

ILLINOIS MUNICIPAL RETIREMENT FUND  
MINUTES OF  
REGULAR MEETING NO. 17-03  
MARCH 31, 2017

ILLINOIS MUNICIPAL RETIREMENT FUND

MEETING NO. 17-03

REGULAR MEETING

OF THE

BOARD OF TRUSTEES

The Regular Meeting of the Board of Trustees was held at 8:00 a.m. on March 31, 2017, in the Fund Office at 2211 York Road, Suite 400, Oak Brook, Illinois.

Ms. Stanish presided as Chair and called the meeting to order.

Ms. Enright called the roll:

Present: Stanish, Thompson, Wallace, Williams, Copper, Henry, Kuehne, Miller  
Absent: None

Ms. Becker-Wold and Mr. Ball from Callan Associates, and a representative from Pensions and Investments were also present.

(17-03-01) (Horizon Vendor Selection) IMRF's Program Sponsor and IMRF's Consultant, Provaliant Retirement, gave a presentation to the Board on IMRF's Horizon Project procurement process, along with recommendations.

The presentation provided the Board with a Horizon project status update; how the project aligns with IMRF's Strategic Objectives; the proposal evaluation process; the proposal evaluation results; and, the next steps of the project.

The Program Sponsor reported that the solution proposed by each finalist, Accenture and Morneau Shepell, uses different approaches but both have the capability to meet IMRF requirements. Accenture's proposal is \$62.1 million and Morneau Shepell's proposal is \$37.5 million. Three other proposals ranged in price from \$34.9 million to \$44.3 million.

The IMRF evaluation team recommended awarding the Horizon Project contract to Morneau Shepell (MS) for the following reasons:

- MS sells the same software they use to support 3,000 pension administrators which includes 350 public sector clients across the globe;
- MS cost was considerably less than Accenture and was comparable to the other bidders; and,
- The evaluators voted unanimously to partner with MS.

Lastly, the Program Sponsor stated the next steps of the Horizon Project included the approval of the Contract Award; to conclude contract negotiations; and, execute the contract with the project starting in April 2017.

After questions and discussion, it was moved by Mr. Kuehne, seconded by Mr. Miller, to award the Horizon Project contract to Morneau Shepell.

Vote: Unanimous Voice Vote

Absent: None

(17-03-02) (Consent Agenda) The Chair presented an agenda consisting of a Consent Agenda. The following items remained on the Consent Agenda since no Board member asked for their removal.

Approval of Minutes

Regular Meeting 17-02-17

Schedules - Dated March 31, 2017

- Schedule A - Benefit award listing of retirement, temporary disability, death benefits, and refund of employee contributions processed during the preceding calendar month under Article 7 of the Illinois Pension Code.
- Schedule B - Adjustment of Benefit Awards showing adjustments required in benefit awards and the reasons therefore.
- Schedule C - Benefit Cancellations.
- Schedule D - Expiration of Temporary Disability Benefits terminated under the provisions of Section 7-147 of the Illinois Pension Code.
- Schedule E - Total and Permanent Disability Benefit Awards recommended by the Fund's medical consultants as provided by Section 7-150 of the Illinois Pension Code.
- Schedule F - Benefits Terminated.
- Schedule G - Administrative Benefit Denials.
- Schedule P - Administrative Denial of Application for Past Service Credit.
- Schedule S - Prior Service Adjustments

Bids

Security Incident and Event Management (SIEM) System  
Single Source: LogRhythm  
Approved Bid: \$43,080.00

Microsoft CRM Software Maintenance  
Approved Bidder: En Pointe Technologies  
Approved Bid: \$107,458.00

IBM Datacap Software Upgrade  
Approved Bidder: MagicLamp Software  
Approved Bid: \$177,200

Participation of New Units of Government

Lyons Township Area Communication Center  
County: Cook  
2017 Rate: 11.13%  
Effective Participation Date: April 1, 2017  
Number of Participating Employees: 15

Vermillion Valley Regional Emergency Communications Joint Authority  
County: Livingston  
2017 Rate: 8.60%  
Effective Participation Date: April 1, 2017  
Number of Participating Employees: 16

Review of March Financial Reporting Packages

Statement of Fiduciary Net Position for November and December 2016

Impact of 2017 Year-To-Date Investment Income on Employer Reserves,  
Funding Status and Average Employer Contribution Rates

Schedule T - Report of Expenditures (March 31, 2017)

It was moved by Ms. Henry, seconded by Mr. Wallace, to approve the Consent Agenda as presented.

Vote: Unanimous Voice Vote  
Absent: None

(17-03-03) (Benefit Review Committee Meeting) The Chair of the Benefit Review Committee reported on the Benefit Review Committee Meeting held on March 23, 2017.

It was moved by Mr. Wallace, seconded by Mr. Kuehne, to accept the following recommendations of the Benefit Review Committee:

- To uphold staff's decision denying total and permanent disability benefits to George D. Johnson.
- To uphold staff's decision terminating temporary disability benefits to Laurie A. Rayborn.
- To uphold staff's decision denying temporary disability benefits to Falena Gaughan.
- To adopt the revisions to the Benefit Review Committee Charter as presented:

BENEFIT REVIEW COMMITTEE CHARTER

The Board of Trustees of the Illinois Municipal Retirement Fund has adopted this Benefit Review Committee ("Committee") Charter. The Benefit Review Committee of the Board shall review and reassess this charter annually and recommend any proposed changes to the Board for approval.

#### PURPOSE

To assist the Board of Trustees in fulfilling its oversight responsibilities for the process of hearing appeals of certain staff determinations regarding members' claims for benefits, benefit calculation errors and resulting benefit recoupment and non-ERI related return to work issues. The Committee will review written findings and conclusions of the IMRF Hearing Officer related to employer contribution delinquencies, employer rates, accelerated payments, eligibility for participation, IMRF reportable earnings, felony forfeitures, contested beneficiary designations, ERI return-to-work violations and other appeals assigned to the IMRF Hearing Officer for determination. The Board may assign other duties to the Committee.

#### AUTHORITY

The Benefit Review Committee has authority to conduct or authorize investigations into any matters within its scope of responsibility. It is empowered to:

- ◆ Utilize outside medical consultants or others to advise the committee or assist in the conduct of an investigation.
- ◆ Seek any information it requires from Fund employees--all of whom are directed to cooperate with the Committee's requests--or external parties.
- ◆ Meet with Fund staff, medical consultants, outside counsel, and members as necessary.

#### COMPOSITION

The Benefit Review Committee will consist of at least three members of the Board of Trustees. At the January Board Meeting, the president of the Board will nominate, and the full Board will elect, committee members and the committee chair for one-year terms.

#### MEETINGS

The Committee will generally meet as scheduled, with authority to convene additional meetings, as circumstances require. All committee members are expected to attend each meeting, in person or via teleconference or videoconference. In the absence of the

Chairperson, the vice chairperson shall preside. In absence of both the chairperson and vice chairperson the other members of the Committee shall designate a chairperson pro tem to preside over the Committee meeting.

The Committee will require that staff, medical consultants, and others attend meetings to provide pertinent information, as necessary. Meeting agendas will be prepared and provided in advance of the meetings. Staff will provide the Committee with a copy of the statement of claim, a statement of the position of the administrative staff, and any other documentation (medical records, etc.) available to the Fund. For appeals heard by the IMRF Hearing Officer, the Committee will be provided with the written findings and conclusions. Members of the Committee may ask questions necessary for better understanding of the facts or law.

All Committee hearings shall be open to the public unless the chairperson, for good cause shown and pursuant to the applicable provisions of the Open Meetings Act, shall determine otherwise. The member/claimant is not required to attend the meeting, and may be represented solely by the statement of claim on file. However, he/she may appear at the meeting in person, by teleconference, or by videoconference. The member may come alone, with an attorney, or with any other authorized representative. An attorney or other authorized representative may represent the member in his/her absence.

Staff will prepare minutes for each meeting. These minutes will serve as a record of proceedings in the form of a non-verbatim report. The claimant may obtain a verbatim record of hearing taken by a court reporter provided he/she makes a timely request for a court reporter to be present. The claimant must pay the full cost for the services of a court reporter.

#### RESPONSIBILITIES

The Committee will carry out the following responsibilities:

Hear appeals of certain staff determinations regarding members' claims for disability benefits, benefit calculation errors and resulting benefit recoupment and non-ERI return to work issues

Review the findings and conclusions of the IMRF Hearing officer related to employer contribution delinquencies, employer rates, accelerated payments, eligibility for participation, IMRF reportable earnings, felony forfeitures, contested beneficiary designations, ERI return-to-work violations and any other appeals assigned to the IMRF Hearing Officer for determination

Staff will schedule the hearings on the meeting dates selected by the Committee..

Determination by the Committee

Upon conclusion of all evidence and arguments, the Benefit Review Committee will make a decision as to the disposition of the claim. At least a majority vote is required for any decision of the Benefit Review Committee. The Committee will render one of the following decisions: affirmance of the staff recommendation, reversal of the staff recommendation, remand of the proceedings to staff for further investigation, request the development of an alternative resolution, or, in the case of deadlock, continuation of the claim for consideration by the full Board of Trustees. The decision will be in the form of a recommendation to the full Board of Trustees or, in the case of deadlock, without recommendation.

Immediately following each Committee meeting staff will prepare the chairperson's summary report to the Board of Trustees.

The Benefits Manager, or other staff designee, will send written notice of the decision of the Board of Trustees to the claimant, and if applicable, to the claimant's representative.

#### Reporting Responsibilities

- ◆ Regularly report to the Board of Trustees about Committee activities, issues, and related recommendations.
- ◆ Provide an open avenue of communication between medical consultants and the Board of Trustees.
- ◆ Review any other issues that relate to Committee responsibilities.

#### Other Responsibilities

- ◆ Perform other activities related to this charter as requested by the Board of Trustees.
- ◆ Institute and oversee special investigations as needed.
- ◆ Make recommendations to the Board of Trustees concerning policies related to the responsibilities set forth herein.
- ◆ Confirm annually that all responsibilities outlined in this charter have been carried out.

Vote: Unanimous Voice Vote  
Absent: None

(17-03-04) (Report of the Investment Committee Meeting) The Chair of the Investment Committee reported on the meeting held March 30, 2017.

The Investment Committee heard presentations from two Real Estate managers, Blackstone Real Estate Partners Asia II, L.P. and Dune Real Estate Fund IV, L.P. followed by recommendations from staff.

It was the consensus of the Investment Committee to recommend the Board approve the following recommendations:

For Real Estate

- Allocate up to \$100 million to Blackstone Real Estate Partners Asia II, L.P., subject to satisfactory legal due diligence;
- Allocate up to \$50 million to Dune Real Estate Fund IV, L.P.; subject to satisfactory legal due diligence; and,
- Authorize staff to complete all documentation necessary to execute these recommendations.

It was moved by Ms. Henry, seconded by Mr. Miller, to approve the Real Estate recommendations of the Investment Committee.

Vote: Unanimous Voice Vote  
Absent: None

Next, the Investment Committee heard presentations from two Private Equity managers, ICV Partners IV, L.P., and Valor Equity Partners IV, L.P., along with recommendations from staff.

It was the consensus of the Investment Committee to recommend the Board approve the following recommendations:

For Private Equity

- Allocate up to \$35 million to ICV Partners IV, L.P., subject to satisfactory legal due diligence;
- Allocate up to \$75 million to Valor Equity Partners IV, L.P., subject to satisfactory legal due diligence;
- Allocate up to \$15 million to Lightspeed SPV I, L.L.C., subject to satisfactory legal due diligence; and,
- Authorize staff to complete all documentation necessary to execute these recommendations.

It was moved by Ms. Henry, seconded by Mr. Miller, to approve the Private Equity recommendations of the Investment Committee.

Vote: Unanimous Voice Vote  
Absent: None

Lastly, staff presented a Domestic Equity recommendation to the Investment Committee for approval.

It was the consensus of the Investment Committee to recommend the Board approve the following recommendations:

For Domestic Equity

- Termination of Ariel Microcap Value portfolio (approximately \$69.6 million as of 02/28/17);
- Liquidate the portfolio as deemed appropriate by the CIO; and,
- Authorize staff to complete any documentation necessary to execute this recommendation.

It was moved by Ms. Henry seconded by Ms. Thompson, to approve the Domestic Equity recommendations of the Investment Committee.

Vote: Unanimous Voice Vote  
Absent: None



(17-03-05) (Report of the Legislative Committee Meetings) The Chair of the Legislative Committee presented reports on the Legislative Committee Meetings that were held on February 21, 2017 and March 7, 2017 via teleconference.

She first reported on the Committee Meeting held via teleconference on February 21, 2017.

The Legislative Committee reviewed legislation affecting IMRF that had been introduced so far in the 100<sup>th</sup> General Assembly.

It was the consensus of the Committee to recommend the board take the following positions:

House Bill 2954 (Cavaletto) - OPPOSE - would allow fire chiefs in a community with an Article 4 pension fund to opt out of participation in that fund and choose to participate in IMRF, in an alternative retirement plan that the municipality may offer, or in no retirement plan.

House Bill 3122 (Moeller) - OPPOSE - would terminate participation in IMRF for all elected officials, except city councils and town, village, and township boards.

House Bill 2491 (Bennett) - OPPOSE - would change the QILDRO calculation so that in the QILDRO calculation order, the gross amount of the member's retirement benefit is calculated as of the member's retirement date, but, for purposes of the calculation, using the member's salary on the date the QILDRO was issued.

House Bill 3729 (Moylan) - SUPPORT - would require all elected officials to file monthly time logs with the employer and for the employer to certify continued eligibility within 90 days of each general election which and official has been elected.

House Bill 3908 (Conroy) - OPPOSE - would prohibit participation by any new elected official or "appointed official" with a forest preserve district.

Senate Bill 1310 (Haine) - OPPOSE - would allow new members age 57 and over to opt out of participation in Tier 2.

Senate Bill 1714 (Clayborne) - NEUTRAL - would require all investment consultants to make the certain information regarding their total searches and the inclusion of MWDOB firms in those searches available to the fund annually.

House Bill 2759 (Sosnowski)- SUPPORT - would require the pension of retirees whose first participation date is on or after 1/1/18 to be suspended if the retiree begins participating in another pension system while working in a full-time position.

Senate Bill 779 (Biss) - OPPOSE - would require certain information to be made available within 90 days after entering an alternative investment agreement. Funds must also make specific fee information available on each of these investments available annually.

