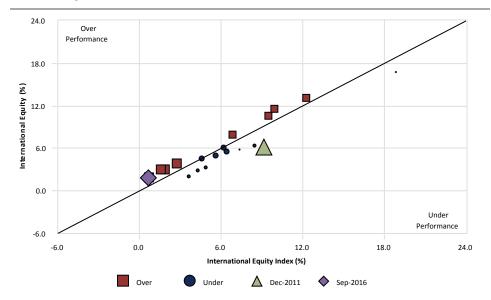
Peer Group Analysis: All Master Trust-Intl. Equity Segment



#### **Monthly Distribution of Returns**



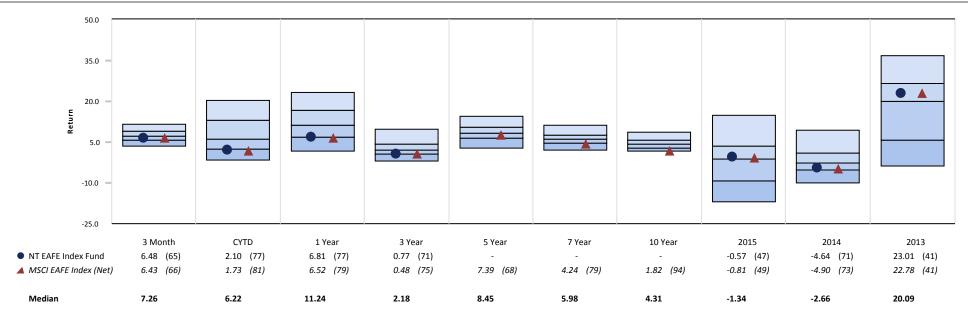
#### 3 Year Rolling Under/Over Performance



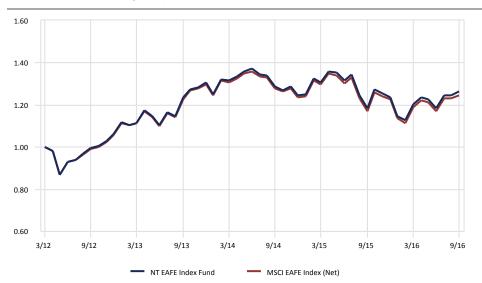
NT EAFE Index Fund

September 30, 2016

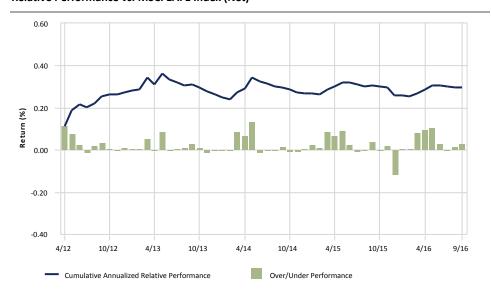
### Peer Group Analysis - IM International Equity (SA+CF)



#### Growth of \$1 - Since Inception (04/01/12)



#### Relative Performance vs. MSCI EAFE Index (Net)

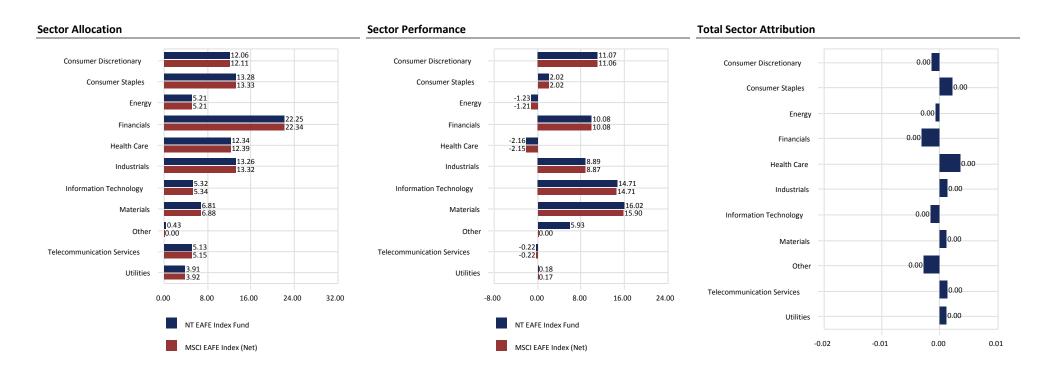


gross of fees

NT EAFE Index Fund vs. MSCI EAFE Index (Net)

September 30, 2016

Ten Best Performers					Ten Worst Performers				
	Portfolio Weight (%)	Benchmark Weight (%)	Active Weight (%)	Quarterly Return (%)		Portfolio Weight (%)	Benchmark Weight (%)	Active Weight (%)	Quarterly Return (%)
Nintendo Co Ltd	0.24	0.24	0.00	85.30	Ono Pharmaceutical Co Ltd	0.09	0.09	0.00	-35.23
Brother Industries Ltd	0.03	0.03	0.00	66.12	Capita PLC	0.05	0.05	0.00	-32.32
South32 Ltd	0.05	0.08	-0.03	62.18	CYBERDYNE Inc	0.01	0.01	0.00	-30.26
South32 Ltd	0.03	0.08	-0.05	60.38	Aggreko PLC	0.03	0.03	0.00	-26.82
Zalando SE	0.03	0.03	0.00	58.55	TPG Telecom Ltd	0.02	0.02	0.00	-25.37
Fortescue Metals Group Ltd	0.05	0.05	0.00	49.32	Ingenico Group	0.04	0.04	0.00	-25.12
Hitachi High-Technologies Corp	0.02	0.02	0.00	47.78	Noble Group Ltd	0.01	0.01	0.00	-24.98
Fujitsu Ltd	0.08	0.08	0.00	47.76	Taro Pharmaceutical Industries Ltd	0.01	0.01	0.00	-24.10
Lanxess AG	0.05	0.05	0.00	42.46	Vocus Communications Ltd	0.02	0.02	0.00	-22.92
Nsk Ltd	0.04	0.04	0.00	41.96	Pearson PLC	0.06	0.07	-0.01	-22.75
% of Portfolio	0.62	0.70			% of Portfolio	0.34	0.35		

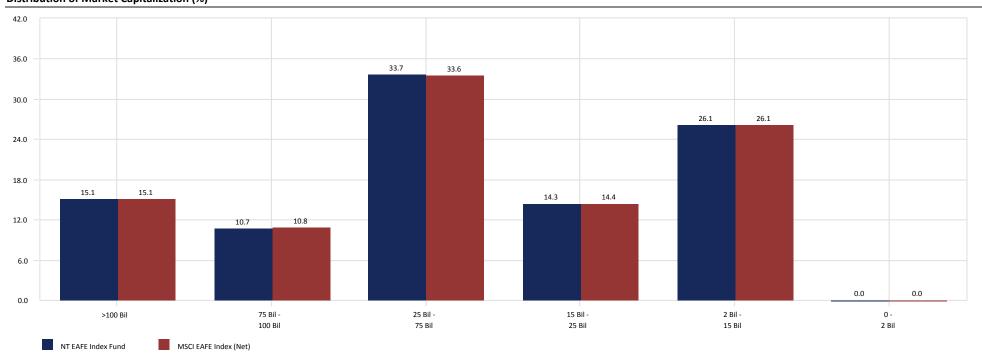


NT EAFE Index Fund vs. MSCI EAFE Index (Net)

September 30, 2016

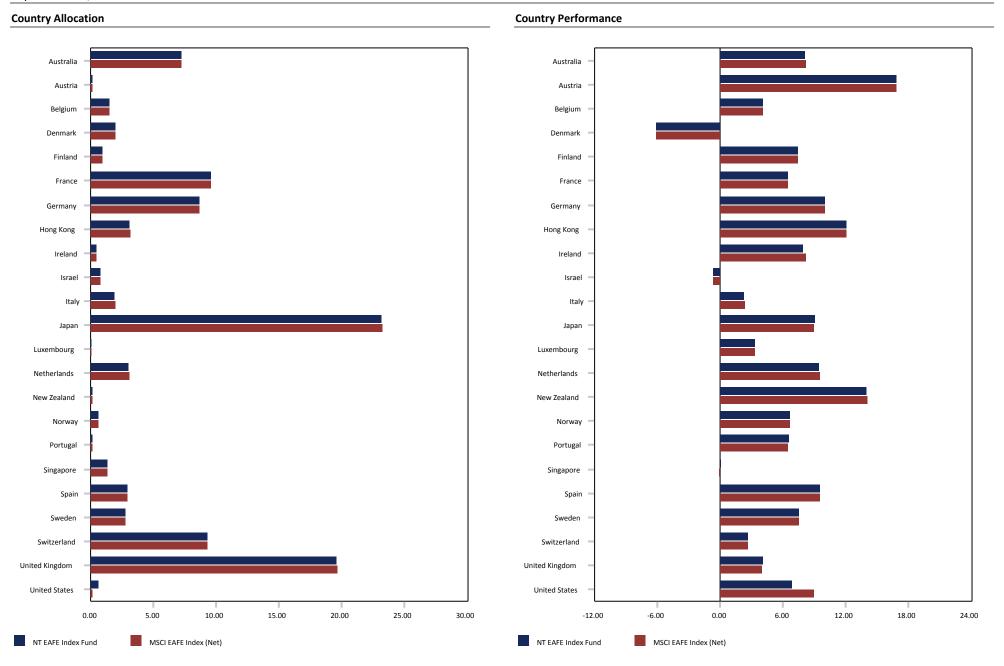
Portfolio Characteristics			Top Ten Equity Holdings				
	Portfolio	Benchmark		Portfolio	Benchmark	Active	Quarterly
Wtd. Avg. Mkt. Cap (\$000)	54,697,486	54,719,315		Weight	Weight	Weight	Return
Median Mkt. Cap (\$000)	9,216,087	9,133,683		(%)	(%)	(%)	(%)
Price/Earnings ratio	16.80	16.80	Nestle SA, Cham Und Vevey	2.03	2.04	-0.01	2.38
Price/Book ratio	2.26	2.25	Novartis AG	1.42	1.42	0.00	-4.20
5 Yr. EPS Growth Rate (%)	3.46	3.48	Roche Holding AG	1.41	1.41	0.00	-5.42
Current Yield (%)	3.38	3.48	Toyota Motor Corp	1.23	1.23	0.00	17.68
` '			HSBC Holdings PLC	1.20	1.20	0.00	22.41
Beta (3 Years, Monthly)	1.00	1.00	British American Tobacco PLC	0.96	0.97	-0.01	-0.02
Number of Stocks	957	927	BP PLC	0.88	0.88	0.00	1.64
			Royal Dutch Shell PLC	0.86	0.86	0.00	-7.44
			Total	0.85	0.86	-0.01	-0.16
			Anheuser-Busch InBev SA/NV	0.85	0.85	0.00	0.33
			% of Portfolio	11.69	11.72		

### **Distribution of Market Capitalization (%)**



NT EAFE Index Fund vs. MSCI EAFE Index (Net)

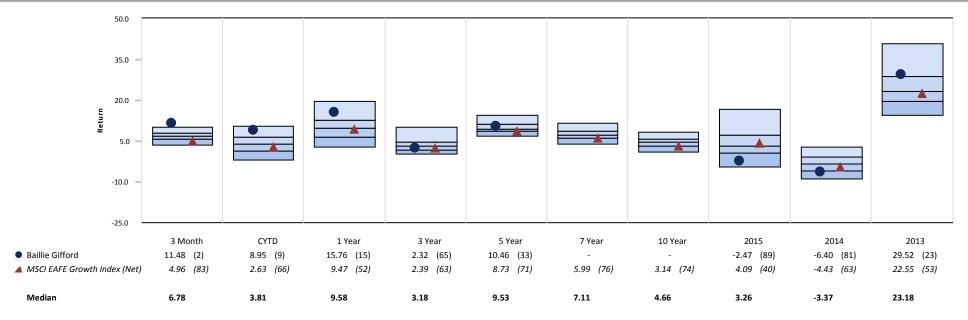
September 30, 2016



**Baillie Gifford** 

September 30, 2016

### Peer Group Analysis - IM International Growth Equity (SA+CF)



#### Growth of \$1 - Since Inception (03/01/11)



#### Relative Performance vs. MSCI EAFE Growth Index (Net)



gross of fees

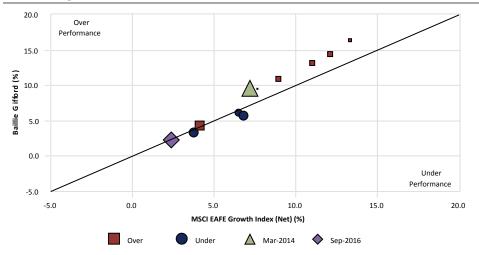
### **Baillie Gifford**

September 30, 2016

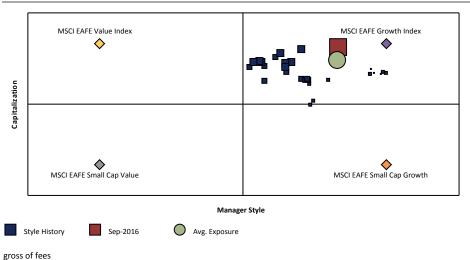
#### **3 Year Portfolio Statistics**

	Simple Alpha	Alpha	Beta	R-Squared	Tracking Error	Information Ratio	Sharpe Ratio	Consistency	Up Capture	Down Capture	Actual Correlation
Baillie Gifford	-0.08	-0.18	1.15	0.88	5.28	0.05	0.23	61.11	105.52	104.76	0.94
MSCI EAFE Growth Index (Net)	0.00	0.00	1.00	1.00	0.00	-	0.25	0.00	100.00	100.00	1.00
90 Day US Treasury Bill	-2.31	0.09	0.00	0.00	11.79	-0.25	-	50.00	0.23	-0.32	0.01

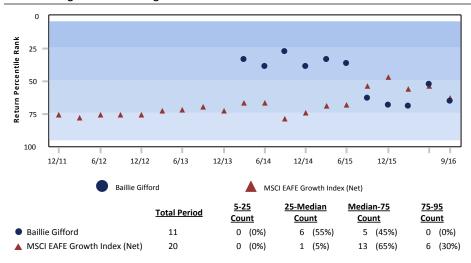
#### 3 Year Rolling Under/Over Performance



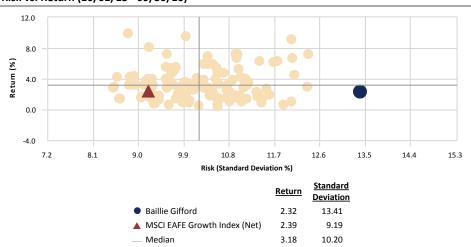
#### 3 Year Style Analysis



#### 3 Year Rolling Relative Ranking



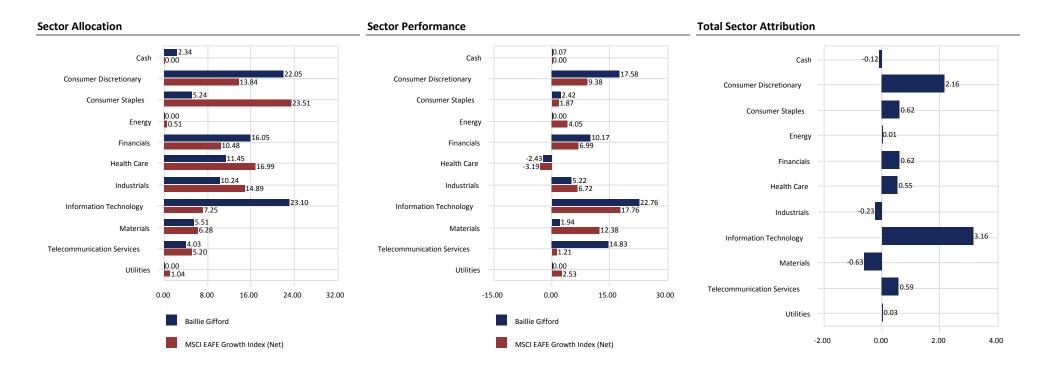
#### Risk vs. Return (10/01/13 - 09/30/16)



Baillie Gifford vs. MSCI EAFE Growth Index (Net)

September 30, 2016

Ten Best Performers					Ten Worst Performers				
	Portfolio Weight (%)	Benchmark Weight (%)	Active Weight (%)	Quarterly Return (%)		Portfolio Weight (%)	Benchmark Weight (%)	Active Weight (%)	Quarterly Return (%)
Zalando SE	3.96	0.06	3.90	58.55	Aggreko PLC	0.75	0.03	0.72	-26.82
Alibaba Group Holding Ltd	3.97	0.00	3.97	33.02	Novo Nordisk A/S	1.36	1.27	0.09	-21.50
MercadoLibre Inc	1.22	0.00	1.22	31.60	Chr.Hansen Holdings AS	0.81	0.09	0.72	-9.04
NAVER Corp	0.73	0.00	0.73	30.26	Novozymes A/S	1.18	0.16	1.02	-7.80
Dialog Semiconductor Plc, London	0.56	0.00	0.56	29.52	Mobileye NV	0.85	0.12	0.73	-7.74
Ferrari NV	2.43	0.10	2.33	27.64	Schibsted ASA	0.34	0.04	0.30	-5.69
Kering	1.77	0.25	1.52	24.91	Genmab A/S	1.97	0.16	1.81	-5.59
JD.com Inc	0.43	0.00	0.43	22.89	Banco Popular Espanol SA, Madrid	0.70	0.04	0.66	-3.20
SBI Holdings Inc	0.54	0.01	0.53	21.42	CIE Generale D'Optique Essilor International SA	1.03	0.43	0.60	-2.26
Tencent Holdings LTD	4.65	0.00	4.65	20.99	Rolls Royce Holdings PLC	2.75	0.10	2.65	-1.66
% of Portfolio	20.26	0.42			% of Portfolio	11.74	2.44		

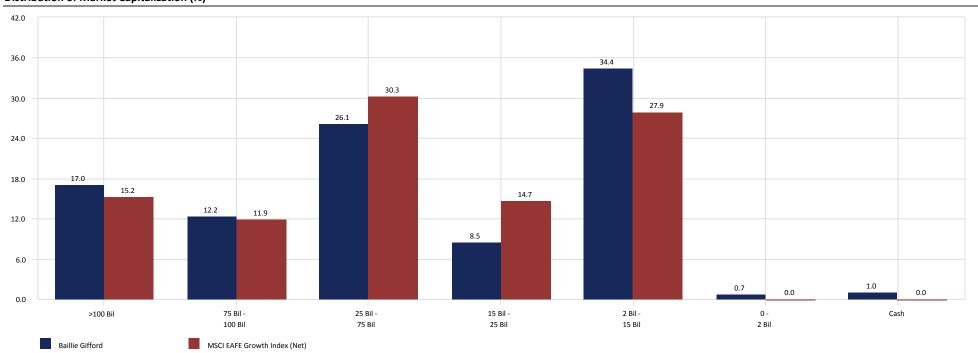


Baillie Gifford vs. MSCI EAFE Growth Index (Net)

September 30, 2016

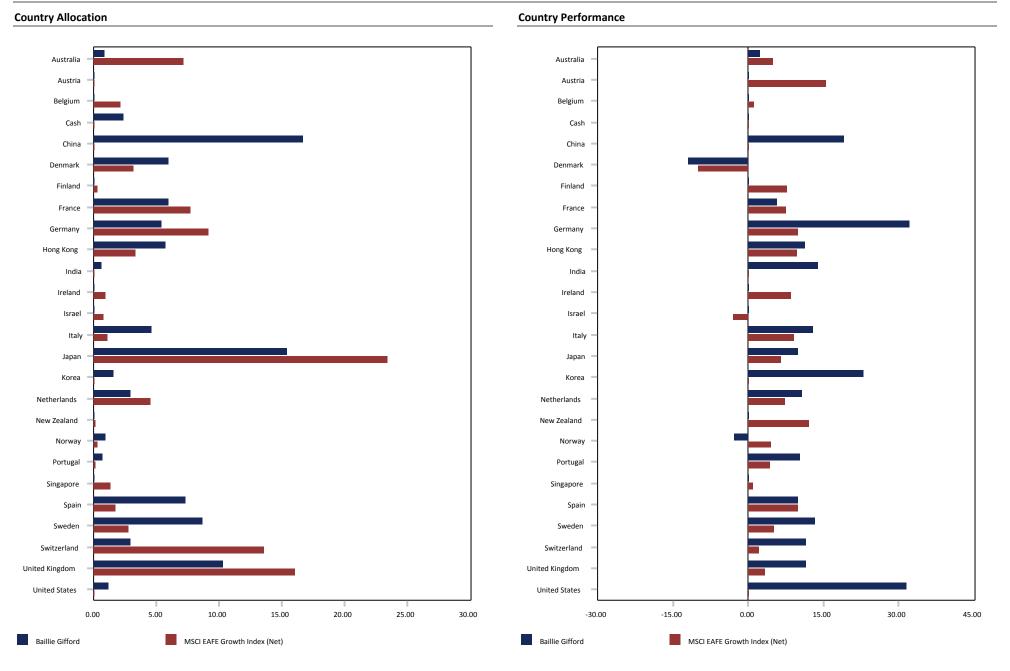
Portfolio Characteristics			Top Ten Equity Holdings				
	Portfolio	Benchmark		Portfolio	Benchmark	Active	Quarterly
Wtd. Avg. Mkt. Cap (\$000)	55,958,755	56,065,200		Weight	Weight	Weight	Return
Median Mkt. Cap (\$000)	11,135,575	8,663,196		(%)	(%)	(%)	(%)
Price/Earnings ratio	27.58	21.08	Industria De Diseno Textil Inditex SA	5.62	0.65	4.97	11.65
Price/Book ratio	4.26	2.95	AIA Group Ltd	4.91	1.28	3.63	11.75
5 Yr. EPS Growth Rate (%)	10.50	7.86	Baidu Inc	4.70	0.00	4.70	10.24
, ,			Tencent Holdings LTD	4.65	0.00	4.65	20.99
Current Yield (%)	1.27	2.47	Softbank Group Corp	4.35	0.99	3.36	14.83
Beta (5 Years, Monthly)	1.15	1.00	· ·				
Number of Stocks	61	540	ASML Holding NV	4.21	0.65	3.56	11.84
			Alibaba Group Holding Ltd	3.97	0.00	3.97	33.02
			Zalando SE	3.96	0.06	3.90	58.55
			M3 Inc	3.94	0.11	3.83	-1.57
			Atlas Copco AB	3.24	0.32	2.92	17.61
			% of Portfolio	43.55	4.06		

