CITY OF PORT ORANGE
POLICE OFFICERS' PENSION BOARD
QUARTERLY MEETING AGENDA

Port Orange Police Department
Police Department Training Room
4545 Clyde Morris Blvd.
Port Orange FL 32129
Thursday, February 21, 2019
9:00 a.m.

Vacancy	William Proctor Secretary	Warren Carman Trustee	Drew Bastian Trustee	Brian Cobb Resident Trustee

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Disability Information: If you are a person with a disability who needs any accommodation in order to participate in this proceeding, you are entitled, at no cost to you, to the provision of certain assistance. Please contact the City Clerk for the City of Port Orange, 1000 City Center Circle, Port Orange, FL 32129, telephone number 386-506-5563, within two working days of your receipt of this notice or five days prior to the meeting date. If you are hearing or voice impaired, contact the relay operator at 1-800-955-8771.
Appeal Notice: Any person who decides to appeal any decision made by the Port Orange Police Officers' Pension Board will need a record of the proceedings, and for such purpose he or she may need to ensure at his or her own expense for the taking and preparation of a verbatim record of all testimony and evidence of the proceedings upon which the appeal is to be based.

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1. **CALL TO ORDER**
2. **DETERMINATION OF A QUORUM**
3. **ELECTION OF OFFICERS**
   A. Elect new chairman to fill vacancy due to retirement of Chairman Steve Braddock
4. **APPROVAL OF MINUTES**
   A. Approve the minutes of quarterly meeting November 15, 2018
5. **OFFICER AND TRUSTEE REPORTS**
6. **CONSENT AGENDA**
   A. Ratify plan expenditures as follows:
      1. Sugarman & Susskind – monthly retainer for November 2018 - $2,600;
      2. Sugarman & Susskind – monthly retainer for December 2018 - $2,600;
      3. Sugarman & Susskind – monthly retainer for January 2019 - $2,600;
      4. Plan Administrator Karan Rounsavall – monthly fee (November 2018, December 2018, January 2019) - $9,000;
      5. Florida Public Pension Trustees' Association (FPPTA) – 2019 membership fee in FPPTA for Pension Board - $600;
      6. Florida Public Pension Trustees' Association (FPPTA) – 2019 Annual Certified Public Pension Trustee (CPPT) re-certification fee for Trustees Warren Carman and Drew Bastian - $60;

7. James Moore & Co., CPA – Audit – Progress billing through December 31, 2018 - $4,000;
8. AndCo Consulting – investment consulting and performance monitoring services for quarter ended December 31, 2018 - $8,750;
9. First State Trust Company – custodial services for quarter ended December 30, 2018 - $4,625.

6. OLD BUSINESS

7. NEW BUSINESS

A. Ratify normal retirement benefits for Steve Braddock (100 percent joint & survivor) commencing January 1, 2019

B. Acknowledge receipt of detailed accounting report for Fiscal Year 2017/2018

C. Discussion and possible action related to reasonable assurance that monthly benefit payments are received by retiree

8. CONSULTANT REPORTS

A. Tyler Grumbles – *AndCo Consulting* (Investment Consultant)
1. Investment Performance Report for quarter ended December 31, 2018
2. Infrastructure Investment Opportunities:
   - ✓ Telephone presentation from Brookfield on its Super-Core Infrastructure strategy
   - ✓ Telephone presentation from JP Morgan on its Infrastructure Investments Fund strategy
3. Discussion and possible action to revise Investment Policy Statement to allow infrastructure investments

B. Chad Little – *Freiman Little Actuaries, LLC* (Plan Actuary)
1. Presentation of annual actuarial valuation for fiscal year ending September 30, 2018
2. Declare expected annual rate of investment return for assets of Port Orange Police Officers' Pension Plan as required by *Florida Statutes*

C. Zach Chalifour – *James Moore CPA* (Auditor)
1. Presentation of draft audit of Police Pension Fund financials for fiscal year ended September 30, 2018

D. Ken Harrison – *Sugarman & Susskind* (Attorney)
1. Legal opinion related to reinstatement of cost-of-living increases for joint annuitants upon death of retiree as it relates to $95,000 benefit cap (question raised at November 15, 2018 meeting
2. Legal opinion related to permissibility of high yield bond investments (i.e. bank loans) in Port Orange Police Pension Fund

E. Karan Rounsavall – Plan Administrator
1. Educational Opportunities: Police Officers' and Firefighters' Pension Trustees' School sponsored by Florida Division of Retirement in Tallahassee (April 30 – May 2, 2019)

9. PUBLIC COMMENT

10. ADJOURNMENT

CITY OF PORT ORANGE
POLICE OFFICERS' PENSION BOARD
NOVEMBER 15, 2018

The Port Orange Police Officers' Pension Board of Trustees held its quarterly meeting on Thursday, November 15, 2018 in the Police Department Training Room, 4545 Clyde Morris Boulevard, Port Orange, Florida.

MEMBERS PRESENT:	Chairman Steve Braddock (police member) Brian Cobb (resident member) Drew Bastian (resident member) Warren Carman (fifth member)
MEMBERS ABSENT:	William Proctor (police member) – excused
CONSULTANTS:	Ken Harrison, Board Attorney – Sugarman & Susskind Tyler Grumbles, Investment Consultant – AndCo Chad Little, Actuary – Freiman Little Actuaries Karan Rounsavall, Plan Administrator
CITY STAFF:	None

Chairman Braddock called the meeting to order at 9:06 a.m. and asked for a roll call. A quorum was in attendance.

APPROVAL OF MINUTES

Member Bastian moved to approve minutes of quarterly meeting August 16, 2018 as submitted. Member Carman seconded the motion and it carried unanimously.

OFFICER AND TRUSTEE REPORTS - *None*

CONSENT AGENDA

The following items were presented for action as recommended:

A. Approve plan expenditures as follows:
    1. Sugarman & Susskind – monthly retainer for August 2018 - $2,600. *Recommendation:* Ratify payment.
    2. Sugarman & Susskind – monthly retainer for September 2018 - $2,600. *Recommendation:* Ratify payment.
    3. Sugarman & Susskind – monthly retainer for October 2018 - $2,600. *Recommendation:* Ratify payment.
    4. Plan Administrator Karan Rounsavall – monthly fee (August 2018, September 2018, October 2018) - $9,000. *Recommendation:* Ratify payments.
    5. Florida Public Pension Trustees' Association (FPPTA) – registration fee for FPPTA Fall Trustee School for Trustees Drew Bastian and Warren Carman - $1,200. *Recommendation:* Ratify payment.
    6. Hyatt Regency Coconut Point Resort – lodging expenses for Trustee Drew Bastian (FPPTA Fall Trustee School) - $597. *Recommendation:* Ratify payment.

7. Hyatt Regency Coconut Point Resort – lodging expenses for Trustee Warren Carman (FPPTA Fall Trustee School) - $597. *Recommendation:* Ratify payment.
8. Trustee Drew Bastian – reimbursement of mileage and meal expenses for attendance at FPPTA Fall Trustee School in Bonita Springs - $299.72. *Recommendation:* Ratify payment.
9. Trustee Warren Carman – reimbursement of mileage and meal expenses for attendance at FPPTA Fall Trustee School in Bonita Springs - $299.72. *Recommendation:* Ratify payment.
10. AndCo Consulting – investment consulting and performance monitoring services for quarter ending September 30, 2018 - $8,750. *Recommendation*: Ratify payment.
11. First State Trust Company – custodial services for quarter ended September 30, 2018 - $4,625. *Recommendation*: Ratify payment.

Member Carman moved to ratify plan expenses as recommended. Member Cobb seconded the motion and it carried on an all yes *vote.*

OLD BUSINESS - None

NEW BUSINESS

A. Ratify normal retirement benefits for Aaron Mcilrath (100 percent joint & survivor) commencing October 1, 2018

Member Bastian moved to ratify retirement benefits for Aaron Mcilrath. Member Cobb seconded the motion and it carried unanimously.

B. Establish quarterly meeting dates for 2019
   - Thursday, February 21, 2019 at 9:00 a.m.
   - Thursday, May 16, 2019 at 9:00 a.m.
   - Thursday, August 22, 2019 at 9:00 a.m.
   - Thursday, November 21, 2019 at 9:00 a.m.

Member Bastian moved to approve the quarterly meeting dates as set forth above. It was understood that the dates could possibly change pending an effort to coordinate a meeting date for the city's three pension boards. Member Cobb seconded the motion and it carried on an all yes vote.

C. Authorization to renew membership in Florida Public Pension Trustees Association (FPPTA) for 2019

Member Bastian moved to renew membership in FPPTA for 2019 at a cost of $600. Member Cobb seconded the motion which carried unanimously.

CONSULTANT REPORTS

A. Tyler Grumbles – AndCo Consulting (Investment Consultant)

   1. Investment Performance Report for quarter ended September 30, 2018

Mr. Grumbles delivered the Investment Performance Report for the quarter ended September 30, 2018. Market returns were, once again, mixed across major equity and fixed income indices for the quarter. Larger cap and growth-oriented equities led the way. Domestic fixed income was flat for the quarter. Mr. Grumbles mentioned that the asset allocation for international equities increased to 15 percent during the last quarter and an increased commitment to real estate was funded.

Total market value as of September 30, 2018 was $36,648,504 up from $36,367,679 for the previous quarter ended June 30, 2018. On a percentage basis, the composite portfolio was up 3.85 percent (gross) for the quarter which ranked in the 17th percentile of public plans. For the fiscal year the fund was up 9.04 percent (gross return) which ranked in the 30th percentile. The portfolio generated over $3 million in investment earnings since October 1, 2017 (start of fiscal year).

Quarterly performance results (i.e. quarter ending September 30, 2018) for the various investment styles/managers represented in the portfolio were as follows:

Vanguard Total Stock Market Index Fund – positive return of 7.09% (22)*
EuroPacific Growth (international equity) – negative return of -0.84% (98)*
Oakmark International (international equity) – negative return of -0.87% (98)*
Dodge & Cox (domestic fixed income) – positive return of 0.63% (6)*
Metropolitan West (domestic fixed income) – positive return of 0.04% (60)*
UBS Trumbull (private real estate) – positive return of 1.42% (100)*

It was noted that the compliance checklist was omitted from the performance report. Mr. Grumbles would forward this separately.

Member Bastian moved to accept the investment performance report as presented. Member Cobb seconded the motion which carried on an all yes vote.

2. Introduction and review of bank loans (fixed income alternative)

Traditional institution portfolios (such as local government retirement funds) were currently challenged to meet expected returns. In a rising interest rate environment, fixed income prices historically declined. Bank loans were a new asset class with characteristics that could address these challenges. Mr. Grumbles explained that bank loans were considered high-yield bonds and, as such, presented more investment risk but higher yields/returns. High yield bonds were frequently referred to as *"junk bonds."* AndCo Consulting had completed its due diligence with respect to bank loans and was of the professional opinion that the higher rate of return outweighed the risk of default.

Attorney Harrison felt that this new asset class (i.e. bank loans/high-yield bonds) would likely require a policy/ordinance change. He needed to research whether or not *Florida Statutes* allowed bonds below investment grade. *The attorney would provide a legal opinion on the matter at the next meeting.* Accordingly, the board moved onto the next agenda item.

3. Introduction and review of infrastructure investment opportunities

Infrastructure investments tended to be a counter-cyclical product with a low correlation to other asset classes. It was another asset class that targeted current challenges to meet expected returns. Infrastructure assets were typically characterized by (1) steady cash flow through an economic cycle; (2) inflation protection; and (3) less economic sensitivity than public equities. These benefits improved the risk-return characteristics of a traditional institutional portfolio resulting in a more optimal asset allocation.

AndCo was currently vetting two infrastructure funds: Brookfield Super-Core Infrastructure and J.P. Morgan Infrastructure Investment Fund. Should the retirement board decide to diversify its portfolio with infrastructure, Mr. Grumbles recommended a five percent target to be funded from a reduction to equities.

At the most recent trustee school, Member Carman learned of farmland investments and was interested in looking into an investment opportunity of this type which also ran counter to the market. He would like to compare the two strategies. Mr. Grumbles agreed to look into farmland investments. His first concern was registration with the Securities and Exchange Commission (SEC).

As the retirement board voiced no opposition to learning more about infrastructure, Mr. Grumbles would arrange for telephone presentations from Brookfield and J.P. Morgan at the next meeting.

4. Updated investment policy statement (IPS) review

This item was deferred to the next meeting pending the attorney's research and opinion concerning investments in high yield bonds (i.e. bank loans).

B. Chad Little – *Freiman Little Actuaries, LLC* (Plan Actuary)

Before proceeding with named agenda items, Mr. Little raised a question related to valuing liabilities of the pension plan. For members retiring after a certain date, their annual benefit was capped at $95,000 including cost-of-living (COLA) increases. For example, should a member select a joint and survivor option (other than 100%) and predecease their joint annuitant, would the COLA for the survivor be reinstated because the benefit decreased based on the selected option? [Reference Section 54-130(a)(7)]

It was Mr. Little's opinion that the COLA would start again. It was likely that no one had given thought to this scenario when the $95,000 benefit cap was implemented. Regardless, such an instance would not occur anytime soon. *Attorney Harrison stated that he would research the question and report back.*

1. Presentation – asset allocation and assumed investment rate of return

Mr. Little stated that actuarial standards required the use of long-term capital market projections when examining assumed investment rates of return. For purposes of this presentation, he used market projections prepared by Blackrock and Merrill Lynch with some reference to the Horizon Study. Based on these projections, the long term geometric (i.e. compounded) return was 4.7 percent. The long term arithmetic mean return was 5.6 percent. The expected return for large cap stocks was 6.6 percent.

During the past ten years, markets had experienced spectacular returns. The Board's current expected rate of return was 7.35 percent. The valuation for 2019 would be performed using a 7.25 percent rate of return. Given the long-term projections, there was no asset allocation that generated that high a return. Given the likelihood of revision to the mean, Mr. Little encouraged the Board to continue to lower its assumed rate of return in light of these projections.

2. Presentation – actuarial experience study

Previously the Pension Board authorized an actuarial experience study which examined actual plan experience from 2012 through 2017. Mr. Little presented findings of the study which reviewed current actuarial assumptions for the purpose of recommending changes in order to develop costs that were stable, predictable and represented the best estimate of anticipated experience. The specific assumptions investigated in the study included: (1) retirement rates; (2) termination rates; (3) disability; (4) individual salary growth; and (5) marital assumption. The study also examined the change in funded percentage and minimum required contribution associated with each recommended assumption change.

The first assumption reviewed was *retirement rates.* Since plan changes in 2011, Mr. Little explained that participants were not working beyond 25 years of service. When participants retired early, the cost to the plan was a bit higher even though they were not eligible for a COLA. He recommended adjustments to retirement rates for those hired prior to January 31, 2011 as set forth in the age/service table.

The next assumption considered was *termination rates.* The study found that the expected termination rate (43.91) was well above actual experience (29). Mr. Little recommended adjusting termination rates accordingly.

There was no recommended change to the *disability rate* as expected disabilities (0.57) were consistent with actual disabilities (1).

Moving on, *individual salary growth* was lower than expected until a participant reached 22 to 23 years of service. High salary increases at later service levels had more impact on a plan's cost. Mr. Little recommended lowering the salary scale from 7.5 percent to 7.25 percent.

The final assumption examined was the *marital assumption* (i.e. how many retirees elected a joint and survivor option). The actuary recommended an assumption of 40 percent of married participants electing the 100 percent joint and survivor option.

The study also examined the change in funded percentage and the change in minimum required contribution associated with each assumption change. Mr. Little emphasized that these should not be the determining factor for assumption selection. He recommended that the Retirement Board adopt the new assumptions as presented. The cost associated with the changes was approximately a $250,000.

Member Carman wondered how the review of plan assumptions might affect the cost for a participant to purchase prior service as this was discussed at the time the experience study was authorized. Mr. Little advised that the recommended changes would increase the cost to purchase prior military or law enforcement service. He would provide a detailed analysis at the quarterly meeting in February.

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Mr. Grumbles was excused from the meeting at 11:18 a.m.

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Member Bastian asked about implementing only a few changes at this time or implementing them over a period of several years. Mr. Little suggested that the change in termination rate assumption could be done over a two-year period.

Member Bastian moved to accept the actuary's recommendation for all assumptions with the change to termination rate assumption being phased in over a three-year period. Assumption changes would be effective with the 2018 valuation. Member Carman seconded the motion and it carried unanimously.

C. Ken Harrison – *Sugarman & Susskind* (Attorney)

Attorney Harrison advised that the Internal Revenue Service was changing the way that it interpreted QDRO's (qualified domestic relation orders). Currently public retirement plans only honored income deduction orders. This was an informational item at this time, however, changes could be forthcoming.

Recent constitutional amendments could potentially affect retirement plans as the standard for judicial reliance on an agency's administrative rules had changed. Additionally, survivor benefits for public safety employees were now stated in the State Constitution.

D. Karan Rounsavall – Plan Administrator

1. Educational Opportunities: Florida Public Pension Trustees Association (FPPTA) Winter Trustees School in Orlando (February 3-6, 2019)

If any member wished to attend, they were to contact her at their earliest opportunity.

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The next quarterly meeting was scheduled for Thursday, February 21, 2019.

PUBLIC COMMENT - None

ADJOURNMENT

The meeting adjourned at 11:46 a.m.