Next, the Chair of the Legislative Committee reported on the Committee Meeting held via teleconference on March 7, 2017.

The Committee reviewed legislation affecting IMRF that was recently introduced in the 100<sup>th</sup> General Assembly.

It was the consensus of the Legislative Committee to recommend the Board take the following positions:

House Bill 2758 (Sosnowski) - OPPOSE - would exclude overtime pay from the definition of pensionable earnings for new and current participants.

Senate Bill 16 (J. Cullerton) - OPPOSE - in the provisions applicable to IMRF, the bill would create a Tier 3 hybrid plan. The plan would be employer optional and members could opt in to the standard Tier 2 plan instead of the hybrid plan.

It was moved by Ms. Thompson, seconded by Ms. Copper, to approve the recommendations of the Legislative Committee.

Vote: Unanimous Voice Vote  
Absent: None

(17-03-06) (Set Date for April Special Board Meeting) The Executive Director stated that the Executive Director Search Committee would like to approve a contract with a search firm at a Special Meeting of the Board in April.

It was moved by Ms. Henry, seconded by Mr. Wallace, to hold a Special Meeting of the Board of Trustees on Thursday, April 27, 2017 at 2:00 p.m.

Vote: Unanimous Voice Vote  
Absent: None

(17-03-07) (Executive Director Performance Appraisal) The Executive Director presented a streamlined Timetable/Approach for the Executive Director's Performance Appraisal.

He stated that normally in April or May, the Board would begin preparing for the upcoming Executive Director annual evaluation.

This year, as part of the RFP process to hire an Executive Director Search Firm, the Board already adopted the Objectives/Principles; revised the Executive Director Performance Appraisal form; and, revised the Executive Director Position Description.

The Executive Director further noted that in the past, Aon Hewitt Investing Consulting, Inc. has assisted the Board in the Executive Director Appraisal process.

After questions and discussion, it was moved by Mr. Kuehne, seconded by Ms. Copper, to adopt the following streamlined Timetable/Approach as proposed by the Board President.

- Aon Hewitt's services would not be used.
- The Board will be furnished with an abbreviated self-appraisal in early May.
- The Board would meet with the Executive Director; verbally discuss his performance at the May Board Meeting; and, determine what, if any, salary adjustment would be made.
- If there is any salary adjustment, it would be approved at the August Board Meeting.

Vote: Unanimous Voice Vote

Absent: None

Trustees Wallace and Copper left the Board Meeting at 9:25 a.m.

(17-03-08) (4th Quarter Investment Performance Report) Ms. Becker-Wold of Callan Associates presented an evaluation of IMRF's investment performance for the period ending December 31, 2016.

The report was followed by discussion from Board Members.

(17-03-09) (Investment Manager Activities - Callan Associates) Mr. Ball of Callan Associates presented the following report to the Board on the activities of IMRF's investment managers for the month of February 2017:

February 28, 2017



**Illinois Municipal  
Retirement Fund  
Monthly Performance Report**

**Investment Measurement Service  
Monthly Review**

The following report was prepared by Callan Associates Inc. ("CAI") using information from sources that include the following: fund trustee(s); fund custodian(s); investment manager(s); CAI computer software; CAI investment manager and fund sponsor database; third party data vendors; and other outside sources as directed by the client. CAI assumes no responsibility for the accuracy or completeness of the information provided, or methodologies employed, by any information providers external to CAI. Reasonable care has been taken to assure the accuracy of the CAI database and computer software. Callan does not provide advice regarding, nor shall Callan be responsible for, the purchase, sale, hedge or holding of individual securities, including, without limitation securities of the client (i.e., company stock) or derivatives in the client's accounts. In preparing the following report, CAI has not reviewed the risks of individual security holdings or the conformity of individual security holdings with the client's investment policies and guidelines, nor has it assumed any responsibility to do so. Advice pertaining to the merits of individual securities and derivatives should be discussed with a third party securities expert. Copyright 2017 by Callan Associates Inc.



**Market Environment**  
**As of February 28, 2017**

Index	Last Month	Year to Date	Last Year	Last 3 Years	Last 5 Years	Last 10 Years
Russell:3000 Index	3.72	5.67	26.29	9.92	13.85	7.64
S&P:500	3.97	5.94	24.98	10.63	14.01	7.62
Russell:2000 Index	1.93	2.33	36.11	6.93	12.89	7.22
MSCI:ACWI ex US	1.59	5.19	19.31	(0.19)	3.55	1.38
MSCI:EM	3.06	8.70	29.46	1.35	(0.37)	2.86
Blmbg:Aggregate	0.67	0.87	1.42	2.64	2.24	4.28
NCREIF:Total Index	0.57	1.15	7.63	10.77	10.79	6.80
Blmbg:Commodity Price Idx	0.17	0.26	15.53	(13.16)	(9.93)	(6.46)

Global equity indices continued a steady trek upwards in February. After falling throughout most of January, the dollar regained some of its strength in February. Production cuts by OPEC lifted energy prices until concerns over the U.S. supply glut ended the rally near the end of the month. The Russell 3000 Index rose 3.7% in February while the MSCI ACWI ex U.S. Index advanced 1.6%, propelled for the second month in a row by surges in Latin American and Asian emerging markets. The MSCI Emerging Markets Index was up 3.1%. The U.S. Treasury yield curve flattened as the yield on the 10-year fell nine basis points. The U.S. Aggregate rose 0.7% over the period.

U.S. labor markets indicators were strong during the month. Nonfarm payroll numbers came in at the high end of the consensus range at 235,000. In addition, January payrolls were revised upwards by 11,000. Construction and professional and business services were the largest contributors to this month's payroll increases. Retail trade was the lone blemish, losing 26,000 positions. The labor force participation rate and the unemployment rate diverged, moving in opposite directions for the first time in months. Labor force participation increased to 63.0% and the unemployment rate fell to 4.7%. These numbers illustrate an environment that encouraged workers on the side-lines to re-enter the labor force. Wages posted reasonable gains rising 2.8% year-over-year. Given the low unemployment rate and the recent rise in core inflation, consensus expectations are that the Fed will raise rates at their March meeting.

The second revision to fourth quarter GDP was unchanged at 1.9%, though some of the underlying contributors shifted. Low net exports continued to place downward pressure on annualized growth. Inventories remained abnormally high and contributed nearly half of the quarter's total growth, but may prove to be a future headwind if demand does not keep up. Consumer spending increased 50 basis points in the most recent estimate. Vehicle sales led the charge making consumer durables the champion of the consumer spending category. Headline CPI rose 0.1% month-over-month in February. The February increase was the smallest 1-month rise since July 2016. Apparel prices rebounded in January and February from recent doldrums providing some upward pressure. Gasoline prices dropped 3.0% during the period, following a considerable January jump. Core CPI, which does not include food or energy prices, increased 0.2% in February. Headline and core CPI are up 2.7% and 2.2%, respectively, year-over-year.

\*Due to a lag in the reporting of NCREIF Property Index returns, the monthly return shown is deduced from the most recent quarterly return. This monthly return, when compounded over three months, equates to the quarterly return.

**U.S. Equity Overview**  
**As of February 28, 2017**

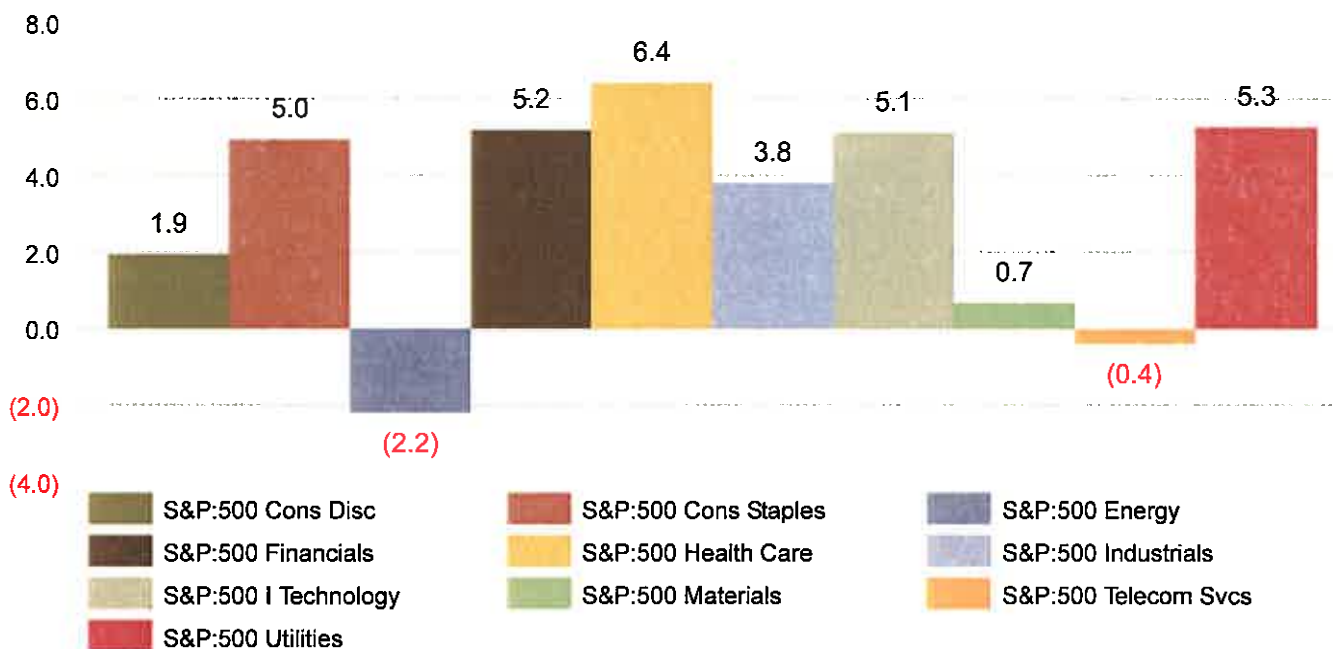
Index	Last Month	Year to Date	Last Year	Last 3 Years	Last 5 Years	Last 10 Years
Russell:3000 Index	3.72	5.67	26.29	9.92	13.85	7.64
Russell:1000 Index	3.87	5.96	25.53	10.19	13.94	7.69
Russell:1000 Growth	4.15	7.66	22.15	10.47	13.79	9.07
Russell:1000 Value	3.59	4.33	29.13	9.90	14.02	6.20
Russell:Midcap Index	2.83	5.31	26.81	8.44	13.63	8.04
Russell:2000 Index	1.93	2.33	36.11	6.93	12.89	7.22
Russell:2000 Growth	2.45	4.12	30.91	5.42	12.29	8.03
Russell:2000 Value	1.45	0.72	41.29	8.37	13.43	6.31

Equity markets continued a steady climb during the second month of the year on healthy business activity, the promise of deregulation, and improving U.S. labor market conditions. Domestic equity rose across all market segments.

Similar to last month, large caps outperformed small caps (Russell 1000 Index: +3.9%; Russell 2000 Index: +1.9%). Growth stocks outperformed value stocks across the capitalization spectrum, though not as significantly as in January (Russell 1000 Growth: +4.2%; Russell 1000 Value: +3.6%). The Russell Midcap Index had a strong month, returning 2.8%.

The majority of S&P 500 sectors produced positive returns again this month. The recent theme of cyclical sectors dominating returns seems to have abated. Health Care lead the way up 6.4%, followed closely by Utilities (+5.3%), Financials (+5.2%) and Information Technology (+5.1%). Energy and Telecom were once again down for the month, falling 2.2% and 0.4% respectively.

**S&P 500 Index Sector Returns**



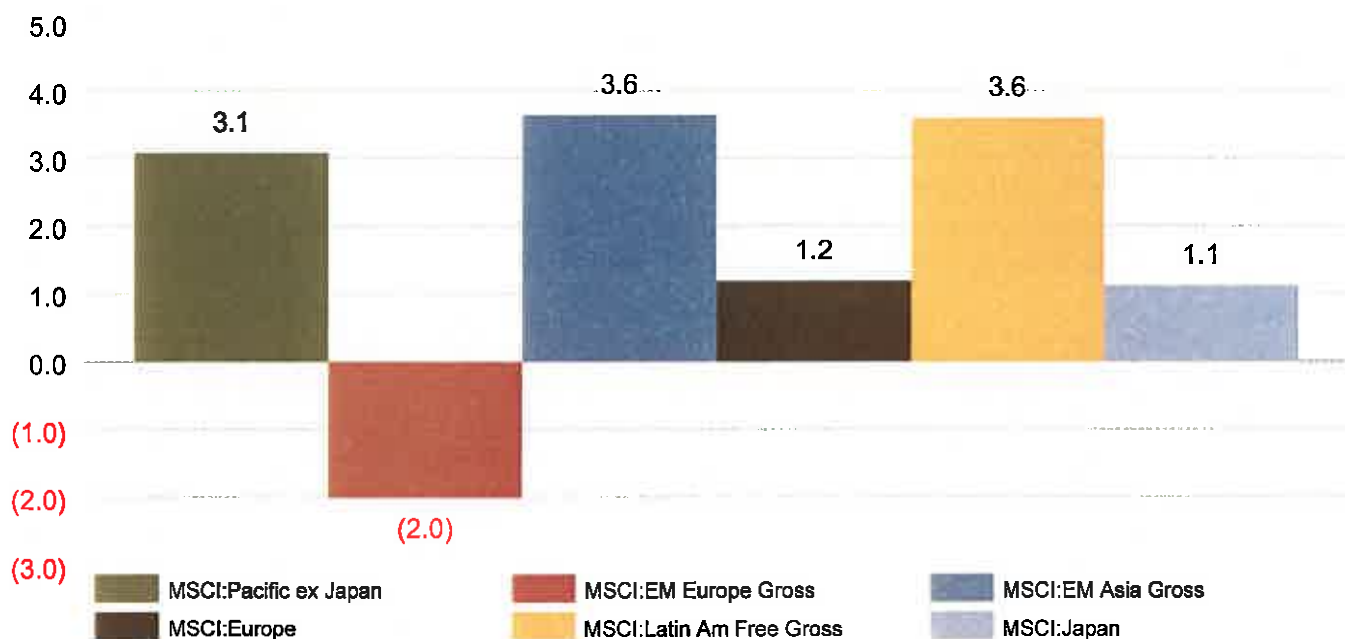
**Non-U.S. Equity Overview**  
**As of February 28, 2017**

Index	Last Month	Year to Date	Last Year	Last 3 Years	Last 5 Years	Last 10 Years
MSCI:ACWI ex US	1.59	5.19	19.31	(0.19)	3.55	1.38
MSCI:EAFE	1.43	4.37	15.75	(0.62)	5.16	1.03
MSCI:EAFE Hedged Net	2.21	2.43	19.55	6.36	10.37	2.70
MSCI:EM	3.06	8.70	29.46	1.35	(0.37)	2.86
MSCI:ACWI ex US Small Cap	2.63	6.57	19.52	1.80	5.98	3.22

International stocks continued their climb into February aided by a strengthening macroeconomic outlook. However, international equities still trailed their U.S. counterparts for the month (MSCI ACWI ex U.S.: +1.6 vs Russell 3000 Index: +3.7%). In a promising departure from the deflationary pressures of 2016, euro zone inflation moved further into positive territory, reaching 1.8%. In the backdrop of strong output and external demand, the Bank of Japan increased their growth expectations over the next two years. Local currency returns outpaced dollar denominated returns as the dollar weakened (MSCI EAFE Index: +1.4% vs MSCI EAFE Hedged Index +2.2%). Emerging markets bolstered international returns on the back of strong growth in both China and India. The MSCI Emerging Markets Index rose 3.1%. International small caps dominated their large cap counterpart and returned 2.6% (MSCI ACWI ex U.S Small Cap).