#### Distribution of Market Capitalization (%)



Baillie Gifford vs. MSCI EAFE Growth Index (Net)

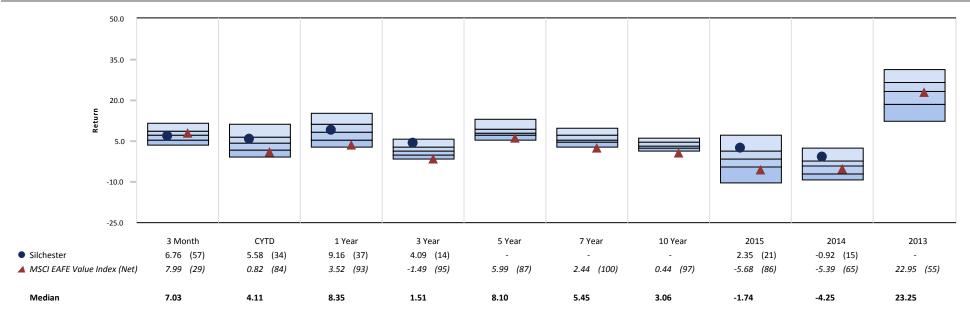
September 30, 2016



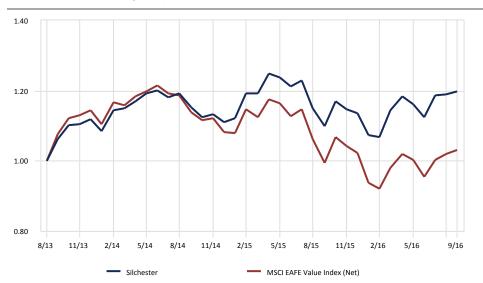
Silchester

September 30, 2016

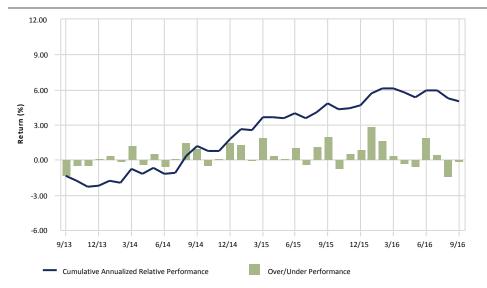
### Peer Group Analysis - IM International Large Cap Value Equity (SA+CF)



#### Growth of \$1 - Since Inception (09/01/13)



#### Relative Performance vs. MSCI EAFE Value Index (Net)

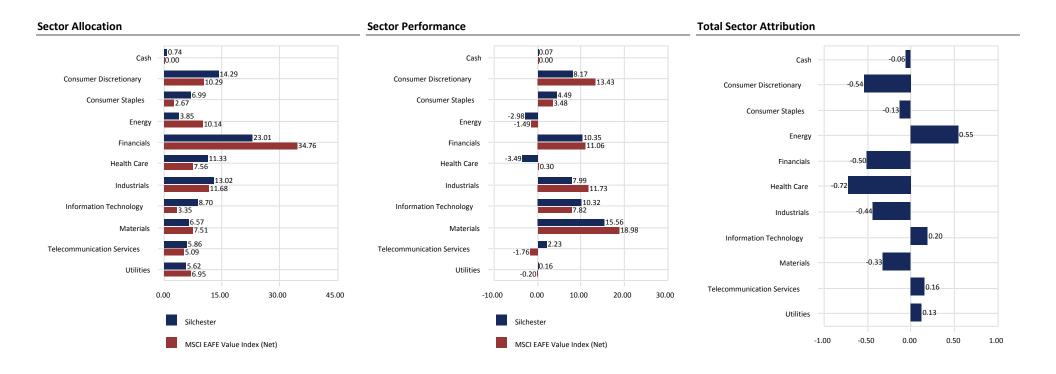


gross of fees

Silchester vs. MSCI EAFE Value Index (Net)

September 30, 2016

Ten Best Performers					Ten Worst Performers				
	Portfolio Weight (%)	Benchmark Weight (%)	Active Weight (%)	Quarterly Return (%)		Portfolio Weight (%)	Benchmark Weight (%)	Active Weight (%)	Quarterly Return (%)
St.Ives PLC	0.03	0.00	0.03	56.85	Mitie Group PLC	0.25	0.00	0.25	-24.84
Kingboard Chemical Holdings Ltd	0.37	0.00	0.37	54.99	Pearson PLC	1.09	0.13	0.96	-22.75
Thai Oil PCL	0.06	0.00	0.06	31.06	Unione Di Banche Italiane S.p.A.	0.44	0.01	0.43	-16.15
Ryosan Co Ltd	0.60	0.00	0.60	30.34	Futaba Corp	0.17	0.00	0.17	-13.41
Anglo American PLC	1.51	0.29	1.22	29.36	Turkcell Iletisim Hizmet	0.98	0.00	0.98	-11.98
Hays PLC	0.21	0.00	0.21	29.17	Gam Holding Ltd	0.84	0.00	0.84	-9.88
Somfy SA	0.72	0.00	0.72	27.12	Sanofi	3.06	1.44	1.62	-8.64
Electrocomponents PLC	1.07	0.00	1.07	26.80	Royal Dutch Shell PLC	1.64	1.74	-0.10	-7.36
Nomura Holdings Inc	1.16	0.26	0.90	26.05	Central Glass Co Ltd	0.15	0.00	0.15	-7.00
Credit Suisse Group	2.30	0.20	2.10	23.90	Amano Corp	0.50	0.00	0.50	-6.73
% of Portfolio	8.03	0.75			% of Portfolio	9.12	3.32		

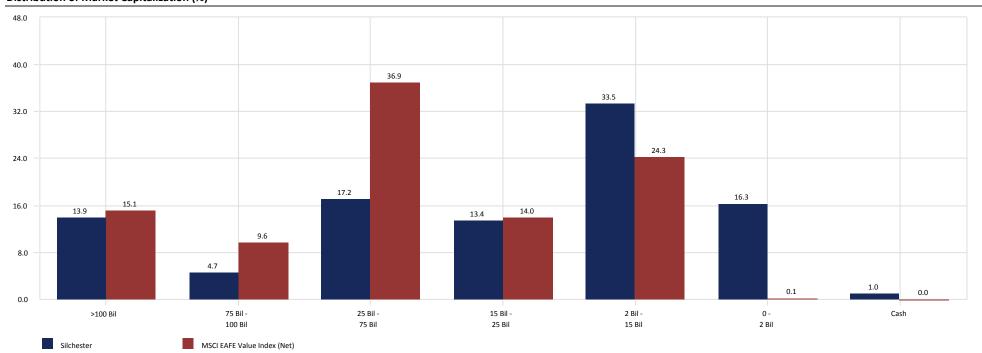


Silchester vs. MSCI EAFE Value Index (Net)

September 30, 2016

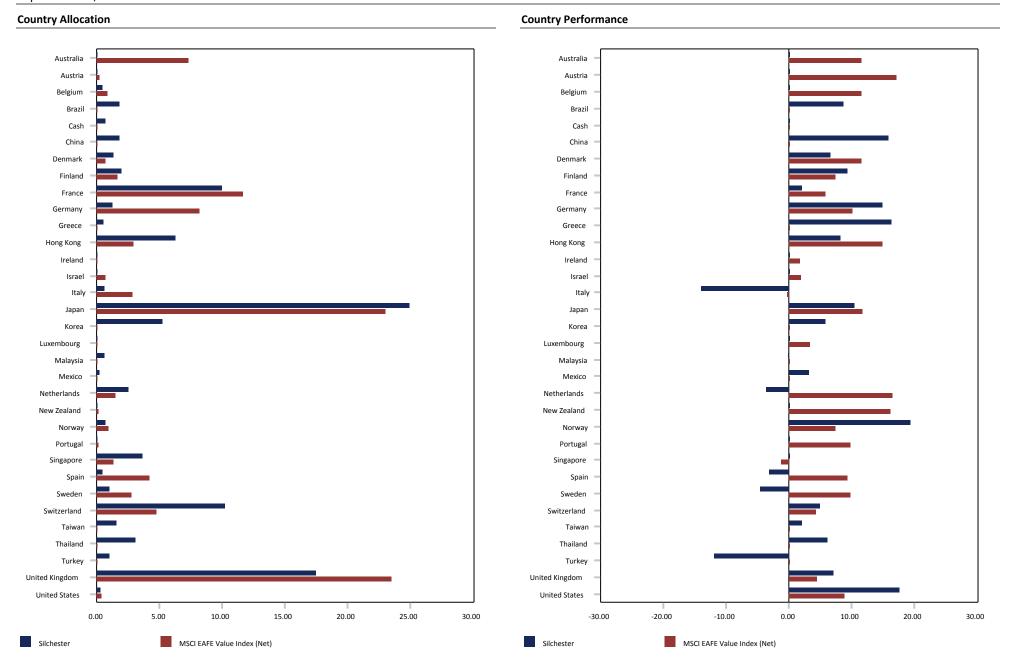
Portfolio Characteristics			Top Ten Equity Holdings				
	Portfolio	Benchmark		Portfolio	Benchmark	Active	Quarterly
Wtd. Avg. Mkt. Cap (\$000)	37,946,256	53,349,034		Weight	Weight	Weight	Return
Median Mkt. Cap (\$000)	3,343,218	8,853,858		(%)	(%)	(%)	(%)
Price/Earnings ratio	14.45	13.54	Sanofi	3.06	1.44	1.62	-8.64
Price/Book ratio	1.90	1.64	Glaxosmithkline PLC	3.00	1.70	1.30	0.63
5 Yr. EPS Growth Rate (%)	-4.91	-1.66	Honda Motor Co Ltd	2.69	0.76	1.93	14.88
, ,			Novartis AG	2.55	1.01	1.54	-4.20
Current Yield (%)	3.92	4.30	Credit Suisse Group	2.30	0.20	2.10	23.90
Beta (3 Years, Monthly)	0.85	1.00	Tesco PLC	2.11	0.00	2.11	1.65
Number of Stocks	146	506					
			Henderson Land Development Co Ltd	2.09	0.00	2.09	6.62
			BAE Systems PLC	2.00	0.35	1.65	-2.82
			Toyota Motor Corp	1.95	2.49	-0.54	17.68
			HSBC Holdings PLC	1.92	2.43	-0.51	22.41
			% of Portfolio	23.67	10.38		

#### Distribution of Market Capitalization (%)



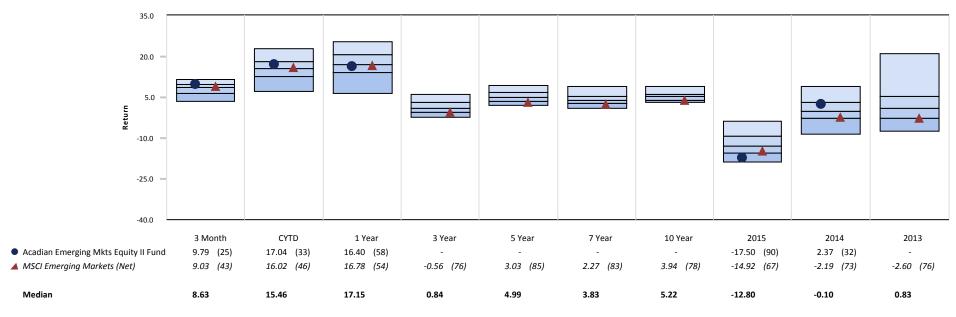
Silchester vs. MSCI EAFE Value Index (Net)

September 30, 2016

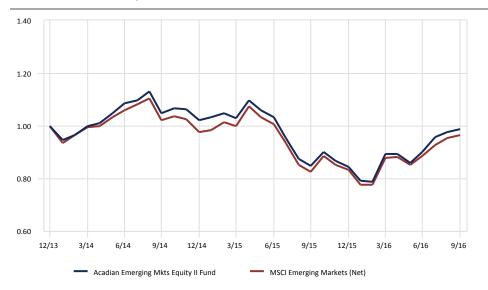


Acadian Emerging Mkts Equity II Fund September 30, 2016

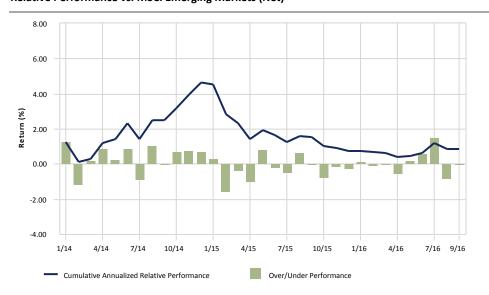
### Peer Group Analysis - IM Emerging Markets Equity (SA+CF)



#### Growth of \$1 - Since Inception (01/01/14)



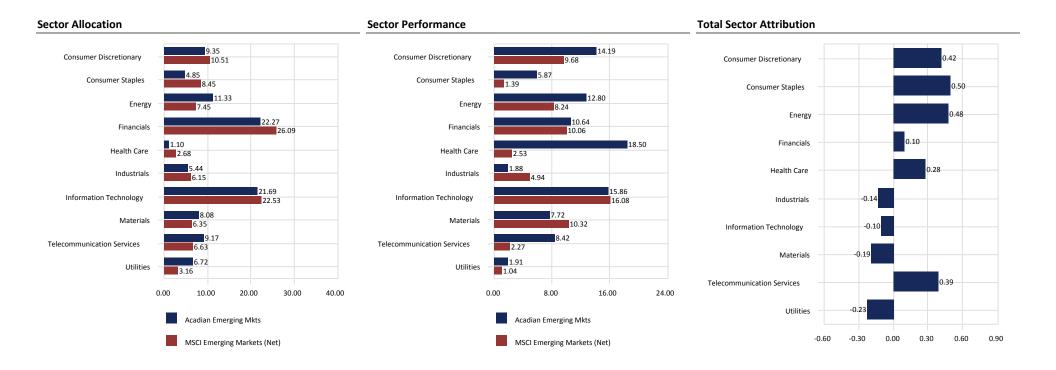
#### Relative Performance vs. MSCI Emerging Markets (Net)



gross of fees

Acadian Emerging Mkts vs. MSCI Emerging Markets (Net) September 30, 2016

Ten Best Performers					Ten Worst Performers				
	Portfolio Weight (%)	Benchmark Weight (%)	Active Weight (%)	Quarterly Return (%)		Portfolio Weight (%)	Benchmark Weight (%)	Active Weight (%)	Quarterly Return (%)
Aptech Ltd	0.00	0.00	0.00	101.63	ChinaCache International Holdings Ltd	0.01	0.00	0.01	-40.59
Jubilant Life Sciences Ltd	0.02	0.00	0.02	99.45	Tipco Asphalt Public Co Ltd	0.14	0.00	0.14	-28.08
Magazine Luiza S/A	0.02	0.00	0.02	95.94	PT Lippo Cikarang TBK	0.02	0.00	0.02	-23.25
Aegean Marine Petroleum Network Inc	0.01	0.00	0.01	82.15	Housing Development and Infrastructure Ltd	0.10	0.00	0.10	-21.88
Weibo Corp	0.55	0.00	0.55	76.49	Elitegroup Computer Systems Co Ltd	0.01	0.00	0.01	-20.65
Zhongsheng Group Holdings Ltd	0.02	0.00	0.02	75.30	Com2us Corp	0.02	0.00	0.02	-20.35
Kiza Anadolu Metal Madencilik Isletmeleri AS	0.04	0.00	0.04	70.89	CKH Food & Health Limited	0.00	0.00	0.00	-18.65
JK Tyre & Industries Ltd	0.04	0.00	0.04	70.71	Enersis Chile SA	0.08	0.04	0.04	-18.53
Yirendai Ltd	0.12	0.00	0.12	70.36	CJ Hellovision Co Ltd	0.02	0.00	0.02	-16.21
Fufeng Group Ltd	0.01	0.00	0.01	69.61	Hexaware Technologies Ltd	0.07	0.00	0.07	-16.17
% of Portfolio	0.83	0.00			% of Portfolio	0.47	0.04		



Acadian Emerging Mkts vs. MSCI Emerging Markets (Net) September 30, 2016

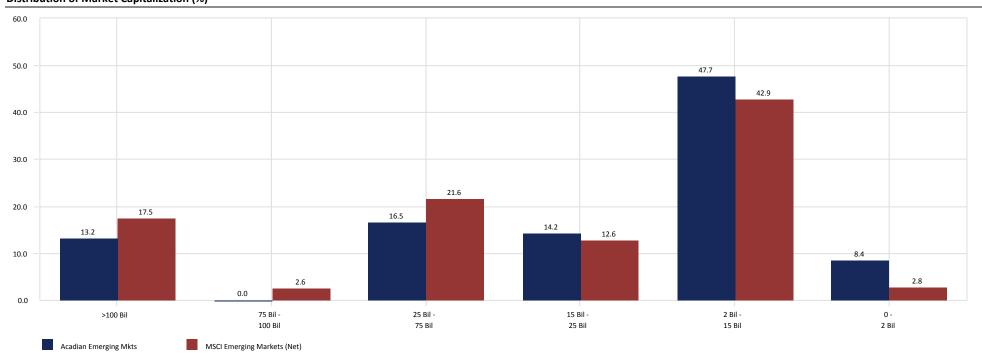
Portfolio Characteristics			Top Ten Equity Holdings				
	Portfolio	Benchmark		Portfolio	Benchmark	Active	Quarterly
Wtd. Avg. Mkt. Cap (\$000)	36,397,983	53,563,967		Weight (%)	Weight (%)	Weight (%)	Return (%)
Median Mkt. Cap (\$000)	2,388,976	4,827,847					
Price/Earnings ratio	10.89	13.55	Samsung Electronics Co Ltd	5.98	3.56	2.42	17.45
Price/Book ratio	1.87	2.39	Bank of China Ltd	2.50	0.89	1.61	14.60
5 Yr. EPS Growth Rate (%)	6.18	6.97	China Construction Bank Corp	2.12	1.53	0.59	12.34
Current Yield (%)	2.94	2.54	Netease Inc	2.07	0.47	1.60	25.07
Beta		1.00	Hon Hai Precision Industry Co Ltd	1.86	0.96	0.90	14.08
Number of Stocks	461	833	China Mobile Ltd	1.83	1.82	0.01	7.57
Number of Stocks	401	033	SK Hynix Inc	1.81	0.52	1.29	29.95
			Credicorp Ltd	1.73	0.25	1.48	-1.37
			Korea Electric Power Corp	1.60	0.31	1.29	-6.36
			Tenaga Nasional Berhad	1.57	0.29	1.28	-0.95

% of Portfolio

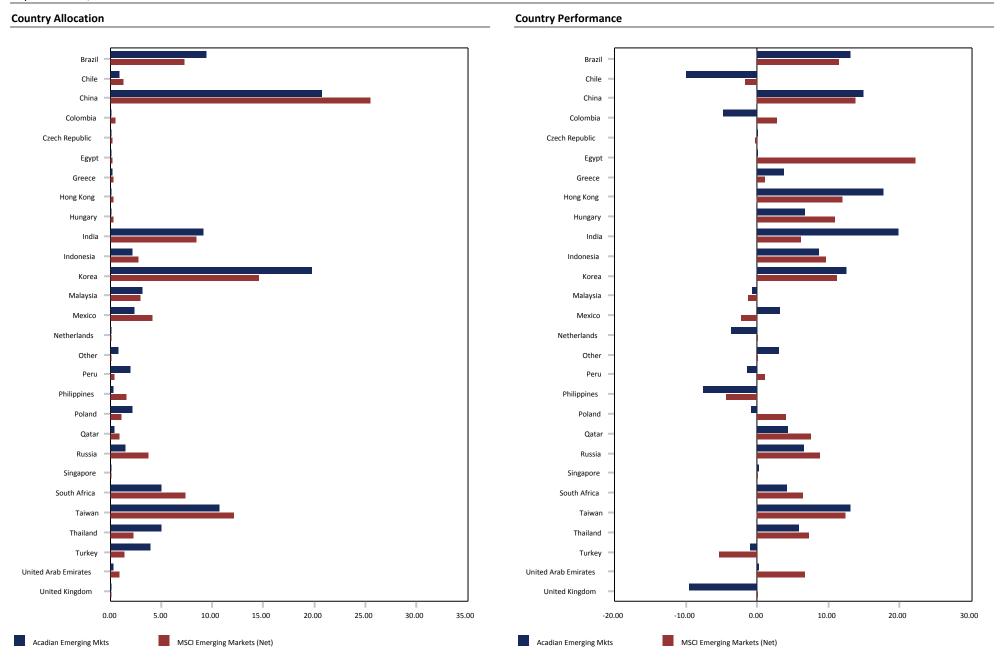
23.07

10.60

#### Distribution of Market Capitalization (%)



Acadian Emerging Mkts vs. MSCI Emerging Markets (Net) September 30, 2016



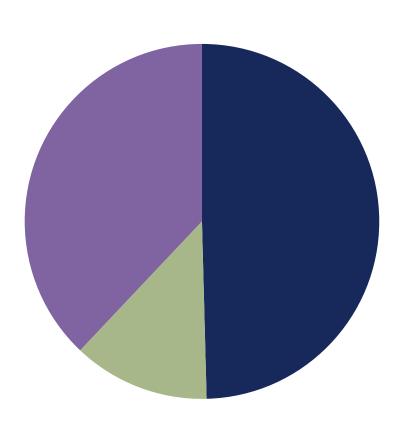
**Fixed Income** 

Fixed Income

September 30, 2016

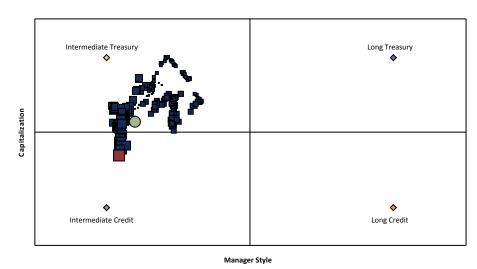
### **Manager Allocation**

September 30, 2016 : \$330,054,270



	Market Value (\$)	Allocation (%)
■ Thompson Siegel Fixed	163,653,845	49.58
■ NTGI TIPS	-	0.00
Eaton Vance Instl Senior Loan Trust	41,168,899	12.47
NTGI Aggregate Bond Index	125,231,526	37.94

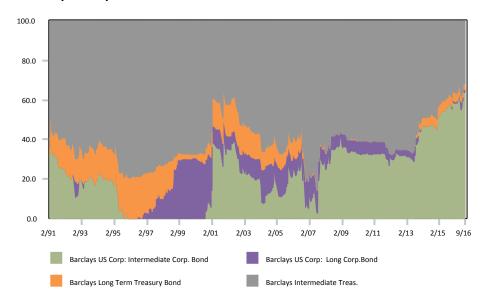
### Style Analysis - Returns Based



Avg. Exposure

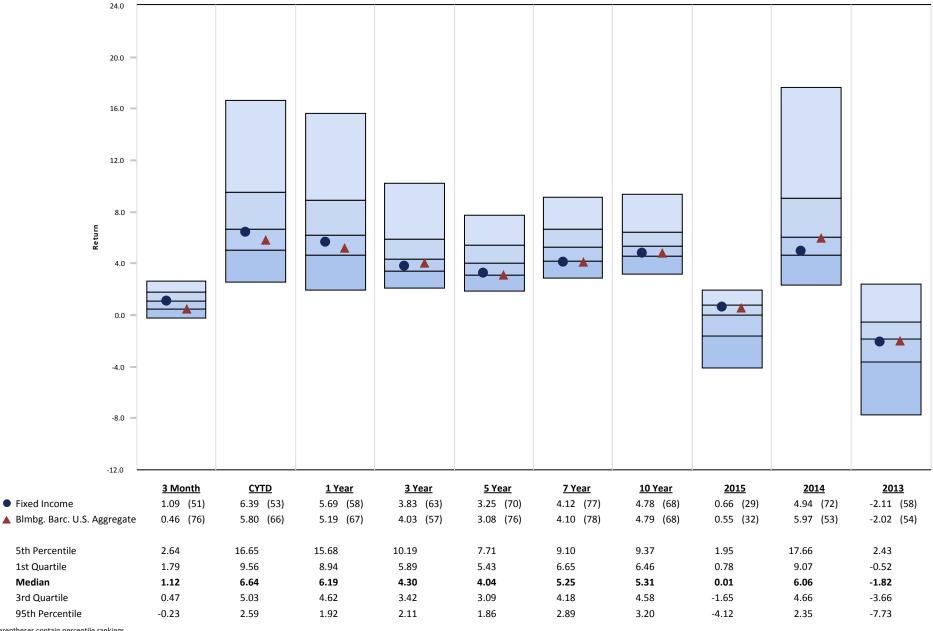
### 3 Year Style Analysis

Style History



All Master Trust-US Fixed Income Segment

September 30, 2016

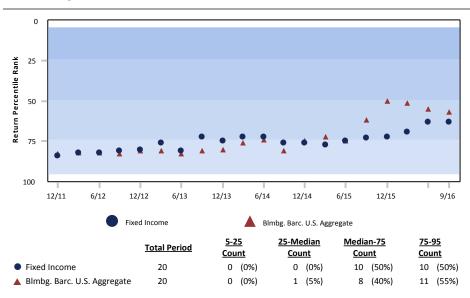


Parentheses contain percentile rankings.