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Sgt. Warren Carman, Chairman

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Karan Rounsavall, Plan Administrator

MEMORANDUM

December 12, 2018

TO: **Port Orange Police Officers' Pension Board**

FROM: **Karan Rounsavall, Pension Plan Administrator**

SUBJECT: **Detailed Accounting Report for Fiscal Year 2017/2018**

Florida Statutes §185.05(8) requires all police pension plans to prepare a detailed accounting report of their administrative expenses and provide copies to the plan sponsor (City of Port Orange) and to the Port Orange Police Department, as well as make it available to plan members. The detailed accounting report is minimally required to include line items for all administrative expenses for legal counsel, actuary, plan administrator, auditor, and all other consultants, and all travel and other expenses paid to or on behalf of the members of the pension board or anyone else on behalf of the plan. The accounting report must accompany the plan's annual report to the state, which is due on March 15, 2019.

In accordance with the referenced statute, attached is the detailed accounting report for Fiscal Year 2017/2018 for your review. It reflects all administrative expenses that were paid on behalf of the Port Orange Police Pension Plan from October 1, 2017 through September 30, 2018 (cash basis).

Actual administrative expenses paid in Fiscal Year 2017/2018 were less than expenses paid in the prior year due in large part to the Board's decision to transition to AndCo Consulting for investment consulting services. However, due to timing of payments, $63,586.88 was paid to our prior investment consultant (Graystone/Morgan Stanley) for the last quarter of Fiscal Year 2016/2017. The adopted administrative expense budget for Fiscal Year 2017/2018 was $227,225.00. Administrative expenses actually paid ($225,689.91) were slightly less than our adopted budget. Mutual fund holdings are reported net of fees and are not considered administrative expenses.

If there are any questions or if additional information is required, please do not hesitate to contact me.

/attachment

Port Orange Police Pension Plan
Fiscal Year 2017-18 Actual Expenses

Account Description	Actual Expense Total
Plan Expense:	
Service Providers:	
Actuary	31,267.00
Administrator	30,000.00
Auditor/ Accounting	10,000.00
Attorney/ Legal	31,200.00
Investment Consultants	0.00
*AndCo Consulting**	32,083.33
*Graystone Consulting****	63,586.88
Custodial Services	13,875.00
Subtotal:	**$212,012.21**
Other Plan Expenses:	
Dues and Subscriptions	600.00
Insurance	4,878.00
Miscellaneous Expenses**	1,848.17
Education	6,351.53
Subtotal:	**13,677.70**
TOTAL:	**$225,689.91**

*AndCo Investment Consulting Expenses.
**All related to disability
***Investment Consulting & Management Fees (Graystone Consulting) - fourth quarter of FY 16/17 - $63,586.88

APPROVED BY PORT ORANGE POLICE PENSION BOARD - FEBRUARY 21, 2019

Port Orange Police Pension Plan
Fiscal Year 2016-17 Actual Expenses

Account Description	Actual Expense Total
Plan Expense:	
Service Providers:	
Actuary	31,500.00
Administrator	28,800.00
Auditor/ Accounting	10,000.00
Attorney/ Legal	30,900.00
Investment Consultant*	148,554.38
Custodial Services**	0.00
Subtotal:	**249,754.38**
Other Plan Expenses:	
Dues and Subscriptions	600.00
Insurance	4,795.00
Miscellaneous Expenses	198.26
Education	6,454.92
Subtotal:	**12,048.18**
TOTAL:	**261,802.56**

* Includes Investment Consultant Expenses. Does not include investment manager expenses. (Total - $246,612.51)
***13 months
**Custodial Services currently included in investment consultant's fee.

APPROVED BY PORT ORANGE POLICE PENSION BOARD - FEBRUARY 16, 2018

Port Orange Police Officers' Pension Plan
Fiscal Year 2017-18 Budget

Account Description	Prior Year Actual/Est Expense	% Total Admin	Next Fiscal Year Budget	% Total Budget
Plan Expense:				
Service Providers:				
Actuary	$31,000.00	11.0%	$42,150.00	18.5%
Administrator	$28,800.00	10.2%	$29,500.00	13.0%
Auditor/ Accounting	$10,000.00	3.5%	$10,000.00	4.4%
Attorney/ Legal	$30,900.00	10.9%	$31,200.00	13.7%
Investment Consultant	$170,000.00	60.2%	$70,000.00	30.8%
Custodial Services	$0.00	0.0%	$18,500.00	8.1%
Subtotal:	**$270,700.00**	**95.8%**	**$201,350.00**	**88.6%**
Other Plan Expenses:				
Dues and Subscriptions	$600.00	0.2%	$600.00	0.3%
Insurance	$4,795.00	1.7%	$5,275.00	2.3%
Miscellaneous Expenses	$0.00	0.0%	$10,000.00	4.4%
Education	$6,500.00	2.3%	$10,000.00	4.4%
Subtotal:	**$11,895.00**	**4.2%**	**$25,875.00**	**11.4%**
TOTAL:	**$282,595.00**	**100.0%**	**$227,225.00**	**100.0%**

Investment Performance Review
Period Ending December 31, 2018

Port Orange Police Pension

As we start 2019, we first want to say "Thank you" for giving AndCo the opportunity to serve you. On behalf of our entire organization, we are extremely grateful for our client partnerships and we will continue working hard to maintain your trust and confidence. Our mission statement reads – "To represent the sole interest of our clients by redefining independence". We're happy to report we remain steadfast in this core belief and continue to build an organization and service model that is singularly focused and independent. This helps ensure all recommendations are truly in the best interest of our valued clients. We believe this approach will drive value for our client partnerships long into the future.

AndCo also remains committed to delivering high quality, customized services. As we start 2019, we are 89 employees strong advising approximately $90 billion in client assets - both record highs for AndCo. In 2018 we hired 7 new team members including one consultant, two research professionals, one additional compliance officer, one technology administrator and two team members within our client solutions group. All hires were made to better service our clients.

2019 will represent another year of reinvestment in the organization to better serve our clients and make AndCo stronger. For example, we have already hired a new Senior Research Analyst bringing our dedicated research team to 15 professionals. As 2019 progresses, we are targeting additional hires in research, software development, content creation and our client solutions group. We will also be partnering with an external firm this year to conduct an in-depth client assessment to help ensure we are meeting the evolving needs of our clients and exceeding their service expectations. There will be more information regarding this survey from the firm and your consultant over the coming months.

Finally, we just completed our annual Firmwide retreat. This retreat was a great opportunity for our firm to spend time together with colleagues and get a clear understanding of where the company is going, and more importantly, why we're headed in that direction. Since the inception of AndCo, the idea has been to make the firm a multigenerational organization owned and managed by its employees. As a result, since 2015, along with the strategic elements of our annual retreat, we also started the process of announcing new partners of the firm to foster this succession plan and today we have 8 partners controlling 100% of the company.

The evolution of our firm would not be possible without great partners like you. Our name reminds us who we work for every day: "Our Client" &Co. You will always be first in our service approach. As we continue to discuss updates with our firm, please know every decision is made by asking "How does this benefit our clients?" If it doesn't benefit you, we don't do it, it's that simple. We know our clients are facing many challenges and we want to be there to help get you through all environments. We are honored and humbled you have chosen AndCo as your partner. We don't take that relationship for granted and will continue to work tirelessly to exceed your expectations.

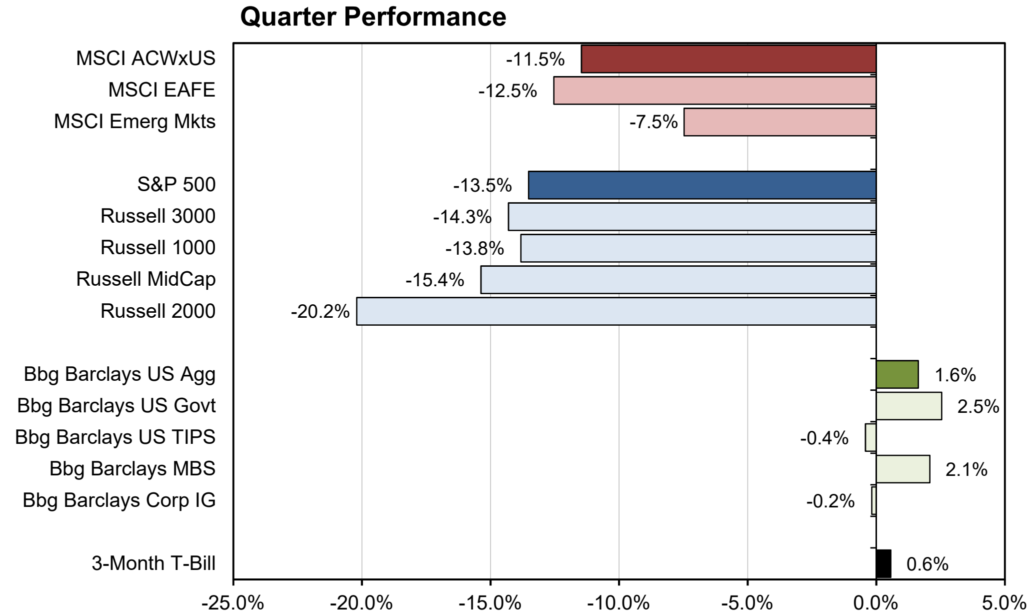
On behalf of AndCo, thank you for your valued partnership and the opportunity to serve you.

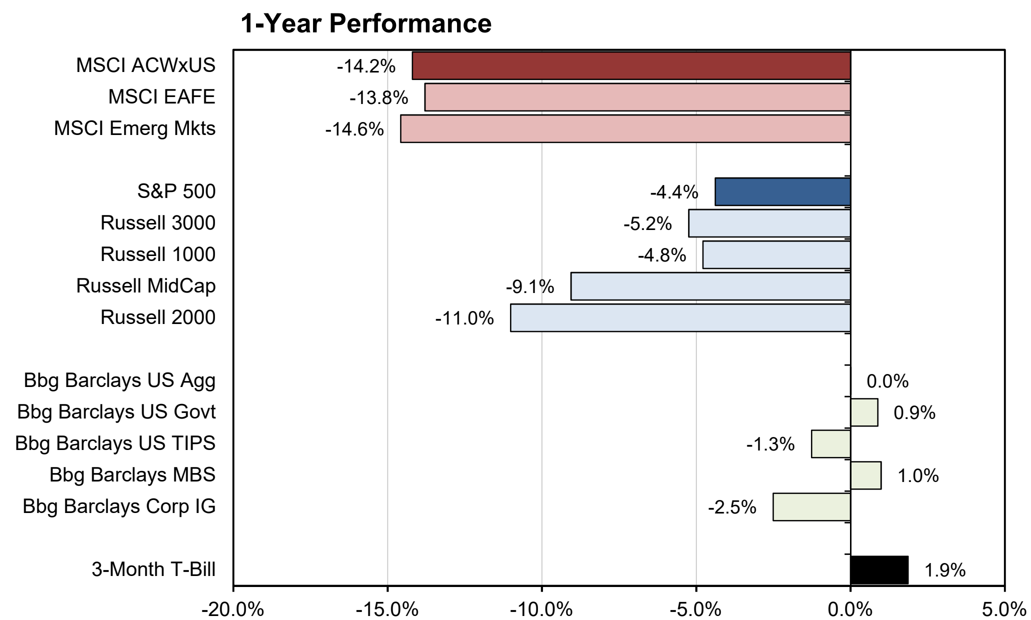
Mike Welker, CFA®
President/CEO

- Markets were volatile to end the 2018 calendar year. Both international and domestic equity markets had considerable losses during the 4th quarter while fixed income returns were muted, but outperformed relative to equities. Within equities, domestic stocks trailed international markets, reversing the 2018 trend of US market strength. Trade tensions between the US and China, midterm elections in US Congress, the effects of ongoing monetary policy tightening by the Federal Reserve (Fed), federal debt ceiling negotiations and the subsequent partial government shutdown outweighed generally positive corporate earnings and macroeconomic data reported during the quarter. The large cap S&P 500 Index returned -13.5% during the quarter while the small cap Russell 2000 Index fell by over 20% for the period. The drop in equity prices over the last three months was enough to take the returns for major US equity indices into negative territory for the 2018 calendar year. Returns over the 1-year period were -4.4% and -11.0% for the S&P 500 and Russell 2000 respectively.

- Similar to US equities, international equity index returns finished the quarter in negative territory with the MSCI ACWI ex US Index returning -11.5%. International markets faced headwinds from softening global macroeconomic data, tightening global monetary policy, uncertainty around Brexit negotiations, turmoil surrounding global trade relations, falling commodity prices and continued US Dollar (USD) strength. The developed market MSCI EAFE Index fell -12.5% during the 4th quarter, ending the year down -13.8%. Emerging markets performed well by comparison, only losing -7.5% during the quarter. Despite the 4th quarter outperformance, returns for emerging market equities trailed developed markets over the 1-year period with the MSCI Emerging Markets Index returning -14.6% versus a -13.8% return for the MSCI EAFE Index.

- Fixed income securities outperformed equities through both the 4th quarter and calendar year 2018 with the broad market Bloomberg Barclays Aggregate Index returning 1.6% and 0.0% respectively. Interest rates on the US Treasury Yield Curve continued their 2018 flattening trend as short-term rates increased to near-term highs while long- term rates fell during the quarter. Some of the increase in short-term rates can be attributed to the late December Fed interest rate hike. This marked the fourth Fed interest rate increase of 2018. This movement in rates did lead to some short-term rates being higher than those of longer dated maturities. More conservative fixed income sectors such as Treasuries and mortgage backed securities outperformed during the quarter and for the year as investors moved toward the relative safety these securities provide while widening credit spreads acted as a headwind to corporate issues.





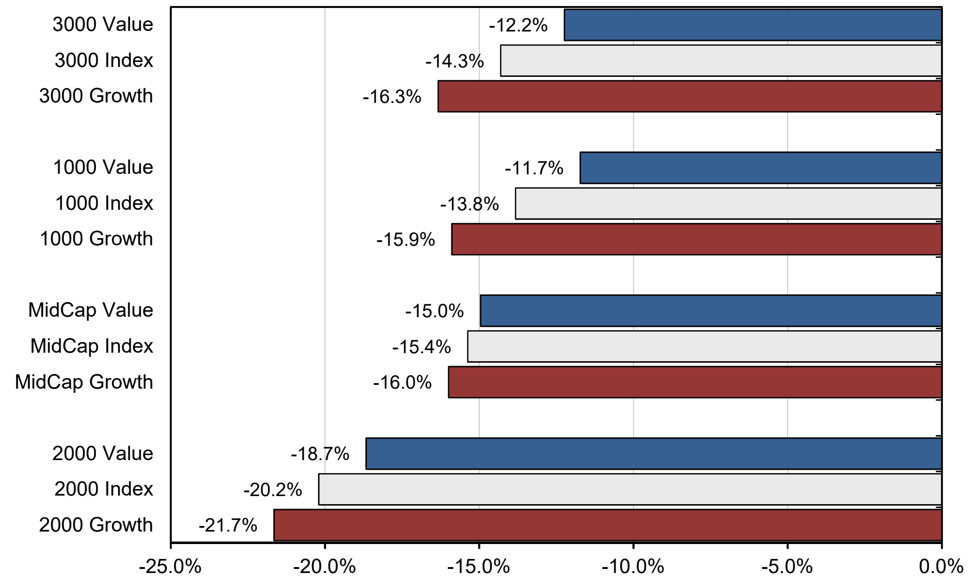
Source: Investment Metrics

- US equity index returns were strongly negative across the style and capitalization spectrum during the 4th quarter of 2018. Despite these negative results, there was positive data in GDP, unemployment, wage growth, retail sales, and corporate earnings during the period. These positive economic factors were offset by softening data in housing, consumer confidence and manufacturing, tightening monetary policy, negative guidance for future corporate earnings and signs of slowing global growth which all contributed to the heavy selling in equities. Investors also considered the effects of ongoing trade negotiations, especially between the US and China, and the results of the US congressional midterm elections which likely reduced the chances of any major policy changes or new fiscal stimulus measures. The effects of partisan politics was particularly evident at the end of the quarter as budget negotiations between Democrats and Republicans collapsed over disagreement around the inclusion of funds for a border wall with Mexico, leading to a partial government shutdown to end the year.

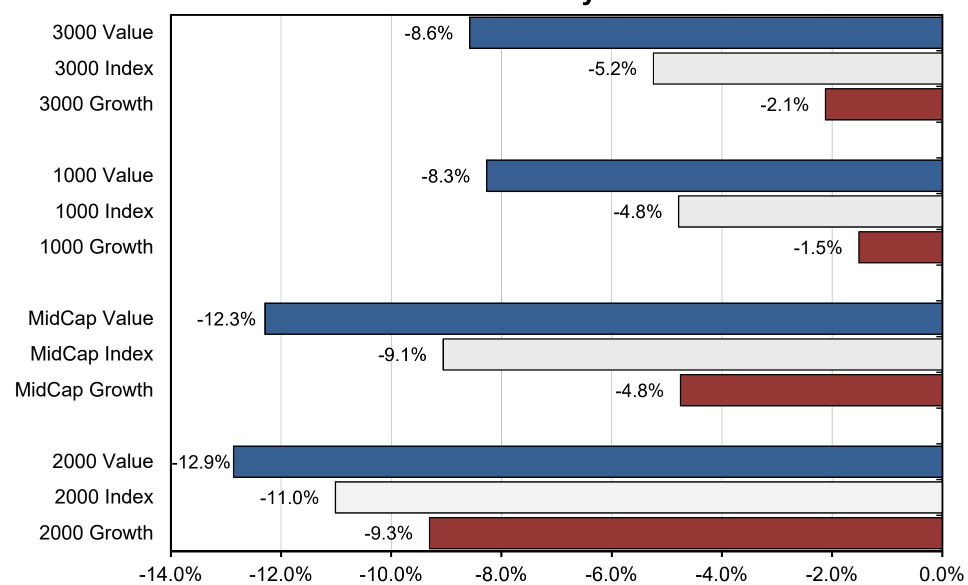
- During the quarter, large cap stocks outperformed mid and small cap equities across growth, value and core indices. The large cap Russell 1000 Index fell -13.8% during the 4th quarter versus a -20.2% drop for the Russell 2000 Index. Part of the reason for weakness in small cap names is the steady increase in interest rates that occurred over 2018 as small cap companies typically maintain a higher percentage of debt than their large cap peers. Small cap names are also typically more volatile than larger companies and they have historically underperformed during market downturns. Similar to the most recent quarter, large cap stocks outperformed relative to small caps through calendar year 2018. The Russell 1000 returned -4.8% for the 1-year periods compared to a -11.0% return for the Russell 2000.