With the exception of European emerging markets (MSCI Emerging Markets Europe: -2.0%), all MSCI regional returns were up for the month. Leading the way were Latin America (MSCI Latin America) and Asian emerging markets (MSCI Emerging Markets Asian), both up 3.6% in February. Pacific ex Japan followed closely, increasing 3.1%. Supported by positive economic data, developed Europe and Japan were up 1.2% and 1.1% respectively.

**MSCI Regional Returns**

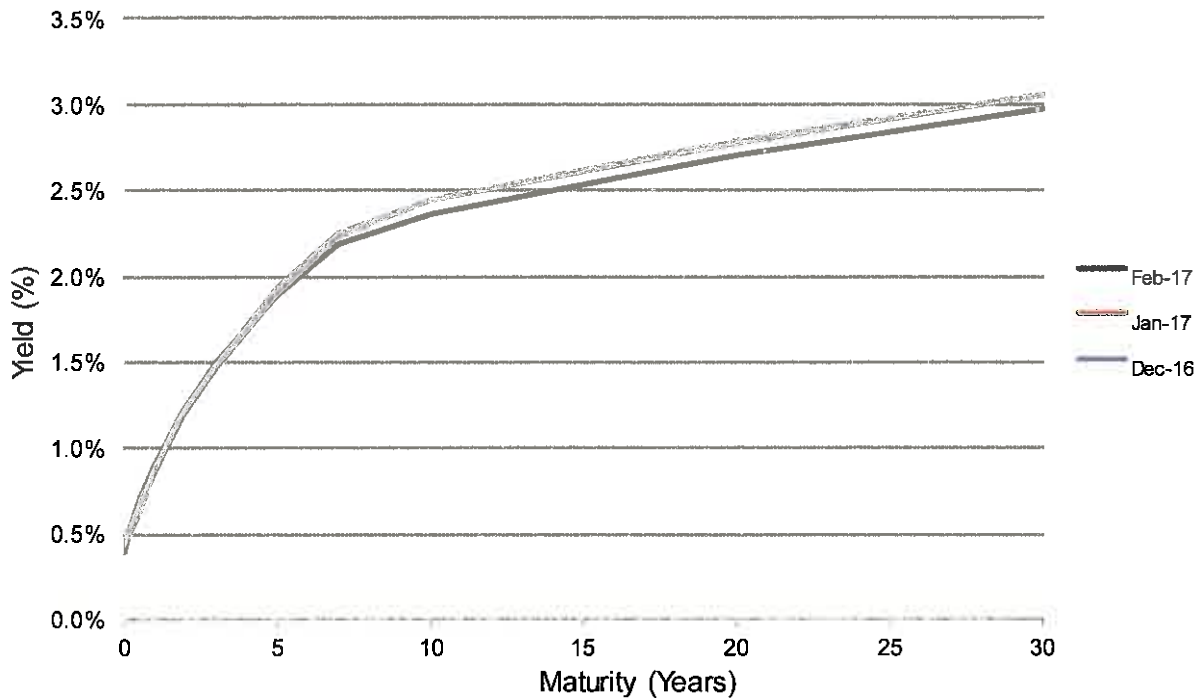




**Fixed Income Overview**  
**As of February 28, 2017**

Index	Last Month	Year to Date	Last Year	Last 3 Years	Last 5 Years	Last 10 Years
Blmbg:Aggregate	0.67	0.87	1.42	2.64	2.24	4.28
Blmbg:US Government	0.48	0.72	(1.15)	1.96	1.41	3.78
Blmbg:Credit	1.11	1.45	5.72	3.61	3.56	5.26
Blmbg:Mortgage Backed Sec	0.48	0.44	0.44	2.57	2.05	4.19
Blmbg:US TIPS	0.47	1.32	3.36	1.89	0.77	4.27
ML:High Yield CP Idx	1.56	2.93	22.13	4.74	6.84	7.32
3 Month T-Bill	0.04	0.09	0.39	0.16	0.14	0.73
CS:Lev Loan	0.59	1.12	12.55	3.82	4.87	4.22

**Treasury Yield Curve**



The Federal Reserve left rates unchanged at the first meeting of 2017, but noted significant progress toward low unemployment and stable prices. The market-implied probability for a March rate hike gradually rose from 30% to 50% over the month, then jumped to 80% at the end of the month following hawkish Fed speeches. Domestic policy uncertainty drove increased volatility and a flattening of the Treasury curve in February. The 1-year Treasury yield rose four bps to 0.88%, and the 10-year Treasury yield fell nine bps to 2.36%.

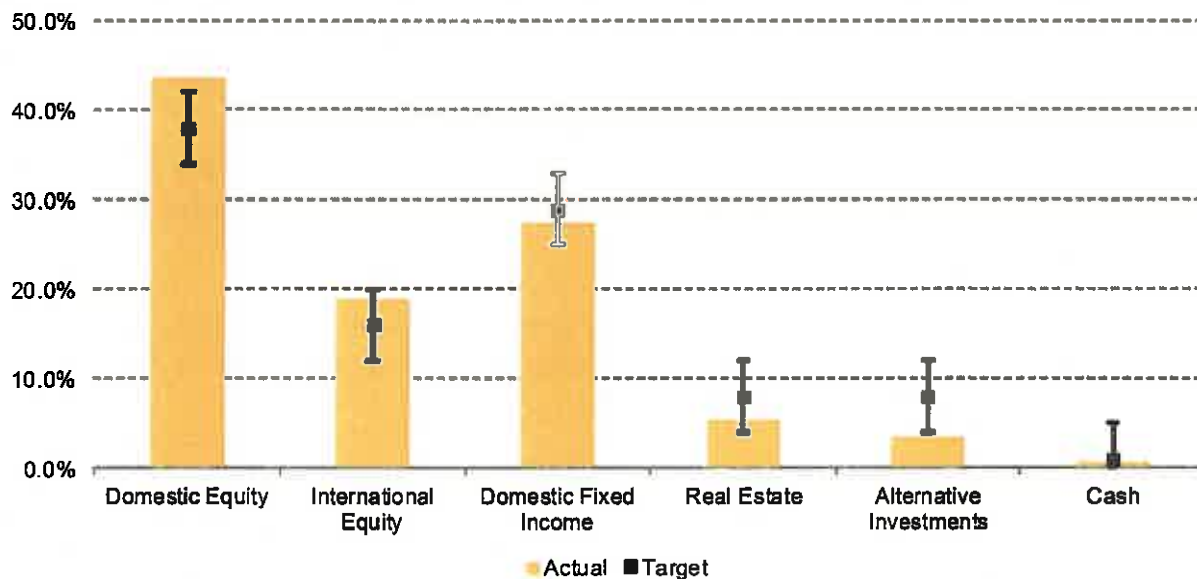
The U.S. fixed income market appears well supported with an improving outlook for U.S. growth and normalizing monetary policy. Indices were up across the board in February. High Yield (ML High Yield CP Index) continued to lead the charge returning 1.6% in February and 2.9% year to date. Credit increased 1.1% for the month (Bloomberg Credit Index). The Bloomberg Aggregate Index finished the month around the middle of the pack with a 0.7% return. Followed by Governments (Bloomberg Government Index: +0.5%), Mortgage Backed Securities (Bloomberg Mortgage Backed Securities Index: +0.5%) and TIPS (Bloomberg U.S. TIPS Index: +0.5%).

**Executive Summary**

**Total Fund**

Total Fund assets at the end of February were \$37.57 billion, up approximately \$621.25 million from the end of January. The Fund gained 1.93% for the month, performing approximately in line with the 1.97% return of the benchmark. The U.S. Equity composite underperformed its benchmark by 58 basis points while the International Equity composite was essentially flat compared to its benchmark. Real Estate added 0.35% in February, but trailed the benchmark by 27 basis points. Alternatives fell short of the 0.72% return of its benchmark, returning 0.56%. Fixed Income grew 0.83% during the month and outperformed the 0.67% return of the Bloomberg Aggregate Index. For the trailing year, the Fund advanced 16.70% outpacing the return of the benchmark by almost 2.0%.

Current policy states that when actual allocations of the asset classes differ by more than four percentage points from their policy targets, a recommendation for rebalancing will be made to the Board of Trustees. As of February, Alternatives was below target allocation by 4.5% and Domestic Equity was above the target allocation by 5.8%. All other asset classes were within the allowable range. The Chief Investment Officer and Consultant do not recommend any rebalancing at this time.



**U.S. Equity**

The U.S. Equity composite gained 3.14% during February, falling short of the 3.72% return of the Russell 3000 Index. Large cap had the advantage over small cap while style returns were mixed across the capitalizations.

**Large Cap:** IMRF's large cap managers advanced 3.78% but missed the 3.87% return of the Russell 1000 Index. In aggregate, growth managers gained 3.66% compared to the 4.15% return of the Russell 1000 Growth Index. Holland was the best performing active growth manager returning 3.95%. Value managers returned 3.91%, outperforming the Russell 1000 Value Index by 32 basis points. BMO was the best performing active value manager, returning 4.53%, followed closely by LSV (+4.22%).

**Small Cap:** The Small Cap composite gained 1.03% but trailed the 1.93% return of the Russell 2000 Index. Continuing the trend from January, the Small Cap Growth managers (+2.14%) in aggregate outperformed the Small Cap Value managers (+0.32%). The Micro-Cap composite advanced 0.49% in February. Ativo was the leading micro-cap manager, advancing 2.64%.

**International Equity**

In February, the International Equity composite was essentially flat to the MSCI ACWI ex-U.S. (Net) Index, returning 1.62%.

Large Cap: International Large Cap managers had an absolute return of 1.47% during February but trailed the MSCI ACWI ex-U.S. (Net) Index by 12 basis points. International Large Cap Growth managers collectively advanced 1.17%, led by the 1.96% return of EARNEST Partners. In aggregate, the International Large Cap Value managers gained 1.24%.

International Small Cap and Emerging Markets: The International Small Cap managers returned 2.31%, but trailed the 2.63% return of the ACWI Small Cap ex US Index. The Emerging Markets portfolio, managed by Genesis, advanced 2.62% during the month but fell short of the MSCI Emerging Markets Index by 45 basis points.

**Fixed Income**

For the month, the total Fixed Income composite gained 0.83% and surpassed the Bloomberg Aggregate Index by 16 basis points. The emerging markets manager, Standish, led the way for all fixed income managers, returning 2.24%.

Active Core: In aggregate, the active core fixed income managers gained 0.73% during February. Both Garcia Hamilton and Piedmont outperformed the Bloomberg Aggregate Index, while EARNEST Partners fell slightly behind the benchmark.

Core Plus: The core plus managers collectively advanced 0.86%. Continuing the trend from January, Western (+0.93%) and Taplin, Canida, Habacht (+0.90%) led the way for the core plus managers.

Bank Loans: The bank loans composite, managed by Barings, fell short of the 0.58% return of its benchmark, returning 0.51%.

Emerging Markets: The emerging market debt component, managed by Standish, was the best performing manager in the Fund's Fixed Income composite, returning 2.24%.

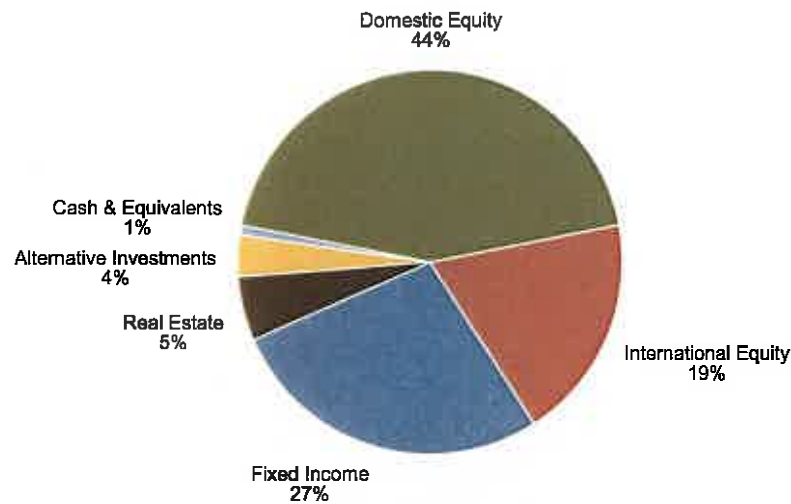
Opportunistic: The opportunistic component, managed by Crescent, gained 1.18% in February, outperforming its custom benchmark by 15 basis points.

High Yield: The high yield manager, MacKay Shields, returned 1.20% in February but underperformed the 1.56% return of its benchmark.