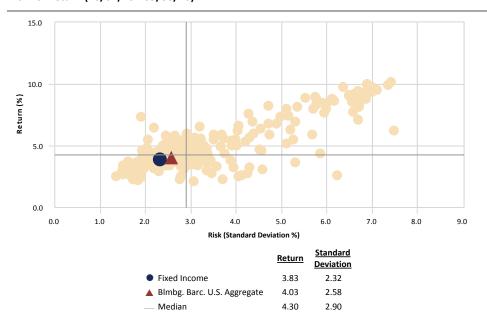
### Fixed Income

September 30, 2016

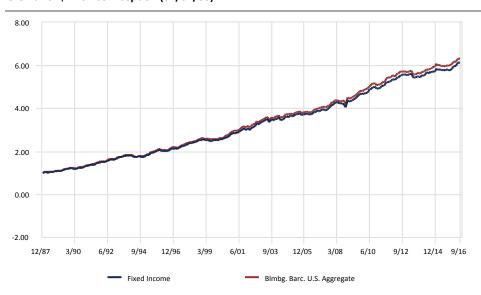
#### 3 Year Rolling Return Rank



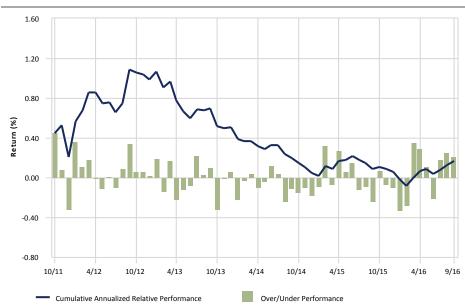
#### Risk vs. Return (10/01/13 - 09/30/16)



#### Growth of \$1 - Since Inception (01/01/88)



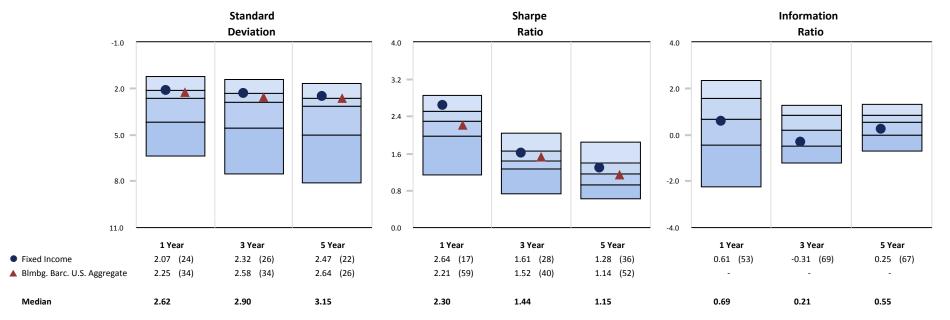
### Relative Performance vs. Blmbg. Barc. U.S. Aggregate



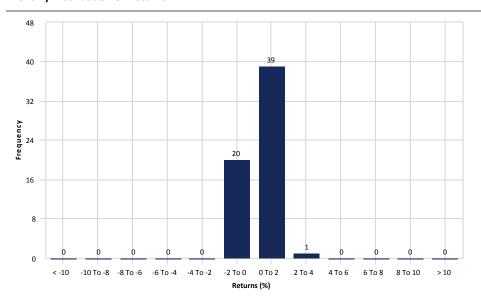
Fixed Income

September 30, 2016

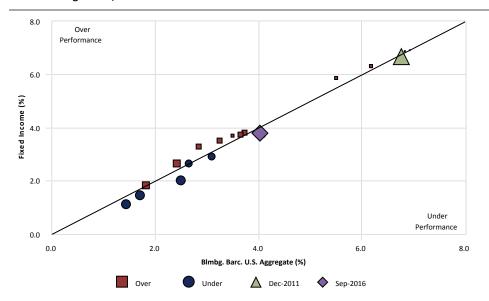
### Peer Group Analysis: All Master Trust-US Fixed Income Segment



#### **Monthly Distribution of Returns**



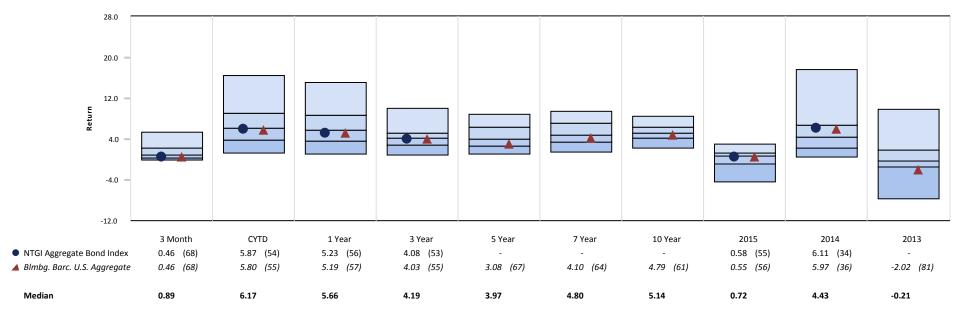
### 3 Year Rolling Under/Over Performance



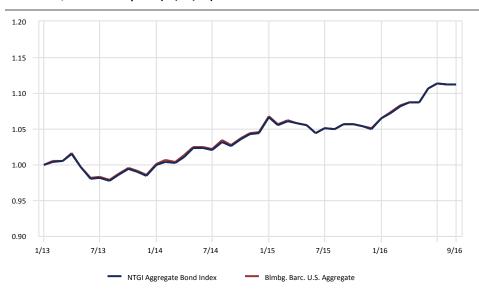
NTGI Aggregate Bond Index

September 30, 2016

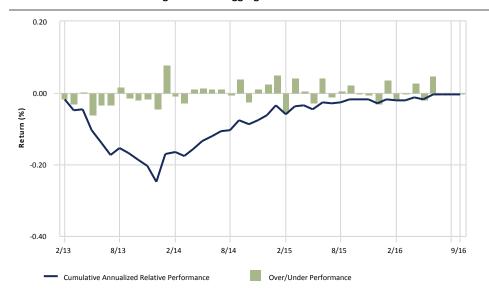
#### Peer Group Analysis - IM U.S. Fixed Income (SA+CF)



#### Growth of \$1 - Since Inception (02/01/13)



#### Relative Performance vs. Blmbg. Barc. U.S. Aggregate



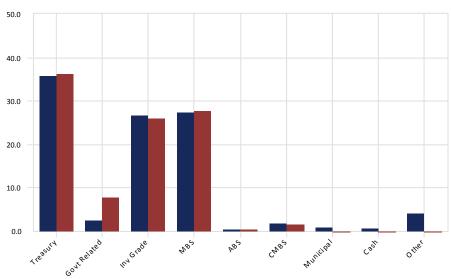
gross of fees

NTGI Aggregate Bond Index vs. Blmbg. Barc. U.S. Aggregate September 30, 2016

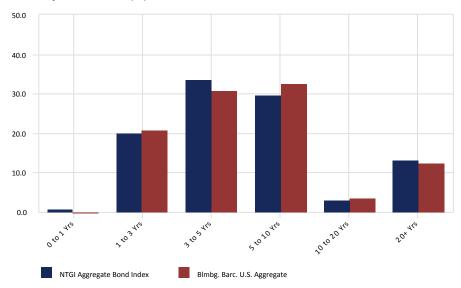
Portfolio	Character	istics
-----------	-----------	--------

	<u>Portfolio</u>	<u>Benchmark</u>
Avg. Maturity	7.71	7.82
Avg. Quality	AA	AA1/AA2
Coupon Rate (%)	3.18	3.09
Modified Duration	5.38	5.51

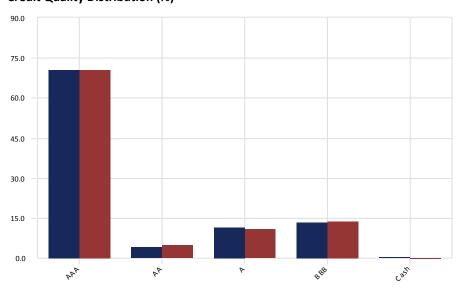
### **Sector Distribution (%)**



### **Maturity Distribution (%)**

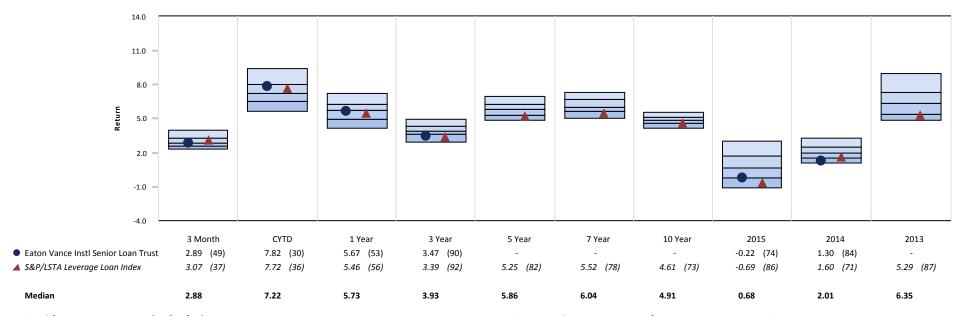


### **Credit Quality Distribution (%)**

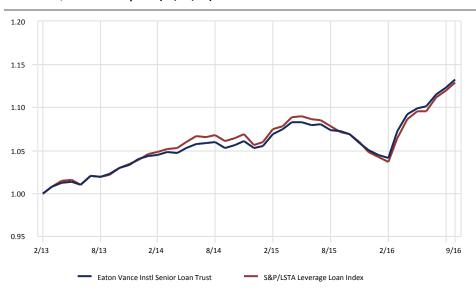


Eaton Vance Instl Senior Loan Trust September 30, 2016

#### Peer Group Analysis - IM U.S. Bank Loans (SA+CF)



#### Growth of \$1 - Since Inception (03/01/13)



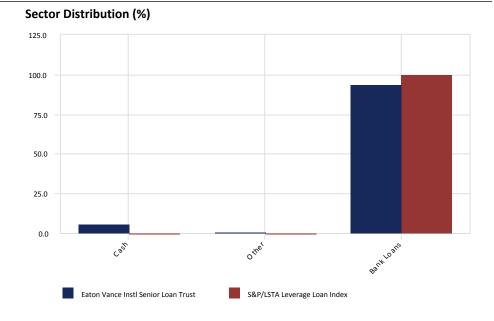
#### Relative Performance vs. S&P/LSTA Leverage Loan Index



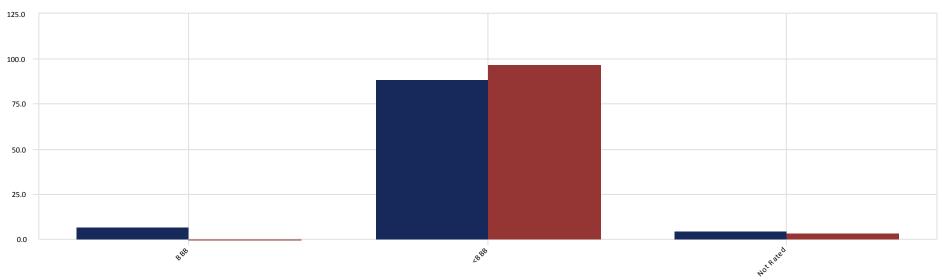
gross of fees

Eaton Vance Instl Senior Loan Trust vs. S&P/LSTA Leverage Loan Index September 30, 2016

<b>Portfolio Characteristics</b>		
	<u>Portfolio</u>	<u>Benchmark</u>
Effective Duration	0.10	0.25
Avg. Quality	B+	B+
Yield To Maturity (%)	5.64	5.52
Coupon Rate (%)	4.50	5.32

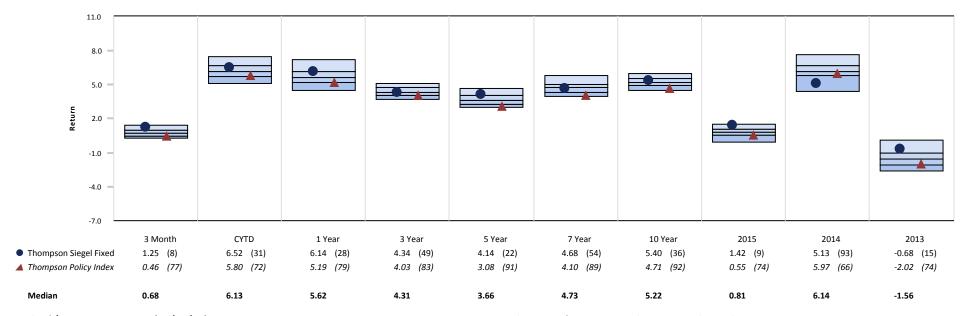


### **Credit Quality Distribution (%)**

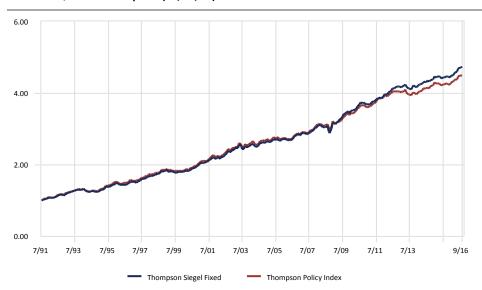


Thompson Siegel Fixed September 30, 2016

#### Peer Group Analysis - IM U.S. Broad Market Core Fixed Income (SA+CF)



#### Growth of \$1 - Since Inception (08/01/91)



#### Relative Performance vs. Thompson Policy Index



gross of fees

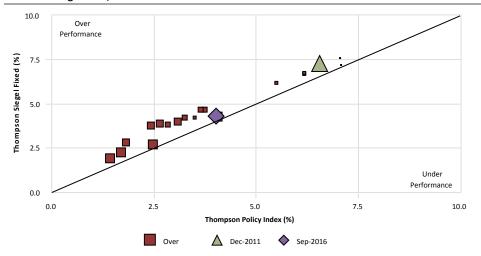
# Thompson Siegel Fixed

September 30, 2016

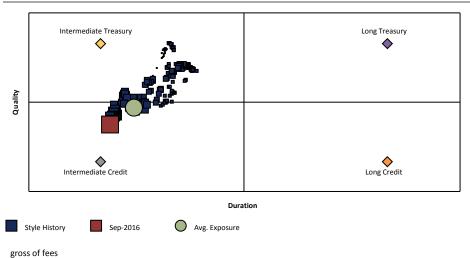
3 Year Port	folio S	tatistics
-------------	---------	-----------

	Simple Alpha	Alpha	Beta	R-Squared	Tracking Error	Information Ratio	Sharpe Ratio	Consistency	Up Capture	Down Capture	Actual Correlation
Thompson Siegel Fixed	0.32	0.81	0.87	0.94	0.65	0.46	1.82	50.00	96.11	71.69	0.97
Thompson Policy Index	0.00	0.00	1.00	1.00	0.00	-	1.52	0.00	100.00	100.00	1.00
90 Day US Treasury Bill	-3.94	0.07	0.00	0.05	2.57	-1.52	-	38.89	0.94	-1.70	0.22

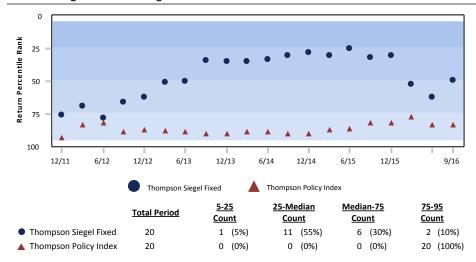
#### 3 Year Rolling Under/Over Performance



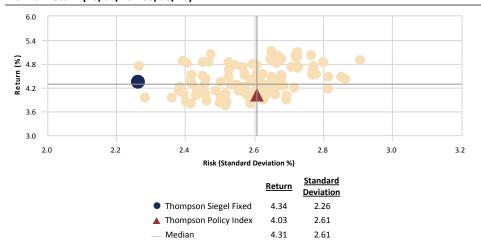
#### 3 Year Style Analysis



#### 3 Year Rolling Relative Ranking



#### Risk vs. Return (10/01/13 - 09/30/16)

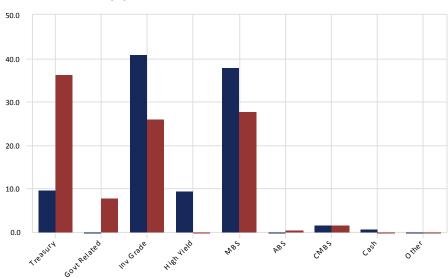


Thompson Siegel Fixed vs. Blmbg. Barc. U.S. Aggregate September 30, 2016

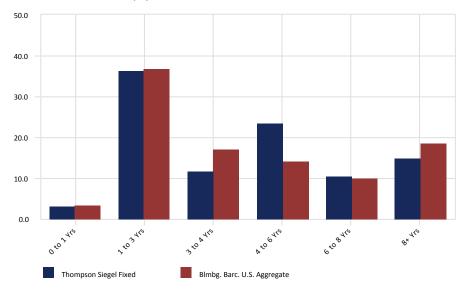
Portfolio C	haracteristics
-------------	----------------

	<u>Portfolio</u>	<u>Benchmark</u>
Effective Duration	4.97	5.42
Avg. Maturity	6.95	7.82
Avg. Quality	A1	AA1/AA2
Yield To Maturity (%)	2.86	1.97
Coupon Rate (%)	-	3.09

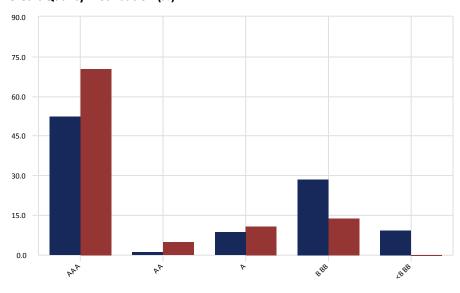
### **Sector Distribution (%)**



### **Duration Distribution (%)**



### **Credit Quality Distribution (%)**



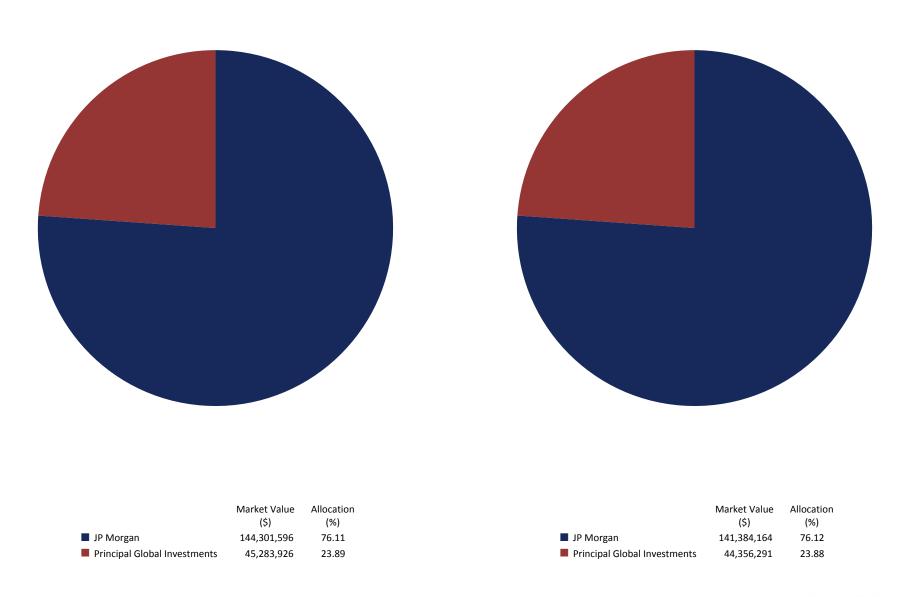
**Real Estate** 

Real Estate Manager Allocation Chart

September 30, 2016

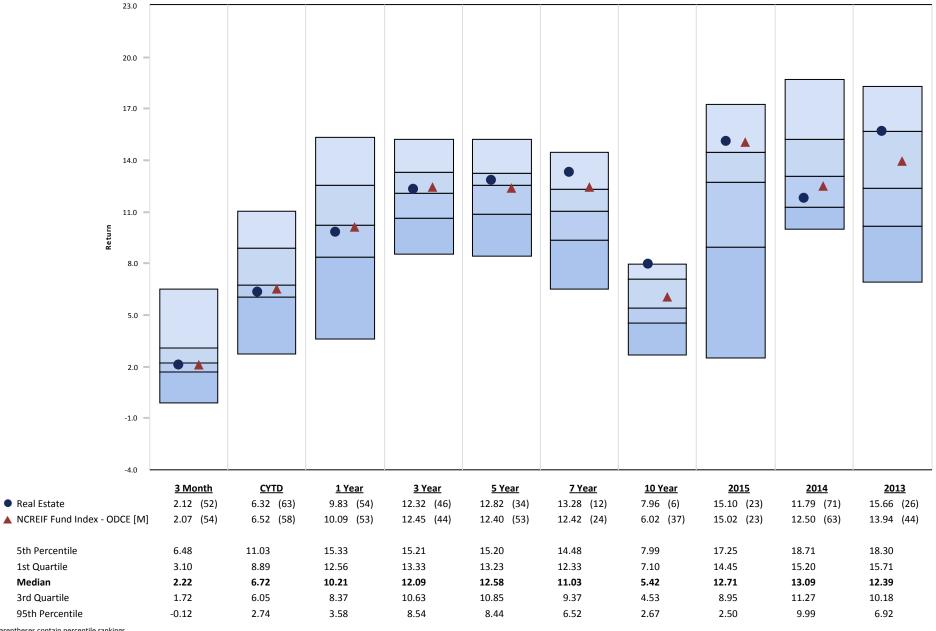
September 30, 2016: \$189,585,522

June 30, 2016 : \$185,740,455



All Master Trust-Real Estate Segment

September 30, 2016

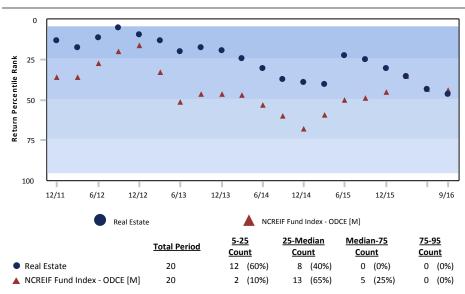


Parentheses contain percentile rankings.