- Value indices outperformed growth indices across the market cap spectrum during the 4th quarter, reversing a year-to-date trend of growth stock outperformance. The large cap Russell 1000 Value Index was the best performing style index for the period, returning -11.7% for the quarter, while the Russell 2000 Growth Index was the worst performer, returning -21.7%. Value benchmarks tend to outperform in down markets as they benefit from their relative safety and higher dividend yields. Despite the short-term underperformance, growth benchmarks continue to outperform over the 1-year period, however, many of the sector exposures that drove growth stock outperformance during the first three quarters of the year, such as technology and consumer discretionary, were relative detractors during the 4th quarter.

Quarter Performance - Russell Style Series



1-Year Performance - Russell Style Series



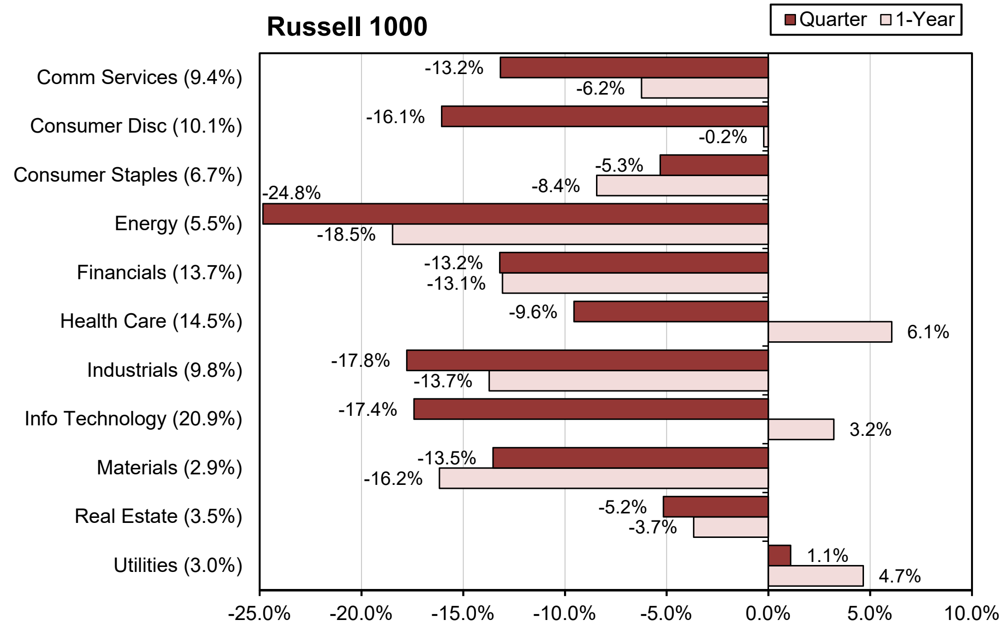
Source: Investment Metrics

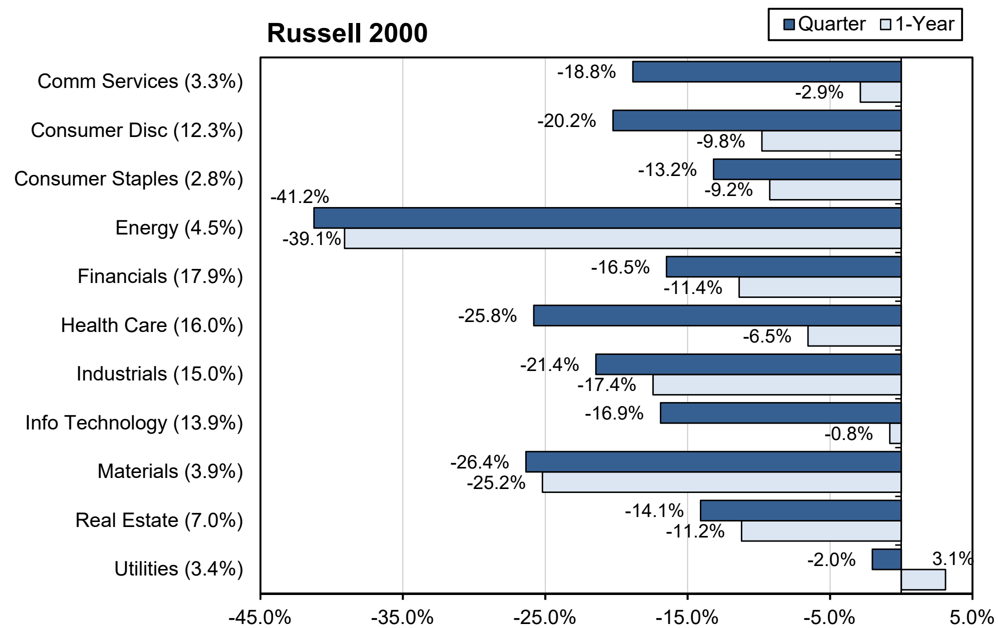
- Both S&P Dow Jones Indices and MSCI made changes to the Global Industry Classification Standard (GICS) sector configurations of their indices, creating a new GICS sector classification called Communication Services which replaced the Telecommunications sector on September 28, 2018. The Communication Services sector is comprised of companies in the Telecommunications sector, as well as certain companies formerly classified as Consumer Discretionary and Information Technology. As a result, the sector, went from a weighting of about 2% of the Russell 1000 Index to almost 10% post reclassification. Notable names now classified under Communication Services include Netflix, Alphabet, Facebook and Disney. This is just the second change to the GICS classifications since 1999.

- Sector performance was broadly negative across large cap sectors for the 4th quarter. All sectors within the Russell 1000 Index with the exception of the utilities sector posted negative returns for the period with seven sectors outpacing the return on the index. Cyclical sectors such as energy, industrials and technology were the worst performers through the quarter returning -24.8%, -17.8% and -17.4% respectively. Energy companies were hurt by a steep decline in oil prices during the quarter while technology and industrial companies fell on negative guidance for future earnings. More defensive, higher dividend paying sectors such as utilities, REITs and consumer staples were the strongest performing sectors with returns of 1.1%, -5.2% and -5.3% respectively. Only three sectors (health care, utilities, technology) posted positive results over the 1-year period with the remaining sectors losing ground during the calendar year.

- Quarterly results for small cap sectors were generally lower relative to their large capitalization counterparts. All eleven sectors had negative returns during the period with six of eleven economic sectors outpacing the Russell 2000 Index return for the quarter. Energy, materials and healthcare posted the worst returns for the period returning -41.2%, -26.4% and -25.8% respectively. Similar to large caps, defensive sectors performed well with utilities, consumer staples and real estate detracting the least returning -2.0%, -13.2% and -14.1% respectively. Over the trailing 1-year period, only utilities posted a gain returning 3.1%. Energy stocks were the worst performers in 2018, falling a considerable -41.2%.

- Using S&P 500 sector valuations as a proxy for the market, forward P/E ratios for three of the eleven GICS sectors were higher than their long-term averages at quarter-end. Using these historical P/E measures, the utilities, consumer discretionary and real estate sectors appear the most extended. In contrast the financials, technology and energy sectors were trading at a discount to their long-term average P/E ratios.





Source: Morningstar Direct
As a result of the GICS classification changes on 9/28/2018 and certain associated reporting limitations, sector performance represents backward looking performance for the prior year of each sector's current constituency, post creation of the Communication Services sector.

Top 10 Index Weights & Quarterly Performance for the Russell 1000 & 2000

As of December 31, 2018

Top 10 Weighted Stocks

Russell 1000	Weight	1-Qtr Return	1-Year Return	Sector
Microsoft Corp	3.27%	-11.2%	20.3%	Information Technology
Apple Inc	3.24%	-29.9%	-5.4%	Information Technology
Amazon.com Inc	2.59%	-25.0%	28.4%	Consumer Discretionary
Berkshire Hathaway Inc B	1.68%	-4.6%	3.0%	Financials
Johnson & Johnson	1.47%	-6.0%	-5.1%	Health Care
JPMorgan Chase & Co	1.39%	-12.9%	-6.6%	Financials
Alphabet Inc Class C	1.34%	-13.2%	-1.0%	Communication Services
Alphabet Inc A	1.32%	-13.4%	-0.8%	Communication Services
Facebook Inc A	1.32%	-20.3%	-25.7%	Communication Services
Exxon Mobil Corp	1.23%	-19.0%	-15.1%	Energy

Top 10 Weighted Stocks

Russell 2000	Weight	1-Qtr Return	1-Year Return	Sector
Integrated Device Technology Inc	0.35%	3.0%	62.9%	Information Technology
Etsy Inc	0.32%	-7.4%	132.6%	Consumer Discretionary
Five Below Inc	0.31%	-21.3%	54.3%	Consumer Discretionary
Haemonetics Corp	0.29%	-12.7%	72.3%	Health Care
Ciena Corp	0.27%	8.5%	62.0%	Information Technology
Planet Fitness Inc A	0.26%	-0.8%	54.8%	Consumer Discretionary
Idacorp Inc	0.26%	-5.6%	4.6%	Utilities
HubSpot Inc	0.26%	-16.7%	42.2%	Information Technology
LivaNova PLC	0.25%	-26.2%	14.5%	Health Care
Cree Inc	0.24%	13.0%	15.2%	Information Technology

Top 10 Performing Stocks (by Quarter)

Russell 1000	Weight	1-Qtr Return	1-Year Return	Sector
Tesaro Inc	0.01%	90.3%	-10.4%	Health Care
Red Hat Inc	0.13%	28.9%	46.2%	Information Technology
Virtu Financial Inc A	0.00%	27.1%	45.9%	Financials
Tesla Inc	0.19%	25.7%	6.9%	Consumer Discretionary
SCANA Corp	0.03%	23.2%	23.1%	Utilities
Tribune Media Co A	0.02%	18.9%	9.7%	Communication Services
MarketAxess Holdings Inc	0.03%	18.6%	5.6%	Financials
ARRIS International PLC	0.02%	17.6%	19.0%	Information Technology
United States Cellular Corp	0.00%	16.1%	38.1%	Communication Services
Newmont Mining Corp	0.08%	15.2%	-6.2%	Materials

Top 10 Performing Stocks (by Quarter)

Russell 2000	Weight	1-Qtr Return	1-Year Return	Sector
Electro Scientific Industries Inc	0.05%	71.7%	39.8%	Information Technology
Fluent Inc	0.01%	67.4%	3.4%	Communication Services
Mitek Systems Inc	0.02%	53.3%	20.8%	Information Technology
Arsanis Inc	0.00%	43.2%	-81.8%	Health Care
Inovalon Holdings Inc	0.05%	41.1%	-5.5%	Health Care
K12 Inc	0.05%	40.1%	55.9%	Consumer Discretionary
Investment Technology Group Inc	0.05%	39.9%	59.0%	Financials
Eidos Therapeutics Inc	0.01%	37.9%	N/A	Health Care
Belmond Ltd Class A	0.13%	37.2%	104.3%	Consumer Discretionary
Pacific Biosciences of California Inc	0.06%	36.8%	180.3%	Health Care

Bottom 10 Performing Stocks (by Quarter)

Russell 1000	Weight	1-Qtr Return	1-Year Return	Sector
Weatherford International PLC	0.00%	-79.4%	-86.6%	Energy
Nabors Industries Ltd	0.00%	-66.8%	-69.3%	Energy
Extraction Oil & Gas Inc	0.00%	-62.0%	-70.0%	Energy
Adient PLC	0.01%	-61.4%	-80.4%	Consumer Discretionary
Whiting Petroleum Corp	0.01%	-57.2%	-14.3%	Energy
Kosmos Energy Ltd	0.00%	-56.5%	-40.6%	Energy
Chesapeake Energy Corp	0.01%	-53.2%	-47.0%	Energy
Conduent Inc	0.01%	-52.8%	-34.2%	Information Technology
NVIDIA Corp	0.33%	-52.4%	-30.8%	Information Technology
SM Energy Co	0.01%	-50.8%	-29.6%	Energy

Bottom 10 Performing Stocks (by Quarter)

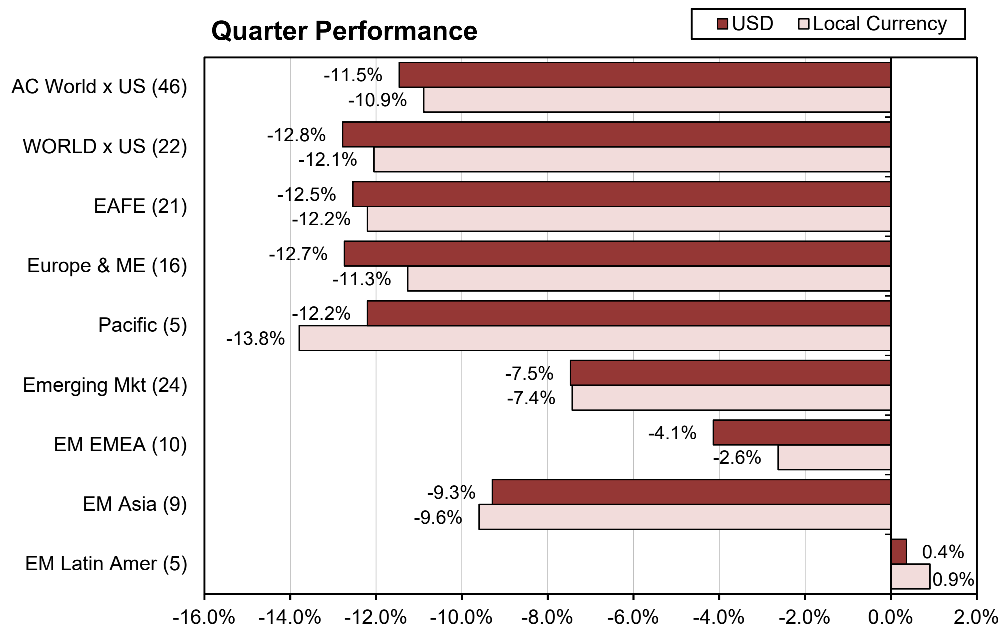
Russell 2000	Weight	1-Qtr Return	1-Year Return	Sector
Synergy Pharmaceuticals Inc	0.00%	-93.3%	-94.9%	Health Care
Sanchez Energy Corp	0.00%	-88.3%	-94.9%	Energy
Sienna Biopharmaceuticals Inc	0.00%	-84.3%	-87.2%	Health Care
Cloud Peak Energy Inc	0.00%	-84.1%	-91.8%	Energy
Selecta Biosciences Inc	0.00%	-82.9%	-72.9%	Health Care
Clearside Biomedical Inc	0.00%	-82.6%	-84.7%	Health Care
Key Energy Services Inc	0.00%	-81.9%	-82.4%	Energy
AAC Holdings Inc	0.00%	-81.7%	-84.4%	Health Care
PHI Inc Non-Voting Shares	0.00%	-80.2%	-84.0%	Energy
Bristow Group Inc	0.00%	-80.0%	-82.0%	Energy

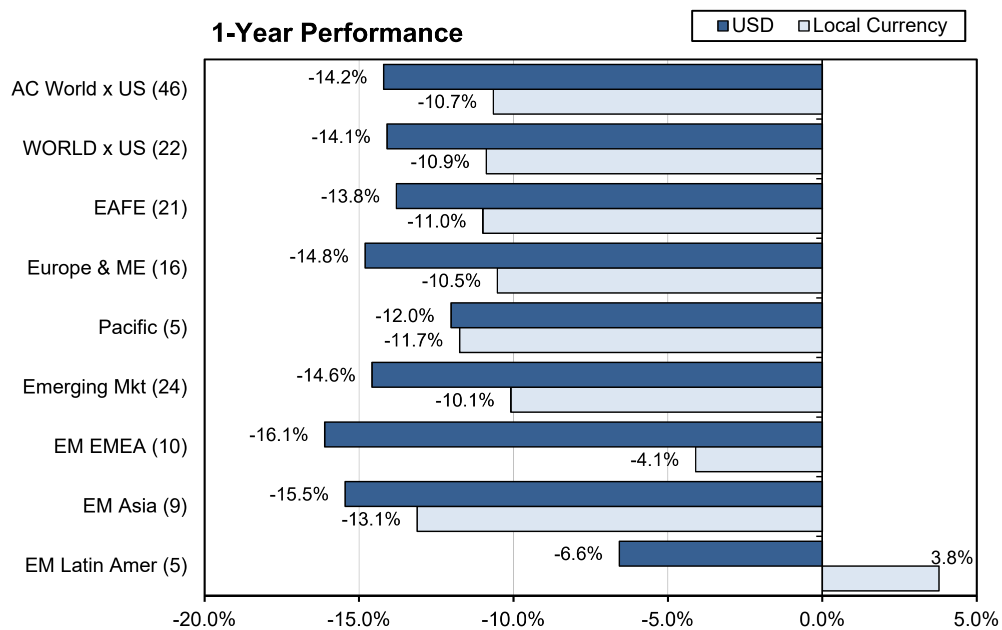
Source: Morningstar Direct

- Broad international equity returns were negative for the quarter in both local currency and USD terms. Geopolitical concerns, weakening economic data and the tightening of global monetary policy drove most of the negative performance. The USD also continued to strengthen against most currencies for the period which provided a headwind for USD based investors. The MSCI ACWI ex US Index fell -10.9% in local currency terms and -11.5% in USD terms during the 4th quarter. Returns for international indices were also broadly negative over the 1-year period in both local currency and USD terms with the MSCI ACWI ex US returning -10.7% and -14.2% respectively.