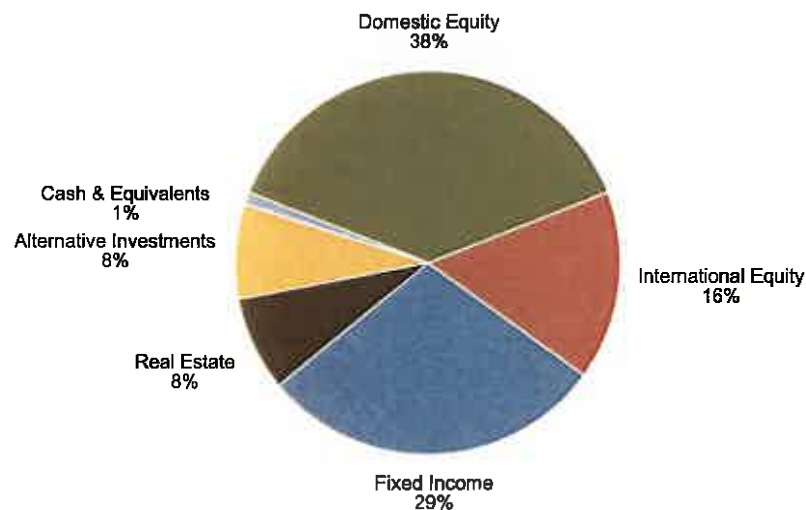
## Actual vs Target Asset Allocation

The first chart below shows the Fund's asset allocation as of February 28, 2017. The second chart shows the Fund's target asset allocation as outlined in the investment policy statement.

### Actual Asset Allocation



### Target Asset Allocation



Asset Class	\$Millions Actual	Percent Actual	Percent Target	Percent Difference	\$Millions Difference
Domestic Equity	16,453	43.8%	38.0%	5.8%	2,176
International Equity	7,132	19.0%	16.0%	3.0%	1,120
Fixed Income	10,324	27.5%	29.0%	(1.5%)	(572)
Real Estate	2,034	5.4%	8.0%	(2.6%)	(972)
Alternative Investments	1,317	3.5%	8.0%	(4.5%)	(1,688)
Cash & Equivalents	312	0.8%	1.0%	(0.2%)	(64)
Total	37,572	100.0%	100.0%		

\* Current Month Target = 38.0% Russell 3000 Index, 29.0% Blmbg Aggregate, 16.0% MSCI ACWI ex US, 8.0% NCREIF NFI-ODCE Val Wt Nt, 8.0% 9% Annually and 1.0% 3-month Treasury Bill.

## Investment Manager Asset Allocation

The table below contrasts the distribution of assets across the Fund's investment managers as of February 28, 2017, with the distribution as of January 31, 2017.

### Asset Distribution Across Investment Managers

	February 28, 2017		January 31, 2017	
	Market Value	Percent	Market Value	Percent
<b>Domestic Equity*</b>	<b>\$16,452,935,854</b>	<b>43.79%</b>	<b>\$15,955,863,001</b>	<b>43.18%</b>
<b>Large Cap Growth</b>				
Holland	925,901,057	2.46%	890,701,092	2.41%
NTGI S&P 500 Growth Idx	1,632,909,734	4.35%	1,569,018,092	4.25%
Sands	1,264,671,055	3.37%	1,228,876,026	3.33%
<b>Large Cap Value</b>				
Dodge & Cox	1,356,968,016	3.61%	1,317,729,662	3.57%
BMO	1,384,756,383	3.69%	1,325,943,084	3.59%
LSV	1,410,313,462	3.75%	1,354,964,569	3.67%
NTGI S&P 500 Value Idx	1,601,498,039	4.26%	1,541,741,926	4.17%
<b>Large Cap Core</b>				
NTGI MarketCap Index	3,112,907,984	8.29%	3,001,777,390	8.12%
<b>Small Cap Growth</b>				
Frontier	385,090,659	1.02%	375,339,636	1.02%
FIAM	1,037,107,485	2.76%	1,017,119,506	2.75%
<b>Small Cap Value</b>				
Channing	216,561,220	0.58%	213,952,316	0.58%
Dimensional Small Cap Value	849,422,562	2.26%	848,230,616	2.30%
Inv. Counselors of Maryland	709,466,902	1.89%	707,554,654	1.91%
<b>Micro Cap</b>				
Ariel	69,585,994	0.19%	72,828,682	0.20%
Ativo	121,443,293	0.32%	118,299,916	0.32%
Dimensional Micro Cap	374,331,154	1.00%	371,453,341	1.01%
Wall Street	1	0.00%	8,374	0.00%
<b>International Equity</b>	<b>\$7,131,637,967</b>	<b>18.98%</b>	<b>\$7,017,263,975</b>	<b>18.99%</b>
<b>International Large Cap Growth</b>				
EARNEST Partners	547,899,838	1.46%	537,364,303	1.45%
William Blair	610,031,051	1.62%	607,135,012	1.64%
<b>International Large Cap Value</b>				
Brandes	540,619,775	1.44%	538,417,790	1.46%
Lombardia	5,175	0.00%	5,205	0.00%
Mondrian	509,752,848	1.36%	498,598,329	1.35%
Lazard	95,296,435	0.25%	93,970,803	0.25%
<b>International Large Cap Core</b>				
Arrowstreet	581,403,200	1.55%	573,714,814	1.55%
Brown	287,736,530	0.77%	281,664,107	0.76%
GlobeFlex	555,285,312	1.48%	543,937,477	1.47%
NTGI MSCI EAFE Index	2,069,849,469	5.51%	2,040,326,847	5.52%
Progress Intl Equity	249,984,058	0.67%	244,760,240	0.66%
<b>International Small Cap</b>				
Franklin Templeton	198,638,082	0.53%	193,991,108	0.52%
William Blair	237,471,666	0.63%	232,270,838	0.63%
<b>Emerging Markets</b>				
Genesis	647,669,703	1.72%	631,112,308	1.71%

\* includes asset in equity transition account.

## Investment Manager Asset Allocation

The table below contrasts the distribution of assets across the Fund's investment managers as of February 28, 2017, with the distribution as of January 31, 2017.

### Asset Distribution Across Investment Managers

	February 28, 2017		January 31, 2017	
	Market Value	Percent	Market Value	Percent
<b>Fixed Income</b>	<b>\$10,324,190,422</b>	<b>27.48%</b>	<b>\$10,256,751,933</b>	<b>27.76%</b>
<b>Domestic Fixed Core</b>				
EARNEST Partners	550,845,831	1.47%	548,991,309	1.49%
Piedmont	551,533,861	1.47%	549,010,533	1.49%
Garcia Hamilton	523,272,257	1.39%	521,410,676	1.41%
<b>Passive Core</b>				
BlackRock US Debt	1,405,997,987	3.74%	1,396,437,430	3.78%
NTGI Blmbg Aggregate Index	1,522,377,288	4.05%	1,512,280,675	4.09%
<b>Domestic Fixed Core Plus</b>				
BlackRock Core Plus	747,182,498	1.99%	742,775,530	2.01%
Brandes Core Plus	245,633,125	0.65%	245,522,254	0.66%
LM Capital	861,376,426	2.29%	855,989,068	2.32%
Progress Fixed Income	862,756,064	2.30%	855,457,903	2.32%
Taplin, Canida, & Habacht	875,695,938	2.33%	869,780,529	2.35%
Western	928,454,866	2.47%	921,970,185	2.50%
<b>Bank Loans</b>				
Barings Global Loan Fund	308,456,864	0.82%	306,889,065	0.83%
<b>Emerging Markets Debt</b>				
Standish	192,039,184	0.51%	187,839,846	0.51%
<b>Opportunistic Fixed Income</b>				
Crescent	118,443,419	0.32%	117,130,779	0.32%
<b>High Yield</b>				
MackKay Shields	628,995,188	1.67%	624,298,528	1.69%
FIAM High Yield	1,129,626	0.00%	967,624	0.00%
<b>Real Estate</b>	<b>\$2,034,233,293</b>	<b>5.41%</b>	<b>\$1,982,480,986</b>	<b>5.37%</b>
<b>Real Estate Core</b>				
TA Buckhead Ind. Prop.	383,343,375	1.02%	379,736,258	1.03%
Barings Core Property Fund	144,444,176	0.38%	144,444,176	0.39%
INVESCO Core RE	187,728,020	0.50%	187,728,020	0.51%
AEW Core Property Trust	222,513,392	0.59%	222,513,392	0.60%
CBRE US Core Property Trust	158,669,597	0.42%	158,669,597	0.43%
<b>Real Estate Non-Core</b>				
Artemis MWBE Spruce	51,130,384	0.14%	22,781,646	0.06%
Franklin Templeton EMREFF	39,124,814	0.10%	39,610,505	0.11%
Security Capital	56,147,658	0.15%	53,642,111	0.15%
Dune II	34,307,190	0.09%	34,637,128	0.09%
Non-Core Real Estate Funds*	637,473,777	1.70%	622,235,812	1.68%
Non-Core Intl Real Estate Funds**	72,617,736	0.19%	69,694,366	0.19%
Rockwood Fund VIII	5,020,557	0.01%	5,086,446	0.01%
Almanac ARS V	8,839,584	0.02%	8,839,584	0.02%
TA Fund IX	32,873,033	0.09%	32,861,945	0.09%
<b>Alternative Investments</b>	<b>\$1,317,332,215</b>	<b>3.51%</b>	<b>\$1,330,222,200</b>	<b>3.60%</b>
<b>Absolute Return</b>				
Aurora	81,058,277	0.22%	84,697,526	0.23%
<b>Private Equity</b>				
Abbott	316,797,910	0.84%	312,348,076	0.85%
Muller & Monroe ILPEFF	2,913,771	0.01%	2,913,771	0.01%
Muller & Monroe MPEFF	9,436,695	0.03%	10,713,206	0.03%
Pantheon	199,577,976	0.53%	199,697,276	0.54%
Private Equity Fund - Domestic	416,029,583	1.11%	430,069,259	1.16%
Private Equity Fund - International	30,090,483	0.08%	28,112,763	0.08%
<b>Agriculture</b>				
Premiere Partners IV	185,831,078	0.49%	186,073,880	0.50%
<b>Timberland</b>				
Forest Investment Assoc.	75,596,443	0.20%	75,596,443	0.20%
<b>Cash &amp; Equivalents</b>	<b>\$311,772,488</b>	<b>0.83%</b>	<b>\$408,269,611</b>	<b>1.10%</b>
<b>Total Fund</b>	<b>\$37,572,102,239</b>	<b>100.0%</b>	<b>\$36,950,851,705</b>	<b>100.0%</b>

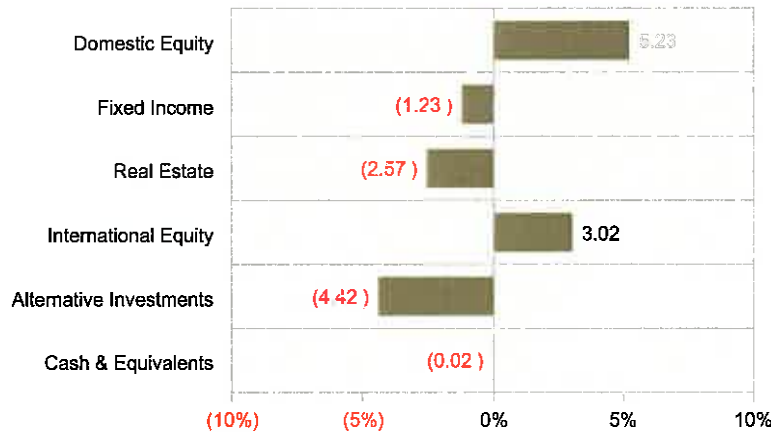
\* Non-Core Real Estate Funds funded since September 2011.

\*\* Non-Core International Real Estate Funds funded since August 2014.

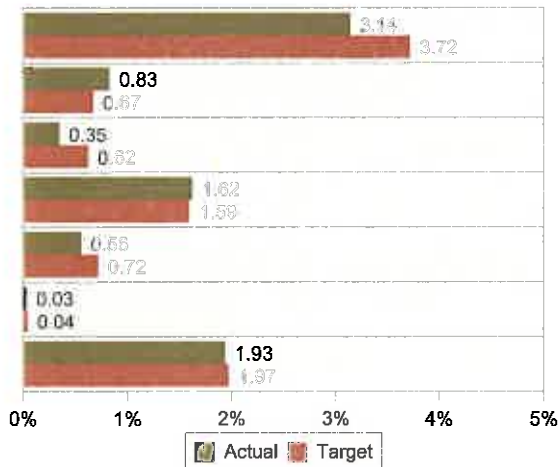
## Monthly Total Fund Relative Attribution - February 28, 2017

The following analysis approaches Total Fund Attribution from the perspective of relative return. Relative return attribution separates and quantifies the sources of total fund excess return relative to its target. This excess return is separated into two relative attribution effects: Asset Allocation Effect and Manager Selection Effect. The Asset Allocation Effect represents the excess return due to the actual total fund asset allocation differing from the target asset allocation. Manager Selection Effect represents the total fund impact of the individual managers excess returns relative to their benchmarks.

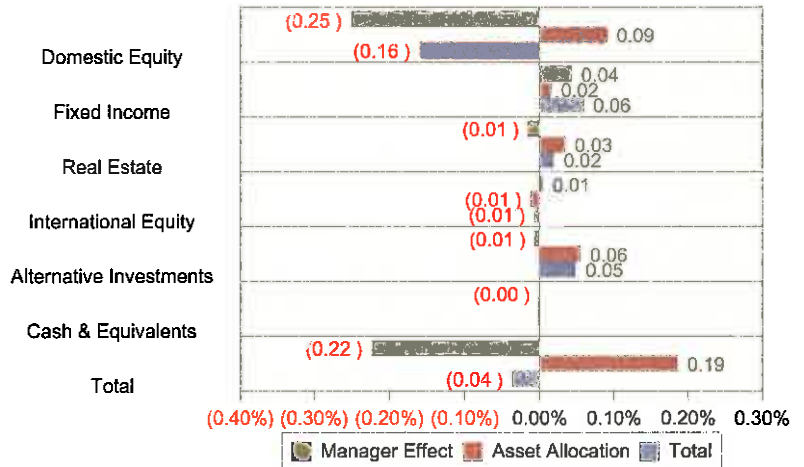
### Asset Class Under or Overweighting



### Actual vs Target Returns



### Relative Attribution by Asset Class



### Relative Attribution Effects for Month ended February 28, 2017

Asset Class	Effective Actual Weight	Effective Target Weight	Actual Return	Target Return	Manager Effect	Asset Allocation	Total Relative Return
Domestic Equity	43%	38%	3.14%	3.72%	(0.25%)	0.09%	(0.16%)
Fixed Income	28%	29%	0.83%	0.67%	0.04%	0.02%	0.06%
Real Estate	5%	8%	0.35%	0.62%	(0.01%)	0.03%	0.02%
International Equity	19%	16%	1.62%	1.59%	0.01%	(0.01%)	(0.01%)
Alternative Investments	4%	8%	0.56%	0.72%	(0.01%)	0.06%	0.05%
Cash & Equivalents	1%	1%	0.03%	0.04%	(0.00%)	0.00%	0.00%
<b>Total</b>			<b>1.93%</b>	<b>1.97%</b>	<b>(0.22%)</b>	<b>0.19%</b>	<b>(0.04%)</b>

\* Current Month Target = 38.0% Russell 3000 Index, 29.0% Blmbg Aggregate, 16.0% MSCI ACWI ex US, 8.0% NCREIF NFI-ODCE Val Wt Nt, 8.0% 9% Annually and 1.0% 3-month Treasury Bill.