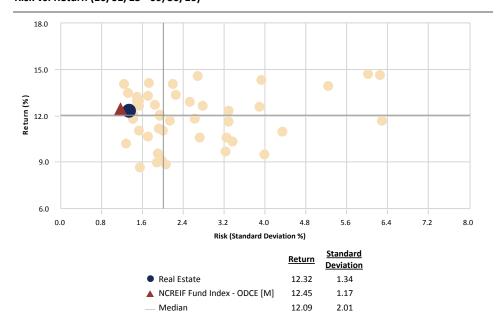
### **Real Estate**

September 30, 2016

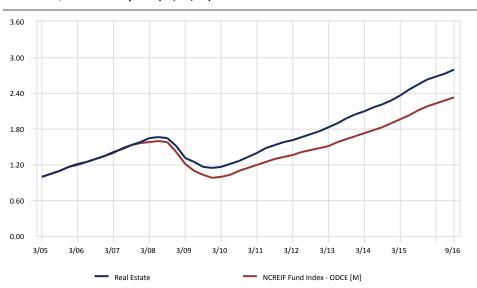
#### 3 Year Rolling Return Rank



#### Risk vs. Return (10/01/13 - 09/30/16)



#### Growth of \$1 - Since Inception (04/01/05)



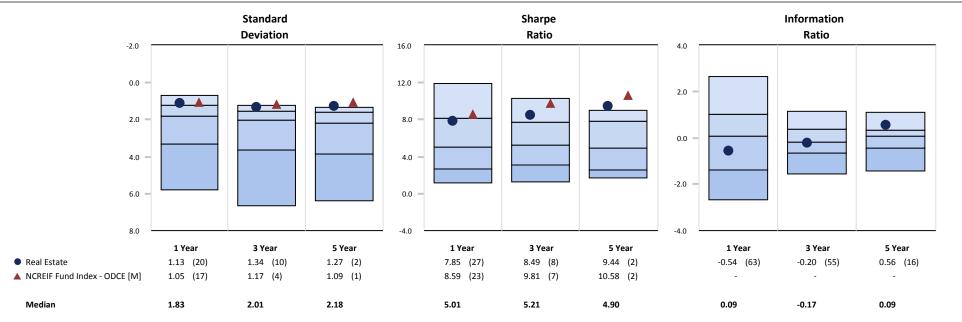
#### Relative Performance vs. NCREIF Fund Index - ODCE [M]



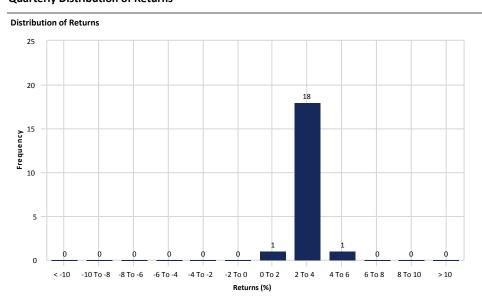
**Real Estate** 

September 30, 2016

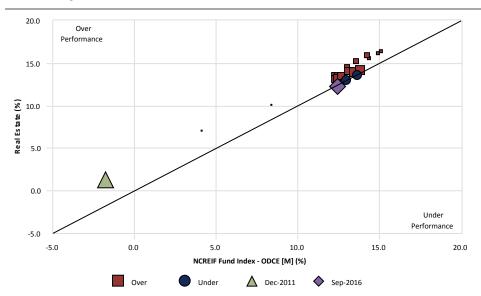
### Peer Group Analysis: All Master Trust-Real Estate Segment



#### **Quarterly Distribution of Returns**



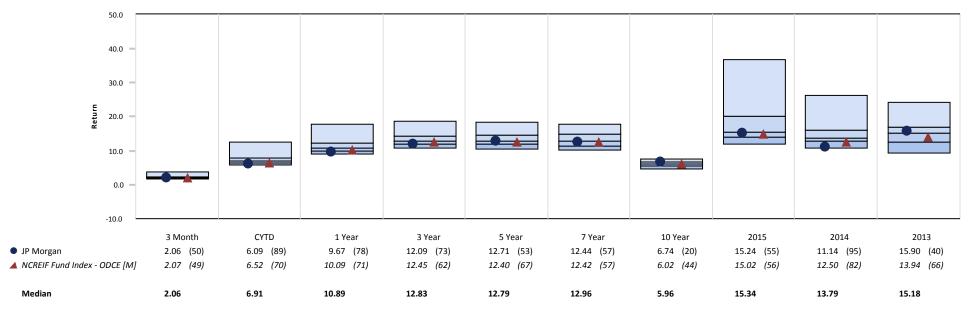
#### 3 Year Rolling Under/Over Performance



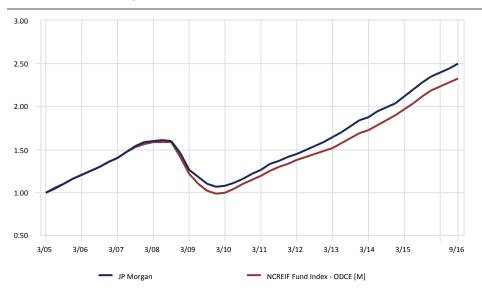
JP Morgan

September 30, 2016

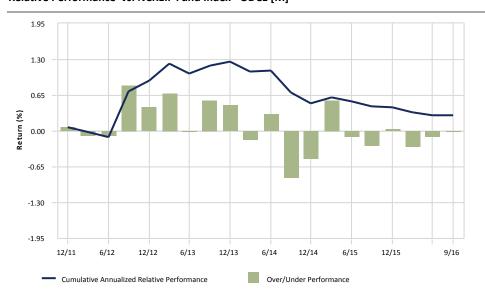
#### Peer Group Analysis - IM U.S. Private Real Estate (SA+CF)



#### Growth of \$1 - Since Inception (04/01/05)



#### Relative Performance vs. NCREIF Fund Index - ODCE [M]



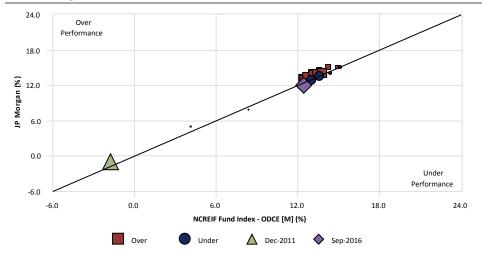
#### JP Morgan

September 30, 2016

#### **3 Year Portfolio Statistics**

	Simple Alpha	Alpha	Beta	R-Squared	Tracking Error	Information Ratio	Sharpe Ratio	Consistency	Up Capture	Down Capture	Actual Correlation
JP Morgan	-0.36	10.50	0.12	0.21	4.55	-0.10	8.53	66.67	96.30	-	0.46
NCREIF Fund Index - ODCE [M]	0.00	0.00	1.00	1.00	0.00	-	2.37	0.00	100.00	-	1.00
90 Day US Treasury Bill	-12.37	0.05	0.00	0.09	4.99	-2.37	-	41.67	0.72	-	0.31

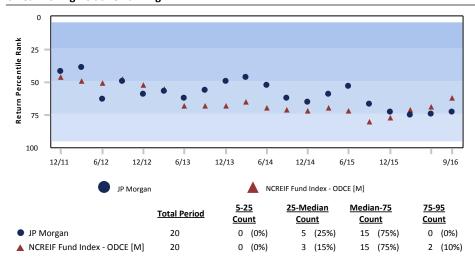
#### 3 Year Rolling Under/Over Performance



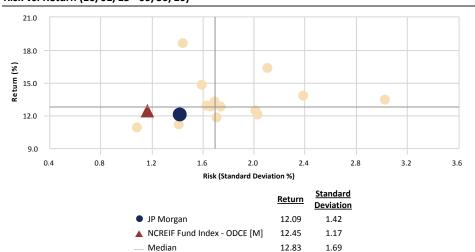
#### 3 Year Style Analysis



#### 3 Year Rolling Relative Ranking



#### Risk vs. Return (10/01/13 - 09/30/16)



#### JP MORGAN FLEMING: Strategic Property Fund

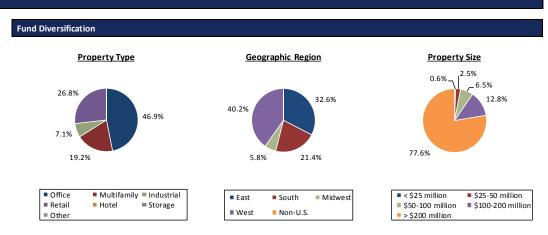
Quarter Ending: September 30, 2016

General Fund Information	
Structure	Commingled Pension Fund
Inception Date	1/1/1998
Termination Date	Infinite Life
L/T Return Objective	1.0% over NCREIF
Eligible Property Types	Office, Residential, Industrial, Retail, Land
# of Investors	367
Maximum Leverage	Portfolio 35%; Asset Specific 65%

Fund Characteristics	
# of Investments / Assets	172
Fund NAV (\$)	\$30.8 billion
Fund GAV (\$)	\$41.8 billion
Cash & Equivalents (% of NAV)	4%
Portfolio Leverage (%)	26%
Occupancy %	93%
# of Metro Areas Invested	53
Wtd Avg Cost of Debt	4.0%
% Debt that is Fixed	83.3%
Net Investor Flows this Qtr (\$)	\$531.0 million
Size of Contribution Queue (\$)	\$778.0 million

Contact Information	
Portfolio Manager	Kimberly Adams
PM Tenure	July 2012
Address	270 Park Avenue, 7th Floor
	New York, NY 10017
Phone	212-648-2176
Email	kimberly.a.adams@jpmorgan.com

General Firm Information	
Year Founded	1871 (Firm); 1970 (Real Estate)
AUM (\$)	\$1.8 trillion



Performance (%, gross of fees)							
		Fund				NFI ODCE	
	Income	Apprec	Total		Income	Apprec	Total
Quarter	1.1%	1.0%	2.1%		1.1%	1.0%	2.1%
YTD	3.4%	2.6%	6.1%		2.2%	2.1%	4.3%
1-Year	4.5%	4.9%	9.7%		4.6%	7.0%	10.1%
3-Years	4.9%	6.9%	12.1%		4.9%	7.8%	12.4%
5-Years	5.1%	7.3%	12.7%		5.1%	7.3%	12.4%

Ten Largest Investments (GMV)						
Investment Name	GMV (\$)	MSA	Туре	%		
Edens	\$1,800,402,296	Various	Retail	4.3%		
Donahue Schriber	\$1,622,427,320	Various	Retail	3.9%		
1345 Ave. Americas	\$1,077,335,277	New York-No. NJ	Office	2.6%		
200 Fifth Avenue	\$966,010,434	New York-No. NJ	Office	2.3%		
Century Plaza Towers	\$927,955,048	Los Angeles, CA	Office	2.2%		
Back Bay	\$904,129,121	Boston, MA	Office	2.2%		
North Park Ctr.	\$882,133,764	Dallas, TX	Retail	2.1%		
Valley Fair Mall	\$873,657,298	San Jose, CA	Retail	2.1%		
Royal Hawaiian Ctr.	\$857,738,548	Honolulu, HI	Retail	2.1%		
Alliance Texas	\$821,856,475	Dallas, TX	Industrial	2.0%		

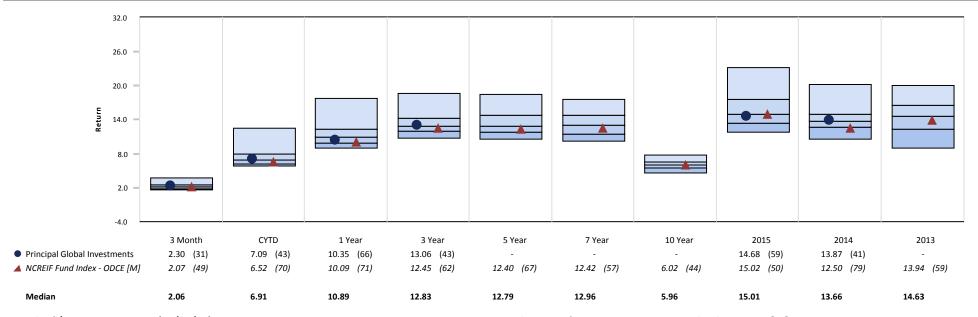
Top Six MSAs	
MSA	% of GMV
New York-No. NJ	15.0%
Los Angeles, CA	10.9%
Boston, MA	9.8%
Dallas-Fort Worth, TX	8.8%
San Francisco, CA	6.5%
Houston, TX	5.2%

Quarterly Fund Activity				
Acquisitions	-,			
# of Investments	3			
Total GMV (\$)	\$373.2 million			
Dispositions				
# of Investments	6			
Total GMV (\$)	\$893.8 million			
Marked to Market				
# Written Up	55			
# Written Down	29			

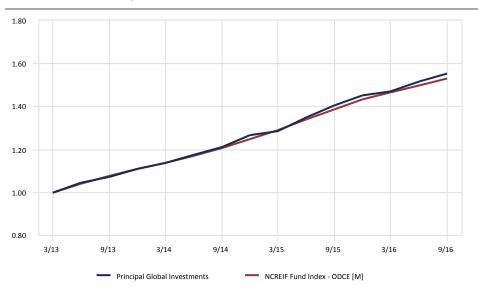
#### **Principal Global Investments**

September 30, 2016

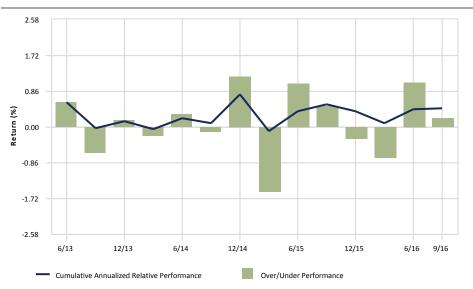
#### Peer Group Analysis - IM U.S. Open End Private Real Estate (SA+CF)



#### Growth of \$1 - Since Inception (04/01/13)



#### Relative Performance vs. NCREIF Fund Index - ODCE [M]



#### PRINCIPAL REAL ESTATE: U.S. Property Account

Quarter Ending: September 30, 2016

General Fund Information	
Structure	Insurance Co. Separate Account
Inception Date	1/31/1982
Termination Date	Infinite Life
L/T Return Objective	Returns = NFI-ODCE Equal Weight
Eligible Property Types	Office, Residential, Industrial, Retail, Hotel, Land
# of Investors	7,758
Maximum Leverage	33%

Fund Characteristics	
# of Investments / Assets	147
Fund NAV (\$)	\$7.0 billion
Fund GAV (\$)	\$9.3 billion
Cash & Equivalents (% of NAV)	1%
Portfolio Leverage (%)	22%
Occupancy %	94.2% (core); 85.4% (total portfolio)
# of Metro Areas Invested	44
Wtd Avg Cost of Debt	3.4%
% Debt that is Fixed	70%
Net Investor Flows this Qtr (\$)	\$44.9 million
Size of Contribution Queue (\$)	\$69.4 million

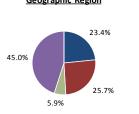
Contact Information	
Portfolio Manager	John Berg
PM Tenure	January 1994
Address	801 Grand Avenue
	Des Moines, IA 50392
Phone	515-248-8261
Email	berg.john@principal.com

General Firm Information	
Year Founded	1999
AUM (\$)	\$72.3 billion (Real Estate)

Property Type	
15.2% 0.9%	43.1%

**Fund Diversification** 







Performance	e (%, gross	of fees)				
		Fund			NFI ODCE	
	Income	Apprec	Total	Income	Apprec	Total
Quarter	1.2%	1.1%	2.3%	1.1%	0.9%	2.1%
YTD	3.8%	3.2%	7.1%	3.4%	3.1%	6.5%
1-Year	5.0%	5.1%	10.4%	4.6%	5.3%	10.1%
3-Years	5.2%	7.6%	13.1%	4.8%	7.3%	12.4%
5-Years	5.4%	7.4%	13.1%	5.0%	7.1%	12.4%

Ten Largest Investment	ts (GMV)			
Investment Name	GMV (\$)	MSA	Туре	%
Park Place	\$401,760,000	Santa Ana, CA	Off./Ret.	4.3%
1370 Ave. Americas	\$350,400,000	New York, NY	Office	3.8%
Energy Center	\$326,900,000	Houston, TX	Office	3.5%
Watermark E. & W.	\$279,200,000	Cambridge, MA	MF/Ret.	3.0%
Charles Park	\$249,800,000	Cambridge, MA	Office	2.7%
Burbank Empire Ctr.	\$237,900,000	Los Angeles, CA	Retail	2.6%
555 City Center	\$211,600,000	Oakland, CA	Office	2.3%
112th at 12th Street	\$200,000,000	Seattle, WA	Office	2.2%
J.W. Marriott	\$192,984,000	San Antonio, TX	Hotel	2.1%
500 W. Second Street	\$185,250,000	Austin, TX	Office	2.0%

Geographic Region	<u>Property Size</u>
23.4%	5.2% 15.9% 27.3% 27.7%

■ < \$25 million

■ \$50-100 million

= > \$200 million

Top Six MSAs	
MSA	% of GMV
New York, NY	8.8%
Seattle, WA	7.3%
Houston, TX	5.9%
Cambridge, MA	5.6%
Washington, D.C.	5.5%
Austin, TX	5.5%

■ \$25-50 million

■ \$100-200 million

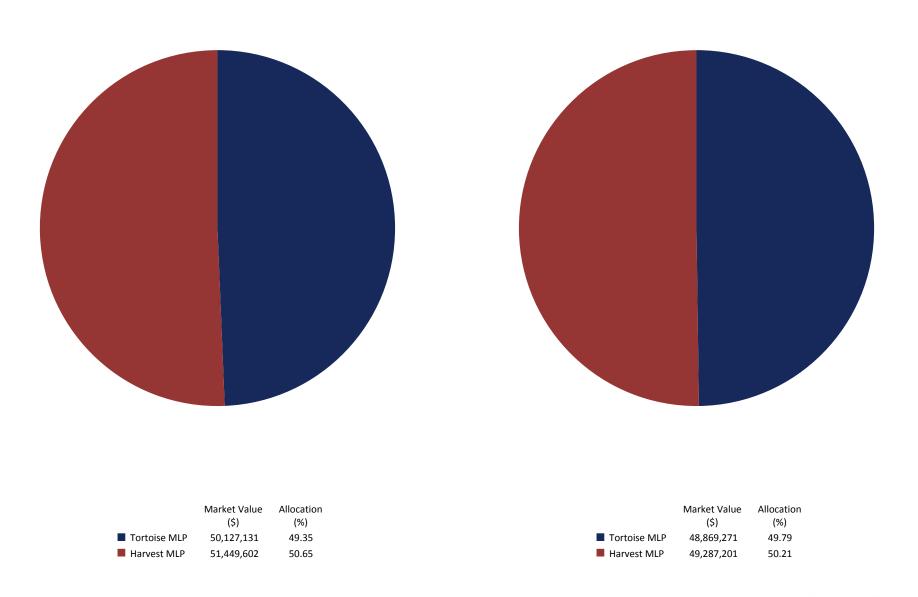
Quarterly Fund Activi	ty
Acquisitions	
# of Investments	1
Total GMV (\$)	\$92.5 million
Dispositions	
# of Investments	4
Total GMV (\$)	\$98.4 million
Marked to Market	
# Written Up	87
# Written Down	16