- Fourth quarter results for developed market international indices were negative in both local currency and USD terms with the MSCI EAFE Index returning -12.2% and -12.5% respectively. Returns were dampened for US investors as the USD continued to appreciate against most currencies, pushing returns lower. Global economic reporting during the quarter fueled concerns that global growth was beginning to slow. Japanese economic data faced headwinds from several natural disasters and data out of Europe was generally disappointing. Investors also weighed the effects of several significant political events in Europe including riots in France, ongoing budget negotiations between Italy and the EU and uncertainty around Brexit. Concerns over a "no deal" Brexit grew during the quarter as the draft withdrawal agreement presented by UK Prime Minister Theresa May was poorly received leading to a wave of cabinet resignations, a delay in the parliamentary vote and a "no confidence" vote which she ultimately won. The MSCI EAFE Index returned -11.0% and -13.8% for the last twelve months in local currency and USD terms respectively.

- Emerging markets outperformed relative to developed markets for the 4th quarter, but still declined in both local currency and USD terms with the MSCI Emerging Markets Index returning -7.4% and -7.5% respectively. Returns in emerging markets were hurt by the continued uncertainty surrounding trade relations between the US and China as both countries agreed to a 90-day hold on any new tariffs to allow for continued negotiations. Chinese economic data also appeared to be slowing during the quarter prompting the announcement of additional monetary and fiscal stimulus. The election of President Andres Manuel Lopez Obrador hurt returns in Mexico as investors feared the potential ramifications of his nationalist campaign promises. In contrast, Brazil was one of the few bright spots during the quarter as market participants looked favorably on the election of President Jair Bolsonaro in anticipation of market friendly economic reforms, including reforms associated with the countries bloated state pension system which has weighed heavily on the country's debt load. One year returns for the MSCI Emerging Market Index were -10.1% in local currency terms and -14.6% in USD terms.





Source: MSCI Global Index Monitor (Returns are Net)

MSCI - EAFE	Sector Weight	Quarter Return	1-Year Return
Communication Services	5.6%	-7.7%	-12.1%
Consumer Discretionary	11.2%	-14.2%	-16.1%
Consumer Staples	11.6%	-8.4%	-10.8%
Energy	5.9%	-17.5%	-7.2%
Financials	19.5%	-13.7%	-20.1%
Health Care	11.2%	-10.3%	-4.3%
Industrials	14.3%	-14.6%	-15.7%
Information Technology	6.0%	-16.7%	-15.6%
Materials	7.4%	-15.2%	-17.5%
Real Estate	3.7%	-5.4%	-9.9%
Utilities	3.8%	-0.1%	1.1%
Total	**100.0%**	**-12.5%**	**-13.8%**

MSCI - ACWIxUS	Sector Weight	Quarter Return	1-Year Return
Communication Services	7.6%	-5.5%	-11.9%
Consumer Discretionary	10.6%	-14.1%	-20.2%
Consumer Staples	9.9%	-7.4%	-11.2%
Energy	7.3%	-16.3%	-8.1%
Financials	22.2%	-10.7%	-16.8%
Health Care	8.4%	-11.2%	-6.2%
Industrials	11.7%	-13.7%	-15.1%
Information Technology	8.0%	-14.6%	-17.6%
Materials	7.7%	-13.4%	-15.9%
Real Estate	3.4%	-3.8%	-11.6%
Utilities	3.4%	0.5%	-0.9%
Total	**100.0%**	**-11.5%**	**-14.2%**

MSCI - Emerging Mkt	Sector Weight	Quarter Return	1-Year Return
Communication Services	14.1%	-3.7%	-14.9%
Consumer Discretionary	10.4%	-13.5%	-32.5%
Consumer Staples	6.7%	-4.6%	-13.7%
Energy	8.0%	-10.6%	4.7%
Financials	24.8%	-0.9%	-8.7%
Health Care	2.8%	-16.2%	-20.9%
Industrials	5.5%	-3.8%	-12.6%
Information Technology	14.2%	-12.7%	-19.3%
Materials	7.7%	-10.8%	-11.6%
Real Estate	3.0%	1.4%	-17.2%
Utilities	2.7%	3.6%	-3.8%
Total	**100.0%**	**-7.5%**	**-14.6%**

Country	MSCI-EAFE Weight	MSCI-ACWIxUS Weight	Quarter Return	1- Year Return
Japan	24.6%	16.6%	-14.2%	-12.9%
United Kingdom	16.9%	11.4%	-11.8%	-14.2%
France	11.1%	7.5%	-15.1%	-12.8%
Germany	8.8%	6.0%	-15.5%	-22.2%
Switzerland	8.7%	5.8%	-8.9%	-9.1%
Australia	6.9%	4.7%	-10.0%	-12.0%
Hong Kong	3.9%	2.6%	-4.5%	-7.8%
Netherlands	3.4%	2.3%	-11.0%	-13.1%
Spain	3.1%	2.1%	-8.7%	-16.2%
Sweden	2.7%	1.8%	-14.2%	-13.7%
Italy	2.3%	1.5%	-11.8%	-17.8%
Denmark	1.8%	1.2%	-9.8%	-15.4%
Singapore	1.4%	0.9%	-6.7%	-9.4%
Finland	1.0%	0.7%	-14.7%	-3.4%
Belgium	1.0%	0.6%	-18.5%	-26.9%
Norway	0.7%	0.5%	-18.1%	-8.6%
Ireland	0.5%	0.4%	-17.7%	-25.3%
Israel	0.5%	0.4%	-14.4%	-5.5%
Austria	0.2%	0.2%	-20.7%	-27.4%
New Zealand	0.2%	0.2%	-6.6%	-4.0%
Portugal	0.2%	0.1%	-14.3%	-11.1%
Total EAFE Countries	**100.0%**	**67.5%**	**-12.5%**	**-13.8%**
Canada		6.5%	-15.3%	-17.2%
Total Developed Countries		**74.0%**	**-12.8%**	**-14.1%**
China		7.9%	-10.7%	-18.9%
Korea		3.6%	-13.1%	-20.9%
Taiwan		3.0%	-13.7%	-8.9%
India		2.4%	2.5%	-7.3%
Brazil		2.0%	13.4%	-0.5%
South Africa		1.6%	-3.8%	-24.8%
Russia		1.0%	-9.0%	-0.7%
Mexico		0.7%	-18.8%	-15.5%
Malaysia		0.6%	-5.8%	-6.0%
Thailand		0.6%	-10.2%	-5.5%
Indonesia		0.6%	9.7%	-9.2%
Poland		0.3%	-3.0%	-12.9%
Philippines		0.3%	5.3%	-16.5%
Qatar		0.3%	8.4%	29.8%
Chile		0.3%	-8.7%	-19.7%
United Arab Emirates		0.2%	-5.5%	-7.7%
Turkey		0.2%	4.8%	-41.4%
Colombia		0.1%	-19.0%	-11.5%
Peru		0.1%	-2.9%	1.6%
Hungary		0.1%	5.9%	-6.1%
Greece		0.1%	-16.0%	-36.8%
Czech Republic		0.0%	-8.7%	-4.5%
Egypt		0.0%	-9.4%	-14.0%
Pakistan		0.0%	-22.4%	-34.8%
Total Emerging Countries		**26.0%**	**-7.5%**	**-14.6%**
Total ACWIxUS Countries		**100.0%**	**-11.5%**	**-14.2%**

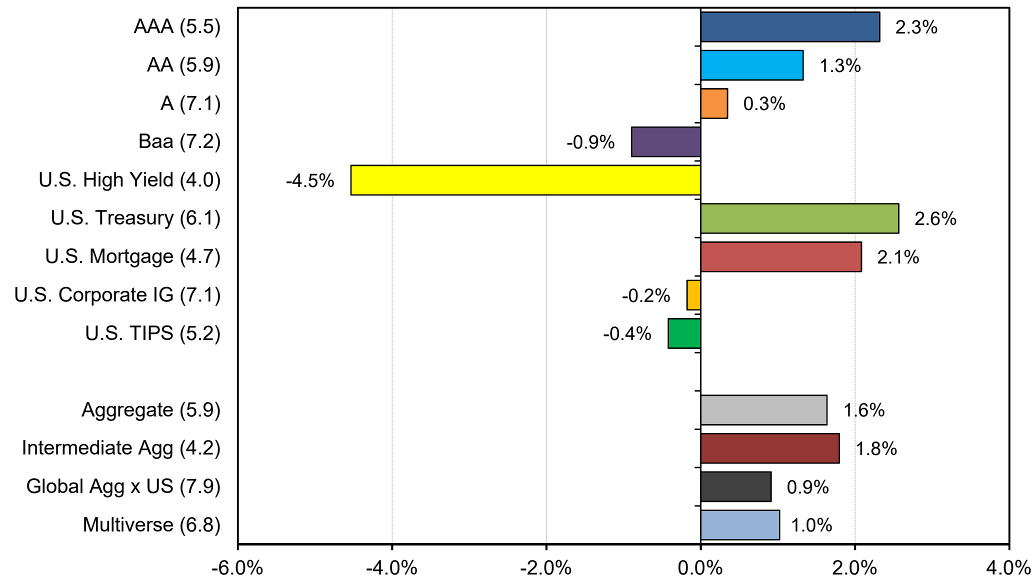
Source: Morningstar Direct, MSCI Global Index Monitor (Returns are Net in USD)
As a result of the GICS classification changes on 9/28/2018 and certain associated reporting limitations, sector performance represents backward looking performance for the prior year of each sector's current constituency, post creation of the Communication Services sector.

- Broad fixed income benchmarks had mixed results during the 4th quarter. Interest rates rose across short-term maturities, but fell on those on the middle and long end of the US Treasury Yield Curve. The Federal Open Market Committee (FOMC), decided to increase short-term interest rates by 25 basis points at their December meeting citing the strength of the US economy which caused an increase in short-term interest rates, but equity market volatility led market participants toward less volatile assets, pushing rates lower on maturities greater than 1-year. This was the fourth rate hike of 2018. The current Fed Funds Rate target range sits at 2.25%-2.50%. This caused continued flattening in the yield curve with some moderate inversion, which happens when short-term maturities have greater yields than long-term securities, in the middle of curve. The difference in yields between the 2-year and 10-year Treasury now sits at just 0.21%. Historically, an inverted yield curve has signaled a greater probability of a recession. The Fed is also continuing the reduction of the size of its balance sheet by slowing its pace of reinvestment as the securities it holds mature. However, the Fed did lower its guidance for future rate increases in 2019 following a reduction in expectations for GDP and inflation. The Fed is now projecting just two additional interest rate increases in 2019. The Bloomberg Barclays US Aggregate Index was positive during the quarter, posting a 1.6% return, but was flat, returning 0.0% over the 1-year period.

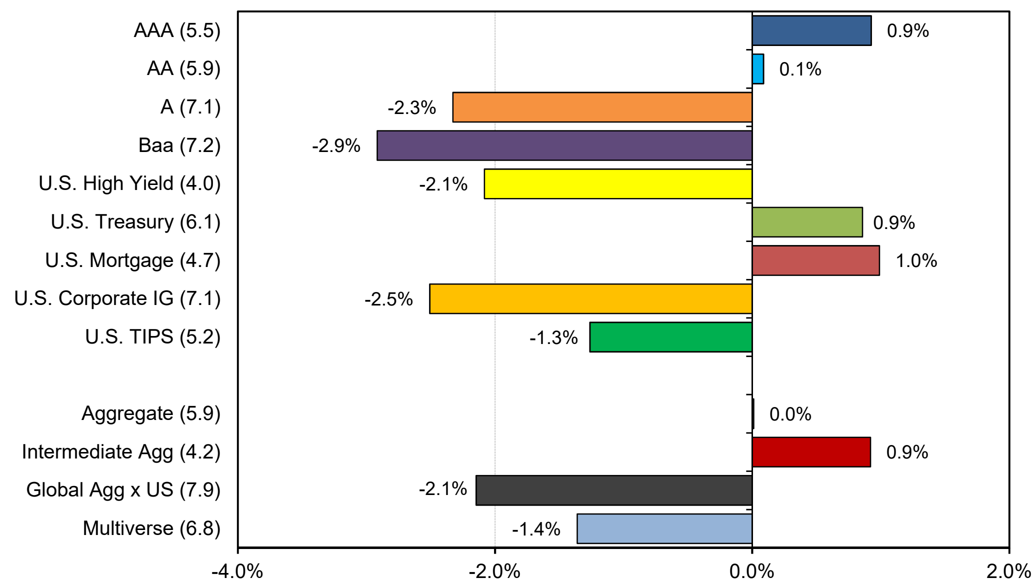
- Within investment grade credit, higher quality issues outperformed lower quality issues as investors preferred more conservative securities. On an absolute basis, without negating the duration differences in the sub-indices, AAA rated credit was the best performing investment grade credit quality segment returning 2.3% for the quarter, while Baa was the worst performing, falling -0.9%. High yield debt trailed investment grade credit as spreads widened the most for these issues, returning -4.5%. Returns are mixed for the investment grade quality segments when viewed over the 1-year period with higher quality issues outperforming lower quality securities. High yield performed well relative to lower quality investment grade debt due to the relatively strong returns experienced during the first three quarters of 2018.

- During the 4th quarter, the more defensive Treasury and mortgage backed sectors of the Bloomberg Barclays US Aggregate Index's three broad sectors were the best performers returning 2.6% and 2.1% respectively. Investment grade corporate credit underperformed, returning -0.2%, as credit spreads widened considerably during the period. This trend carried through to the 1-year period as both Treasuries and mortgage backed securities outperformed both investment grade and high yield corporate debt. Calendar year 2018 performance for the Treasury, mortgage backed and investment grade corporate issues was 0.9%, 1.0% and -2.5% respectively. US TIPS returned -0.4% and -1.3% for the 4th quarter and 1-year period.

Quarter Performance



1-Year Performance



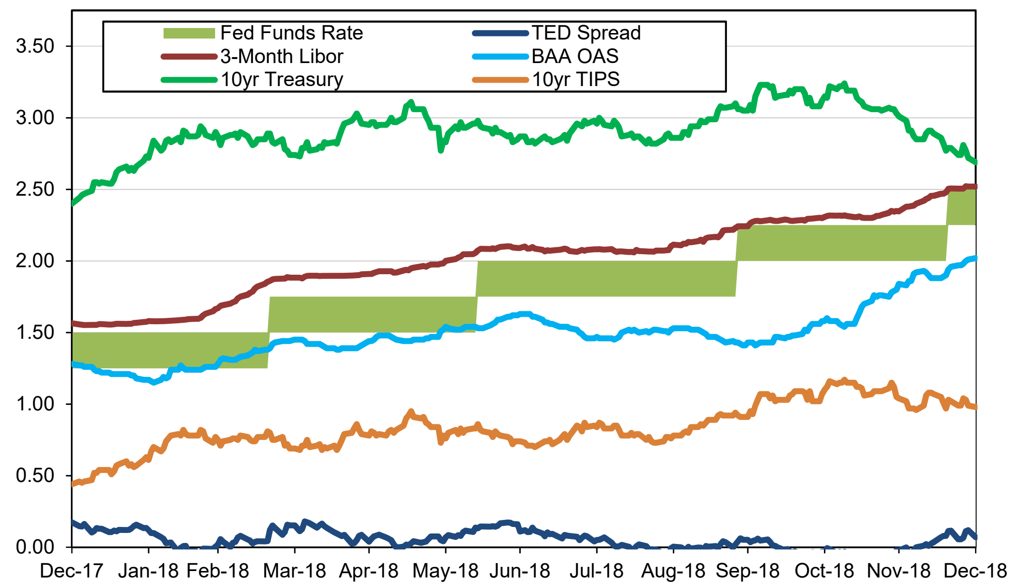
Source: Bloomberg

- Global fixed income indices continue to struggle relative to their domestic counterparts, underperforming during the 4th quarter. These indices have lower yields and the returns of these indices are also significantly influenced by fluctuations in their currency denomination relative to the USD. During the 4th quarter the USD strengthened against most other currencies, negatively impacting the returns on global bond indices. The return on global bonds, as represented by the Bloomberg Barclays Global Aggregate ex US Index, was 0.9% and -2.1% for the quarter and 1-year period respectively. As the global economy continues to recover, several international central banks have started to move toward less accommodative postures. Notably, the ECB, began to slow its monthly bond purchase program in September, reducing new purchases to 15 billion euro per month from 30 billion euro per month and ended the program entirely at year end. However, they have indicated a continuation of reinvestment in maturing securities and would likely not raise interest rates from current levels until summer 2019. The Bank of England and the Bank of Japan made no major policy changes during the quarter as they continue to review macroeconomic data within their respective countries.