## Asset Class Returns

The table below details the rates of return for the fund's asset class composites over various time periods. Negative returns are shown in red, positive returns in black. Returns for one year or greater are annualized.

### Returns for Periods Ended February 28, 2017

	Last Month	Last 3 Months	Year to Date	Last 12 Months
Domestic Equity	3.14%	7.13%	5.10%	27.90%
Blended Benchmark**	3.72%	7.73%	5.67%	26.29%
Domestic Equity - Net	3.11%	7.07%	5.06%	27.62%
International Equity	1.62%	7.74%	5.11%	17.93%
MSCI ACWI x US (Net)	1.59%	7.88%	5.19%	19.31%
International Equity - Net	1.60%	7.69%	5.06%	17.58%
Fixed Income	0.83%	1.73%	1.24%	4.57%
Blmbg Aggregate Index	0.67%	1.01%	0.87%	1.42%
Fixed Income - Net	0.82%	1.70%	1.22%	4.44%
Real Estate	0.35%	1.20%	0.57%	8.44%
Blended Benchmark***	0.62%	1.88%	1.25%	7.74%
Real Estate - Net	0.35%	1.20%	0.57%	8.44%
Alternative Investments	0.56%	0.52%	0.24%	6.43%
Alternatives Custom Benchmark****	0.72%	2.18%	1.45%	9.00%
Alternative Investments - Net	0.52%	0.46%	0.19%	6.16%
Absolute Return	0.09%	2.15%	1.06%	8.50%
HFR Fund-of-Funds Index	0.90%	2.81%	1.89%	6.50%
Private Equity	0.77%	0.26%	0.26%	8.67%
Alternatives Custom Benchmark****	0.72%	2.18%	1.45%	9.00%
Agriculture	(0.13%)	0.33%	(0.15%)	(0.76%)
Blended Benchmark***	0.62%	1.88%	1.25%	7.74%
Timberland	0.00%	2.51%	0.00%	(4.58%)
Blended Benchmark***	0.62%	1.88%	1.25%	7.74%
<b>Total Fund</b>	<b>1.93%</b>	<b>5.08%</b>	<b>3.55%</b>	<b>16.70%</b>
Total Fund - Net	1.92%	5.03%	3.51%	16.47%
Total Fund Benchmark	1.97%	4.82%	3.45%	14.72%

\* Current Month Target = 38.0% Russell 3000 Index, 29.0% Blmbg Aggregate, 16.0% MSCI ACWI ex US, 8.0% NCREIF NFI-ODCE Val Wt Nt, 8.0% 9% Annually and 1.0% 3-month Treasury Bill.

\*\* The Blended Benchmark is currently Russell 3000 Index. Returns prior to January 1, 2015, reflect those of the Dow Jones U.S. Total Stock Market Index.

\*\*\* The Blended Benchmark is currently ODCE Value Weighted Index. Returns between January 1, 2007 and December 31, 2012 reflect NPI+1%. Returns prior to January 1, 2007, reflect those of the Consumer Price Index +5%.

Given that ODCE returns are updated quarterly, an approximation of the Index is used in the monthly reports.

\*\*\*\* The Alternatives Custom Benchmark is based on an annualized rate of return of 9.0%. Prior to July 1, 2010 the Benchmark was based on an annual return of 12.0%. Prior to 2004, the Benchmark was based on an annual return of 13.0%. Prior to 2003, it was based on an annual return of 15.0%.



## Asset Class Returns

The table below details the rates of return for the fund's asset class composites over various time periods. Negative returns are shown in red, positive returns in black. Returns for one year or greater are annualized.

### Returns for Periods Ended February 28, 2017

	Last 36 Months	Last 60 Months	Last 120 Months	Since Inception
Domestic Equity	8.47%	13.69%	7.85%	11.63% <sup>(1/82)</sup>
Blended Benchmark**	9.88%	13.81%	7.76%	11.39% <sup>(1/82)</sup>
Domestic Equity - Net	8.21%	13.42%	7.58%	8.11% <sup>(1/05)</sup>
International Equity	0.86%	5.73%	2.27%	7.71% <sup>(9/86)</sup>
MSCI ACWI x US (Net)	(0.19%)	3.55%	1.38%	-
International Equity - Net	0.54%	5.40%	1.94%	5.11% <sup>(1/05)</sup>
Fixed Income	3.26%	3.39%	5.18%	8.50% <sup>(1/82)</sup>
Blmbg Aggregate Index	2.64%	2.24%	4.28%	7.97% <sup>(1/82)</sup>
Fixed Income - Net	3.12%	3.24%	5.04%	4.93% <sup>(1/05)</sup>
Real Estate - Net	10.93%	11.37%	4.97%	7.02% <sup>(1/05)</sup>
Blended Benchmark***	10.94%	11.37%	7.61%	7.78% <sup>(1/05)</sup>
Alternative Investments	7.26%	7.89%	6.22%	10.61% <sup>(2/86)</sup>
Alternatives Custom Benchmark****	9.00%	9.00%	9.99%	13.00% <sup>(2/86)</sup>
Alternative Investments - Net	6.89%	7.55%	5.93%	7.67% <sup>(1/05)</sup>
Absolute Return	3.91%	4.58%	2.81%	4.61% <sup>(1/02)</sup>
HFR Fund-of-Funds Index	1.42%	3.13%	1.29%	3.40% <sup>(1/02)</sup>
Private Equity	9.72%	9.84%	8.55%	12.72% <sup>(2/86)</sup>
Alternatives Custom Benchmark****	9.00%	9.00%	9.99%	13.00% <sup>(2/86)</sup>
Agriculture	12.05%	14.86%	9.97%	8.59% <sup>(10/97)</sup>
Blended Benchmark***	10.94%	11.37%	7.61%	7.58% <sup>(10/97)</sup>
Timberland	0.67%	2.83%	4.95%	7.98% <sup>(10/92)</sup>
Blended Benchmark***	10.94%	11.37%	7.61%	7.59% <sup>(10/92)</sup>
<b>Total Fund</b>	<b>5.42%</b>	<b>8.71%</b>	<b>6.39%</b>	<b>9.95%</b> <sup>(1/82)</sup>
Total Fund - Net	5.18%	8.47%	6.16%	6.95% <sup>(1/05)</sup>
Total Fund Benchmark	6.21%	8.18%	6.25%	6.80% <sup>(1/05)</sup>

\* Current Month Target = 38.0% Russell 3000 Index, 29.0% Blmbg Aggregate, 16.0% MSCI ACWI ex US, 8.0% NCREIF NFI-ODCE Val Wt Nt, 8.0% 9% Annually and 1.0% 3-month Treasury Bill.

\*\* The Blended Benchmark is currently Russell 3000 Index. Returns prior to January 1, 2015, reflect those of the Dow Jones U.S. Total Stock Market Index.

\*\*\* The Blended Benchmark is currently ODCE Value Weighted Index. Returns between January 1, 2007 and December 31, 2012 reflect NPI+1%. Returns prior to January 1, 2007, reflect those of the Consumer Price Index +5%.

Given that ODCE returns are updated quarterly, an approximation of the Index is used in the monthly reports.

\*\*\*\* The Alternatives Custom Benchmark is based on an annualized rate of return of 9.0%. Prior to July 1, 2010 the Benchmark was based on an annual return of 12.0%. Prior to 2004, the Benchmark was based on an annual return of 13.0%. Prior to 2003, it was based on an annual return of 15.0%.

## Large Cap Equity Returns

The table below details the rates of return for the fund's large cap growth and large cap value managers over various time periods. Negative returns are shown in red, positive returns in black. Returns for one year or greater are annualized.

### Returns for Periods Ended February 28, 2017

	Last Month	Last 3 Months	Year to Date	Last 12 Months
<b>Large Cap Equity</b>	<b>3.78%</b>	<b>8.09%</b>	<b>6.31%</b>	<b>26.61%</b>
Russell 1000 Index	3.87%	7.95%	5.96%	25.53%
<b>Large Cap Growth</b>	<b>3.66%</b>	<b>9.10%</b>	<b>8.67%</b>	<b>20.76%</b>
Holland	3.95%	8.29%	7.33%	19.86%
LCG Blended Benchmark*	4.15%	9.00%	7.66%	22.15%
Russell 1000 Growth Index	4.15%	9.00%	7.66%	22.15%
Holland - Net	3.95%	8.29%	7.33%	19.67%
NTGI S&P 500 Growth Idx	4.07%	8.71%	7.17%	21.67%
S&P/Citi 500 Growth Index	4.07%	8.71%	7.19%	21.62%
NTGI S&P 500 Growth Idx - Net	4.07%	8.70%	7.17%	21.67%
Sands	2.91%	10.22%	11.72%	20.97%
LCG Blended Benchmark*	4.15%	9.00%	7.66%	22.15%
Russell 1000 Growth Index	4.15%	9.00%	7.66%	22.15%
Sands - Net	2.86%	10.16%	11.66%	20.70%
<b>Large Cap Value</b>	<b>3.91%</b>	<b>7.60%</b>	<b>5.11%</b>	<b>30.98%</b>
Dodge & Cox	3.03%	6.73%	5.48%	37.35%
LCV Blended Benchmark**	3.59%	6.94%	4.33%	29.13%
Russell 1000 Value Index	3.59%	6.94%	4.33%	29.13%
Dodge & Cox - Net	2.98%	6.68%	5.42%	37.08%
BMO	4.53%	8.63%	5.77%	27.00%
LCV Blended Benchmark**	3.59%	6.94%	4.33%	29.13%
Russell 1000 Value Index	3.59%	6.94%	4.33%	29.13%
BMO - Net	4.47%	8.57%	5.72%	26.74%
LSV	4.22%	7.84%	4.71%	32.19%
LCV Blended Benchmark**	3.59%	6.94%	4.33%	29.13%
Russell 1000 Value Index	3.59%	6.94%	4.33%	29.13%
LSV - Net	4.22%	7.78%	4.65%	31.88%
NTGI S&P 500 Value Idx	3.88%	7.23%	4.58%	28.46%
S&P/Citi 500 Value Index	3.85%	7.20%	4.54%	28.32%
NTGI S&P 500 Value Idx - Net	3.88%	7.23%	4.58%	28.46%
<b>Large Cap Passive Core</b>	<b>3.70%</b>	<b>7.79%</b>	<b>5.71%</b>	<b>26.42%</b>
NTGI MarketCap Idx	3.70%	7.79%	5.71%	26.42%
DJ U.S. Total Stock Market Index	3.69%	7.76%	5.71%	26.26%
NTGI MarketCap Idx - Net	3.70%	7.78%	5.71%	26.41%

\* The LCG Blended Benchmark is currently the Russell 1000 Growth Index. Returns prior to January 1, 2006, reflect those of the S&P 500/Citigroup Growth Index.

\*\* The LCV Blended Benchmark is currently the Russell 1000 Value Index. Returns prior to January 1, 2006, reflect those of the S&P 500/Citigroup Value Index.

## Large Cap Equity Returns

The table below details the rates of return for the fund's large cap growth and large cap value managers over various time periods. Negative returns are shown in red, positive returns in black. Returns for one year or greater are annualized.

### Returns for Periods Ended February 28, 2017

	Last 36 Months	Last 60 Months	Last 120 Months	Since Inception
<b>Large Cap Equity</b>	<b>9.30%</b>	<b>13.97%</b>	<b>7.84%</b>	<b>11.20%</b> (1/82)
Russell 1000 Index	10.19%	13.94%	7.69%	11.58% (1/82)
<b>Large Cap Growth</b>	<b>7.08%</b>	<b>12.49%</b>	<b>8.81%</b>	<b>11.51%</b> (1/82)
Holland	7.82%	11.76%	9.32%	10.12% (11/94)
LCG Blended Benchmark*	10.47%	13.79%	9.07%	9.70% (11/94)
Russell 1000 Growth Index	10.47%	13.79%	9.07%	8.94% (11/94)
Holland - Net	7.61%	11.54%	9.06%	7.82% (1/05)
NTGI S&P 500 Growth Idx	10.81%	14.24%	9.17%	6.75% (8/01)
S&P/Citi 500 Growth Index	10.79%	14.21%	9.16%	6.71% (8/01)
NTGI S&P 500 Growth Idx - Net	10.80%	14.23%	9.17%	8.67% (1/05)
Sands	3.54%	12.30%	10.91%	10.63% (11/03)
LCG Blended Benchmark*	10.47%	13.79%	9.07%	8.69% (11/03)
Russell 1000 Growth Index	10.47%	13.79%	9.07%	8.75% (11/03)
Sands - Net	3.30%	12.05%	10.64%	9.31% (1/05)
<b>Large Cap Value</b>	<b>10.37%</b>	<b>15.24%</b>	<b>6.95%</b>	<b>10.52%</b> (10/82)
Dodge & Cox	10.39%	16.24%	7.01%	9.77% (9/03)
LCV Blended Benchmark**	9.90%	14.02%	6.20%	8.64% (9/03)
Russell 1000 Value Index	9.90%	14.02%	6.20%	8.84% (9/03)
Dodge & Cox - Net	10.16%	16.00%	6.77%	7.88% (1/05)
BMO	9.92%	14.72%	7.48%	8.22% (2/01)
LCV Blended Benchmark**	9.90%	14.02%	6.20%	5.61% (2/01)
Russell 1000 Value Index	9.90%	14.02%	6.20%	6.77% (2/01)
BMO - Net	9.68%	14.46%	7.22%	8.40% (1/05)
LSV	11.00%	16.12%	7.62%	11.62% (2/03)
LCV Blended Benchmark**	9.90%	14.02%	6.20%	9.72% (2/03)
Russell 1000 Value Index	9.90%	14.02%	6.20%	9.73% (2/03)
LSV - Net	10.74%	15.84%	7.33%	8.62% (1/05)
NTGI S&P 500 Value Idx	10.32%	13.77%	6.03%	5.68% (8/99)
S&P/Citi 500 Value Index	10.25%	13.68%	5.96%	5.66% (8/99)
NTGI S&P 500 Value Idx - Net	10.31%	13.76%	6.02%	7.07% (1/05)
<b>Large Cap Passive Core</b>	<b>9.96%</b>	<b>13.88%</b>	<b>7.67%</b>	<b>11.12%</b> (1/85)
NTGI MarketCap Idx	9.96%	13.88%	7.68%	10.87% (2/85)
DJ U.S. Total Stock Market Index	9.84%	13.79%	7.74%	10.82% (2/85)
NTGI MarketCap Idx - Net	9.95%	13.88%	7.68%	8.12% (1/05)

\* The LCG Blended Benchmark is currently the Russell 1000 Growth Index. Returns prior to January 1, 2006, reflect those of the S&P 500/Citigroup Growth Index.