MLPs/Energy

MLPs/Energy Asset Allocation Chart September 30, 2016

September 30, 2016: \$101,576,733

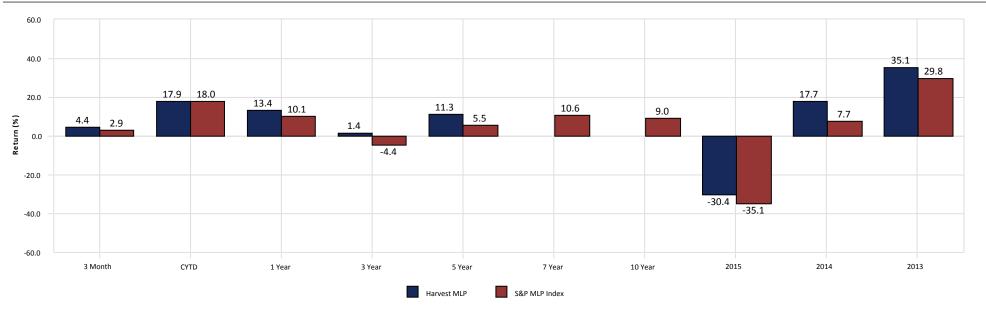
June 30, 2016 : \$98,156,472



Harvest MLP

September 30, 2016

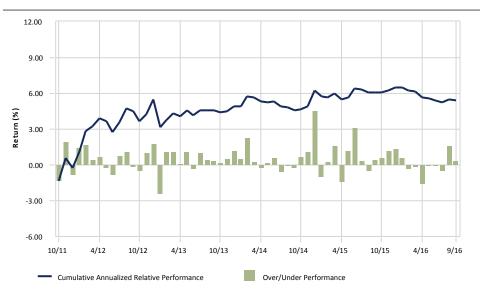
#### **Comparative Performance**



#### Growth of \$1 - Since Inception (03/01/11)



#### Relative Performance vs. S&P MLP Index

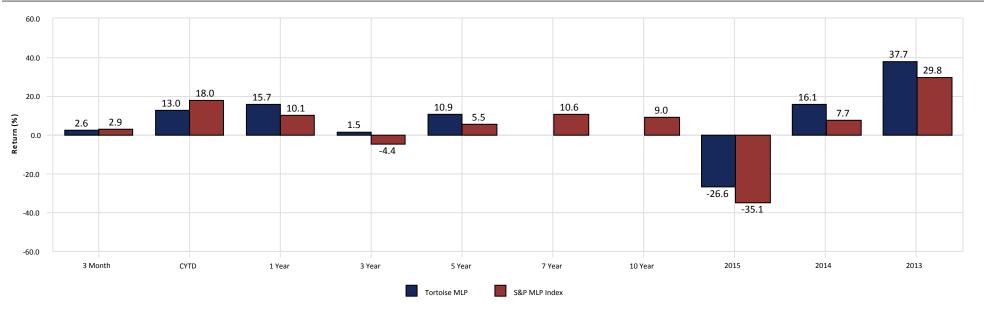


gross of fees

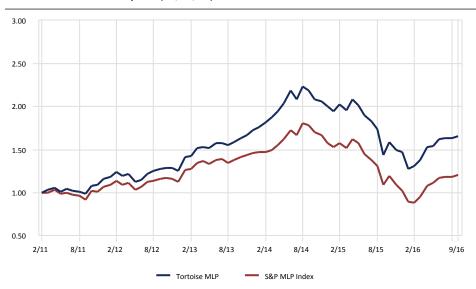
**Tortoise MLP** 

September 30, 2016

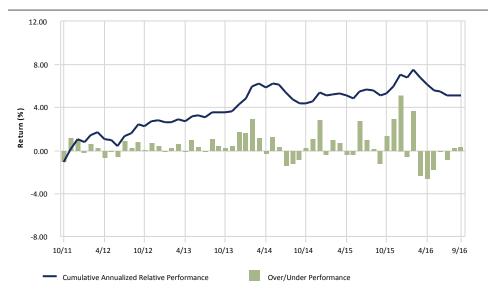
#### **Comparative Performance**



#### Growth of \$1 - Since Inception (03/01/11)



#### Relative Performance vs. S&P MLP Index



gross of fees

**Appendix** 

Benchmark Composition Total Fund & US Equity & International Equity As of September 30, 2016

Total Fund Policy Index				US Equity Index	
	<u>(%)</u>		<u>(%)</u>		<u>(%)</u>
Mar-2016		Jul-2009		Jul-2009	
Russell 3000 Index	39.00	Russell 3000 Index	40.00	Russell 3000 Index	100.00
MSCI AC World ex USA (Net)	20.00	MSCI EAFE Index	20.00	law 4000	
Blmbg. Barc. U.S. Aggregate	20.50	Blmbg. Barc. U.S. Aggregate	25.00	Jan-1988	100.00
NCREIF Fund Index - ODCE [M]	15.00	NCREIF Fund Index - ODCE [M]	15.00	Dow Jones US Total Stock Market Index	100.00
S&P MLP Index	5.50	Oct-2008			
Mar-2013		Dow Jones US Total Stock Market Index	50.00		
Russell 3000 Index	35.00	MSCI EAFE Index	10.00		
MSCI AC World ex USA (Net)	20.00	BofA Merrill Lynch Gov Corp Master	30.00		
Blmbg. Barc. U.S. Aggregate	22.50	NCREIF Fund Index - ODCE [M]	10.00	International Equity Index	
NCREIF Fund Index - ODCE [M]	15.00	Amy 1000			<u>(%)</u>
S&P MLP Index	7.50	Apr-1989  Dow Jones US Total Stock Market Index	50.00	Oct-2009	
Apr-2012		MSCI EAFE Index	10.00	NACCI AC Marid av LICA	100.00
Russell 3000 Index	40.00	BofA Merrill Lynch Gov Corp Master	35.00	Feb-1999	
MSCI AC World ex USA (Net)	20.00	NCREIF Fund Index - ODCE [M]		MSCI EAFE Index	100.00
Blmbg. Barc. U.S. Aggregate	25.00				
NCREIF Fund Index - ODCE [M]	10.00				
S&P MLP Index	5.00				
l 2014				Thompson Siegal Policy	
Jun-2011	40.00				<u>(%)</u>
Russell 3000 Index MSCI EAFE Index	40.00 20.00			Oct-2009	
				Blmbg. Barc. U.S. Aggregate	100.00
Blmbg. Barc. U.S. Aggregate	25.00				
NCREIF Fund Index - ODCE [M]	10.00			Dec-1975	
S&P MLP Index	5.00			BofA Merrill Lynch Gov Corp Master	100.00

**Benchmark Composition Managers** 

As of September 30, 2016

Thompson

<u>(%)</u>

Oct-2009

Blmbg. Barc. U.S. Aggregate 100.00

Dec-1975

BofA Merrill Lynch Gov Corp Master 100.00

September 30, 2016

	1 Month	3 Month	CYTD	1 Year	3 Year	5 Year	7 Year	10 Year	Since Inception	Inception Date
US Equity: All Cap										
Russell 3000 Index	0.16	4.40	8.18	14.96	10.44	16.36	13.18	7.37	11.68	01/01/1979
Dow Jones US Total Stock Market Index	0.18	4.43	8.14	14.93	10.39	16.30	13.22	7.49	10.06	01/01/1987
US Equity: Large Cap										
Russell 1000 Index	0.08	4.03	7.92	14.93	10.78	16.41	13.25	7.40	11.72	01/01/1979
Russell 1000 Value Index	-0.21	3.48	10.00	16.19	9.70	16.15	12.34	5.85	12.09	01/01/1979
Russell 1000 Growth Index	0.37	4.58	6.00	13.76	11.83	16.60	14.11	8.85	10.99	01/01/1979
S&P 500	0.02	3.85	7.84	15.43	11.16	16.37	13.17	7.24	10.03	01/01/1926
Dow Jones Industrials Average	-0.41	2.78	7.21	15.46	9.23	13.66	12.27	7.34	10.15	01/01/1955
US Equity: Mid Cap										
Russell Midcap Index	0.20	4.52	10.26	14.25	9.70	16.67	14.11	8.32	13.30	01/01/1979
Russell Midcap Value Index	0.42	4.45	13.72	17.26	10.49	17.38	14.27	7.89	11.96	01/01/1986
Russell Midcap Growth Index	-0.05	4.59	6.84	11.24	8.90	15.85	13.90	8.51	10.66	01/01/1986
NASDAQ Composite Index	1.96	10.02	7.09	16.42	13.45	18.54	15.33	10.08	10.22	01/01/1995
US Equity: SMID Cap										
Russell 2500 Index	0.48	6.56	10.80	14.44	7.77	16.30	13.40	7.94	12.73	01/01/1979
Russell 2500 Value Index	0.66	6.18	14.51	17.68	8.05	16.29	12.81	6.92	11.35	01/01/1986
Russell 2500 Growth Index	0.29	6.98	6.95	11.02	7.43	16.20	13.98	8.82	9.50	01/01/1986
US Equity: Small Cap										
Russell 2000 Index	1.11	9.05	11.46	15.47	6.71	15.82	12.49	7.07	11.48	01/01/1979
Russell 2000 Value Index	0.79	8.87	15.49	18.81	6.77	15.45	11.60	5.78	13.00	01/01/1979
Russell 2000 Growth Index	1.44	9.22	7.48	12.12	6.58	16.15	13.32	8.29	9.61	01/01/1979
Russell Microcap	2.94	11.25	9.38	13.47	5.84	16.37	11.79	5.50	7.03	07/01/2000

September 30, 2016

	1 Month	3 Month	CYTD	1 Year	3 Year	5 Year	7 Year	10 Year	Since Inception	Inception Date
International Equity: Unrestrained, All Cap										
MSCI World (Net)	0.53	4.87	5.55	11.36	5.85	11.63	8.50	4.47	8.61	01/01/1970
MSCI World ex-US (Net)	1.22	6.29	3.12	7.16	0.33	6.89	4.05	1.88	8.70	01/01/1970
MSCI AC World Index (Net)	0.61	5.30	6.60	11.96	5.17	10.63	7.77	4.34	4.37	01/01/2001
MSCI AC World ex USA (Net)	1.23	6.91	5.82	9.26	0.18	6.04	3.66	2.16	4.21	01/01/2001
S&P Developed Ex-US BMI	1.49	6.73	4.62	9.07	1.56	7.93	5.20	2.85	5.68	07/01/1989
S&P Developed Ex-US SmallCap	2.66	7.97	7.13	12.71	5.05	10.63	8.01	4.60	6.34	07/01/1989
International Equity: Developed Market, Large Cap										
MSCI EAFE Index	1.27	6.50	2.20	7.06	0.93	7.88	4.71	2.30	9.35	01/01/1970
MSCI EAFE Index (Net)	1.23	6.43	1.73	6.52	0.48	7.39	4.24	1.82	8.50	02/01/1985
MSCI EAFE Value Index (Net)	0.97	7.99	0.82	3.52	-1.49	5.99	2.44	0.44	10.94	01/01/1975
MSCI EAFE Growth Index (Net)	1.49	4.96	2.63	9.47	2.39	8.73	5.99	3.14	8.40	01/01/1975
S&P EPAC BMI	1.52	6.94	3.26	8.41	1.78	8.47	5.39	2.84	5.59	07/01/1989
S&P EPAC LargeMidCap	1.28	6.64	2.88	7.83	1.05	7.88	4.85	2.51	5.42	07/01/1989
S&P EPAC LargeMidCap Value	1.17	7.90	1.92	5.44	-0.20	7.47	4.17	2.15	5.90	07/01/1989
S&P EPAC LargeMidCap Growth	1.42	5.51	3.83	10.21	2.27	8.25	5.49	2.85	4.91	07/01/1989
International Equity: Developed Market, Small Cap										
MSCI EAFE Small Cap (Net)	2.97	8.64	5.19	12.33	5.08	11.07	8.11	4.39	8.36	01/01/2001
S&P EPAC SmallCap	2.73	8.49	5.27	11.44	5.59	11.50	8.24	4.76	6.30	07/01/1989
S&P EPAC SmallCap Value	2.47	8.92	6.00	11.03	5.44	11.63	8.21	4.86	7.28	07/01/1989
S&P EPAC SmallCap Growth	2.99	8.07	4.57	11.86	5.74	11.35	8.26	4.64	5.23	07/01/1989
International Equity: Emerging Market										
MSCI Emerging Markets (Net)	1.29	9.03	16.02	16.78	-0.56	3.03	2.27	3.94	9.14	01/01/2001
S&P Emerging BMI	1.15	8.85	15.54	18.38	0.85	3.99	3.07	5.12	7.51	01/01/1998
S&P Emerging LargeMidCap	1.18	8.94	16.21	18.41	0.85	3.72	2.80	4.89	7.47	01/01/1998

September 30, 2016

	1 Month	3 Month	CYTD	1 Year	3 Year	5 Year	7 Year	10 Year	Since Inception	Inception Date
S&P Emerging SmallCap	0.99	8.38	11.87	18.24	0.86	5.49	4.52	6.78	7.81	01/01/1998
International Equity: Developed Market, Country Specific										
MSCI Australia	2.46	7.95	10.84	21.95	-1.36	5.83	4.12	5.39	8.86	01/01/1970
MSCI Austria	5.31	16.86	5.03	12.23	-7.32	1.19	-4.68	-7.78	7.52	01/01/1970
MSCI Belgium	4.11	5.03	5.37	20.02	10.52	18.27	10.98	1.71	11.64	01/01/1970
MSCI Canada	1.18	5.04	21.33	15.37	-0.43	3.12	3.14	3.58	9.24	01/01/1970
MSCI Denmark	-4.08	-6.17	-7.15	-0.93	10.80	17.27	11.92	9.12	13.10	01/01/1970
MSCI Finland	3.60	7.42	1.12	10.87	5.56	12.20	4.34	1.68	10.57	01/01/1982
MSCI France	1.32	6.43	2.88	4.73	0.06	8.75	2.99	1.47	9.68	01/01/1970
MSCI Germany	0.39	10.02	2.01	9.87	0.97	10.57	5.61	4.40	9.59	01/01/1970
MSCI Greece	-5.32	0.99	-23.67	-38.17	-41.95	-26.96	-35.60	-27.79	-2.40	01/01/1988
MSCI Hong Kong	3.65	11.92	12.34	19.09	6.66	12.20	8.70	8.14	14.58	01/01/1970
MSCI Ireland	-2.02	7.50	-6.89	-0.36	7.52	15.53	6.36	-7.14	4.50	01/01/1988
MSCI Italy	-2.56	2.34	-18.34	-20.20	-5.38	1.23	-5.25	-5.79	4.76	01/01/1970
MSCI Japan	1.74	8.76	2.87	12.52	3.65	7.63	5.44	1.24	9.13	01/01/1970
MSCI Netherlands	1.16	9.23	7.51	10.91	4.78	12.51	6.78	3.98	11.89	01/01/1970
MSCI New Zealand	0.03	12.89	33.87	58.19	9.58	14.42	12.86	8.25	12.10	01/01/1982
MSCI Norway	4.34	6.36	11.68	11.31	-7.20	1.79	2.20	1.43	10.22	01/01/1970
MSCI Portugal	0.43	6.47	7.79	12.51	-11.52	-6.08	-7.81	-5.94	1.61	01/01/1988
MSCI Singapore	1.65	-0.13	5.29	9.77	-3.46	3.33	3.93	5.64	11.68	01/01/1970
MSCI Spain	1.42	9.45	-2.73	-5.16	-4.24	1.37	-3.55	-0.53	8.33	01/01/1970
MSCI Sweden	2.03	7.48	2.68	5.21	-1.05	9.29	7.87	5.34	13.00	01/01/1970
MSCI Switzerland	0.83	2.66	-0.19	1.85	1.97	10.41	8.18	5.42	11.25	01/01/1970
MSCI United Kingdom	1.02	3.99	0.85	1.60	-1.75	6.04	4.86	1.45	9.62	01/01/1970
International Equity: Emerging Market, Country Specific										
	5.34	2.78	19.71	50.43	19.30	7.67	8.64	4.43	14.89	01/01/1988
MSCI Argentina	3.34	2.70	13./1	50.43	13.30	7.07	0.04	4.43	14.03	01/01/1200

September 30, 2016

	1 Month	3 Month	CYTD	1 Year	3 Year	5 Year	7 Year	10 Year	Since Inception	Inception Date
MSCI Brazil	0.35	11.37	63.15	58.00	-7.85	-5.29	-5.72	2.81	14.56	01/01/1988
MSCI Chile	-0.42	-1.70	14.12	13.01	-8.11	-5.16	-0.75	3.83	13.89	01/01/1988
MSCI China	2.55	13.96	8.80	13.18	4.14	8.53	3.91	7.98	0.52	01/01/1993
MSCI Colombia	-0.40	2.76	29.45	17.28	-18.71	-7.92	-1.93	5.11	11.54	01/01/1993
MSCI Czech Republic	2.53	-0.37	0.96	-10.44	-5.99	-5.18	-5.36	-0.16	8.81	01/01/1995
MSCI Egypt	-1.15	21.55	15.59	6.53	10.93	9.95	0.27	2.42	13.91	01/01/1995
MSCI Hungary	-0.29	10.81	23.90	38.04	4.71	6.71	-1.81	-1.09	10.15	01/01/1995
MSCI India	-0.92	5.92	7.12	6.14	11.18	5.29	3.06	5.17	8.57	01/01/1993
MSCI Indonesia	2.06	9.54	27.34	53.92	7.71	2.33	6.94	10.89	10.57	01/01/1988
MSCI Israel	-3.88	-1.83	-14.91	-7.17	7.52	5.66	1.25	4.36	7.36	04/01/1995
MSCI Jordan	0.11	-2.10	-6.35	-5.32	0.24	-3.32	-6.03	-6.88	2.29	01/01/1988
MSCI Korea	1.37	10.97	15.34	21.94	0.13	5.29	4.95	3.95	6.67	01/01/1988
MSCI Malaysia	-2.94	-1.52	4.92	13.17	-7.56	0.59	4.37	7.15	7.10	01/01/1988
MSCI Mexico	-3.33	-2.20	-1.25	-2.36	-5.96	1.70	3.44	2.84	16.84	01/01/1988
MSCI Morocco	2.58	8.53	22.05	17.87	2.62	-3.85	-2.56	1.80	8.51	01/01/1995
MSCI Pakistan	1.66	6.58	21.57	21.06	10.67	14.71	13.44	4.82	7.45	01/01/1993
MSCI Peru	0.14	1.09	51.77	39.46	5.69	1.70	2.34	10.29	14.33	01/01/1993
MSCI Philippines	-5.61	-5.22	7.64	7.16	6.63	14.57	15.53	13.18	8.34	01/01/1988
MSCI Poland	-1.47	3.39	-2.65	-15.21	-13.10	-2.82	-2.29	-2.64	5.15	04/01/1995
MSCI Russia	3.87	8.90	31.34	26.10	-9.17	-1.67	-1.16	-4.15	10.16	01/01/1995
MSCI South Africa	5.87	6.39	23.31	10.35	-0.02	3.20	4.65	6.46	6.80	04/01/1995
MSCI Taiwan	2.97	12.35	22.23	23.73	7.71	9.03	7.31	6.19	6.38	01/01/1988
MSCI Thailand	-3.51	7.32	29.27	21.29	1.23	8.33	10.90	10.84	7.92	01/01/1988
MSCI Turkey	-0.85	-5.26	6.47	6.21	-9.33	-2.39	-1.46	2.06	8.48	01/01/1988
US Fixed Income										
Blmbg. Barc. U.S. Universal Index	0.02	0.96	6.69	6.11	4.27	3.62	4.53	5.00	6.49	01/01/1990
Blmbg. Barc. U.S. Aggregate	-0.06	0.46	5.80	5.19	4.03	3.08	4.10	4.79	7.68	01/01/1976

September 30, 2016

	1 Month	3 Month	CYTD	1 Year	3 Year	5 Year	7 Year	10 Year	Since Inception	Inception Date
Blmbg. Barc. U.S. Intermediate Aggregate	0.17	0.31	4.10	3.57	3.09	2.56	3.49	4.34	7.44	01/01/1976
Blmbg. Barc. U.S. Treasury	-0.13	-0.28	5.07	4.09	3.38	2.18	3.44	4.45	7.33	01/01/1973
Blmbg. Barc. U.S. TIPS	0.55	0.96	7.27	6.58	2.40	1.93	4.00	4.48	5.68	03/01/1997
Blmbg. Barc. U.S. Gov't/Credit	-0.19	0.40	6.66	5.86	4.22	3.24	4.28	4.86	7.47	01/01/1973
Blmbg. Barc. Intermed. U.S. Government/Credit	0.13	0.16	4.24	3.52	2.80	2.45	3.33	4.17	7.17	01/01/1973
Blmbg. Barc. U.S. Government	-0.12	-0.25	4.96	4.00	3.32	2.16	3.32	4.34	7.32	01/01/1973
Blmbg. Barc. U.S. Agency	0.09	0.14	3.42	2.76	2.61	1.86	2.54	3.74	7.26	01/01/1976
Blmbg. Barc. U.S. Credit Index	-0.28	1.23	8.86	8.30	5.44	4.83	5.74	5.77	6.57	01/01/1992
Blmbg. Barc. U.S. Mortgage Backed Securities	0.28	0.60	3.72	3.61	3.61	2.65	3.49	4.65	7.75	01/01/1976
Blmbg. Barc. U.S. Corp: High Yield	0.67	5.55	15.11	12.73	5.28	8.34	8.75	7.71	9.05	07/01/1983
BofAML Convertible Bonds, All Qualities	1.97	8.13	8.52	10.33	7.91	12.12	10.35	7.78	9.39	01/01/1988
BofA Merrill Lynch High Yield Master II	0.65	5.49	15.32	12.82	5.27	8.24	8.62	7.59	8.47	09/01/1986
BofA Merrill Lynch 1-3 Year Treasury	0.12	-0.11	1.32	0.88	0.85	0.69	1.03	2.25	6.19	01/01/1978
90 Day US Treasury Bill	0.04	0.07	0.19	0.18	0.09	0.08	0.09	0.89	3.59	01/01/1926
CPI - All Urban Consumers	0.29	0.46	1.24	1.48	1.04	1.24	1.59	1.74	2.89	01/01/1926
International Fixed Income										
Citigroup World Government Bond	0.65	0.30	11.07	9.71	1.78	0.77	1.90	4.10	7.41	01/01/1985
Citigroup World Government Bond Hedged	-0.06	-0.03	6.68	6.76	5.44	4.30	4.21	4.61	6.94	01/01/1985
Real Estate										
FTSE NAREIT Composite REIT	-1.37	-0.88	12.73	20.76	13.49	15.39	15.01	5.77	9.82	01/01/1972
FTSE NAREIT Equity REIT Index	-1.76	-1.43	11.75	19.86	14.22	15.91	15.56	6.35	12.07	01/01/1972
FTSE EPRA/NAREIT Developed Index	-0.90	1.46	10.97	15.85	8.59	13.16	10.77	4.16	7.77	01/01/1990
NCREIF Fund Index-ODCE (VW)	-	2.07	6.52	10.08	12.45	12.40	12.42	6.02	8.75	01/01/1978
NCREIF Property Index	-	1.77	6.13	9.22	11.31	11.18	11.09	7.22	9.30	01/01/1978
NCREIF Timberland Index	-	0.67	1.40	3.28	7.60	6.91	4.33	6.37	12.15	04/01/1987