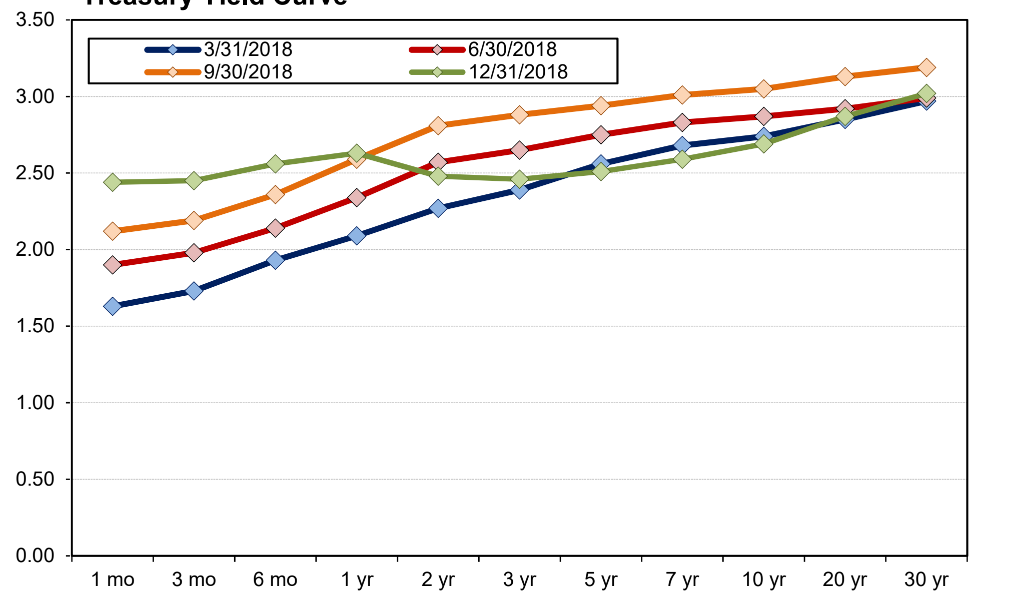
- Much of the index performance detailed in the bar graphs on the previous page is visible on a time series basis by reviewing the line graphs to the right. The '1-Year Trailing Market Rates' chart illustrates that the 10-year Treasury yield (green line) fell during the 4th quarter after rising steadily through most of the year as investors moved to safe haven assets during the period, ending the year at 2.69%. The blue line illustrates changes in the BAA OAS (Option Adjusted Spread). This measure quantifies the additional yield premium that investors require to purchase and hold non-Treasury issues. This line illustrates a relatively tight range in credit spreads throughout most of 2018, but highlights an abrupt increase during the 4th quarter as investors moved to higher quality assets. This increase is equivalent to an interest rate increase on corporate bonds, which produces an additional headwind for corporate bond index returns. These credit spreads have widened by about 59 basis points over the last 3-months. The green band across the graph illustrates the gradual increase in the Federal Funds Rate (four increases in the last twelve months) due to the continued tightening of US monetary policy.

- The lower graph provides a snapshot of the US Treasury yield curve at the end of each of the last four calendar quarters. As mentioned, the yield curve continues to flatten as yields on shorter-term maturities have risen more than interest rates on the long end of the curve. The upward momentum of interest rates as well as a general flattening of the yield curve are clearly visible over the last twelve months with some minor inversion visible in the middle of the yield curve.

1-Year Trailing Market Rates

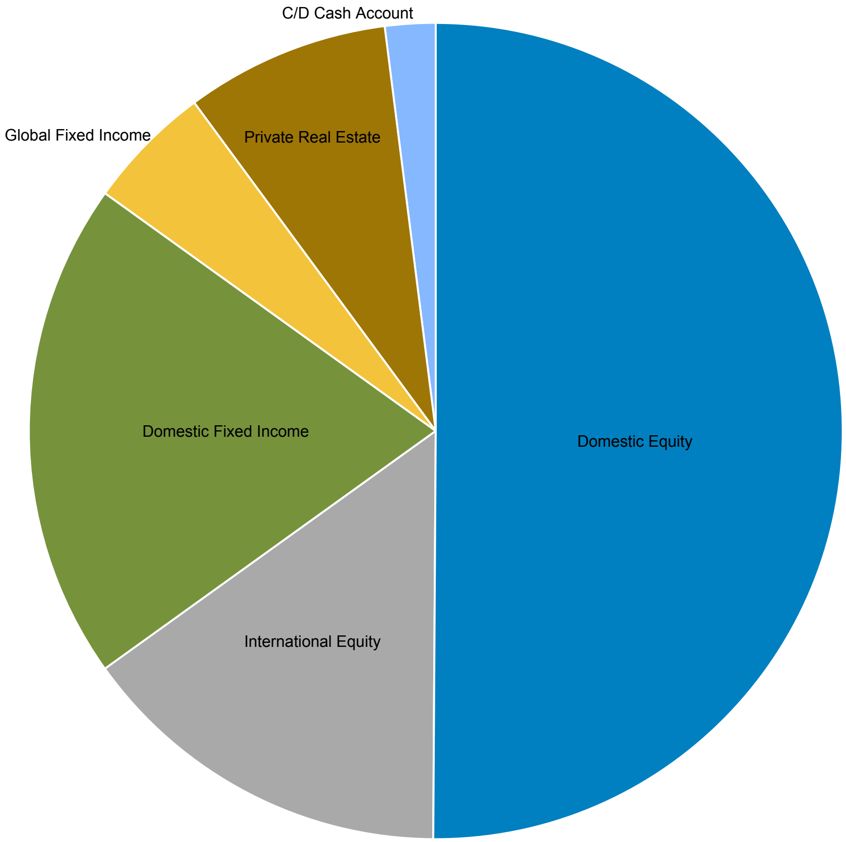


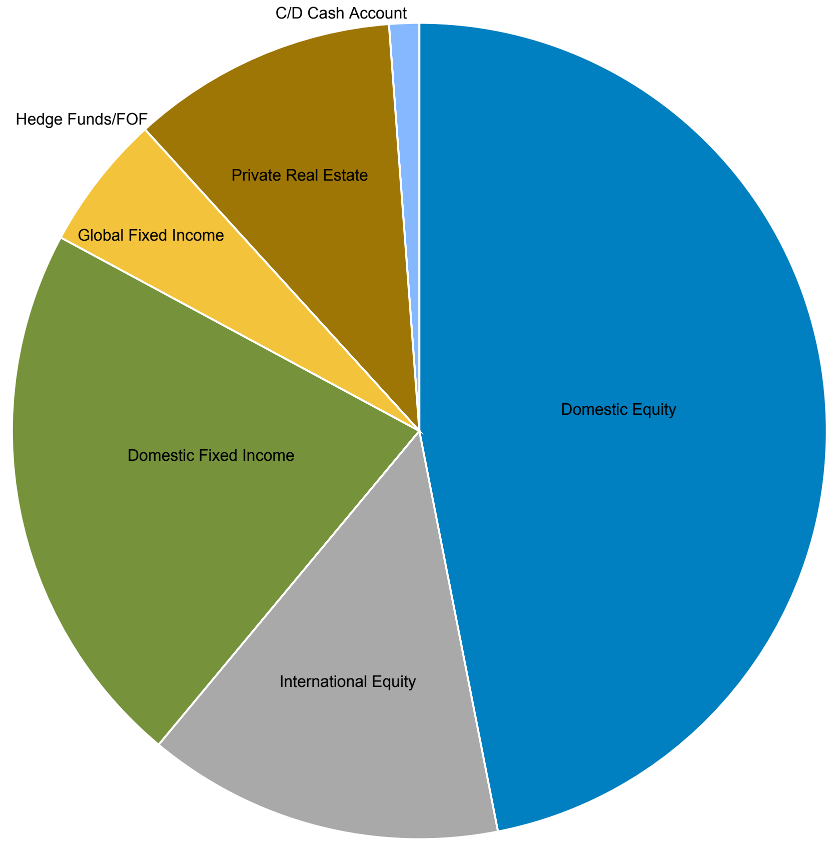
Treasury Yield Curve



Source: US Department of Treasury, FRED (Federal Reserve of St. Louis)

September 30, 2018 : $38,648,504	December 31, 2018 : $35,390,042





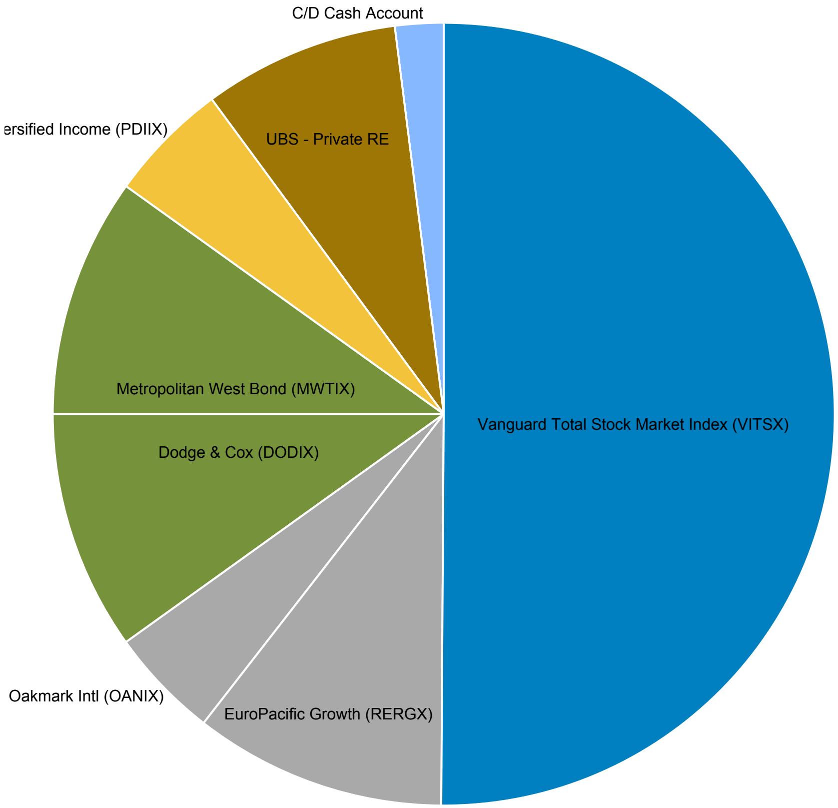
Allocation

	Market Value	Allocation
Domestic Equity	19,363,421	50.1
International Equity	5,799,177	15.0
Domestic Fixed Income	7,648,915	19.8
Global Fixed Income	1,928,268	5.0
Hedge Funds/FOF	-	0.0
Private Real Estate	3,133,921	8.1
R&D Cash Account	-	0.0
C/D Cash Account	774,802	2.0

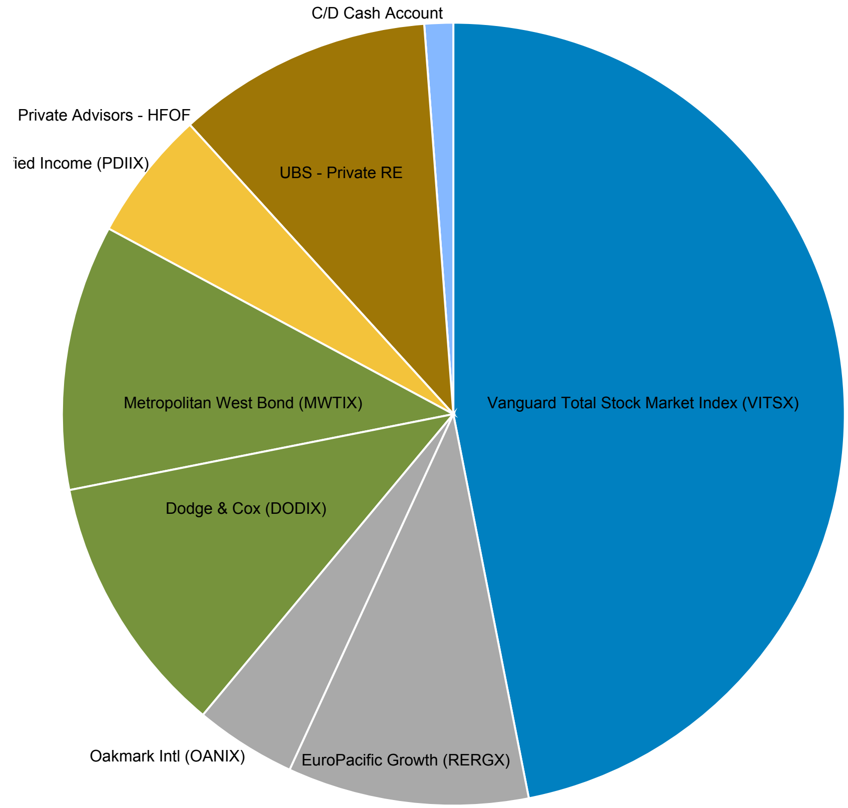
Allocation

	Market Value	Allocation
Domestic Equity	16,602,561	46.9
International Equity	5,003,320	14.1
Domestic Fixed Income	7,718,449	21.8
Global Fixed Income	1,904,039	5.4
Hedge Funds/FOF	88	0.0
Private Real Estate	3,740,067	10.6
R&D Cash Account	-	0.0
C/D Cash Account	421,518	1.2

September 30, 2018 : $38,648,504



December 31, 2018 : $35,390,042



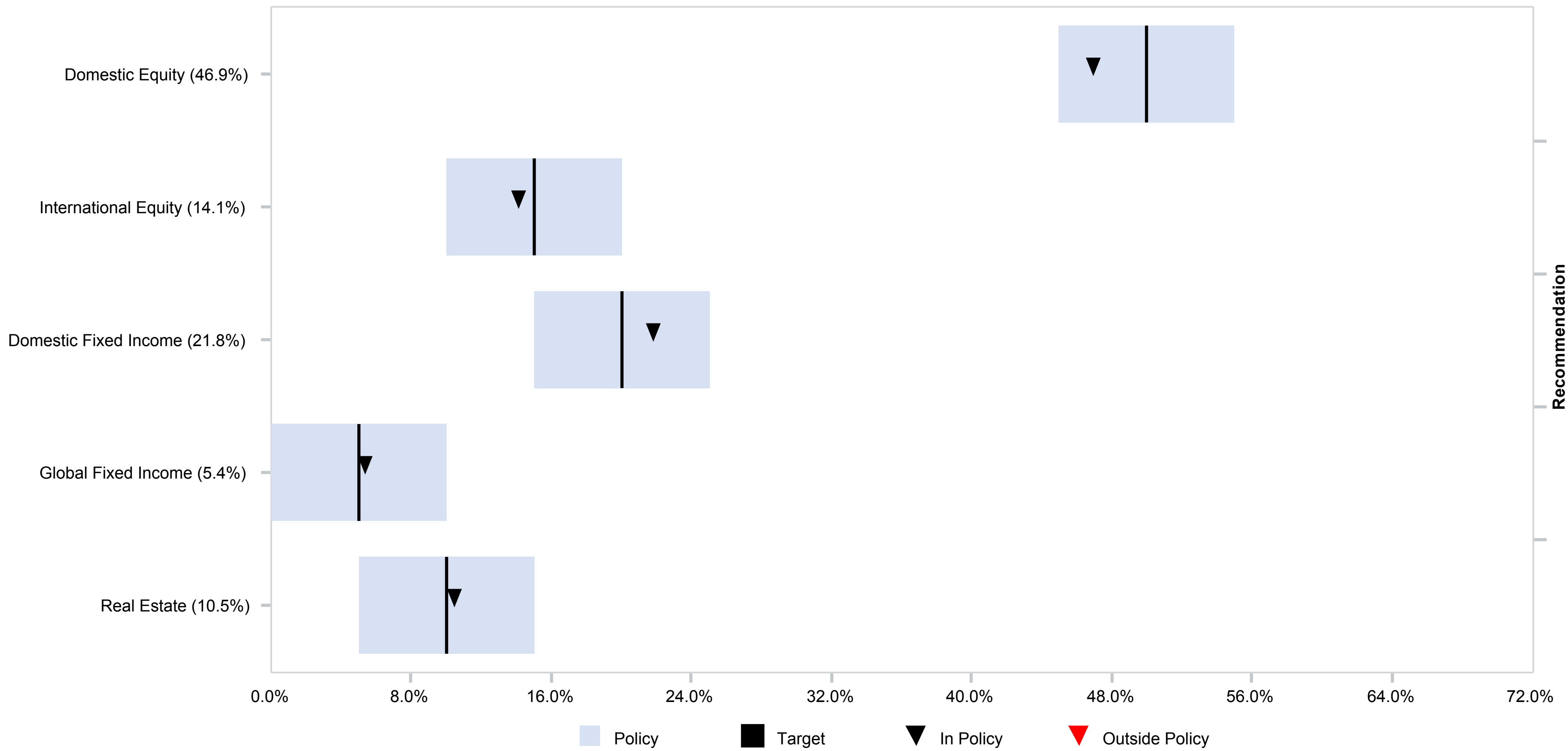
Allocation

	Market Value	Allocation
Vanguard Total Stock Market Index (VITSX)	19,363,421	50.1
EuroPacific Growth (RERGX)	4,030,422	10.4
Oakmark Intl (OANIX)	1,768,754	4.6
Dodge & Cox (DODIX)	3,825,596	9.9
Metropolitan West Bond (MWTIX)	3,823,319	9.9
PIMCO Diversified Income (PDIIX)	1,928,268	5.0
Private Advisors - HFOF	-	0.0
UBS - Private RE	3,133,921	8.1
R&D Cash Account	-	0.0
C/D Cash Account	774,802	2.0

Allocation

	Market Value	Allocation
Vanguard Total Stock Market Index (VITSX)	16,602,561	46.9
EuroPacific Growth (RERGX)	3,522,845	10.0
Oakmark Intl (OANIX)	1,480,475	4.2
Dodge & Cox (DODIX)	3,836,794	10.8
Metropolitan West Bond (MWTIX)	3,881,655	11.0
PIMCO Diversified Income (PDIIX)	1,904,039	5.4
Private Advisors - HFOF	88	0.0
UBS - Private RE	3,740,067	10.6
R&D Cash Account	-	0.0
C/D Cash Account	421,518	1.2