\*\* The LCV Blended Benchmark is currently the Russell 1000 Value Index. Returns prior to January 1, 2006, reflect those of the S&P 500/Citigroup Value Index.

## Small Cap Equity Returns

The table below details the rates of return for the fund's small cap growth, small cap value, and micro cap managers over various time periods. Negative returns are shown in red, positive returns in black. Returns for one year or greater are annualized.

### Returns for Periods Ended February 28, 2017

	Last Month	Last 3 Months	Year to Date	Last 12 Months
<b>Small Cap Equity</b>	<b>1.03%</b>	<b>4.01%</b>	<b>1.25%</b>	<b>31.70%</b>
Russell 2000 Index	1.93%	5.20%	2.33%	36.11%
<b>Small Cap Growth</b>	<b>2.14%</b>	<b>4.88%</b>	<b>3.71%</b>	<b>26.75%</b>
Frontier	2.60%	5.00%	4.67%	28.55%
Russell 2000 Growth Index	2.45%	5.54%	4.12%	30.91%
Frontier - Net	2.60%	4.87%	4.54%	27.84%
FIAM	1.97%	4.84%	3.37%	25.22%
Russell 2000 Growth Index	2.45%	5.54%	4.12%	30.91%
FIAM - Net	1.97%	4.60%	3.37%	24.47%
<b>Small Cap Value</b>	<b>0.32%</b>	<b>3.56%</b>	<b>(0.02%)</b>	<b>36.69%</b>
Channing	1.22%	4.50%	1.26%	41.34%
Russell 2000 Value Index	1.45%	4.88%	0.72%	41.29%
Channing - Net	1.22%	4.37%	1.14%	40.67%
DFA Small Cap Value	0.14%	2.97%	(0.72%)	35.73%
Russell 2000 Value Index	1.45%	4.88%	0.72%	41.29%
DFA Small Cap Value - Net	0.01%	2.84%	(0.84%)	35.07%
Inv. Counselors of Maryland	0.27%	4.00%	0.45%	37.55%
Russell 2000 Value Index	1.45%	4.88%	0.72%	41.29%
Inv. Couns. of Maryland - Net	0.18%	3.90%	0.36%	36.76%
<b>Micro Cap</b>	<b>0.49%</b>	<b>3.19%</b>	<b>(0.67%)</b>	<b>29.99%</b>
Ariel	(4.46%)	3.48%	(3.09%)	15.39%
Russell Microcap Index	1.04%	4.05%	(0.48%)	35.65%
Russell 2000 Value Index	1.45%	4.88%	0.72%	41.29%
Russell 2000 Index	1.93%	5.20%	2.33%	36.11%
Ariel - Net	(4.46%)	3.27%	(3.29%)	14.45%
Ativo	2.64%	5.94%	0.80%	27.72%
Russell Microcap Index	1.04%	4.05%	(0.48%)	35.65%
Russell 2000 Growth Index	2.45%	5.54%	4.12%	30.91%
Russell 2000 Index	1.93%	5.20%	2.33%	36.11%
Ativo - Net	2.64%	5.78%	0.65%	26.94%
DFA Micro Cap	0.77%	3.55%	(0.71%)	34.20%
Russell 2000 Value Index	1.45%	4.88%	0.72%	41.29%
Russell 2000 Index	1.93%	5.20%	2.33%	36.11%
DFA Micro Cap - Net	0.65%	3.42%	(0.84%)	33.54%

## Small Cap Equity Returns

The table below details the rates of return for the fund's small cap growth, small cap value, and micro cap managers over various time periods. Negative returns are shown in red, positive returns in black. Returns for one year or greater are annualized.

### Returns for Periods Ended February 28, 2017

	Last 36 Months	Last 60 Months	Last 120 Months	Since Inception
<b>Small Cap Equity</b>	<b>6.37%</b>	<b>13.08%</b>	<b>8.66%</b>	<b>12.50%</b> <sup>(7/88)</sup>
Russell 2000 Index	6.93%	12.89%	7.22%	9.61% <sup>(7/88)</sup>
<b>Small Cap Growth</b>	<b>6.54%</b>	<b>12.69%</b>	<b>8.99%</b>	<b>13.10%</b> <sup>(7/88)</sup>
Frontier	2.83%	10.64%	8.60%	12.89% <sup>(8/88)</sup>
Russell 2000 Growth Index	5.42%	12.29%	8.03%	8.02% <sup>(8/88)</sup>
Frontier - Net	2.23%	10.04%	6.13%	6.84% <sup>(1/05)</sup>
FIAM	9.91%	14.56%	10.27%	13.89% <sup>(8/88)</sup>
Russell 2000 Growth Index	5.42%	12.29%	8.03%	8.02% <sup>(8/88)</sup>
FIAM - Net	9.29%	14.00%	9.67%	11.21% <sup>(1/05)</sup>
<b>Small Cap Value</b>	<b>8.73%</b>	<b>14.18%</b>	<b>8.15%</b>	<b>12.38%</b> <sup>(8/89)</sup>
Channing	9.43%	15.70%	-	13.64% <sup>(7/11)</sup>
Russell 2000 Value Index	8.37%	13.43%	6.31%	11.47% <sup>(7/11)</sup>
Channing - Net	8.93%	15.07%	-	13.00% <sup>(7/11)</sup>
DFA Small Cap Value	8.19%	14.84%	7.73%	12.98% <sup>(2/96)</sup>
Russell 2000 Value Index	8.37%	13.43%	6.31%	10.20% <sup>(2/96)</sup>
DFA Small Cap Value - Net	7.70%	14.30%	7.19%	8.66% <sup>(1/05)</sup>
Inv. Counselors of Maryland	10.14%	14.27%	8.63%	12.09% <sup>(5/99)</sup>
Russell 2000 Value Index	8.37%	13.43%	6.31%	9.79% <sup>(5/99)</sup>
Inv. Couns. of Maryland - Net	9.63%	13.78%	8.11%	9.04% <sup>(1/05)</sup>
<b>Micro Cap</b>	<b>1.16%</b>	<b>11.40%</b>	<b>6.09%</b>	<b>11.90%</b> <sup>(7/84)</sup>
Ariel	(10.29%)	3.56%	-	4.45% <sup>(11/10)</sup>
Russell Microcap Index	4.23%	13.12%	5.40%	12.48% <sup>(11/10)</sup>
Russell 2000 Value Index	8.37%	13.43%	6.31%	12.70% <sup>(11/10)</sup>
Russell 2000 Index	6.93%	12.89%	7.22%	12.86% <sup>(11/10)</sup>
Ariel - Net	(11.05%)	2.71%	-	3.60% <sup>(11/10)</sup>
Ativo	9.51%	16.96%	-	14.88% <sup>(10/10)</sup>
Russell Microcap Index	4.23%	13.12%	5.40%	13.27% <sup>(10/10)</sup>
Russell 2000 Growth Index	5.42%	12.29%	8.03%	13.50% <sup>(10/10)</sup>
Russell 2000 Index	6.93%	12.89%	7.22%	13.39% <sup>(10/10)</sup>
Ativo - Net	8.73%	16.11%	-	14.05% <sup>(10/10)</sup>
DFA Micro Cap	8.41%	15.02%	8.20%	11.48% <sup>(8/87)</sup>
Russell 2000 Value Index	8.37%	13.43%	6.31%	10.33% <sup>(8/87)</sup>
Russell 2000 Index	6.93%	12.89%	7.22%	8.96% <sup>(8/87)</sup>
DFA Micro Cap - Net	7.87%	14.45%	7.67%	8.24% <sup>(1/05)</sup>

## International Equity Returns

The table below details the rates of return for the fund's international large cap growth and international large cap value managers over various time periods. Negative returns are shown in red, positive returns in black. Returns for one year or greater are annualized.

### Returns for Periods Ended February 28, 2017

	Last Month	Last 3 Months	Year to Date	Last 12 Months
<b>Intl Large Cap Equity</b>	<b>1.47%</b>	<b>7.87%</b>	<b>4.92%</b>	<b>17.59%</b>
MSCI ACWI ex-US Index	1.59%	7.88%	5.19%	19.31%
<b>Intl Large Cap Growth</b>	<b>1.17%</b>	<b>7.02%</b>	<b>5.22%</b>	<b>19.09%</b>
EARNEST Partners	1.96%	8.45%	6.17%	25.51%
MSCI ACWI ex-US Index	1.59%	7.88%	5.19%	19.31%
MSCI ACWI ex-US Growth	2.02%	7.72%	6.14%	15.09%
EARNEST Partners - Net	1.96%	8.45%	6.17%	25.32%
William Blair	0.48%	5.76%	4.38%	13.86%
MSCI ACWI ex-US Index	1.59%	7.88%	5.19%	19.31%
MSCI ACWI ex-US Growth	2.02%	7.72%	6.14%	15.09%
William Blair - Net	0.48%	5.67%	4.28%	13.45%
<b>Intl Large Cap Value</b>	<b>1.24%</b>	<b>7.53%</b>	<b>3.53%</b>	<b>16.93%</b>
Brandes	0.41%	6.91%	2.75%	19.19%
MSCI ACWI ex-US Index	1.59%	7.88%	5.19%	19.31%
MSCI ACWI ex-US Value	1.22%	8.16%	4.36%	24.80%
Brandes - Net	0.41%	6.91%	2.75%	19.00%
Mondrian	2.11%	8.48%	4.38%	15.44%
MSCI ACWI ex-US Index	1.59%	7.88%	5.19%	19.31%
MSCI ACWI ex-US Value	1.22%	8.16%	4.36%	24.80%
Mondrian - Net	2.11%	8.48%	4.38%	15.01%
Lazard	1.41%	6.09%	3.50%	11.24%
MSCI ACWI ex-US Index	1.59%	7.88%	5.19%	19.31%
MSCI ACWI ex-US Value	1.22%	8.16%	4.36%	24.80%
Lazard - Net	1.35%	5.96%	3.43%	10.50%

## International Equity Returns

The table below details the rates of return for the fund's international large cap growth and international large cap value managers over various time periods. Negative returns are shown in red, positive returns in black. Returns for one year or greater are annualized.

### Returns for Periods Ended February 28, 2017

	Last 36 Months	Last 60 Months	Last 120 Months	Since Inception
<b>Intl Large Cap Equity</b>	<b>0.85%</b>	<b>6.02%</b>	<b>2.03%</b>	<b>7.74%</b> <sup>(9/88)</sup>
MSCI ACWI ex-US Index	(0.19%)	3.55%	1.38%	-
<b>Intl Large Cap Growth</b>	<b>0.32%</b>	<b>5.12%</b>	<b>2.18%</b>	<b>8.30%</b> <sup>(9/02)</sup>
EARNEST Partners	0.12%	3.87%	4.66%	9.36% <sup>(10/04)</sup>
MSCI ACWI ex-US Index	(0.19%)	3.55%	1.38%	5.62% <sup>(10/04)</sup>
MSCI ACWI ex-US Growth	0.99%	4.45%	2.36%	6.28% <sup>(10/04)</sup>
EARNEST Partners - Net	(0.08%)	3.60%	4.27%	7.87% <sup>(1/05)</sup>
William Blair	0.50%	6.31%	2.87%	9.54% <sup>(10/02)</sup>
MSCI ACWI ex-US Index	(0.19%)	3.55%	1.38%	8.19% <sup>(10/02)</sup>
MSCI ACWI ex-US Growth	0.99%	4.45%	2.36%	8.22% <sup>(10/02)</sup>
William Blair - Net	0.13%	5.91%	2.48%	5.69% <sup>(1/05)</sup>
<b>Intl Large Cap Value</b>	<b>0.91%</b>	<b>5.36%</b>	<b>0.98%</b>	<b>8.94%</b> <sup>(10/95)</sup>
Brandes	1.02%	6.21%	1.39%	9.22% <sup>(1/98)</sup>
MSCI ACWI ex-US Index	(0.19%)	3.55%	1.38%	4.90% <sup>(1/98)</sup>
MSCI ACWI ex-US Value	(0.56%)	3.51%	1.25%	-
Brandes - Net	0.81%	5.98%	1.16%	4.11% <sup>(1/05)</sup>
Mondrian	1.25%	-	-	4.94% <sup>(4/12)</sup>
MSCI ACWI ex-US Index	(0.19%)	3.55%	1.38%	3.90% <sup>(4/12)</sup>
MSCI ACWI ex-US Value	(0.56%)	3.51%	1.25%	3.98% <sup>(4/12)</sup>
Mondrian - Net	0.78%	-	-	4.45% <sup>(4/12)</sup>
Lazard	(0.50%)	-	-	5.31% <sup>(4/12)</sup>
MSCI ACWI ex-US Index	(0.19%)	3.55%	1.38%	3.90% <sup>(4/12)</sup>
MSCI ACWI ex-US Value	(0.56%)	3.51%	1.25%	3.98% <sup>(4/12)</sup>
Lazard - Net	(1.12%)	-	-	4.64% <sup>(4/12)</sup>

## International Equity Returns

The table below details the rates of return for the fund's international large cap core, international small cap, and emerging markets managers over various time periods. Negative returns are shown in red, positive returns in black. Returns for one year or greater are annualized.