September 30, 2016

	1 Month	3 Month	CYTD	1 Year	3 Year	5 Year	7 Year	10 Year	Since Inception	Inception Date
Real Assets										
S&P GSCI Composite Index	4.14	-4.15	5.30	-12.21	-22.16	-12.61	-8.27	-9.04	6.92	01/01/1970
Bloomberg Commodity Index Total Return	3.13	-3.86	8.85	-2.59	-12.35	-9.37	-5.51	-5.33	2.35	02/01/1991
S&P North American Natural Resources Sector	3.76	4.23	24.62	22.36	-3.58	2.98	3.12	3.08	7.26	09/01/1996
Alerian MLP	1.85	1.07	15.94	12.74	-4.82	4.96	10.22	8.98	14.07	01/01/1996
Hedge Fund										
Credit Suisse/Tremont Hedge Fund Index	0.12	1.75	0.11	-0.01	2.54	4.26	4.54	4.22	7.79	01/01/1994
HFRI Fund of Funds Composite Index	0.44	2.42	-0.22	0.51	2.17	3.17	2.49	1.77	6.69	01/01/1990
HFRI FOF: Conservative Index	0.42	1.91	0.31	0.32	2.16	3.12	2.57	1.51	5.83	01/01/1990
HFRI ED: Distressed/Restructuring	1.05	5.27	8.91	5.34	1.00	4.90	5.38	3.80	10.70	01/01/1990
HFRI Equity Hedge (Total)	1.03	4.65	4.23	6.04	3.23	5.61	4.31	3.33	11.54	01/01/1990
HFRI EH: Equity Market Neutral	0.24	0.83	0.98	2.11	3.63	3.94	2.62	2.07	6.39	01/01/1990
HFRI Event-Driven (Total)	0.68	4.31	6.59	6.17	2.55	5.28	5.29	4.28	10.50	01/01/1990
HFRI Macro (Total)	-0.40	-1.07	1.66	1.52	2.57	0.70	1.31	3.36	10.58	01/01/1990

# Glossary

<u>Term</u>	<u>Description</u>
Simple Alpha (Excess or Relative Return)	The arithmetic difference between the portfolio's return and the benchmark's return.
Alpha	A measure of the difference between a portfolio's actual returns and its expected performance, given its level of risk as measured by beta. It is a measure of the portfolio's historical performance not explained by movements of the market, or a portfolio's non-systematic return.
Asset Allocation Effect	In attribution analysis, the incremental return attibutable to diverging from the target weights of the policy benchmark holding all other factors constant.
Beta	Also called systematic risk or non-diversifiable risk, beta measures the sensitivity of asset returns to the market (benchmark). In isolation a lower beta is considered less risky but does not distinguish between upside and downside risk.
Consistency	The percentage of periods that a product achieved a rate of return higher than that of its benchmark. The higher the consistency figure, the more value a manager has contributed to the product's performance.
Down Market Capture	The ratio of average portfolio return over the benchmark during periods of negative benchmark return. Lower values indicate better product performance.
Excess Risk	A measure of the standard deviation of a portfolio's performance relative to the risk free return.
Information Ratio	Measured by dividing the active rate of return by the tracking error. The higher the Information Ratio, the more value-added contribution by the manager. Negative Information Ratios are difficult to interpret.
Manager Value-Added (Selection Effect)	In attribution analysis, the incremental return attributable to active management; the result of diverging from the benchmark allocation within a given asset class.
Market Timing / Other	In attribution analysis, represents the impact of intra-period shifts in asset allocation. For example a rapidly appreciating asset could have markedly different weights throughout the analysis period (which looks at fixed points in time).

# Glossary

R-Squared	The percentage of portfolio performance explained by the performance of its benchmark; measured on a scale of 0 to 100, with 100 indicating that the portfolio's performance is entirely determined by the benchmark.
Sharpe Ratio	Also called the reward-to-variability ratio, Sharpe Ratio measures the absolute rate of return per unit of risk and is calculated as the Excess Return vs. the Risk Free Rate divided by the standard deviation of the Excess Return. Investors prefer higher Sharpe Ratios (more return per unit of risk).
Standard Deviation	Typically referred to as Volatility or Risk, standard deviation measures the dispersion of actual returns around their average.
Tracking Error	A measure of the standard deviation of a portfolio's performance relative to the performance of an appropriate market benchmark.
Treynor Ratio	Similar to Sharpe ratio, but focuses on beta rather than excess risk (standard deviation). Represents the excess rate of return over the risk free rate divided by the beta. The result is the absolute rate of return per unit of risk. The higher the value, the better the product's historical risk-adjusted performance.
Up Market Capture	The ratio of average portfolio return over the benchmark during periods of positive benchmark return. Higher values indicate better product performance.

#### **DISCLAIMER**

Summit Strategies Group (Summit) has prepared this report for the exclusive use by the client for which it was prepared. The information herein was obtained from various sources, such as the client's custodian(s) accounting statements, commercially available databases, and other economic and financial market data sources. While Summit believes these sources to be reliable, Summit does not guarantee nor shall be liable for the market values, returns, or other information contained in this report. The market commentary, portfolio holdings, and characteristics are as of the date shown and are subject to change. Past performance is not an indication of future performance. No graph, chart, or formula can, in and of itself, be used to determine which securities or investments to buy or sell. Any forward-looking projection contained herein is based on assumptions that Summit believes may be reasonable, but are subject to a wide range of risks, uncertainties, and the possibility of loss. Accordingly, there is no assurance that any estimated performance figures will occur in the amounts and during the periods indicated, or at all. Actual results and performance will differ from those expressed or implied by such forward-looking projections. Any information contained in this report is for informational purposes only and should not be construed to be an offer to buy or sell any securities, investment consulting, or investment management services.

# Investment Manager Instructions for Neuberger Berman Trust Company N.A.

#### **Policy:**

The portfolio under the supervision of Neuberger Berman Trust Company (Neuberger) is intended to be a primarily a domestic fixed income portfolio. Neuberger has been hired to pursue an investment style, which the Board has defined as an actively managed core-plus fixed income style. Neuberger is expected to produce investment returns that are 50 basis points over the Barclays U.S. Aggregate Bond Index on an annualized basis over rolling three-to-five year periods, net of fees, and rank above median compared to their style peers over the same period. It is understood that investment returns are not guaranteed.

#### **Guidelines:**

- A. The investment vehicle used is the Neuberger Berman Core Plus Trust, a collective investment trust. As such, the portfolio will be managed according to the trusts' investment guidelines. A copy of these guidelines is attached to these Instructions as Attachment A. The portfolio shall be constructed primarily as a domestic, investment grade bond portfolio but allowed to invest in "plus" sectors including: high yield bonds, emerging market debt and non-dollar bonds. The portfolio shall be adequately diversified regarding security, industry and sector weights.
- B. Neuberger will be reviewed quarterly based on the following:
  - 1. Adherence to style risk assignment, including portfolio characteristics relative to those of the benchmark.
  - 2. The value-added over the Barclays U.S. Aggregate Bond Index.
  - 3. The trend of value-added over the Barclays U.S. Aggregate Bond Index.
  - 4. The value-added over median similar style investment managers.

These guidelines are not to be construed as restrictive to Neuberger's ability to follow the strategies they consider are most appropriate given the Board's directive, but rather as an exercise of the Board's fiduciary responsibility. If at any time Neuberger feels that these instructions are unrealistic, or may be a hindrance in pursuing their investment style, the Executive Director and the investment consultant are to be notified immediately in writing.

#### ATTACHMENT A

# NEUBERGER BERMAN TRUST COMPANY N.A. CORE PLUS TRUST PORTFOLIO GUIDELINES

#### **Investment Objective:**

The Trustee will seek to earn a return that exceeds the return of the Barclays U.S. Aggregate Bond Index ("the Benchmark") before fees over a market cycle (3-5 years).

#### **Eligible Investments:**

1. All securities contained in the Benchmark, their equivalents, and other instruments as determined by the Trustee.

Eligible Global investments specifically include but are not limited to:

- Treasury, Sovereign, and Agency securities
- Corporate securities
- Agency and non-Agency issued mortgage-backed securities including fixed and adjustable rate passthroughs, collateralized mortgage obligations and other structures such as interest only (IO) and principal only (PO) structures
- Asset-backed securities
- Commercial mortgage-backed securities including Government Agency Multi-Family securities
- Securities issued under Rule 144A (with or without registration rights)
- Non-U.S. dollar fixed income securities (both investment grade and below investment grade)
- U.S. dollar securities issued by foreign entities
- · Floating rate securities
- Inflation linked securities
- Floating rate loans
- High Yield Debt
- Emerging Market Debt
- International fixed income debt
- Cash and cash equivalents as described in the Short-Term Investments Section
- Forward purchase and sales transactions
- Derivatives as specified under the Derivatives Section, which may include exchange-traded and overthe-counter traded financial futures, forwards, options and swaps (interest rate, total return, and credit default swaps – both single name and index)
- Equity received as part of a restructuring or unit offering
- Preferred Instruments
- Corporate Hybrids
- Financial Hybrids
- Contingent convertible capital securities (CoCos)
- Deferred interest securities including, but not limited to, zero coupon bonds and pay-in-kind securities
- When-issued securities
- Securities purchased and sold for delayed settlement
- Subject to compliance with applicable law, affiliated mutual funds or commingled funds
- Exchange Traded Funds
- Foreign Currency Spot Transactions

#### Issuer/Issue Type/Industry restrictions:

1. The maximum holding in a single issue (at time of purchase), excluding any G-10 Sovereign, Government and Government Sponsored Enterprises, is 5% of the portfolio's total market value.

- 2. The maximum holding in a single issuer (at time of purchase), excluding any G-10 Sovereign, Government and Government Sponsored Enterprises is 10% of the portfolio's total market value.
- 3. The maximum holding in IO (interest only) and PO (principal only) securities is 20% of the portfolio's total market value.
- 4. The maximum amount in equity securities and/or equity-like securities including convertible bonds and preferred securities is 3% of the portfolio's total market value.

#### **Extended Sectors: (maximum investment is calculated at the time of purchase)**

- 1. The maximum investment in high yield debt (including bonds, ETFs, mutual funds, or commingled funds) is 30%.
- 2. The maximum investment in emerging markets debt (including bonds, ETFs, mutual funds, or commingled funds) is 30%. Emerging market debt includes sovereign plus non-sovereign issuers of emerging market countries. The Trustee considers emerging market countries to be those included in the JPMorgan Emerging Market Bond Global Diversified Index, the JPMorgan Corporate Emerging Market Bond Diversified Index, JPMorgan Emerging Local Markets Index or the JPMorgan Government Bond Index Emerging Markets Global Diversified, as well as those countries which are not defined as a High Income Organization for Economic Cooperation and Development (OECD) member country by the World Bank.
- 3. The maximum allocation to floating rate loans (including loans, ETFs, mutual funds, or commingled funds) is 30%.
- 4. The maximum allocation to non-agency mortgage backed obligations is 30%.
- 5. The maximum investment in the combined amounts covered by points 1, 2, 3, and 4 above is 30%.

#### **Ratings Restrictions:**

- 1. Any restrictions will be based upon ratings by the Nationally Recognized Statistical Rating Organizations (NRSROs)
- 2. An investment grade bond is defined as follows: If, at the time of investment, the bond is rated investment grade by a majority of independent credit rating agencies or, if unrated, are determined by the Trustee to be of comparable quality. The portfolio may contain investment grade, noninvestment grade, and unrated bonds.

#### **Derivatives:**

- 1. Derivatives may not be used to create a portfolio structure that is incompatible with any guideline contained within this document.
- 2. Excluding Eurodollar futures, the maximum investment, as measured by net notional amount, in derivative instruments is 50% of the portfolio's total market value.
- 3. There is no limit on the maximum notional amount of Eurodollar futures so long as the portfolio does not violate any guideline with respect to overall portfolio duration.
- 4. The maximum investment, as measured by notional amount in a single type of swap transaction, is 25% of the portfolio's total market value excluding currency forwards.
- 5. The maximum investment, as measured by notional amount, in a single-name credit default swap is 5%.
- 6. The maximum investment, as measured by notional amount, in non exchange-traded futures and options (excluding currency instruments) is 5% of the portfolio's market value.

#### **Short-Term Investments:**

- 1. Cash and cash equivalents, excluding liquid assets required as collateral for forward commitments, is typically 10% or lower.
- 2. Permitted short-term securities include:
- Treasury and Agency issues
- Certificates of Deposit (CDs)
- Bankers' Acceptances (BAs)
- Commercial Paper
- Repurchase agreements (Repos) collateralized by U.S. Treasury and Agency securities at a minimum 102%; the maximum maturity for the Repos is seven days.
- Money market funds of commercial banks

#### **Additional Restrictions:**

- 1. The portfolio duration will generally be within +/- 2 years of the Benchmark duration as measured by the Trustee.
- 2. The maximum for forward purchases and sales, excluding mortgage TBA and currency, is 30% calculated based on the portfolio's total market value.
- **3.** The active currency exposure, measured as the difference between the actual exposure in any currency and the benchmark, should not exceed 15%
- **4.** Direct borrowing is prohibited.

#### **Application of Guidelines:**

- 1. The Trustee has three months to address restrictions for securities and sectors which, for any reason, appreciate in relative value after purchase to a level in excess of limits stated in these guidelines.
- 2. With respect to individual securities, the Trustee has 30 days to address restrictions for securities which, for any reason, become ineligible or otherwise do not qualify within the limits of these guidelines.

January 21, 2015 April 10, 2015 July 28, 2016



8182 Maryland Avenue, 6th Floor St. Louis, Missouri 63105 314.727.7211

**Eagle and Brown Advisory Review** 

City of Jacksonville Police & Fire Pension Fund

October 2016

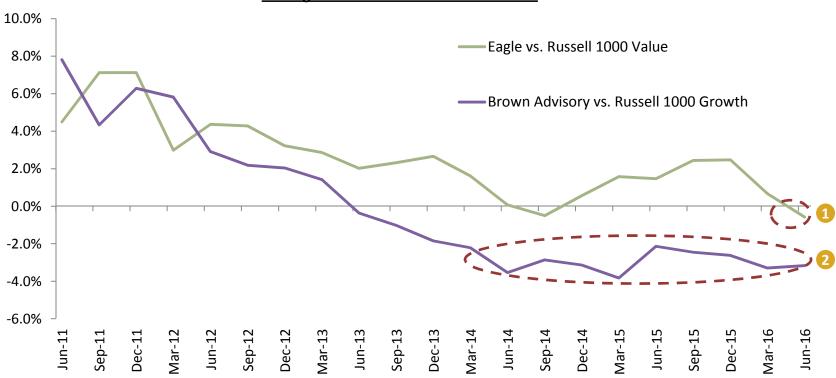
#### **ANNUALIZED PERFORMANCE – NET OF FEES**

Manager vs Benchmark										
As of 6/30/16	1 ye	ear	3 y	ears	5 ye	ears	7 y	ears	10 y	ears
Eagle	-2.9	5% 9.29%		29%	11.17%		15.99%		8.78%	
Russell 1000 Value	2.8	5%	9.87%		11.35%		14.50%		6.13%	
Brown	0.9	5%	9.9	00%	9.78%		15.49%		10.23%	
Russell 1000 Growth	3.0	2%	13.	13.07% 12.35%		15.52%		8.78%		
			Ca	alendar Yea	r Return					
	YTD 2016	2015	2014	2013	2012	2011	2010	2009	2008	2007
Eagle	-1.89%	1.15%	12.28%	35.86%	17.47%	4.86%	20.57%	32.17%	-34.65%	8.03%
Russell 1000 Value	6.30%	-3.83%	13.45%	32.53%	17.51%	0.39%	15.51%	19.69%	-36.85%	-0.17%
Brown	-1.44%	7.71%	6.86%	29.42%	16.18%	0.12%	25.36%	53.05%	-36.27%	11.84%
Russell 1000 Growth	1.36%	5.67%	13.05%	33.48%	15.26%	2.64%	16.71%	37.21%	-38.44%	11.81%

Performance reflects City of Jacksonville Police & Fire Pension Fund net of fees returns, linked with composite net of fees returns to lengthen performance history as necessary.

#### **HISTORICAL PERFORMANCE SUMMARY – NET OF FEES**





- 1 A historically strong relative performer, Eagle's three-year relative performance (primarily due to performance over the past year) has fallen slightly below over the most recent three-year period.
- 2 After outperforming on a three-year rolling basis historically, Brown Advisory's performance has significantly trailed its benchmark in recent years.

#### **EAGLE CAPITAL MANAGEMENT, LLC – EAGLE EQUITY**

#### **FIRM DETAILS**

Address: 499 Park Ave.

New York, NY 10022

Phone: 212.293.4040
Asset Class: Large Cap Value
Benchmark: Russell 1000 Value

Founded: 1988

Ownership: 100% employee owned
Assets Under Management: \$25.0 billion

#### PRODUCT DETAILS

Inception: December 1988

Assets Under Management: \$25.0 billion

Vehicles Offered: SA (closed)

Separate Account Minimum: \$5 million Portfolio Managers/Dual Role PMs: 1

Avg. Yrs of Experience: 48 Avg. Yrs at Firm: 28 Research Analysts: 5 Avg. Yrs of Experience: 20

Avg. Yrs at Firm: 13

Fee Schedule (SA): 1.00% on the first \$5 million

0.75% on the balance

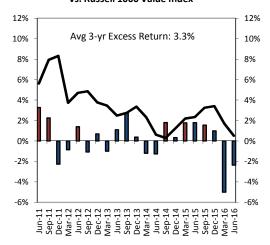
(Performance-based fees are available)

#### CHARACTERISTICS

	<u>Portfolio</u>	Benchmark
No of Securities:	27	692
Portfolio Turnover:	20%	N/A
Dividend Yield:	1.1%	2.6%
Equity P/E:	18.3x	17.9x
Avg. Mkt Cap: \$16	6.0 billion	\$114.1 billion
Last 3 Years:		
Tracking Error:	4.4%	N/A
Information Ratio:	0.1	N/A
Sharpe Ratio:	1.0	1.1

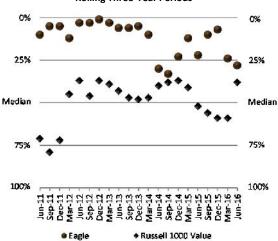
#### **ROLLING PERFORMANCE AND RANKINGS**

# Three-Year Rolling/Quarterly Excess Performance vs. Russell 1000 Value Index



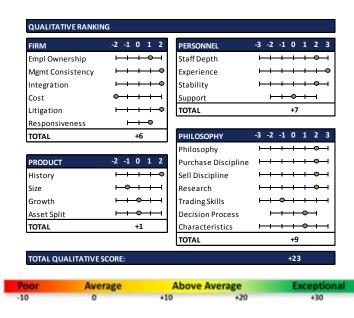
Quarterly Excess Return When Benchmark is Negative
Quarterly Excess Return When Benchmark is Positive
3-Year Rolling Excess Performance

# Manager vs. Large Cap Value Universe Rolling Three-Year Periods



#### QUALITATIVE OVERVIEW

- Eagle Capital Management, LLC was founded in late 1988 by Ravenel and Beth Curry. After the passing of Beth in 2015, 10 employees own 100% of the firm. Ravenel has been the portfolio manager since inception, though the strategy has become more team oriented over the last 10 years. Ravenel was formerly a partner at H.C. Wainwright and the portfolio manager of the Duke Endowment prior to co-founding ECM.
- This firm is focused on one strategy. Ravenel Curry leads the six-person team and is supported by Richard Ong, Mary Kush, Boykin Curry, Alex Henry, and Adrian Meli.
- Through industry contacts, reports, other investors, and trade shows, the team
  generates 100 new ideas a year. These are added to an existing inventory of 30 to 40
  names per analyst. From this pool, approximately 50 names undergo a rigorous
  research process to identify companies with superior management, attractive current
  valuation, and a plan for significant growth that has not yet been recognized by the
  market. Approximately 5-10 of these names will be added to the portfolio each year.
- The strategy is opportunistic with regard to market cap, often with sizable positions in the mid cap space. Position sizes are limited to 5% at the time of purchase and 10% overall. Sector and industry exposure is limited to 25%. Expected alpha is 200 to 300 bps over the S&P 500, though they are comfortable with any benchmark over a 3- to 5year horizon. Portfolios hold 25-35 stocks, and turnover averages 15%-30%.



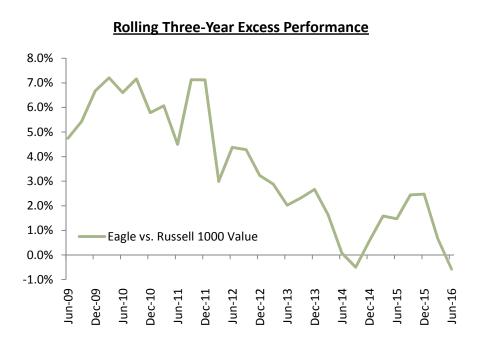
#### **EAGLE CAPITAL REVIEW**

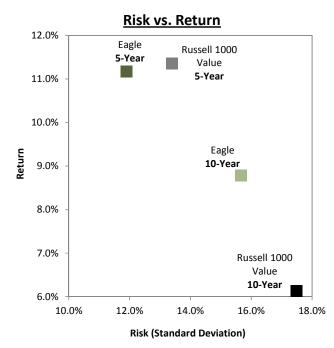
#### **Background**

Eagle Capital is one of four large cap managers in the portfolio (the others being Northern Trust, Brown Advisory, and Sawgrass). Eagle currently manages ~\$175 million in assets for the City of Jacksonville Police & Fire Pension Fund (~10% of portfolio assets and ~33% of the large cap equity portfolio assets).

Recent underperformance warrants further analysis:

- The strategy has trailed the benchmark by 581 bps over the trailing year, net of fees, as of June 30, 2016.
- Performance lags the benchmark over the trailing one-, three-, and five-year periods, although it only trails by 58 bps over the trailing three years and 18 bps over the trailing five years, net of fees.



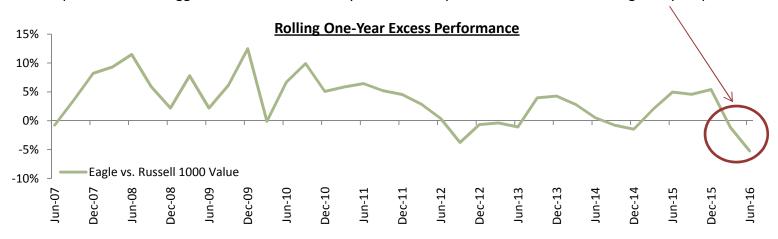


Eagle has significantly outperformed the benchmark over the trailing 10-year period with a lower volatility. However, over the trailing five years (and three years) performance has fallen in line to slightly below the benchmark.