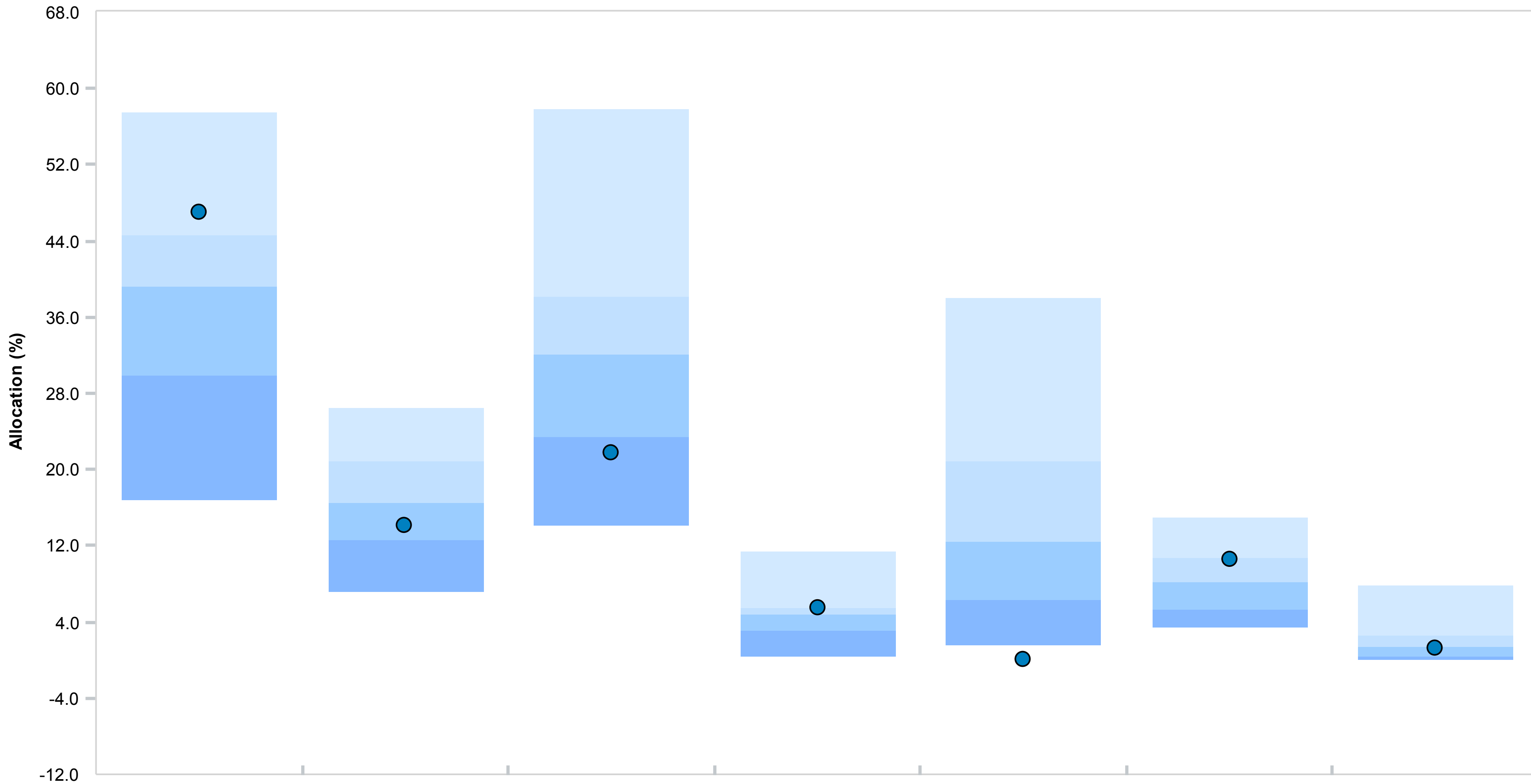
Executive Summary



Asset Allocation Compliance

	Minimum Allocation (%)	Maximum Allocation (%)	Current Allocation (%)	Target Allocation (%)
Global Fixed Income	0.0	10.0	5.4	5.0
Real Estate	5.0	15.0	10.5	10.0
International Equity	10.0	20.0	14.1	15.0
Domestic Fixed Income	15.0	25.0	21.8	20.0
Domestic Equity	45.0	55.0	46.9	50.0
Total Fund	N/A	N/A	100.0	100.0

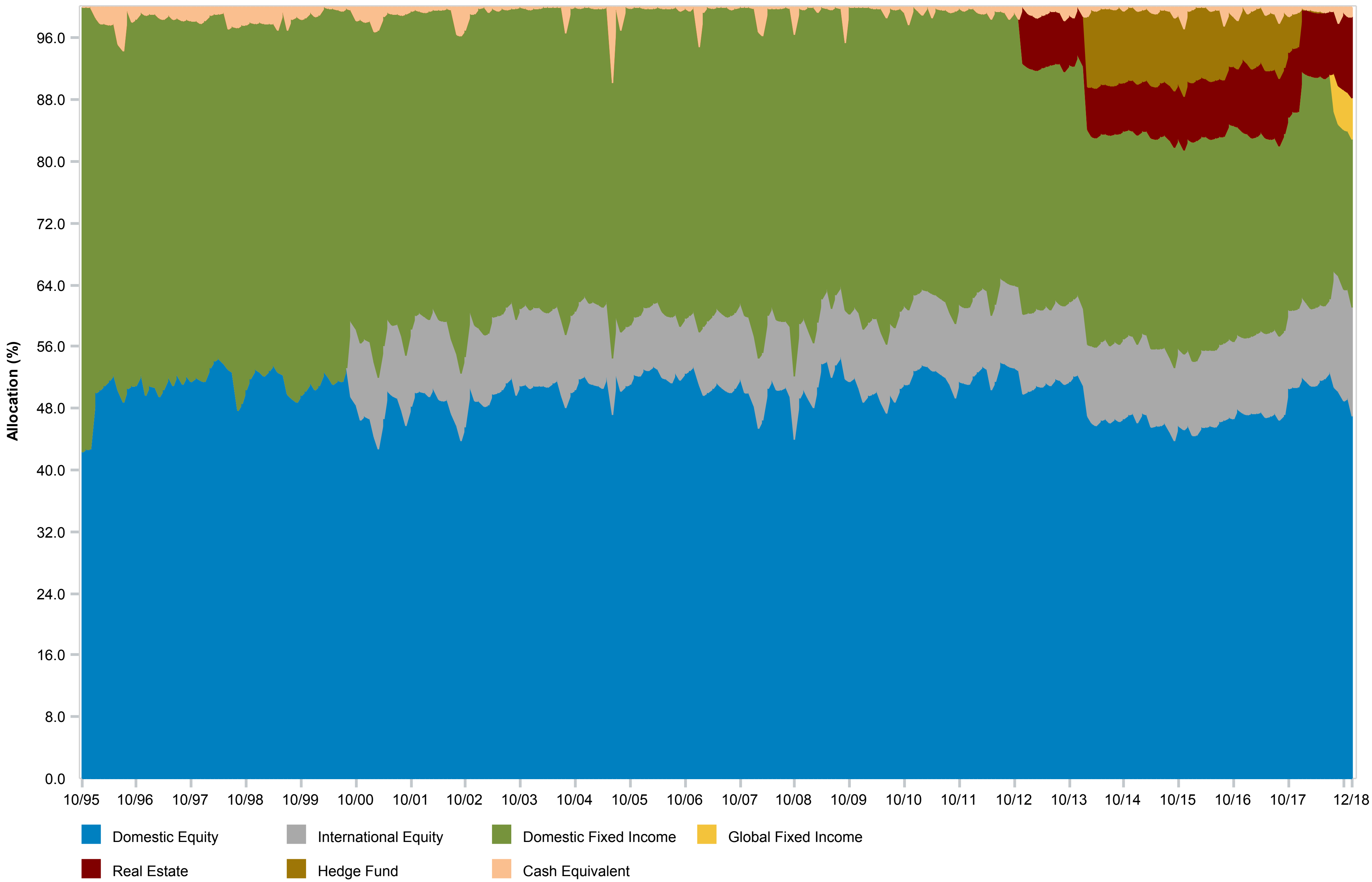
Plan Sponsor TF Asset Allocation vs. All Public Plans-Total Fund



	US Equity	Intl. Equity	US Fixed Income	Intl. Fixed Income	Alternative Inv.	Real Estate	Cash
Total Fund	46.91 (20)	14.14 (60)	21.81 (80)	5.38 (29)	0.00 (100)	10.57 (26)	1.19 (56)
5th Percentile	57.47	26.43	57.76	11.40	38.07	14.95	7.84
1st Quartile	44.65	20.83	38.24	5.47	20.93	10.69	2.51
Median	39.12	16.41	32.03	4.82	12.47	8.17	1.45
3rd Quartile	29.82	12.61	23.47	3.14	6.23	5.30	0.45
95th Percentile	16.83	7.21	14.05	0.32	1.50	3.42	0.06
Population	746	695	684	158	172	320	550

Parentheses contain percentile rankings.

	Dec-2018		Sep-2018		Jun-2018		Mar-2018	
	($)	%	($)	%	($)	%	($)	%
Total Equity	**21,605,881**	**61.05**	**25,162,597**	**65.11**	**22,304,634**	**61.33**	**21,621,230**	**60.91**
Domestic Equity	**16,602,561**	**46.91**	**19,363,421**	**50.10**	**18,839,713**	**51.80**	**18,048,863**	**50.85**
Vanguard Total Stock Market Index (VITSX)	16,602,561	46.91	19,363,421	50.10	18,839,713	51.80	18,048,703	50.85
International Equity	**5,003,320**	**14.14**	**5,799,177**	**15.00**	**3,464,922**	**9.53**	**3,572,367**	**10.06**
EuroPacific Growth (RERGX)	3,522,845	9.95	4,030,422	10.43	2,560,724	7.04	2,625,177	7.40
Oakmark Intl (OANIX)	1,480,475	4.18	1,768,754	4.58	904,197	2.49	947,189	2.67
Total Fixed Income	**9,622,488**	**27.19**	**9,577,183**	**24.78**	**10,714,214**	**29.46**	**10,693,608**	**30.13**
Domestic Fixed Income	**7,718,449**	**21.81**	**7,648,915**	**19.79**	**10,714,214**	**29.46**	**10,693,608**	**30.13**
Dodge & Cox (DODIX)	3,836,794	10.84	3,825,596	9.90	5,340,545	14.68	5,336,772	15.04
Metropolitan West Bond (MWTIX)	3,881,655	10.97	3,823,319	9.89	5,373,668	14.78	5,356,836	15.09
Global Fixed Income	**1,904,039**	**5.38**	**1,928,268**	**4.99**	**-**	**0.00**	**-**	**0.00**
PIMCO Diversified Income (PDIIX)	1,904,039	5.38	1,928,268	4.99	-	0.00	-	0.00
Hedge Funds/FOF	**88**	**0.00**	**-**	**0.00**	**27,395**	**0.08**	**30,323**	**0.09**
Private Advisors - HFOF	88	0.00	-	0.00	27,395	0.08	30,323	0.09
Private Real Estate	**3,740,067**	**10.57**	**3,133,921**	**8.11**	**3,097,437**	**8.52**	**3,051,255**	**8.60**
UBS - Private Real Estate	3,740,067	10.57	3,133,921	8.11	3,097,437	8.52	3,051,255	8.60
R&D Cash Account	-	0.00	-	0.00	439	0.00	439	0.00
C/D Cash Account	421,518	1.19	774,802	2.00	223,560	0.61	97,583	0.27
Total Fund	**35,390,042**	**100.00**	**38,648,504**	**100.00**	**36,367,679**	**100.00**	**35,494,438**	**100.00**


Allocation (%)
0.0
8.0
16.0
24.0
32.0
40.0
48.0
56.0
64.0
72.0
80.0
88.0
96.0
10/95
10/96
10/97
10/98
10/99
10/00
10/01
10/02
10/03
10/04
10/05
10/06
10/07
10/08
10/09
10/10
10/11
10/12
10/13
10/14
10/15
10/16
10/17
12/18
Domestic Equity
International Equity
Domestic Fixed Income
Global Fixed Income
Real Estate
Hedge Fund
Cash Equivalent

	Market Value 10/01/2018	Net Transfers	Contributions	Distributions	Management Fees	Other Expenses	Income	Capital Gain/Loss	Market Value 12/31/2018
Total Equity	**25,162,597**	**-**	**-**	**-**	**-**	**-**	**300,492**	**-3,857,208**	**21,605,881**
Domestic Equity	**19,363,421**	**-**	**-**	**-**	**-**	**-**	**92,870**	**-2,853,730**	**16,602,561**
Vanguard Total Stock Market Index (VITSX)	19,363,421	-	-	-	-	-	92,870	-2,853,730	16,602,561
International Equity	**5,799,177**	**-**	**-**	**-**	**-**	**-**	**207,622**	**-1,003,479**	**5,003,320**
EuroPacific Growth (RERGX)	4,030,422	-	-	-	-	-	104,293	-611,870	3,522,845
Oakmark Intl (OANIX)	1,768,754	-	-	-	-	-	103,329	-391,609	1,480,475
Total Fixed Income	**9,577,183**	**-**	**-**	**-**	**-**	**-**	**91,175**	**-45,870**	**9,622,488**
Domestic Fixed Income	**7,648,915**	**-**	**-**	**-**	**-**	**-**	**68,176**	**1,358**	**7,718,449**
Dodge & Cox (DODIX)	3,825,596	-	-	-	-	-	39,802	-28,605	3,836,794
Metropolitan West Bond (MWTIX)	3,823,319	-	-	-	-	-	28,373	29,963	3,881,655
Global Fixed Income	**1,928,268**	**-**	**-**	**-**	**-**	**-**	**22,999**	**-47,228**	**1,904,039**
PIMCO Diversified Income (PDIIX)	1,928,268	-	-	-	-	-	22,999	-47,228	1,904,039
Hedge Funds/FOF	**-**	**-**	**-**	**-**	**-**	**-**	**88**	**-**	**88**
Private Advisors - HFOF	-	-	-	-	-	-	88	-	88
Private Real Estate	**3,133,921**	**550,000**	**-**	**-**	**-7,491**	**-**	**37,878**	**25,759**	**3,740,067**
UBS - Private Real Estate	3,133,921	550,000	-	-	-7,491	-	37,878	25,759	3,740,067
R&D Cash Account	-	-	-	-	-	-	-	-	-
C/D Cash Account	774,802	-550,000	864,691	-633,814	-	-36,325	2,164	-	421,518
Total Fund	**38,648,504**	**-**	**864,691**	**-633,814**	**-7,491**	**-36,325**	**431,797**	**-3,877,319**	**35,390,042**

	Market Value 10/01/2018	Net Transfers	Contributions	Distributions	Management Fees	Other Expenses	Income	Capital Gain/Loss	Market Value 12/31/2018
Total Equity	**25,162,597**	**-**	**-**	**-**	**-**	**-**	**300,492**	**-3,857,208**	**21,605,881**
Domestic Equity	**19,363,421**	**-**	**-**	**-**	**-**	**-**	**92,870**	**-2,853,730**	**16,602,561**
Vanguard Total Stock Market Index (VITSX)	19,363,421	-	-	-	-	-	92,870	-2,853,730	16,602,561
International Equity	**5,799,177**	**-**	**-**	**-**	**-**	**-**	**207,622**	**-1,003,479**	**5,003,320**
EuroPacific Growth (RERGX)	4,030,422	-	-	-	-	-	104,293	-611,870	3,522,845
Oakmark Intl (OANIX)	1,768,754	-	-	-	-	-	103,329	-391,609	1,480,475
Total Fixed Income	**9,577,183**	**-**	**-**	**-**	**-**	**-**	**91,175**	**-45,870**	**9,622,488**
Domestic Fixed Income	**7,648,915**	**-**	**-**	**-**	**-**	**-**	**68,176**	**1,358**	**7,718,449**
Dodge & Cox (DODIX)	3,825,596	-	-	-	-	-	39,802	-28,605	3,836,794
Metropolitan West Bond (MWTIX)	3,823,319	-	-	-	-	-	28,373	29,963	3,881,655
Global Fixed Income	**1,928,268**	**-**	**-**	**-**	**-**	**-**	**22,999**	**-47,228**	**1,904,039**
PIMCO Diversified Income (PDIIX)	1,928,268	-	-	-	-	-	22,999	-47,228	1,904,039
Hedge Funds/FOF	**-**	**-**	**-**	**-**	**-**	**-**	**88**	**-**	**88**
Private Advisors - HFOF	-	-	-	-	-	-	88	-	88
Private Real Estate	**3,133,921**	**550,000**	**-**	**-**	**-7,491**	**-**	**37,878**	**25,759**	**3,740,067**
UBS - Private Real Estate	3,133,921	550,000	-	-	-7,491	-	37,878	25,759	3,740,067
R&D Cash Account	-	-	-	-	-	-	-	-	-
C/D Cash Account	774,802	-550,000	864,691	-633,814	-	-36,325	2,164	-	421,518
Total Fund	**38,648,504**	**-**	**864,691**	**-633,814**	**-7,491**	**-36,325**	**431,797**	**-3,877,319**	**35,390,042**