### Returns for Periods Ended February 28, 2017

	Last Month	Last 3 Months	Year to Date	Last 12 Months
<b>Intl Large Cap Active Core</b>	<b>1.84%</b>	<b>8.58%</b>	<b>6.37%</b>	<b>18.81%</b>
Arrowstreet	1.34%	9.58%	7.00%	24.41%
MSCI ACWI ex-US Index	1.59%	7.88%	5.19%	19.31%
Arrowstreet - Net	1.23%	9.46%	6.88%	23.85%
Brown	2.16%	6.13%	4.54%	7.89%
MSCI ACWI ex-US Index	1.59%	7.88%	5.19%	19.31%
Brown - Net	2.16%	6.00%	4.41%	6.48%
GlobeFlex	2.09%	9.43%	6.75%	19.63%
MSCI ACWI ex-US Index	1.59%	7.88%	5.19%	19.31%
GlobeFlex - Net	1.99%	9.23%	6.65%	19.17%
Progress Intl Equity	2.13%	7.29%	6.20%	18.37%
Custom Benchmark	2.14%	8.48%	6.11%	20.93%
MSCI ACWI ex-US Index	1.59%	7.88%	5.19%	19.31%
Progress Intl Equity - Net	2.13%	7.16%	6.07%	17.79%
<b>Intl Large Cap Pass. Core</b>	<b>1.45%</b>	<b>7.98%</b>	<b>4.39%</b>	<b>16.25%</b>
NTGI MSCI EAFE Idx	1.45%	7.98%	4.39%	16.25%
MSCI EAFE Index	1.43%	7.94%	4.37%	15.75%
NTGI EAFE Idx - Net	1.45%	7.97%	4.39%	16.24%
<b>International Small Cap</b>	<b>2.31%</b>	<b>7.94%</b>	<b>5.75%</b>	<b>13.14%</b>
Franklin Templeton	2.40%	9.29%	6.17%	14.44%
ACWI Small Cap ex US	2.63%	8.83%	6.57%	19.52%
Franklin Templeton - Net	2.40%	9.29%	6.17%	13.82%
William Blair	2.24%	6.84%	5.40%	12.08%
ACWI Small Cap ex US	2.63%	8.83%	6.57%	19.52%
Intl SC Blended Benchmark	2.63%	8.83%	6.57%	19.52%
William Blair - Net	2.24%	6.64%	5.20%	11.22%
<b>Emerging Markets</b>	<b>2.62%</b>	<b>6.40%</b>	<b>6.41%</b>	<b>24.97%</b>
Genesis	2.62%	6.40%	6.41%	24.97%
MSCI Emerging Markets Index	3.07%	9.03%	8.71%	29.94%
Genesis - Net	2.62%	6.40%	6.41%	24.59%

Brown and GlobeFlex moved to International Large Cap Active Core April 1, 2011.

Progress Custom Benchmark is a comprised of each manager's weighted benchmark.

Intl SC Blended Benchmark consists of the S&P Developed Ex-U.S. Small Cap Index through May 31, 2011 and the MSCI ACWI Ex-U.S. Small Cap Index thereafter.



## International Equity Returns

The table below details the rates of return for the fund's international large cap core, international small cap, and emerging markets managers over various time periods. Negative returns are shown in red, positive returns in black. Returns for one year or greater are annualized.

### Returns for Periods Ended February 28, 2017

	Last 36 Months	Last 60 Months	Last 120 Months	Since Inception
<b>Intl Large Cap Active Core</b>	<b>2.78%</b>	<b>7.95%</b>	<b>-</b>	<b>3.92%</b> <sup>(2/08)</sup>
Arrowstreet	3.48%	8.41%	-	4.21% <sup>(3/08)</sup>
MSCI ACWI ex-US Index	(0.19%)	3.55%	1.38%	0.74% <sup>(3/08)</sup>
Arrowstreet - Net	2.99%	7.90%	-	3.72% <sup>(3/08)</sup>
Brown	1.77%	9.06%	3.83%	7.67% <sup>(10/04)</sup>
MSCI ACWI ex-US Index	(0.19%)	3.55%	1.38%	5.62% <sup>(10/04)</sup>
Brown - Net	0.58%	7.99%	3.14%	5.95% <sup>(1/05)</sup>
GlobeFlex	3.32%	7.39%	2.80%	4.40% <sup>(3/08)</sup>
MSCI ACWI ex-US Index	(0.19%)	3.55%	1.38%	2.94% <sup>(3/08)</sup>
GlobeFlex - Net	2.90%	6.95%	2.36%	3.94% <sup>(3/08)</sup>
Progress Intl Equity Custom Benchmark	-	-	-	(0.21%) <sup>(7/14)</sup>
MSCI ACWI ex-US Index	(0.19%)	3.55%	1.38%	(0.88%) <sup>(7/14)</sup>
Progress Intl Equity - Net	-	-	-	(2.12%) <sup>(7/14)</sup>
				(0.64%) <sup>(7/14)</sup>
<b>Intl Large Cap Pass. Core</b>	<b>(0.23%)</b>	<b>5.57%</b>	<b>1.45%</b>	<b>2.87%</b> <sup>(1/00)</sup>
NTGI MSCI EAFE Idx	(0.23%)	5.57%	1.44%	3.27% <sup>(2/00)</sup>
MSCI EAFE Index	(0.62%)	5.16%	1.03%	2.89% <sup>(2/00)</sup>
NTGI EAFE Idx - Net	(0.24%)	5.56%	1.43%	4.38% <sup>(1/05)</sup>
<b>International Small Cap</b>	<b>1.23%</b>	<b>7.89%</b>	<b>1.20%</b>	<b>4.06%</b> <sup>(12/05)</sup>
Franklin Templeton	1.70%	7.65%	-	5.26% <sup>(8/11)</sup>
ACWI Small Cap ex US	1.80%	5.98%	3.22%	3.96% <sup>(8/11)</sup>
Franklin Templeton - Net	1.01%	6.89%	-	4.53% <sup>(8/11)</sup>
William Blair	0.85%	8.09%	-	9.59% <sup>(9/10)</sup>
ACWI Small Cap ex US	1.80%	5.98%	3.22%	7.19% <sup>(9/10)</sup>
Intl SC Blended Benchmark	1.80%	5.98%	2.35%	7.70% <sup>(9/10)</sup>
William Blair - Net	0.06%	7.25%	-	8.75% <sup>(9/10)</sup>
<b>Emerging Markets</b>	<b>1.28%</b>	<b>1.51%</b>	<b>5.63%</b>	<b>8.88%</b> <sup>(2/82)</sup>
Genesis	1.28%	1.51%	5.65%	11.22% <sup>(5/04)</sup>
MSCI Emerging Markets Index	1.73%	(0.02%)	3.20%	8.95% <sup>(5/04)</sup>
Genesis - Net	0.77%	0.99%	5.06%	9.00% <sup>(1/05)</sup>

Brown and GlobeFlex moved to International Large Cap Active Core April 1, 2011.

Progress Custom Benchmark is a comprised of each manager's weighted benchmark.

Intl SC Blended Benchmark consists of the S&P Developed Ex-U.S. Small Cap Index through May 31, 2011 and the MSCI ACWI Ex-U.S. Small Cap Index thereafter.

## Fixed Income Returns

The table below details the rates of return for the fund's domestic fixed core managers over various time periods. Negative returns are shown in red, positive returns in black. Returns for one year or greater are annualized.

### Returns for Periods Ended February 28, 2017

	Last Month	Last 3 Months	Year to Date	Last 12 Months
<b>Dom. Fixed Active Core</b>	<b>0.73%</b>	<b>1.16%</b>	<b>1.01%</b>	<b>2.11%</b>
EARNEST Partners	0.57%	0.81%	0.82%	0.77%
Blmbg Aggregate Index	0.67%	1.01%	0.87%	1.42%
EARNEST Partners - Net	0.57%	0.77%	0.77%	0.59%
Piedmont	0.76%	1.47%	1.16%	3.87%
Blmbg Aggregate Index	0.67%	1.01%	0.87%	1.42%
Piedmont - Net	0.76%	1.43%	1.12%	3.71%
Garcia Hamilton	0.86%	1.20%	1.05%	1.29%
Blmbg Aggregate Index	0.67%	1.01%	0.87%	1.42%
Garcia Hamilton	0.86%	1.18%	1.02%	1.18%
<b>Dom. Fixed Passive Core</b>	<b>0.68%</b>	<b>1.03%</b>	<b>0.89%</b>	<b>1.45%</b>
BlackRock US Debt	0.68%	1.03%	0.89%	1.50%
Blmbg Aggregate Index	0.67%	1.01%	0.87%	1.42%
BlackRock US Debt - Net	0.68%	1.03%	0.89%	1.50%
NTGI Blmbg Agg. Index	0.67%	1.02%	0.90%	1.41%
Blmbg Aggregate Index	0.67%	1.01%	0.87%	1.42%
NTGI Blmbg Agg. Index - Net	0.67%	1.02%	0.89%	1.40%

## Fixed Income Returns

The table below details the rates of return for the fund's domestic fixed core managers over various time periods. Negative returns are shown in red, positive returns in black. Returns for one year or greater are annualized.

### Returns for Periods Ended February 28, 2017

	Last 36 Months	Last 60 Months	Last 120 Months	Since Inception
<b>Dom. Fixed Active Core</b>	<b>3.18%</b>	<b>2.92%</b>	<b>4.68%</b>	<b>4.68%</b> <sup>(4/01)</sup>
EARNEST Partners	3.22%	2.86%	4.76%	4.69% <sup>(5/05)</sup>
Blmbg Aggregate Index	2.64%	2.24%	4.28%	4.24% <sup>(5/05)</sup>
EARNEST Partners - Net	3.00%	2.65%	4.55%	4.48% <sup>(5/05)</sup>
Piedmont	3.09%	2.95%	4.59%	4.50% <sup>(6/05)</sup>
Blmbg Aggregate Index	2.64%	2.24%	4.28%	4.18% <sup>(6/05)</sup>
Piedmont - Net	2.93%	2.78%	4.41%	4.31% <sup>(6/05)</sup>
Garcia Hamilton	-	-	-	2.52% <sup>(6/15)</sup>
Blmbg Aggregate Index	2.64%	2.24%	4.28%	1.75% <sup>(6/15)</sup>
Garcia Hamilton	-	-	-	2.43% <sup>(6/15)</sup>
<b>Dom. Fixed Passive Core</b>	<b>2.72%</b>	<b>2.29%</b>	<b>4.23%</b>	<b>6.13%</b> <sup>(1/90)</sup>
BlackRock US Debt	2.77%	-	-	3.02% <sup>(10/13)</sup>
Blmbg Aggregate Index	2.64%	2.24%	4.28%	2.88% <sup>(10/13)</sup>
BlackRock US Debt - Net	2.76%	-	-	3.02% <sup>(10/13)</sup>
NTGI Blmbg Agg. Index	2.68%	2.27%	4.23%	6.19% <sup>(2/90)</sup>
Blmbg Aggregate Index	2.64%	2.24%	4.28%	6.18% <sup>(2/90)</sup>
NTGI Blmbg Agg. Index - Net	2.68%	2.27%	4.22%	4.16% <sup>(1/05)</sup>

## Fixed Income Returns

The table below details the rates of return for the fund's domestic fixed core plus and high yield managers over various time periods. Negative returns are shown in red, positive returns in black. Returns for one year or greater are annualized.

### Returns for Periods Ended February 28, 2017

	Last Month	Last 3 Months	Year to Date	Last 12 Months
<b>Domestic Fixed Core Plus</b>	<b>0.86%</b>	<b>1.72%</b>	<b>1.24%</b>	<b>4.29%</b>
BlackRock Core Plus	0.84%	1.23%	1.01%	2.53%
Blmbg Aggregate Index	0.67%	1.01%	0.87%	1.42%
BlackRock Core Plus - Net	0.82%	1.22%	1.00%	2.40%
Brandes Core Plus	0.70%	1.28%	1.06%	0.93%
Blmbg Aggregate Index	0.67%	1.01%	0.87%	1.42%
Brandes Core Plus - Net	0.70%	1.28%	1.06%	0.93%
LM Capital	0.83%	1.44%	1.09%	3.16%
Blmbg Aggregate Index	0.67%	1.01%	0.87%	1.42%
LM Capital - Net	0.83%	1.40%	1.04%	2.99%
Progress Fixed Income	0.85%	1.55%	1.23%	3.48%
Blmbg Aggregate Index	0.67%	1.01%	0.87%	1.42%
Progress Fixed Inc. - Net	0.85%	1.46%	1.14%	3.14%
Taplin, Canida, Habacht	0.90%	2.24%	1.41%	7.63%
Blmbg Aggregate Index	0.67%	1.01%	0.87%	1.42%
Taplin, Canida, Hab. - Net	0.90%	2.20%	1.37%	7.49%
Western	0.93%	2.19%	1.48%	5.16%
Blmbg Aggregate Index	0.67%	1.01%	0.87%	1.42%
Western - Net	0.93%	2.19%	1.48%	5.04%
<b>Bank Loans</b>	<b>0.51%</b>	<b>2.62%</b>	<b>1.22%</b>	<b>13.10%</b>
Barings Global Loan Fund	0.51%	2.62%	1.22%	13.37%
Custom Benchmark	0.58%	2.32%	1.21%	12.32%
Barings Global Loan Fund - Net	0.51%	2.64%	1.25%	13.39%
<b>Emerging Markets</b>	<b>2.24%</b>	<b>6.57%</b>	<b>4.21%</b>	<b>15.38%</b>
Standish	2.24%	6.57%	4.21%	15.38%
Custom Benchmark	1.79%	5.17%	3.63%	12.56%
Standish - Net	2.15%	6.48%	4.12%	14.99%
<b>Opportunistic Fixed Income</b>	<b>1.18%</b>	<b>3.80%</b>	<b>2.05%</b>	<b>15.31%</b>
Crescent	1.18%	3.80%	2.05%	15.31%
Custom Benchmark	1.03%	3.58%	1.99%	17.41%
Crescent - Net	1.13%	3.68%	1.99%	14.59%
<b>High Yield</b>	<b>1.22%</b>	<b>4.33%</b>	<b>2.51%</b>	<b>20.52%</b>
MacKay Shields	1.20%	4.32%	2.50%	21.25%
ML High Yield Cash Pay Index	1.56%	4.94%	2.93%	22.13%
MacKay Shields - Net	1.11%	4.23%	2.41%	20.83%

Taplin, Canida, & Habacht moved to Core Plus October 1, 2010.

Barings Custom Benchmark is comprised of the Credit Suisse US Leveraged Loan Index and the Credit Suisse Western European Leveraged Loan Index, weighted by the portfolio's market value to each sector.

Standish Custom Benchmark is 50% JPM GBI-EM Index, 25% JPM EMBI Global Index and 25% JPM Corporate EMBI Diversified Index.

Crescent Custom Benchmark is 50% ML U.S. High Yield Master II Index and 50% S&P/LSTA Leveraged Loan Index.