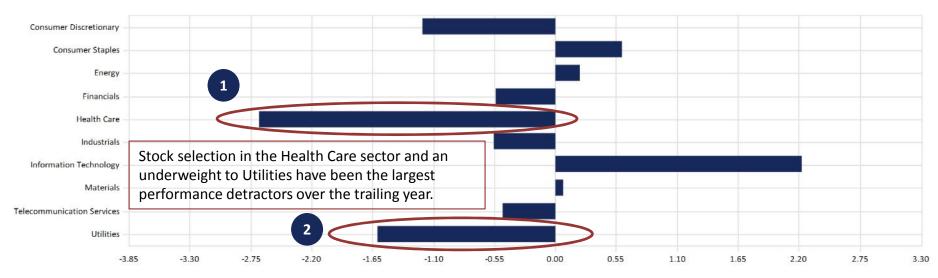
Performance reflects City of Jacksonville Police & Fire Pension Fund net of fees returns, linked with composite net of fees returns to lengthen performance history as necessary.

#### **EAGLE CAPITAL – UNDERPERFORMANCE SUMMARY**

Eagle's recent performance struggles can be almost entirely attributed to performance over the trailing one-year period.

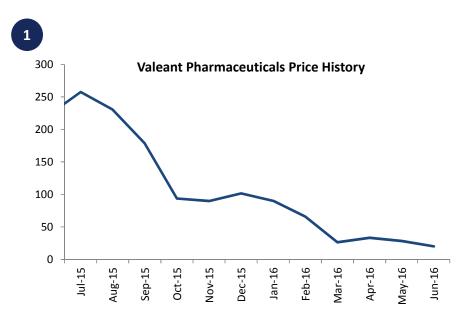


### **One-Year Performance Attribution**



Performance reflects City of Jacksonville Police & Fire Pension Fund net of fees returns, linked with composite net of fees returns to lengthen performance history as necessary.

#### **EAGLE CAPITAL – UNDERPERFORMANCE EXPLAINED**



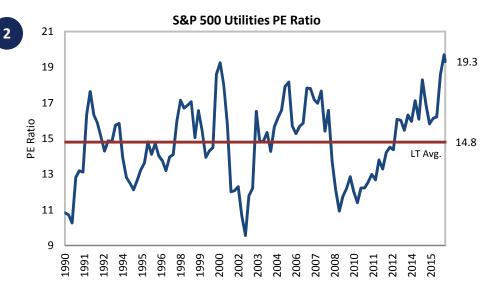
As shown on the previous page, stock selection in the Health Care sector detracted significantly from performance over the trailing year.

As a concentrated portfolio, individual stocks can have a material impact on Eagle's performance, as was the case with Valeant Pharmaceuticals over the trailing year.

At a 3.5% weight in the portfolio in June 2015, Valeant's subsequent 90% year-over-year price decline had a significant negative impact on performance.

Eagle has no exposure to the Utilities sector, compared to the index at ~7%, which has detracted from performance over the trailing year.

As investors have continued to migrate out the risk/asset curve in search of yield, utilities (typically "defensive", high dividend paying stocks) have performed extremely well, returning 32% over the trailing one-year period.



### BROWN ADVISORY, LLC – LARGE CAP GROWTH

#### FIRM DETAILS

Address: 901 South Bond Street, Ste. 400

Baltimore, MD 21231

Phone: 410.537.5400
Asset Class: Large Cap Growth
Benchmark: Russell 1000 Growth

Founded: 1993

Ownership: 70% employee owned; 30% owned

by Board of Directors, clients, and

investors

Assets Under Management: \$20.4 billion

#### PRODUCT DETAILS

Inception: April 1993

Assets Under Management: \$11.6 billion

Vehicles Offered: SA, MF

Separate Account Minimum: \$5 million

Mutual Fund Minimum (BAFGX): \$1 million

Portfolio Managers/Dual Role PMs: 1

Avg. Yrs of Experience: 29 Avg. Yrs at Firm: 19 Research Analysts: 22 Avg. Yrs of Experience: 12

Avg. Yrs at Firm: 6

Fee Schedule (SA): 0.80% on first \$10 million

0.65% on next \$15 million 0.50% on next \$25 million

0.40% on balance (MF): 0.72% on all assets

#### CHARACTERISTICS

	<u>Portfolio</u>	Benchmark
No of Securities:	36	600
Portfolio Turnover:	25%	N/A
Dividend Yield:	0.5%	1.6%
Equity P/E:	32.2x	23.7x
Avg Market Cap:	\$92.7 billion	\$133.2 billion

Last 3 Years:

Last 3 Tears.		
Tracking Error:	2.6%	N/A
Information Ratio:	-1.2	N/A
Sharpe Ratio:	1.2	1.5

## Performance reflects gross of fees composite returns. \*As of 3/31/2016

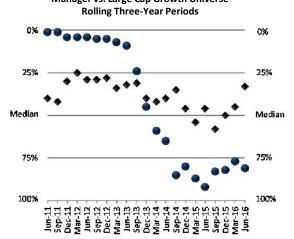
#### **ROLLING PERFORMANCE AND RANKINGS**

# Three-Year Rolling/Quarterly Excess Performance vs. Russell 1000 Growth Index



Quarterly Excess Return When Benchmark is Negative
Quarterly Excess Return When Benchmark is Positive
3-Year Rolling Excess Performance

Manager vs. Large Cap Growth Universe



Russell 1000 Growth

Brown Advisory

#### **QUALITATIVE OVERVIEW**

- Brown Advisory was established in 1993 as an investment management arm of Alex Brown and Sons. Key professionals made an employee-led buyout in 1998 to gain independence from investment banking conflicts. 70% of the equity is held by a diverse group of employees, and 30% is held by members of the independent Board of Directors and a group of clients.
- Ken Stuzin took over as the lead manager for institutional large cap growth accounts in 2001 and proceeded to build out the research team. The 22 analysts on this team average twelve years of investment experience and six years with the firm.
- The process is designed to find quality sustainable growth companies through bottom-up research, focused on both traditional and non-traditional growth sectors. A quantitative screen, based on several growth and balance sheet metrics, is used to narrow the initial universe. Companies must have sustainable earnings growth rates of 14% or better. Favored companies will have large and enduring market opportunities, an experienced management team, and proprietary products or services. The firm tries to identify companies with a culture that rewards innovation and is adaptable to change. Patience on valuation is a key to factor in the strategy's buy and sell discipline.
- Portfolios are relatively concentrated (30-35 stocks) with name turnover averaging 35%. Analysts remain style agnostic, which brings periods of significant benchmark risk, especially in momentum-driven or narrow markets.

#### QUALITATIVE RANKING PERSONNEL FIRM Staff Depth Empl Ownership Mgmt Consistency Experience Integration Stability Cost Support TOTAL +6 Litigation Responsiveness TOTAL +8 PHILOSOPHY -3 -2 -1 0 1 2 Philosophy -2 -1 0 1 2 **PRODUCT** Purchase Discipline History $\overline{\phantom{a}}$ Sell Discipline Size Research Trading Skills Growth Asset Split $\overline{\phantom{a}}$ **Decision Process** +4 TOTAL Characteristics TOTAL +9 +27 TOTAL QUALITATIVE SCORE: Average **Above Average** Exceptional

+10

+30

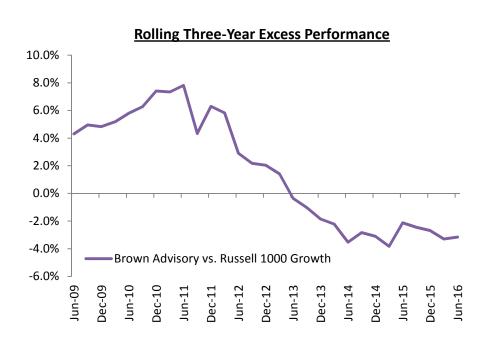
#### **BROWN ADVISORY REVIEW**

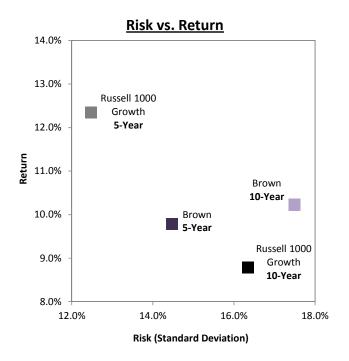
#### **Background**

Brown Advisory is one of four large cap managers in the portfolio (the others being Northern Trust, Eagle, and Sawgrass). Brown Advisory currently manages ~\$85 million in assets for the City of Jacksonville Police & Fire Pension Fund (~5% of portfolio assets and ~16% of the large cap equity portfolio assets).

Recent underperformance warrants further analysis:

- Below median rolling 3-year performance (versus peers) for the last 11 quarters.
- Performance currently lags the benchmark for the trailing 1-, 3-, and 5-year periods.

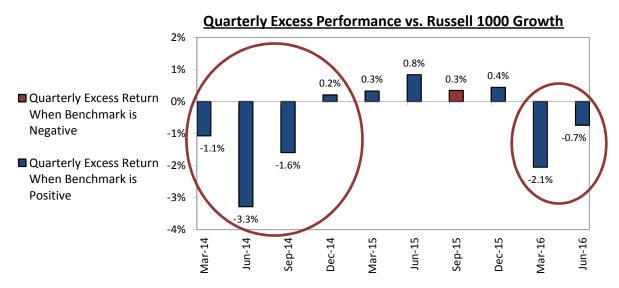




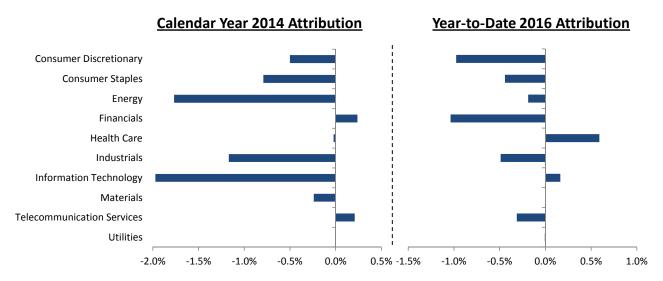
Over the trailing 10-year period, Brown has outperformed the Russell 1000 Growth, with a slightly higher volatility. However, over the trailing 5-year period, the index has outperformed Brown with a lower volatility.

Performance reflects City of Jacksonville Police & Fire Pension Fund net of fees returns, linked with composite net of fees returns to lengthen performance history as necessary.

#### **BROWN ADVISORY – UNDERPERFORMANCE SUMMARY**



**One-Year Performance Attribution** 



Brown Advisory's underperformance since inception in the portfolio can be entirely explained by relative performance in calendar year 2014 and the first two quarters of 2016.

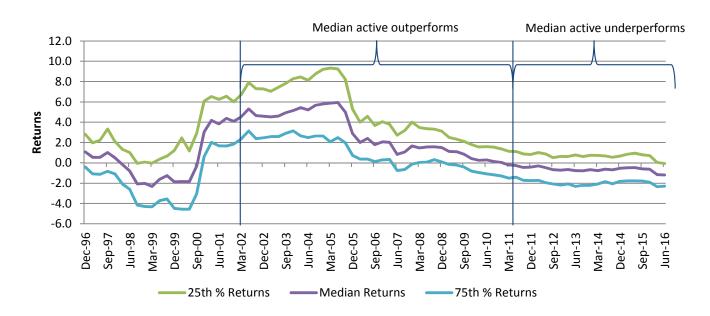
Calendar year 2014 performance was hindered primarily by an energy overweight in a timeframe when oil was down close to 50%, in conjunction with poor stock selection in industrials (Flour Corp.) and Technology (Discovery Communications).

Year-to-date 2016 performance has been hurt by stock selection in the consumer discretionary and financials sectors. Investors searching for yield in the current low interest rate environment has also hurt, as Brown's pure growth, typically low-dividend paying holdings have not seen the gains of more dividend-oriented names.

While stock selection has hurt, the recent market environment has been very difficult for active managers in general, particularly in the large cap growth space (see next page).

#### LARGE CAP GROWTH UNIVERSE – EXCESS RETURN CHARACTERISTICS (AS OF JUNE 30, 2016)

Large Cap Growth Universe
Five-Year Rolling Excess (Gross) Return by Quartiles



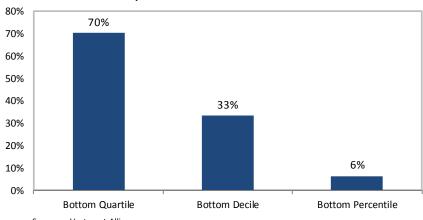
Active management's ability to add value is cyclical.

The five-year rolling excess returns of the median active manager have trailed the benchmark from December 2010 through June 2016.

The median active manager provided positive excess return from the end of the dot.com bubble until active excess returns began to decay in the aftermath of the Global Financial Crisis and start of quantitative easing.

#### **US LARGE CAP MANAGER PERSISTENCE**

Percent of Trailing 10-Year Top Quartile US Large Cap Strategies
That Spent at Least One 3-Year Period in the:



Source: eVestment Alliance.

Consistent short- and long-term outperformance has been hard to come by.

Of the top quartile strategies over the past decade, 70% spent at least one three-year period in the bottom quartile. Additionally, 33% spent at least one three-year period in the bottom decile.

 This lack of persistence makes it challenging for investors to remain invested with the same manager during periods of poor performance.

Brown's return over the trailing 10 years places it in the second percentile (i.e., top decile) in the US large cap Universe.

	Annual Excess Return	Max Underp	erformance	mance vs. S&P 500		
Company	vs. S&P 500 (1985-2015)	Magnitude	Start	End		
Home Depot	14.0%	-187%	Dec-92	Dec-07		
Amgen	13.7%	-169%	Jan-92	Apr-98		
Nike	12.0%	-259%	Dec-91	Mar-00		
UnitedHealth	11.9%	-271%	May-94	Mar-00		
Danaher	11.8%	-77%	Jul-88	Jan-92		
Henry Jack & Assoc.	11.5%	-173%	Feb-86	Oct-89		
Kansas City Southern	11.3%	-135%	Dec-85	Mar-91		
Apple	10.8%	-771%	Oct-87	Oct-00		
Altria Group	10.4%	-493%	Oct-87	Mar-00		
Paychex	10.2%	-94%	Nov-00	Aug-14		

Source: Windhorse Capital.

Unfortunately in the US large cap market, it has not been as easy as "buying the winners and holding them." Many of the top-performing companies over the long term endured periods of significant underperformance.

**ACTIVE VS. PASSIVE IMPLEMENTATION** 

#### **BIG PICTURE: THE ACTIVE VS. PASSIVE DECISION**

A rational investor will pay an active management fee only if the perceived alpha potential is in excess of the management fee.

- Typical target is gross alpha of 2x-4x the fee.
- Otherwise, the investor:
  - Experiences benchmark (or less) returns, and
  - Experiences high volatility / tracking error.
- Meanwhile, the manager:
  - Gets wealthy.

Some asset classes require an investor to pursue active management, as passive implementation is not available or feasible.

- Private Assets:
  - o Private Equity, Private Debt, Private Real Assets (Real Estate, Infrastructure, Natural Resources)
  - o Hedge Funds ("Passive" ETFs are available, but the concern is not selecting "alpha" managers and being left with "expensive beta")
  - Risk Parity

All other (more traditional) asset classes can be garnered passively or actively.

- Includes asset classes such as Public Equities, Public Fixed Income, Cash.
- Default position should be passive management, and an investor must be compelled to move away from this position.
- Reliant upon the skill of the active manager and the staff/consultant skill to select high quality managers.
- Must be sensitive to not over-diversify, ultimately producing an expensive index with active management fees.
- Caveat: All asset classes are subject to issues regarding the appropriateness of a benchmark comparison.
- Active and passive management both go through periods of under/outperformance.
- Some asset classes are better suited for active management.

## INDUSTRY EXCESS RETURN CHARACTERISTICS: DOMESTIC EQUITY (AS OF DECEMBER 31, 2015)

## **Domestic Equity**

## **Large Capitalization**

#### Level of Over/Under Performance vs. Russell 1000 **Over Three-Year Rolling Periods** 14% Avg Top Quartile: 2.6% 12% Avg Median: 0.7% 10% Avg Bottom Quartile: -1.0% 8% 6% 4% 2% 0% -2% -4% -6% Dec-85

	Median	Top Quartile	
Average Alpha	70 bps 260 bps		
Average Fee	52 bps		
Multiple of Fee	1.3x	5.0x	
Index Fee	2 bps		

- Median

Top Quartile

Historically, a very challenging asset class to garner excess return with active management, net of fees. Index management is very inexpensive.

## **Small Capitalization**

#### Level of Over/Under Performance vs. Russell 2000 Over Three-Year Rolling Periods



	Median	Top Quartile	
Average Alpha	230 bps 510 bps		
Average Fee	88 bps		
Multiple of Fee	2.6x	5.8x	
Index Fee	7 bps		

While an expensive asset class, greater excess returns can be realized with active management. Index management is fairly inexpensive.

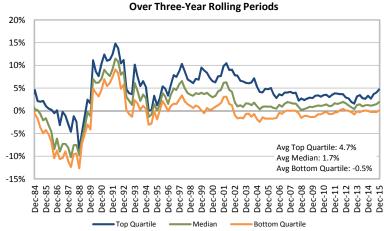
Bottom Quartile

## INDUSTRY EXCESS RETURN CHARACTERISTICS: INTERNATIONAL EQUITY (AS OF DECEMBER 31, 2015)

## **International Equity**

## **Developed International**

# Level of Over/Under Performance vs. MSCI EAFE Over Three-Year Rolling Periods

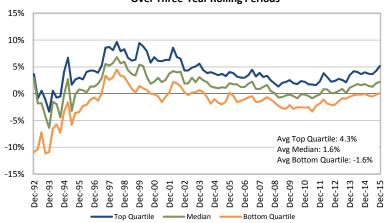


	Median	Top Quartile	
Average Alpha	170 bps 470 bps		
Average Fee	68 bps		
Multiple of Fee	2.5x	6.9x	
Index Fee	7 bps		

The most substantial upside relative to the size of the active management fee.

## **Emerging Markets**

Level of Over/Under Performance vs. MSCI Emerging Markets
Over Three-Year Rolling Periods



	Median	Top Quartile	
Average Alpha	160 bps	430 bps	
Average Fee	90 bps		
Multiple of Fee	1.8x	4.8x	
Index Fee	20 bps		

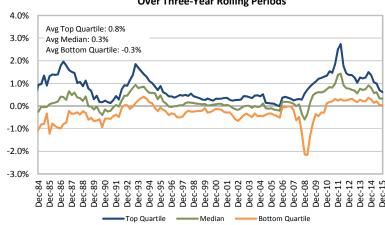
Substantial return difference between 1st quartile and median; asset class can be garnered inexpensively.

## INDUSTRY EXCESS RETURN CHARACTERISTICS: FIXED INCOME (AS OF DECEMBER 31, 2015)

## **Fixed Income**

#### **Core Fixed Income**

# Level of Over/Under Performance vs. Barclays Aggregate Over Three-Year Rolling Periods

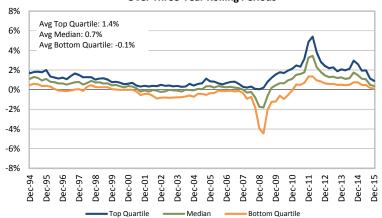


	Median	Top Quartile	
Average Alpha	30 bps 80 bps		
Average Fee	26 bps		
Multiple of Fee	1.2x	3.1x	
Index Fee	~9 bps*		

Challenging to garner material excess returns from active management, net of fees.

#### **Core Plus Fixed Income**

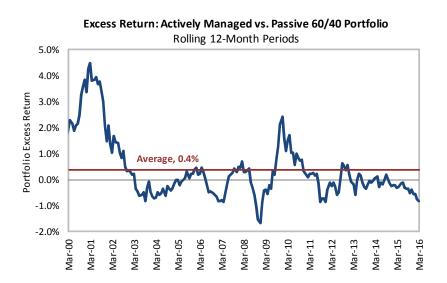
#### Level of Over/Under Performance vs. Barclays Universal Over Three-Year Rolling Periods



	Median	Top Quartile	
Average Alpha	70 bps 140 bps		
Average Fee	31 bps		
Multiple of Fee	2.3x	4.5x	
Index Fee	~14 bps*		

A challenging space to realize substantial excess returns, net of fees, but significantly greater alpha potential than core fixed income.

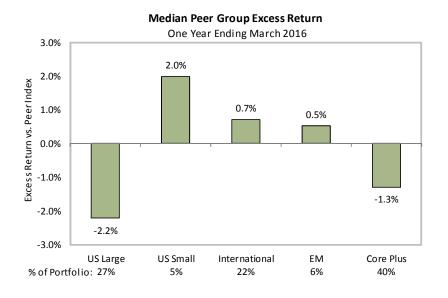
### TRADITIONAL ACTIVE MANAGEMENT



In aggregate, a portfolio of median performing active managers has generated excess return for investors.

Positive excess returns for the median portfolio have occurred at a 52% batting average since December 1999.

For the 12 months ending March 2016 the portfolio underperformed by 0.8%, which falls in the 4th percentile of observations over this period.



During the most recent 12-month period, negative portfolio excess return has been driven by US large cap equity and core plus fixed income.

Given the large weights of these two categories in a hypothetical 60/40 portfolio (40% core plus and 27% US large), portfolios with more active management have in general been challenged.

Active management's underperformance has mostly been driven by US large cap and fixed income strategies.

Source: eVestment (Median Returns Net of Fees) – US Large vs. Russell 1000, US Small vs. Russell 2000, International vs. MSCI EAFE, Emerging Markets vs. MSCI EM, and Core Plus vs. Barclays Universal

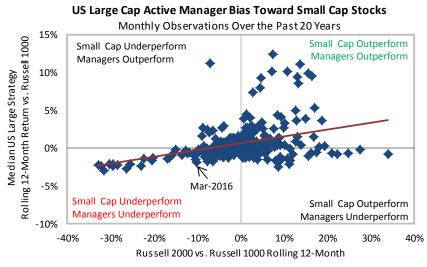
### **INITIAL FINDINGS**

The most challenging asset class to generate consistent manager alpha has been large cap domestic equity.

- This statement applies to both:
  - The industry in general, and;
  - The Fund's experience.

The following pages contain a "deeper dive" on the dynamics that have potentially produced this situation within the domestic large cap equity space.