	QTR		FYTD		1 YR		3 YR		4 YR		5 YR		Inception		Inception Date
Total Fund - Gross	**-8.87**	**(68)**	**-8.87**	**(68)**	**-4.37**	**(50)**	**4.77**	**(87)**	**3.82**	**(65)**	**3.94**	**(81)**	**6.67**	**(77)**	**10/01/1995**
Total Fund Hybrid	-7.67	(37)	-7.67	(37)	-3.07	(27)	5.85	(48)	4.59	(35)	4.98	(39)	7.07	(54)	
All Public Plans-Total Fund Median	-8.30		-8.30		-4.41		5.77		4.20		4.73		7.16		
Total Fund - Gross (AndCo)	**-8.87**	**(68)**	**-8.87**	**(68)**	**-4.37**	**(50)**	**N/A**		**N/A**		**N/A**		**-4.37**	**(50)**	**01/01/2018**
Total Fund Hybrid	-7.67	(37)	-7.67	(37)	-3.07	(27)	N/A		N/A		N/A		-3.07	(27)	
All Public Plans-Total Fund Median	-8.30		-8.30		-4.41		N/A		N/A		N/A		-4.41		
Total Fund - Net	**-8.89**		**-8.89**		**-4.44**		**4.29**		**3.23**		**3.29**		**5.73**		**10/01/1995**
Total Equity	**-14.14**		**-14.14**		**-7.50**		**N/A**		**N/A**		**N/A**		**0.89**		**07/01/2017**
Total Equity	-13.62		-13.62		-6.48		N/A		N/A		N/A		N/A		
Domestic Equity	**-14.26**	**(46)**	**-14.26**	**(46)**	**-5.24**	**(27)**	**N/A**		**N/A**		**N/A**		**2.72**	**(37)**	**07/01/2017**
Russell 3000 Index	-14.30	(48)	-14.30	(48)	-5.24	(27)	N/A		N/A		N/A		3.55	(25)	
IM U.S. Multi-Cap Core Equity (MF) Median	-14.38		-14.38		-7.20		N/A		N/A		N/A		1.39		
International Equity	**-13.72**	**(53)**	**-13.72**	**(53)**	**-18.60**	**(90)**	**N/A**		**N/A**		**N/A**		**-8.16**	**(91)**	**07/01/2017**
MSCI AC World ex USA	-11.41	(5)	-11.41	(5)	-13.78	(29)	N/A		N/A		N/A		-2.51	(13)	
IM International Large Cap Core Equity (MF) Median	-13.68		-13.68		-14.90		N/A		N/A		N/A		-5.33		
Total Fixed Income	**0.47**		**0.47**		**-0.26**		**N/A**		**N/A**		**N/A**		**-0.46**		**07/01/2017**
Total Fixed Income	1.51		1.51		-0.13		N/A		N/A		N/A		N/A		
Domestic Fixed Income	**0.91**	**(58)**	**0.91**	**(58)**	**0.01**	**(82)**	**N/A**		**N/A**		**N/A**		**-0.28**	**(92)**	**07/01/2017**
Blmbg. Barc. U.S. Aggregate Index	1.64	(25)	1.64	(25)	0.01	(82)	N/A		N/A		N/A		0.83	(33)	
IM U.S. Intermediate Duration Fixed Income (MF) Median	1.09		1.09		0.65		N/A		N/A		N/A		0.60		
Global Fixed Income	**-1.26**	**(90)**	**-1.26**	**(90)**	**N/A**		**N/A**		**N/A**		**N/A**		**-0.47**	**(68)**	**09/01/2018**
Blmbg. Barc. Global Multiverse	1.02	(23)	1.02	(23)	N/A		N/A		N/A		N/A		0.28	(43)	
IM Global Fixed Income (MF) Median	0.33		0.33		N/A		N/A		N/A		N/A		0.00		
Private Real Estate	**1.73**	**(66)**	**1.73**	**(66)**	**6.97**	**(96)**	**N/A**		**N/A**		**N/A**		**7.27**	**(91)**	**07/01/2017**
NCREIF Fund Index-Open End Diversified Core (EW)	1.62	(76)	1.62	(76)	8.25	(66)	N/A		N/A		N/A		8.28	(61)	
IM U.S. Open End Private Real Estate (SA+CF) Median	1.80		1.80		8.71		N/A		N/A		N/A		8.62		

Returns for periods greater than one year are annualized. Returns are expressed as percentages.

	QTR		FYTD		1 YR		3 YR		4 YR		5 YR		Inception		Inception Date
Domestic Equity Strategies															
Vanguard Total Stock Market Index (VITSX)	-14.26	(46)	-14.26	(46)	-5.17	(27)	N/A		N/A		N/A		-3.90	(25)	12/01/2017
Russell 3000 Index	-14.30	(48)	-14.30	(48)	-5.24	(27)	N/A		N/A		N/A		-3.97	(27)	
IM U.S. Multi-Cap Core Equity (MF) Median	-14.38		-14.38		-7.20		N/A		N/A		N/A		-5.72		
International Equity Strategies															
EuroPacific Growth (RERGX)	-12.59	(28)	-12.59	(28)	N/A		N/A		N/A		N/A		-16.43	(58)	03/01/2018
MSCI AC World ex USA	-11.41	(5)	-11.41	(5)	N/A		N/A		N/A		N/A		-14.30	(36)	
IM International Large Cap Core Equity (MF) Median	-13.68		-13.68		N/A		N/A		N/A		N/A		-15.40		
Oakmark Intl (OANIX)	-16.30	(99)	-16.30	(99)	N/A		N/A		N/A		N/A		-23.84	(100)	03/01/2018
MSCI AC World ex USA	-11.41	(5)	-11.41	(5)	N/A		N/A		N/A		N/A		-14.30	(36)	
IM International Large Cap Core Equity (MF) Median	-13.68		-13.68		N/A		N/A		N/A		N/A		-15.40		
Domestic Fixed Income Strategies															
Dodge & Cox (DODIX)	0.29	(86)	0.29	(86)	-0.31	(32)	N/A		N/A		N/A		-0.31	(32)	01/01/2018
Blmbg. Barc. U.S. Aggregate Index	1.64	(11)	1.64	(11)	0.01	(18)	N/A		N/A		N/A		0.01	(18)	
IM U.S. Broad Market Core Fixed Income (MF) Median	0.99		0.99		-0.63		N/A		N/A		N/A		-0.63		
Metropolitan West Bond (MWTIX)	1.53	(18)	1.53	(18)	0.18	(11)	N/A		N/A		N/A		0.51	(11)	12/01/2017
Blmbg. Barc. U.S. Aggregate Index	1.64	(11)	1.64	(11)	0.01	(18)	N/A		N/A		N/A		0.43	(15)	
IM U.S. Broad Market Core Fixed Income (MF) Median	0.99		0.99		-0.63		N/A		N/A		N/A		-0.18		
Global Fixed Income Strategies															
PIMCO Diversified Income (PDIIX)	-1.26	(90)	-1.26	(90)	N/A		N/A		N/A		N/A		-0.48	(68)	09/01/2018
Blmbg. Barc. Global Multiverse	1.02	(23)	1.02	(23)	N/A		N/A		N/A		N/A		0.28	(43)	
IM Global Fixed Income (MF) Median	0.33		0.33		N/A		N/A		N/A		N/A		0.00		
Private Real Estate Strategies															
UBS - Private Real Estate	1.73	(66)	1.73	(66)	6.97	(96)	6.86	(95)	8.35	(95)	9.00	(95)	9.49	(N/A)	09/01/2012
NCREIF Fund Index-Open End Diversified Core (EW)	1.62	(76)	1.62	(76)	8.25	(66)	8.44	(52)	10.08	(57)	10.52	(63)	10.96	(N/A)	
IM U.S. Open End Private Real Estate (SA+CF) Median	1.80		1.80		8.71		8.66		10.36		10.82		N/A		

Returns for periods greater than one year are annualized. Returns are expressed as percentages.

Comparative Performance

	FYTD		FY 2018		FY 2017		FY 2016		FY 2015		FY 2014		FY 2013		FY 2012	
Total Fund - Gross	**-8.87**	**(68)**	**9.04**	**(33)**	**11.00**	**(74)**	**7.12**	**(92)**	**0.32**	**(31)**	**8.52**	**(84)**	**12.76**	**(46)**	**18.10**	**(46)**
Total Fund Hybrid	-7.67	(37)	9.16	(31)	11.12	(71)	9.11	(64)	0.80	(23)	9.39	(67)	13.04	(41)	18.21	(44)
All Public Plans-Total Fund Median	-8.30		8.14		12.19		9.66		-0.45		10.24		12.51		17.94	
Total Fund - Net	-8.89		8.95		10.29		6.21		-0.59		7.59		11.70		17.03	
Total Equity	**-14.14**		**12.56**		**N/A**		**N/A**		**N/A**		**N/A**		**N/A**		**N/A**	
Total Equity Policy	-13.62		14.90		N/A		N/A		N/A		N/A		N/A		N/A	
Domestic Equity	**-14.26**	**(46)**	**15.94**	**(39)**	**N/A**		**N/A**		**N/A**		**N/A**		**N/A**		**N/A**	
Russell 3000 Index	-14.30	(48)	17.58	(19)	18.71	(35)	14.96	(17)	-0.49	(33)	17.76	(32)	21.60	(59)	30.20	(18)
IM U.S. Multi-Cap Core Equity (MF) Median	-14.38		14.56		17.48		11.72		-1.79		16.35		22.72		26.92	
International Equity	**-13.72**	**(53)**	**-3.27**	**(98)**	**N/A**		**N/A**		**N/A**		**N/A**		**N/A**		**N/A**	
MSCI AC World ex USA	-11.41	(5)	2.25	(19)	20.15	(22)	9.80	(4)	-11.78	(77)	5.22	(32)	16.98	(75)	15.04	(47)
IM International Large Cap Core Equity (MF) Median	-13.68		1.35		18.57		5.51		-7.87		4.30		21.64		14.76	
Total Fixed Income	**0.47**		**-1.45**		**N/A**		**N/A**		**N/A**		**N/A**		**N/A**		**N/A**	
Total Fixed Income Policy	1.51		-1.23		N/A		N/A		N/A		N/A		N/A		N/A	
Domestic Fixed Income	**0.91**	**(56)**	**-1.61**	**(71)**	**N/A**		**N/A**		**N/A**		**N/A**		**N/A**		**N/A**	
Blmbg. Barc. U.S. Aggregate Index	1.64	(11)	-1.22	(41)	0.07	(64)	5.19	(52)	2.94	(9)	3.96	(59)	-1.68	(53)	5.16	(81)
IM U.S. Broad Market Core Fixed Income (MF) Median	0.99		-1.35		0.48		5.21		1.98		4.19		-1.62		6.79	
Global Fixed Income	**-1.26**	**(90)**	**N/A**		**N/A**		**N/A**		**N/A**		**N/A**		**N/A**		**N/A**	
Blmbg. Barc. Global Multiverse	1.02	(23)	-1.32	(52)	-0.56	(77)	9.23	(25)	-3.56	(42)	1.40	(79)	-2.22	(56)	5.57	(81)
IM Global Fixed Income (MF) Median	0.33		-1.24		1.02		7.42		-3.85		3.37		-1.81		7.17	
Private Real Estate	**1.73**	**(66)**	**7.62**	**(82)**	**N/A**		**N/A**		**N/A**		**N/A**		**N/A**		**N/A**	
NCREIF Fund Index-Open End Diversified Core (EW)	1.62	(76)	8.82	(59)	7.81	(60)	10.62	(69)	14.71	(62)	12.39	(68)	12.47	(67)	11.77	(66)
IM U.S. Open End Private Real Estate (SA+CF) Median	1.80		9.04		8.29		11.32		15.45		12.78		13.18		12.90	

Returns for periods greater than one year are annualized. Returns are expressed as percentages.

	FYTD		FY 2018		FY 2017		FY 2016		FY 2015		FY 2014		FY 2013		FY 2012	
Domestic Equity Strategies																
Vanguard Total Stock Market Index (VITSX)	-14.26	(46)	N/A		N/A		N/A		N/A		N/A		N/A		N/A	
Russell 3000 Index	-14.30	(48)	17.58	(19)	18.71	(35)	14.96	(17)	-0.49	(33)	17.76	(32)	21.60	(59)	30.20	(18)
IM U.S. Multi-Cap Core Equity (MF) Median	-14.38		14.56		17.48		11.72		-1.79		16.35		22.72		26.92	
BlackRock LCV	N/A		N/A		20.98	(20)	14.43	(41)	-2.92	(47)	15.57	(79)	16.08	(94)	N/A	
Russell 1000 Value Index	-11.72	(29)	9.45	(77)	15.12	(76)	16.19	(26)	-4.42	(65)	18.89	(42)	22.30	(60)	30.92	(26)
IM U.S. Large Cap Value Equity (SA+CF) Median	-13.57		11.80		17.91		13.17		-3.28		18.36		23.73		28.16	
Jennison LCG	N/A		N/A		25.44	(8)	9.04	(75)	6.79	(15)	20.45	(27)	N/A		N/A	
Russell 1000 Growth Index	-15.89	(62)	26.30	(37)	21.94	(37)	13.76	(23)	3.17	(55)	19.15	(40)	19.27	(63)	29.19	(39)
IM U.S. Large Cap Growth Equity (SA+CF) Median	-15.14		24.42		20.81		11.64		3.60		18.18		20.25		27.65	
Wedgewood LCG	N/A		N/A		13.75	(95)	5.14	(96)	-2.95	(94)	15.99	(72)	N/A		N/A	
Russell 1000 Growth Index	-15.89	(62)	26.30	(37)	21.94	(37)	13.76	(23)	3.17	(55)	19.15	(40)	19.27	(63)	29.19	(39)
IM U.S. Large Cap Growth Equity (SA+CF) Median	-15.14		24.42		20.81		11.64		3.60		18.18		20.25		27.65	
Connors LCC	N/A		N/A		13.83	(89)	11.61	(67)	0.43	(48)	16.54	(79)	N/A		N/A	
S&P 500 Index	-13.52	(44)	17.91	(40)	18.61	(53)	15.43	(22)	-0.61	(63)	19.73	(45)	19.34	(65)	30.20	(44)
IM U.S. Large Cap Core Equity (SA+CF) Median	-13.83		17.33		18.74		13.26		0.09		19.21		20.71		29.63	
Boston Smid Value	N/A		N/A		19.58	(41)	N/A		N/A		N/A		N/A		N/A	
Russell 2500 Value Index	-17.12	(39)	10.24	(48)	15.75	(71)	17.68	(19)	-2.44	(66)	9.88	(60)	27.58	(72)	32.15	(31)
IM U.S. SMID Cap Value Equity (SA+CF) Median	-17.55		10.00		18.59		13.60		-0.27		10.97		29.88		29.73	
RBC Small Growth	N/A		N/A		14.94	(90)	14.58	(34)	6.08	(35)	1.00	(76)	32.33	(66)	32.30	(39)
Russell 2000 Growth Index	-21.65	(66)	21.06	(74)	20.98	(58)	12.12	(46)	4.04	(49)	3.79	(54)	33.07	(58)	31.18	(48)
IM U.S. Small Cap Growth Equity (SA+CF) Median	-20.70		26.79		21.53		11.53		3.76		4.28		33.93		30.61	

Returns for periods greater than one year are annualized. Returns are expressed as percentages.

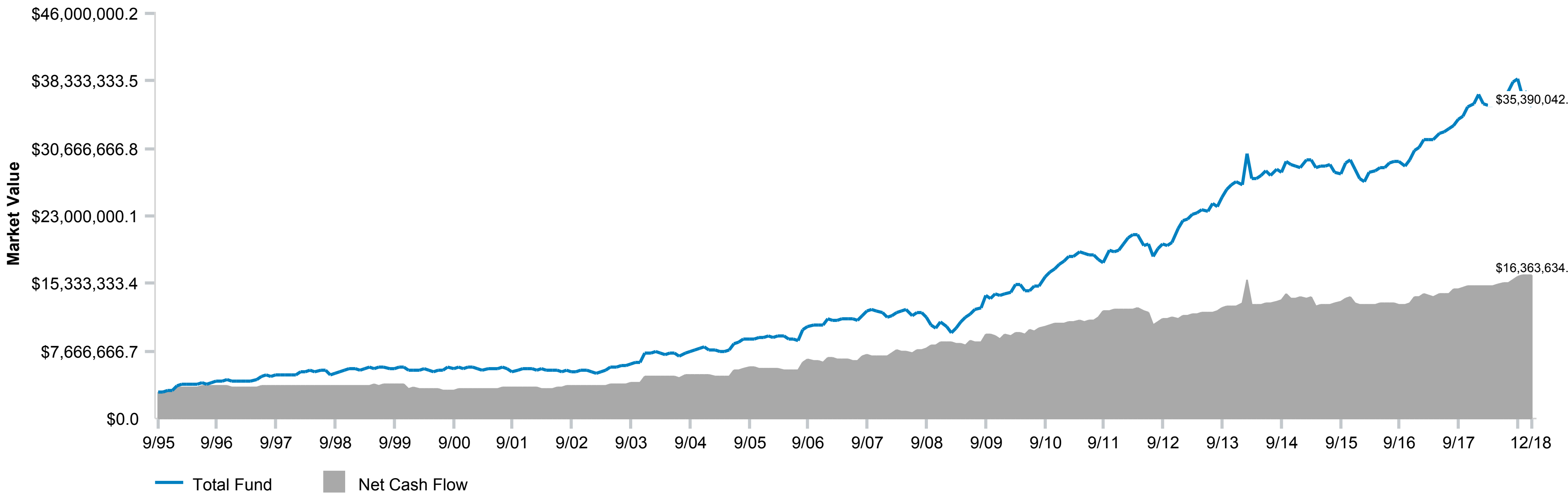
	FYTD		FY 2018		FY 2017		FY 2016		FY 2015		FY 2014		FY 2013		FY 2012	
International Equity Strategies																
EuroPacific Growth (RERGX)	-12.59	(28)	N/A		N/A		N/A		N/A		N/A		N/A		N/A	
MSCI AC World ex USA	-11.41	(5)	2.25	(19)	20.15	(22)	9.80	(4)	-11.78	(77)	5.22	(32)	16.98	(75)	15.04	(47)
IM International Large Cap Core Equity (MF) Median	-13.68		1.35		18.57		5.51		-7.87		4.30		21.64		14.76	
Oakmark Intl (OANIX)	-16.30	(99)	N/A		N/A		N/A		N/A		N/A		N/A		N/A	
MSCI AC World ex USA	-11.41	(5)	2.25	(19)	20.15	(22)	9.80	(4)	-11.78	(77)	5.22	(32)	16.98	(75)	15.04	(47)
IM International Large Cap Core Equity (MF) Median	-13.68		1.35		18.57		5.51		-7.87		4.30		21.64		14.76	
Lazard Int'l Value	N/A		N/A		15.52	(86)	4.43	(89)	-1.72	(20)	6.99	(39)	20.04	(52)	23.27	(11)
MSCI EAFE (Net) Index	-12.54	(56)	2.74	(38)	19.10	(66)	6.52	(80)	-8.66	(52)	4.25	(68)	23.77	(37)	13.75	(76)
IM International Equity (SA+CF) Median	-11.87		1.44		21.00		11.54		-8.30		5.83		20.31		17.27	
Renaissance Int'l Growth	N/A		N/A		19.28	(63)	10.53	(56)	-11.86	(67)	10.85	(15)	24.85	(31)	16.00	(60)
MSCI AC World ex USA (Net)	-11.46	(46)	1.76	(47)	19.61	(61)	9.26	(63)	-12.16	(68)	4.77	(62)	16.48	(63)	14.49	(70)
IM International Equity (SA+CF) Median	-11.87		1.44		21.00		11.54		-8.30		5.83		20.31		17.27	

Returns for periods greater than one year are annualized. Returns are expressed as percentages.