## Fixed Income Returns

The table below details the rates of return for the fund's domestic fixed core plus and high yield managers over various time periods. Negative returns are shown in red, positive returns in black. Returns for one year or greater are annualized.

### Returns for Periods Ended February 28, 2017

	Last 36 Months	Last 60 Months	Last 120 Months	Since Inception	
<b>Domestic Fixed Core Plus</b>	<b>3.48%</b>	<b>3.47%</b>	<b>4.99%</b>	<b>8.35%</b>	(1/82)
BlackRock Core Plus	3.11%	2.93%	4.79%	4.83%	(4/07)
Bimbg Aggregate Index	2.64%	2.24%	4.28%	4.32%	(4/07)
BlackRock Core Plus - Net	2.96%	2.75%	-	4.71%	(4/07)
Brandes Core Plus	-	-	-	0.93%	(3/16)
Bimbg Aggregate Index	2.64%	2.24%	4.28%	1.42%	(3/16)
Brandes Core Plus - Net	-	-	-	0.93%	(3/16)
LM Capital	3.24%	3.21%	5.17%	5.10%	(5/05)
Bimbg Aggregate Index	2.64%	2.24%	4.28%	4.24%	(5/05)
LM Capital - Net	3.07%	3.05%	5.01%	4.93%	(5/05)
Progress Fixed Income	3.18%	3.16%	4.99%	5.10%	(1/06)
Bimbg Aggregate Index	2.64%	2.24%	4.28%	4.36%	(1/06)
Progress Fixed Inc. - Net	2.84%	2.81%	4.63%	4.75%	(1/06)
Taplin, Canida, Habacht	3.95%	3.98%	5.30%	5.18%	(5/05)
Bimbg Aggregate Index	2.64%	2.24%	4.28%	4.24%	(5/05)
Taplin, Canida, Hab. - Net	3.81%	3.84%	5.17%	5.05%	(5/05)
Western	3.99%	3.95%	5.04%	5.59%	(11/01)
Bimbg Aggregate Index	2.64%	2.24%	4.28%	4.40%	(11/01)
Western - Net	3.86%	3.81%	4.89%	5.00%	(1/05)
<b>Bank Loans</b>	-	-	-	<b>3.96%</b>	(8/14)
Barings Global Loan Fund	-	-	-	4.06%	(8/14)
Custom Benchmark	-	-	-	3.97%	(8/14)
Barings Global Loan Fund - Net	-	-	-	4.07%	(8/14)
<b>Emerging Markets</b>	-	-	-	<b>1.03%</b>	(8/14)
Standish	-	-	-	1.03%	(8/14)
Custom Benchmark	1.60%	1.38%	5.47%	(0.25%)	(8/14)
Standish - Net	-	-	-	0.70%	(8/14)
<b>Opportunistic Fixed Income</b>	-	-	-	<b>3.49%</b>	(8/14)
Crescent	-	-	-	3.26%	(9/14)
Custom Benchmark	4.23%	5.81%	6.00%	4.10%	(9/14)
Crescent - Net	-	-	-	2.91%	(9/14)
<b>High Yield</b>	<b>5.63%</b>	<b>7.14%</b>	<b>7.66%</b>	<b>9.84%</b>	(4/86)
MacKay Shields	5.87%	7.33%	7.39%	9.29%	(11/00)
ML High Yield Cash Pay Index	4.74%	6.84%	7.32%	7.96%	(11/00)
MacKay Shields - Net	5.47%	6.94%	7.01%	7.20%	(1/05)

Taplin, Canida, & Habacht moved to Core Plus October 1, 2010.

Barings Custom Benchmark is comprised of the Credit Suisse US Leveraged Loan Index and the Credit Suisse Western European Leveraged Loan Index, weighted by the portfolio's market value to each sector.

Standish Custom Benchmark is 50% JPM GBI-EM Index, 25% JPM EMBI Global Index and 25% JPM Corporate EMBI Diversified Index.

Crescent Custom Benchmark is 50% ML U.S. High Yield Master II Index and 50% S&P/LSTA Leveraged Loan Index.

**Five Best Performing Portfolio's vs. Benchmarks**

<b>Manager</b>	<b>Year-to-Date Outperformance</b> (in % points)	<b>Since Inception Outperformance</b> (in % points)	
Sands	<b>4.06</b>	<b>1.94</b>	<b>10/31/2003</b>
Arrowstreet	<b>1.80</b>	<b>3.13</b>	<b>02/29/2008</b>
BMO	<b>1.44</b>	<b>2.61</b>	<b>01/31/2001</b>
Dodge & Cox	<b>1.14</b>	<b>1.13</b>	<b>08/31/2003</b>
Babson	<b>1.10</b>	<b>0.52</b>	<b>07/31/2014</b>

**Five Worst Performing Portfolio's vs. Benchmarks**

<b>Manager</b>	<b>Year-to-Date Underperformance</b> (in % points)	<b>Since Inception Underperformance</b> (in % points)	
Ariel	<b>-3.82</b>	<b>-8.25</b>	<b>10/31/2010</b>
Ativo	<b>-3.31</b>	<b>1.38</b>	<b>09/30/2010</b>
Brandes	<b>-2.44</b>	<b>4.32</b>	<b>12/31/1995</b>
Genesis	<b>-2.31</b>	<b>2.27</b>	<b>04/30/2004</b>
Lazard	<b>-1.70</b>	<b>1.41</b>	<b>03/31/2012</b>

**Five Highest Returning Portfolios**

<b>Manager</b>	<b>Year-to-Date Return</b> (in % points)	<b>Since Inception Return</b> (in % points)	
Sands	<b>11.72</b>	<b>10.63</b>	<b>10/31/2003</b>
Holland	<b>7.33</b>	<b>10.12</b>	<b>10/31/1994</b>
NTGI S&P500 Gr	<b>7.17</b>	<b>6.75</b>	<b>07/31/2001</b>
Arrowstreet	<b>7.00</b>	<b>4.17</b>	<b>02/29/2008</b>
GlobeFlex	<b>6.75</b>	<b>4.36</b>	<b>02/28/2006</b>

**Five Lowest Returning Portfolios**

<b>Manager</b>	<b>Year-to-Date Return</b> (in % points)	<b>Since Inception Return</b> (in % points)	
Ariel	<b>-3.09</b>	<b>4.45</b>	<b>10/31/2010</b>
DFA SCV	<b>-0.72</b>	<b>12.98</b>	<b>01/31/1996</b>
DFA Micro Cap	<b>-0.71</b>	<b>11.48</b>	<b>07/31/1987</b>
Inv Counselors of MD	<b>0.45</b>	<b>12.09</b>	<b>04/30/1999</b>
Ativo	<b>0.80</b>	<b>14.88</b>	<b>09/30/2010</b>

Returns are shown gross of investment management fees.

Excludes Real Estate and Alternative Investments portfolios.

(17-03-10) (Journey of Excellence) The Deputy Executive Director and Performance Excellence Manager gave a presentation to the Board on IMRF's formal Journey of Excellence, that is now in its tenth year.

The Deputy Executive Director noted that Performance Excellence refers to an integrated approach to organizational performance management that results in: Delivery of ever-improving value to customers and stakeholders, contributing to organizational sustainability; Improvement of overall organizational effectiveness and capabilities; and, Organizational and personal learning.

The presentation outlined IMRF's Journey of Excellence, with a focus on the Baldrige Criteria for Performance Excellence. This disciplined approach to continuous improvement has been an important factor in IMRF's organizational success during the past 10 years.

Discussion followed, and the Board expressed support for IMRF's Journey of Excellence.

(17-03-11) (Intranet Replacement Project Wrap-Up) The Communications Manager updated the Board on IMRF's new employee intranet, COMPASS.

He reported that COMPASS was launched on February 27, 2017, bringing a successful conclusion to a project that IMRF began planning two years earlier, following the launch of the redesigned [www.imrf.org](http://www.imrf.org) in 2015.

The goal of this project was to replace the legacy system with a superior knowledge management, internal communication, and customer service tool for staff.

The Communications Manager also provided the Board with a demonstration of COMPASS.

Questions and discussion followed.

(17-03-12) (Legislative Update) The Legislative Liaison updated the Board on current legislative activity.

She reported that two of the bills on the Board's Legislative Agenda (House Bill 2966 and House Bill 3070) have passed out of the House pension committee and are in the Senate.

The Legislative Liaison further reported that an amendment was filed by Senator John Cullerton on Senate Bill 16 to remove IMRF from the bill. Senate Bill 16 included provisions to create a hybrid plan for new employees of each of the systems, including IMRF.

Discussion followed.

(17-03-13 (Litigation Update) ) The following is an update of the currently pending or recently concluded litigation:

**IN RE TRIBUNE CO, ET AL. , THE OFFICIAL COMMITTEE OF UNSECURED CREDITORS OF TRIBUNE CO, ET AL. VS. FITZSIMONS, ET AL.**

**Summary:** The unsecured creditors in the Tribune bankruptcy sued investors who sold their Tribune stock at the time of the buyout by the Sam Zell group. The plaintiff's theory is that the buyout was fraudulent and therefore a portion of those stockholders' proceeds from the stock sale was due to the fraud and should be returned to the Tribune's bankruptcy estate.

**Status:** The stockholders' motion to dismiss the intentional fraudulent transfer claim was granted on January 6, 2017 and the claim against them was dismissed. Another portion of this claim against the stockholders was previously dismissed on motions and that decision was upheld on appeal. Therefore, unless this decision is overturned on appeal, the case against the disinterested stockholders (including IMRF) is over.

The creditors have asked the judge for permission to file an appeal before the entire case is concluded, which he has agreed to grant as soon he has ruled on all the motions to dismiss.

**KATHLEEN KONICKI V. IMRF (14 MR 32) (SANGAMON CO)**

**Summary:** Administrative review challenging the Board's decision that Ms. Konicki was not eligible to convert service into Original ECO.

**Status:** On July 29, 2016, Judge Belz upheld the IMRF Board's decision finding that the law clearly did not allow Plaintiff to participate in Original ECO and that the law creating Revised ECO did not violate the Pension Protection Clause. Plaintiff had 30 days from July 29, 2016 to file a notice of appeal. She did not do so, however, it was discovered that the court clerk never mailed Plaintiff the judge's order. Konicki filed a motion for relief from Judgment which was granted. The case has been appealed to the Fourth District Appellate Court and a scheduling order has been entered.

**MCLEAN COUNTY V. IMRF (MCLEAN COUNTY 2016 MR 563)**

**Summary:** This is an appeal from the IMRF Board's decision denying an exemption from the AP for a charge to McLean County that resulted from a payment of back wages under a collective bargaining agreement that was entered into after January 1, 2012. The County also charges a violation of the Open Meetings Act by IMRF claiming that its Board Agenda was not sufficiently detailed regarding the decision.

**Status:** IMRF and McLean County are working on the details based on the Board Resolution allowing certain back wages to be allocated to prior



months when AP charges are involved and a new case management date is set for April 2017.

**MOTORS LIQUIDATION COMPANY AVOIDANCE ACTION TRUST VS. JP MORGAN CHASE, ET AL. (US BANKRUPTCY CT., SO. DIST. OF N.Y.)**

**Summary:** This is an adversary action stemming from the General Motors bankruptcy. A loan in which IMRF was an investor was paid off after the bankruptcy filing. It was later discovered that an error, before the bankruptcy, had released part of the security. A group of unsecured creditors sued to force the recipients of the loan pay-off proceeds to return them.

**Status:** The parties are currently litigating the value of the remaining security, which if it is sufficient would end the case. We are sharing our defense counsel with several other public pension funds.

**THERESA MILLER V. IMRF (16 MR 58 MONROE COUNTY)**

**Summary:** This is an administrative review of the Board's decision to deny total and permanent disability benefits to Ms. Miller.

**Status:** IMRF's answer and appearance were filed on 11/28/2016.

**KATHERINE HADLER V. IMRF (16 MR 1375 DUPAGE COUNTY)**

**Summary:** This is an administrative review of the Board's decision to deny total and permanent disability benefits to Ms. Hadler.

**Status:** IMRF's answer and appearance were filed on 11/21/2016. The case has been briefed and a hearing is set for 4/5/17.

**CARRIE MCHUGH V. IMRF (17 MR 135 KANE COUNTY)**

**Summary:** This is an administrative review of the IMRF Board's decision adopting the recommendation of the IMRF hearing officer which found that Ms. McHugh was ineligible for disability benefits due to a voluntary termination of her employment with the City of Aurora.

**Status:** IMRF's answer and appearance were filed, and an initial court appearance is set for 5/18/17.

**PISANI V. CITY OF SPRINGFIELD (Fourth District Appellate Court)**

**Summary:** When the City of Springfield attempted to change an ordinance which allowed for the payout of accrued vacation time prior to termination of employment (in part, due to the AP charges from IMRF), union groups filed a lawsuit claiming that the City was prohibited from doing so by the Pension Protection Clause. The Circuit Court found that the City's actions in changing the vacation payout ordinance were not covered by the Pension Protection Clause. The union groups appealed and IMRF filed an *amicus curiae* brief with the court pointing out the impact that this decision could have on employers statewide.

**Status:** The Fourth District Appellate Court, on March 3, upheld the Circuit Court's decision and found that the vacation payout provision was not a benefit of membership in IMRF and was therefore not protected. It was a unique benefit of Springfield, similar to the terms and conditions of employment. Even though a change in conditions of employment may cause an employee to receive a lower pension benefit (like a pay cut or lay off) there is no protection for such under the Pension Protection Clause.

(17-03-14) (Trustee Forum) The Chair reported the following Trustee requested authorization from the Board for the following conference:

David Miller	4 <sup>th</sup> Annual Global Future of Retirement Pensions & Investments June 25-27, 2017 New York City
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It was moved by Ms. Thompson, seconded by Mr. Kuehne, to approve the above Trustee request.

Vote: Unanimous Voice Vote  
Absent: Copper, Wallace

(17-03-15) (Adjournment) It was the moved by Mr. Miller, seconded by Mr. Kuehne, to adjourn the Board Meeting at 10:54 a.m., to reconvene in the Fund offices, 2211 York Road, Suite 400, Oak Brook, Illinois, at 2:00 p.m. on April 27, 2017.

Vote: Unanimous Voice Vote  
Absent: Copper, Wallace

*Aue Stanish*  
\_\_\_\_\_  
President

*[Signature]*  
\_\_\_\_\_  
Secretary

*4/27/17*  
\_\_\_\_\_  
Date

*4/27/17*  
\_\_\_\_\_  
Date