#### **US LARGE CAP ACTIVE MANAGEMENT**

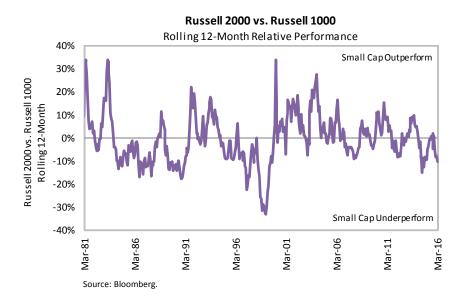


Source: eVestment.

Historically there has been a positive relationship between small cap equity performance (vs. large cap) and active manager performance (vs. benchmarks).

 Generally, small cap outperformance has resulted in better active manager performance vs. passive indices.

During the most recent 12-month period, the median US large active manager underperformed by 1.9%, and the Russell 2000 underperformed the Russell 1000 by 10.3%.



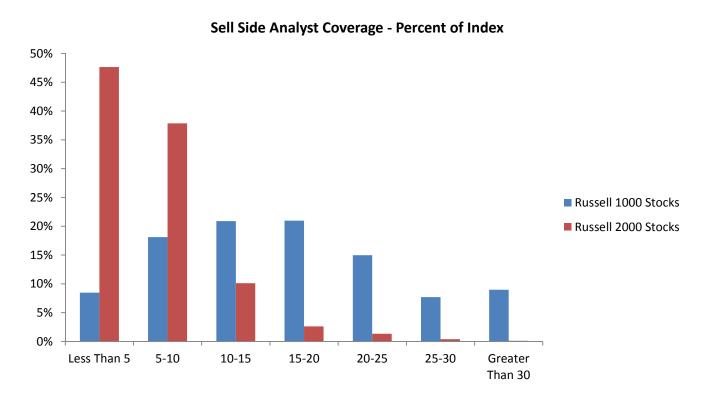
Historically, US small cap stocks have outperformed large cap stocks during 53% of monthly rolling 12-month periods.

At current valuations, US small caps are fairly valued relative to large cap, suggesting small cap performance should not be as much of a drag on active management going forward.

	Russell	Russell	Premium/
	2000	1000	Discount
Current PE Ratio	40.5x	20.2x	2.0x
Historical Avg (ex GFC)	36.0x	16.9x	2.1x
Absolute Valuation Premium	12%	19%	

Source: Bloomberg.

## US EQUITY SELL SIDE ANALYST COVERAGE: LARGE VERSUS SMALL



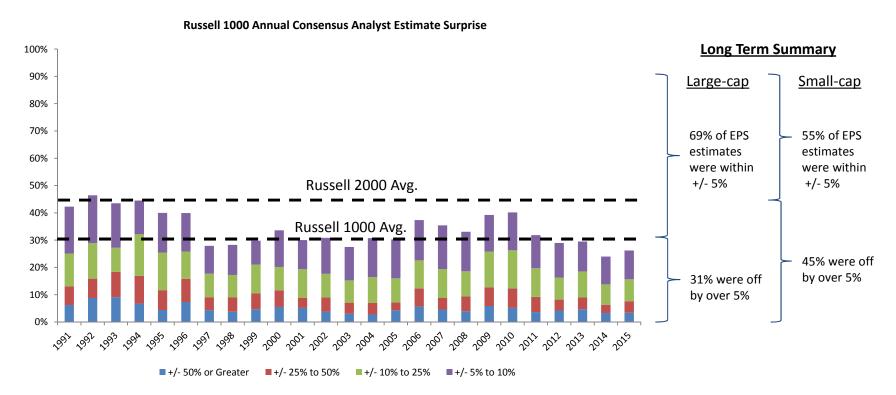
The median stock in the Russell 1000 Index currently has 16 independent sell-side analysts providing an EPS estimate for the next 12-month period. The most noteworthy stocks in the index have as many as 45 estimates – Google 45, Schlumberger 44, Facebook 44, Halliburton 42, Apple 41, Salesforce.com 40, etc.

It is hard to comprehend how an asset management firm can add much value by creating the 42nd opinion on Apple.

Coverage of small-cap stocks is dramatically lower, which is consistent with the less efficient, higher value added reality of the asset class.

85% of small cap names have less than ten analysts covering the stock.

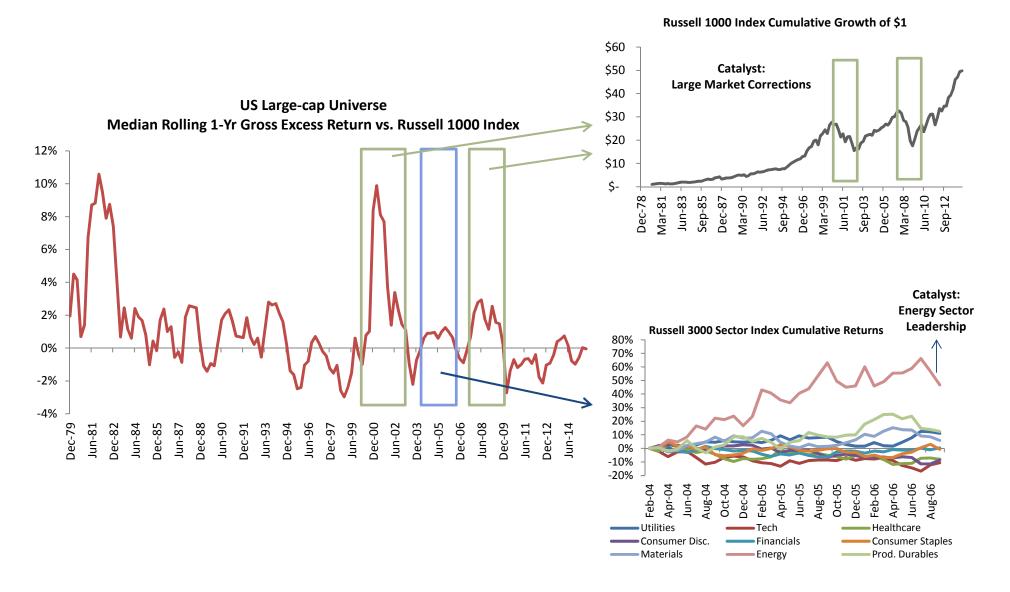
### HOW "RIGHT" ARE ANALYSTS? EPS SURPRISE WITHIN LARGE CAP AND SMALL CAP



Fundamental research analysts at asset management firms generally take a view on whether a company is positioned to exceed or miss sell-side analyst estimates. When a company posts results widely off from sell-side estimates, the surprise results often are the catalyst for a large stock price move and future estimate revisions.

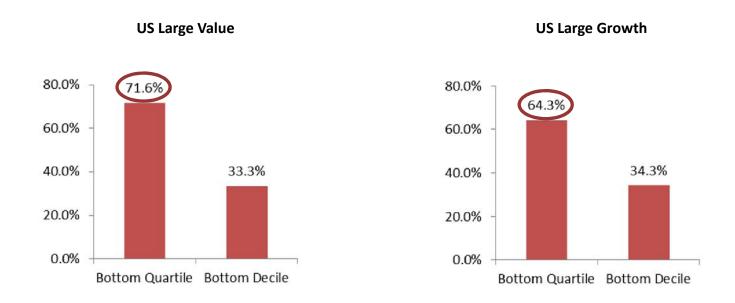
Within the Russell 1000 stock universe, sell-side analysts have historically been very accurate at estimating company results. In 2015, only 254 of the 1000 companies in the index surprised analyst estimates by greater or less than 5%. This implies that the opportunity set for fundamental analysts in US large-cap is fairly small.

### MOST RECENT ENVIRONMENTS WHEN ACTIVE MANAGEMENT WORKED



## LONG-TERM INVESTING PROOF STATEMENT: EVEN THE GOOD MANAGERS APPEAR "DUMB" SOMETIMES

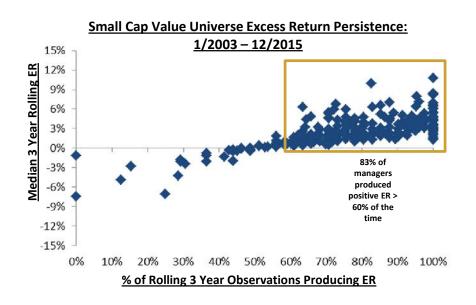
### Percentage of Top-Quartile Managers over Most Recent 10 Years Who Ranked Poorly for at Least One 3-Year Period

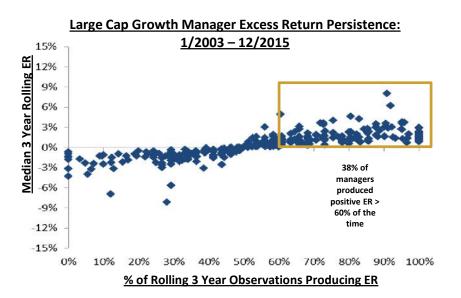


The most successful large cap strategies over the most recent (March 2016) trailing 10-year period have almost all been significantly out of favor for a period of time.

Investors that have been able to weather the storm and remain invested in these managers have been rewarded; however, many of these managers will admit that a large number of clients hire and fire them at the absolute worst times.

## LARGE CAP GROWTH INDEXATION – AN INEXPENSIVE ALTERNATIVE TO ACTIVE MANAGEMENT





Some asset classes (such as small cap value - upper left) are more inefficient, where active managers have more consistently added value over time.

The large cap growth space (upper right) has historically been one of the more difficult asset classes for managers to consistently add value. While Summit still believes alpha in the large cap growth space exists, the evidence is also supportive of the utilization of less expensive, passive alternatives for large cap growth allocations.

Because the asset class is large and liquid, several good options exist that tightly track the Russell 1000 Growth Index.

#### TAKEAWAYS REGARDING LARGE CAP ACTIVE MANAGEMENT

Unless an investor is willing to embrace the following concepts in implementing an actively managed structure, there will be a higher likelihood of failure, and the default passive approach would have been preferable:

- <u>Patience</u>: A long-term time horizon is required. No manager can "get it right" all of the time. Tracking error goes both ways, and excess returns are lumpy in markets that are largely efficient.
- <u>Build a Portfolio of Managers with Diversified Style Biases.</u> If all strategies in the portfolio outperform during the same type of market environment, they will likely all underperform in a different type of market environment. Proper manager sizing and diversification across styles will allow for a portfolio structure that can weather challenging performance cycles.
- Avoid Reactionary Responses: Simply put, chasing recent performance does not work.
- <u>Rebalancing Can Be Additive to Performance.</u> If manager excess return expectations are well defined, mean reversion opportunities will present themselves. Taking money from outperforming strategies and giving it to underperforming strategies can only be implemented successfully if an understanding of when each strategy should and has added value is established up-front.
- <u>Dedicate Resources to the Endeavor:</u> The successful implementation of such a structure requires that resources are continually dedicated to the oversight of the investment program, allowing for the production of analysis to continue to address if the investment program is on track, even at times when it does not appear at first glance to be on track.

#### OTHER POSSIBLE APPROACHES

Numerous strategies can be employed to try to improve upon the default position (index management) within domestic large cap.

— We must not lose sight that this is not purely about performance, but we must have an eye towards the volatility and tracking error introduced by moving away from the default position.

Other possible approaches are described on the following page, which generally include:

- Quantitative/enhanced strategies that focus on modest alpha production with tight tracking error.
- A diversified portfolio of very different, very active managers. This type of approach generally produces the most volatile portfolio, with the highest amount of tracking error.
- A core/satellite approach.
  - This approach is a blend of the two strategies described above.
  - This approach utilizes either a passive or quantitative manager to provide the "anchor" within the portfolio to control tracking error, complemented by a select number of managers (sized accordingly) to provide most of the alpha potential.

## THE SPECTRUM OF ACTIVE/PASSIVE IMPLEMENTATION OPTIONS

## **Passive**

<u>Investment Goal</u> – Track the desired benchmark.

<u>Pros</u> – Provides low-cost exposure to desired asset class.

<u>Cons</u> – Zero excess return potential and slightly negative excess return net of fees.

Investment Case – Active management and manager selection in US large-cap is challenging and has historically gone through extended periods when it has been out of favor.

Implementation Considerations – Minimize cost and tracking error and maximize liquidity.

## **Benchmark Aware**

<u>Investment Goal</u> – Beat desired benchmark while limiting tracking error.

<u>Pros</u> – Potential excess return upside with limited risk of a blowup.

<u>Cons</u> – Net of fee excess return is low compared to more active strategies.

Investment Case – There have been a number of strategies that have produced very consistent levels of excess return while maintaining low tracking error through high diversification.

Implementation Considerations – Fees matter a lot due to lower expected returns. Many strategies in this category don't explicitly come out and say that this is what they are doing. A large number of strategies in this category fail to outperform.

## Very Active

<u>Investment Goal</u> – Beat desired benchmark.

<u>Pros</u> – High potential excess return.

<u>Cons</u> – Excess returns are typically lumpy due to biased investment styles and tracking error is high.

Investment Case – There have been a number of strategies that have been able to deliver very high excess returns when the strategy's style was in favor and kept up with their benchmark in other periods.

Implementation Considerations – Hiring, firing, and reweighting these types of strategies at the right times is extremely important. Utilization of multiple strategies using different investment biases often produces higher risk adjusted returns than a single strategy.

#### **CONCLUSIONS AND RECOMMENDATIONS**

## **CONCLUSIONS**

Some asset classes require the use of active management, as passive alternatives do not exist.

For those asset classes where a passive alternative exists, the default position should be passive management.

An investor must be compelled to move away from the default (passive) position.

Industry data indicates that large cap domestic is the most challenging asset class for active management to add value.

Active and passive move into and out of favor over time.

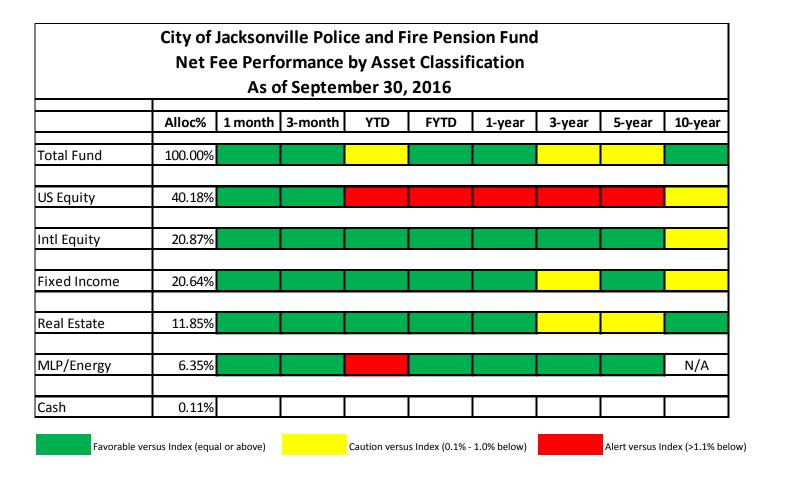
## **RECOMMENDATIONS**

## Large Cap:

- Current portfolio combination of active and passive index management is appropriate.
- Passive default is acceptable as well, especially in the large cap growth space.
- Sizing between active and passive should be discussed, as well as timing of possible shifts.



Note: Summit Strategies Group (Summit) has prepared this report for the exclusive use by its clients. The information herein was obtained from various sources, which Summit believes to be reliable, and may contain opinions developed by Summit. Summit does not guarantee the accuracy or completeness of the opinions, observations or other information contained in this report. The opinions, market commentary, portfolio holdings and characteristics are as of the date shown and are subject to change. Past performance is no guarantee of future performance. No graph, chart, or formula can, in and of itself, be used to determine which managers or investments to buy or sell. Any forward-looking projection contained herein is based on assumptions that Summit believes may be reasonable, but are subject to a wide range of risks, uncertainties and the possibility of loss. Accordingly, there is no assurance that any estimated performance figures will occur in the amounts and during the periods indicated, or at all. Actual results and performance will differ from those expressed or implied by such forward-looking projections. Any information contained in this report is for information purposes only and should not be construed to be an offer to buy or sell any securities, investment consulting or investment management.



- Domestic Equity: 2016 has been a very challenging environment for active management. Magnitude of recent underperformance has pulled trailing 3- and 5-year returns below benchmark.
- International Equity: Emerging market exposure has been primary driver of performance.
- Fixed Income: Credit exposure has been primary driver of performance.
- Real Estate: JP Morgan has underperformed net of fees.
- MLPS; Strong absolute returns in 2016 and FYTD. High quality bias caused drag on relative performance CYTD.



8182 Maryland Avenue, 6th Floor St. Louis, Missouri 63105 314.727.7211

**Watch List Discussion** 

City of Jacksonville Police & Fire Pension Fund

October 2016

#### **EXECUTIVE SUMMARY**

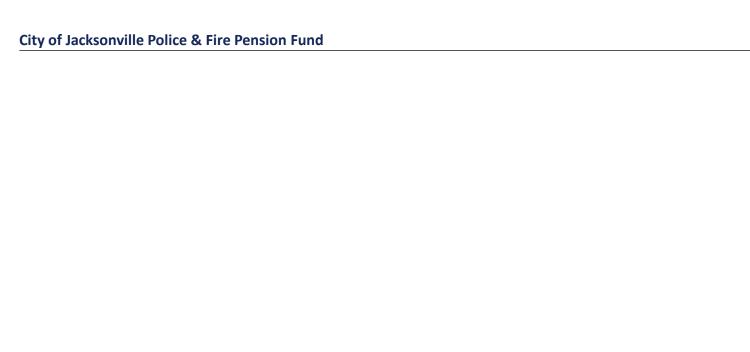
- Given past discussion with the FIAC and Executive Director, Summit believes discussion of a "watch list" process is appropriate.
- This presentation describes what a watch list is and how it functions.
- Further, the presentation outlines which investment managers Summit recommends be added to the watch list along with an explanation of the underlying issues.
- At this time, Summit does not believe a deeper review and discussion are necessary regarding any of the City of Jacksonville Police & Fire Pension Fund's current managers.

#### PURPOSE AND OPERATION OF A WATCH LIST

- The purpose of a watch list is to help fiduciaries maintain a prudent decision-making process in the retention/termination of investment managers. It does this by:
  - Identifying any issues of importance/concern.
  - Providing for enhanced on-going scrutiny of these issues.
- Issues that would cause an investment manager to be placed on a watch list include the following:
  - Ownership Change
  - Turnover of Key Personnel
  - Style Drift or Change in Strategy
  - Persistent Underperformance Relative to Benchmark or Peers
  - Regulatory Issues
  - Significant Asset Growth in Capital Constrained Asset Classes
  - Shift of Investment Strategy at the Total Portfolio Level
  - Significant Perceived Overvaluation of a Sector/Asset Class
- Regarding underperformance, the following would trigger an investment manager being placed on the watch list:
  - 1-year trailing performance in the bottom quartile of the peer sample.
  - 3-, 5-year trailing performance below the benchmark and median of the peer sample.
- Identification of any issues/concerns would trigger:
  - Meeting/Phone interview with the investment manager to discuss the issues.
  - A memorandum outlining the issue from Summit to the FIAC and Board of Trustees along with a "hold" or "terminate" recommendation.
  - Ongoing monitoring and reporting until the issue is resolved.

## MANAGERS RECOMMENDED FOR WATCH LIST STATUS (AS OF JUNE 30, 2016)

Manager	Reason	Discussion	Recommendation
Pinnacle (US SMID Cap Growth Equity)	1-year performance in bottom quartile. 3-year performance in bottom quartile and below benchmark.	<ul> <li>Outperformed by over 600 bps in the fourth quarter of 2015; underperformance in 2016 has been driven by a reversal of what worked in that time period.</li> <li>An overweight position and stock selection in biotechnology accounted for approximately half of the relative underperformance on a 2016 CYTD basis.</li> <li>Stock selection in the consumer discretionary sector (media content providers and cruise lines) accounted for the other half of relative underperformance CYTD.</li> <li>The magnitude of 2016 CYTD underperformance has negatively impacted 3-year performance relative to peers and the benchmark.</li> </ul>	Hold: This is a low turnover, higher volatility manager who has consistently added value when evaluated over rolling three-and five-year cycles. Their willingness to actively invest in biotechnology is a key differentiator (and a source of alpha) relative to peers. Significant outperformance in 3Q16 has manager above benchmark for 1- and 5-year periods.
Baillie Gifford (International Growth Equity)	1-year performance in bottom quartile. 5-year performance below benchmark and peer median.	<ul> <li>Emerging markets exposure, especially in China, hurt relative and absolute performance in 2015.</li> <li>Significant recovery in 2016 as emerging markets have recovered.</li> <li>Longer-term performance remains strong.</li> </ul>	Hold: Issues seen as short term. 3Q16 performance has manager above benchmark for 1- and 5-year periods.
Acadian (Emerging Markets Equity)	1-year performance in bottom quartile.	<ul> <li>The portfolio's value bias has been a detractor for the last year.</li> <li>Underweights to Russia and Indonesia also detracted slightly.</li> </ul>	Hold: Issues seen as short term. 2016 CYTD performance has improved on an absolute and relative basis
JP Morgan (Core Real Estate)	1-year performance in bottom quartile. 3-year performance below benchmark and peer median.	<ul> <li>The fund is a core-only offering, investing in high quality assets and providing a lower risk profile than peers; the fund's beta is typically around 0.9x the peer set (and uses less leverage), which has not been a benefit in the recent past.</li> <li>Long-term performance remains strong versus peers over the trailing 10-year period.</li> </ul>	Hold: Relative performance issues seen as short term; redemption queue currently takes over two quarters to clear. 3Q16 performance has manager above benchmark over all periods.



Summit Strategies Group (Summit) has prepared this report for the exclusive use by the client for which it was prepared. The information herein was obtained from various sources, such as the client's custodian(s) accounting statements, commercially available databases, and other economic and financial market data sources. While Summit believes these sources to be reliable, Summit does not guarantee nor shall be liable for the market values, returns or other information contained in this report. The market commentary, portfolio holdings and characteristics are as of the date shown and are subject to change. Past performance is not an indication of future performance. No graph, chart, or formula can, in and of itself, be used to determine which securities or investments to buy or sell. Any forward-looking projection contained herein is based on assumptions that Summit believes may be reasonable, but are subject to a wide range of risks, uncertainties and the possibility of loss. Accordingly, there is no assurance that any estimated performance figures will occur in the amounts and during the periods indicated, or at all. Actual results and performance will differ from those expressed or implied by such forward-looking projections. Any information contained in this report is for information purposes only and should not be construed to be an offer to buy or sell any securities, investment consulting or investment management services.