	FYTD		FY 2018		FY 2017		FY 2016		FY 2015		FY 2014		FY 2013		FY 2012	
Domestic Fixed Income Strategies																
Dodge & Cox (DODIX)	0.29	(86)	N/A		N/A		N/A		N/A		N/A		N/A		N/A	
Blmbg. Barc. U.S. Aggregate Index	1.64	(11)	-1.22	(41)	0.07	(64)	5.19	(52)	2.94	(9)	3.96	(59)	-1.68	(53)	5.16	(81)
IM U.S. Broad Market Core Fixed Income (MF) Median	0.99		-1.35		0.48		5.21		1.98		4.19		-1.62		6.79	
Metropolitan West Bond (MWTIX)	1.53	(18)	N/A		N/A		N/A		N/A		N/A		N/A		N/A	
Blmbg. Barc. U.S. Aggregate Index	1.64	(11)	-1.22	(41)	0.07	(64)	5.19	(52)	2.94	(9)	3.96	(59)	-1.68	(53)	5.16	(81)
IM U.S. Broad Market Core Fixed Income (MF) Median	0.99		-1.35		0.48		5.21		1.98		4.19		-1.62		6.79	
Madison Intermediate FI	N/A		N/A		0.23	(88)	2.08	(99)	2.04	(83)	1.28	(100)	-0.38	(62)	3.04	(99)
Bloomberg Barclays Intermediate US Govt/Credit Idx	1.65	(24)	-0.96	(97)	0.23	(88)	3.52	(76)	2.68	(51)	2.20	(85)	-0.50	(66)	4.40	(81)
IM U.S. Intermediate Duration (SA+CF) Median	1.39		-0.37		0.69		3.90		2.70		2.88		-0.27		5.56	
Global Fixed Income Strategies																
PIMCO Diversified Income (PDIIX)	-1.26	(90)	N/A		N/A		N/A		N/A		N/A		N/A		N/A	
Blmbg. Barc. Global Multiverse	1.02	(23)	-1.32	(52)	-0.56	(77)	9.23	(25)	-3.56	(42)	1.40	(79)	-2.22	(56)	5.57	(81)
IM Global Fixed Income (MF) Median	0.33		-1.24		1.02		7.42		-3.85		3.37		-1.81		7.17	
Hedge Funds / FOF Strategies																
Private Advisors - HFOF	N/A		N/A		4.45		0.69		-4.24		N/A		N/A		N/A	
HFRI FOF: Conservative Index	-3.42		3.64		4.61		0.25		0.62		5.64		6.61		2.59	
Pine Grove - HFOF	N/A		N/A		6.75		0.38		-4.18		N/A		N/A		N/A	
HFRI FOF: Conservative Index	-3.42		3.64		4.61		0.25		0.62		5.64		6.61		2.59	
Real Estate Strategies																
UBS - Private Real Estate	1.73	(66)	7.62	(82)	5.52	(87)	8.83	(100)	12.93	(82)	10.87	(91)	10.06	(91)	N/A	
NCREIF Fund Index-Open End Diversified Core (EW)	1.62	(76)	8.82	(59)	7.81	(60)	10.62	(69)	14.71	(62)	12.39	(68)	12.47	(67)	11.77	(66)
IM U.S. Open End Private Real Estate (SA+CF) Median	1.80		9.04		8.29		11.32		15.45		12.78		13.18		12.90	

Returns for periods greater than one year are annualized. Returns are expressed as percentages.

Plan Growth



Trailing Returns

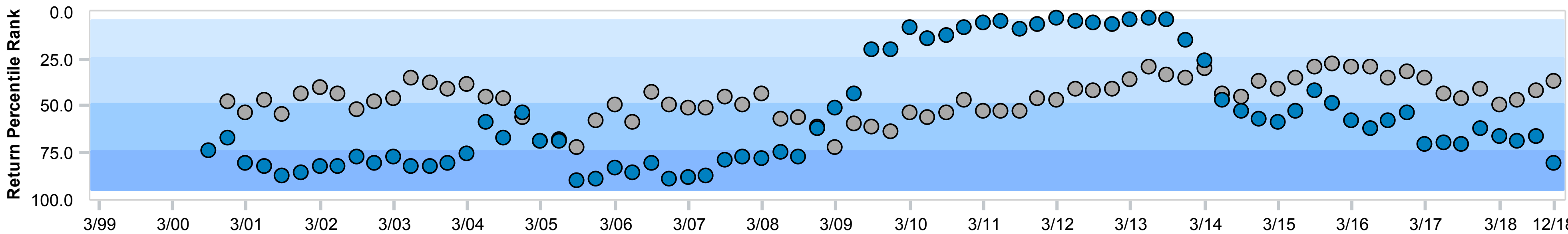
	QTR	YTD	1 YR	2 YR	3 YR	5 YR	7 YR	10 YR	15 YR
Total Fund	-8.87 (68)	-4.37 (50)	-4.37 (50)	4.02 (75)	4.77 (87)	3.94 (81)	7.00 (66)	8.67 (40)	6.14 (50)
Total Fund Hybrid	-7.67 (37)	-3.07 (27)	-3.07 (27)	4.95 (49)	5.85 (48)	4.98 (39)	7.71 (40)	8.75 (35)	6.20 (47)
Median	-8.30	-4.41	-4.41	4.92	5.77	4.73	7.45	8.46	6.14

Fiscal Year Returns

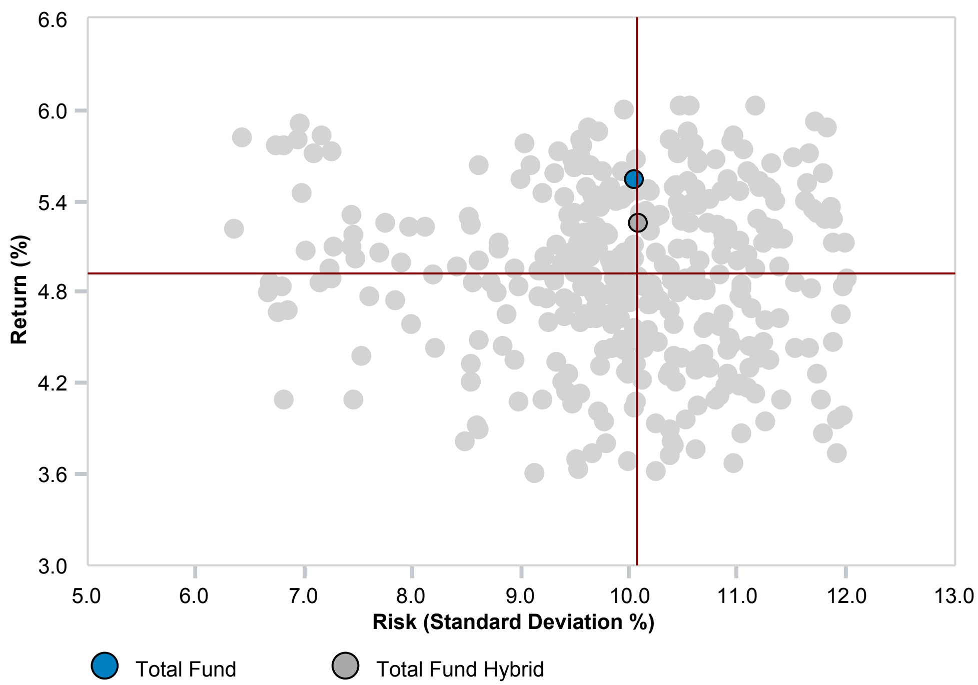
	FYTD	FY 2018	FY 2017	FY 2016	FY 2015	FY 2014	FY 2013	FY 2012	FY 2011
Total Fund	-8.87 (68)	9.04 (28)	11.00 (73)	7.12 (93)	0.32 (29)	8.52 (81)	12.76 (42)	18.10 (44)	0.66 (42)
Total Fund Hybrid	-7.67 (37)	9.16 (26)	11.12 (70)	9.11 (66)	0.80 (20)	9.39 (64)	13.04 (36)	18.21 (42)	0.55 (43)
Median	-8.30	7.92	12.07	9.68	-0.62	9.99	12.26	17.78	0.22

Peer Group: All Public Plans-Total Fund

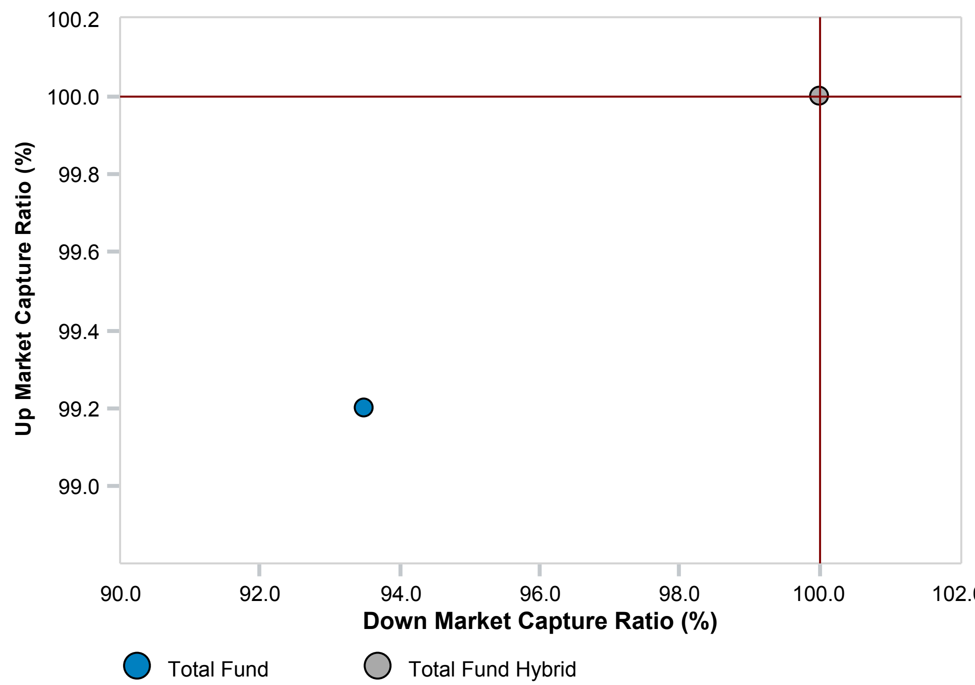
5 Year Rolling Percentile Ranking



Risk vs Return: October 2007 to Present



Up/Down Markets: October 2007 to Present



Historical Statistics: October 1, 2007 To December 31, 2018

	Consistency	Maximum Drawdown	Alpha	Active Return	Sharpe Ratio	Information Ratio	Treynor Ratio	Beta	Tracking Error
Total Fund	44.44	-23.70	0.37	0.27	0.52	0.16	0.05	0.98	1.68
Total Fund Hybrid	0.00	-28.52	0.00	0.00	0.49	N/A	0.05	1.00	0.00

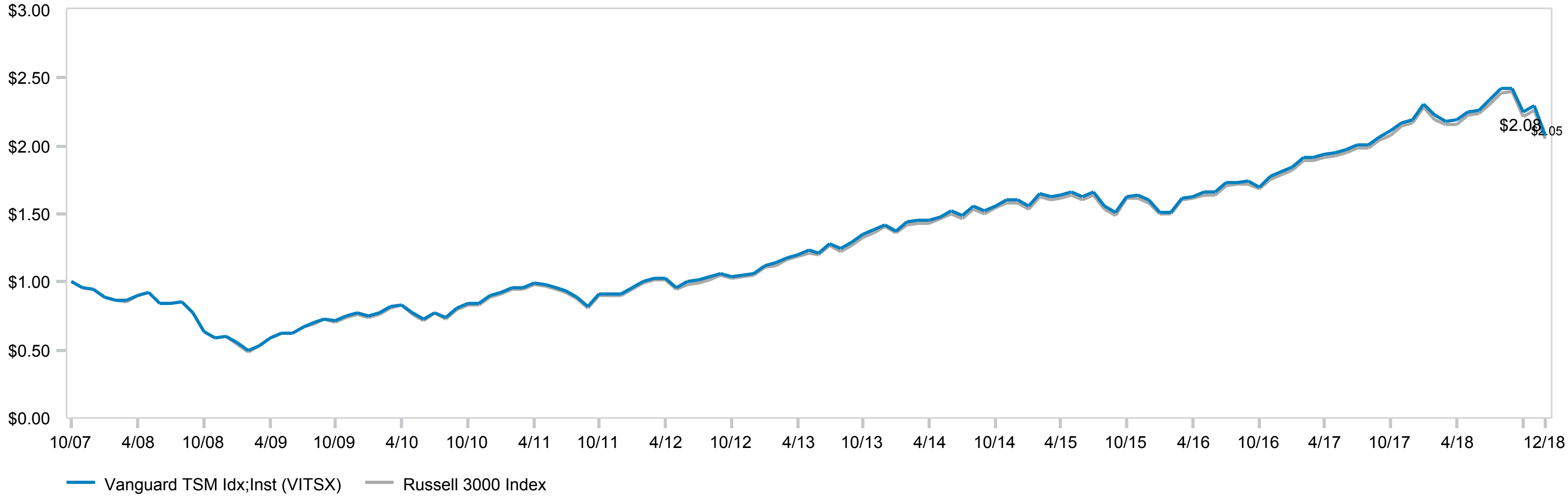
Peer Group: All Public Plans-Total Fund

Multi Timeperiod Statistics

	1 Qtr Return		1 Quarter Ending Sep-2018 Return		1 Quarter Ending Jun-2018 Return		1 Quarter Ending Mar-2018 Return		3 YR Return		5 YR Return		3 YR Down Market Capture		5 YR Down Market Capture	
Total Fund	**-8.87**	**(73)**	**3.85**	**(20)**	**1.71**	**(35)**	**-0.65**	**(77)**	**4.77**	**(88)**	**3.94**	**(81)**	**113.74**	**(22)**	**105.80**	**(47)**
Total Fund Hybrid	-7.67	(42)	3.82	(21)	1.84	(29)	-0.70	(80)	5.85	(50)	4.98	(37)	100.00		100.00	
All Public Plans-Total Fund Median	-8.04		3.09		1.43		-0.27		5.82		4.71		98.61		104.46	
Domestic Equity Strategies																
Vanguard Total Stock Market Index (VITSX)	-14.26	(46)	7.09	(23)	3.90	(19)	-0.60	(49)	N/A		N/A		N/A		N/A	
Russell 3000 Index	-14.30	(48)	7.12	(20)	3.89	(20)	-0.64	(52)	8.97	(11)	7.91	(12)	100.00		100.00	
IM U.S. Multi-Cap Core Equity (MF) Median	-14.38		5.83		2.66		-0.61		7.04		5.85		100.11		102.92	
International Equity Strategies																
EuroPacific Growth (RERGX)	-12.59	(28)	-0.84	(98)	-2.83	(87)	N/A		N/A		N/A		N/A		N/A	
MSCI AC World ex USA	-11.41	(5)	0.80	(32)	-2.39	(80)	-1.08	(46)	4.98	(1)	1.14	(1)	100.00		100.00	
IM International Large Cap Core Equity (MF) Median	-13.68		0.49		-1.75		-1.16		1.60		-0.49		136.80		111.74	
Oakmark Intl (OANIX)	-16.30	(99)	-0.87	(98)	-4.97	(92)	N/A		N/A		N/A		N/A		N/A	
MSCI AC World ex USA	-11.41	(5)	0.80	(32)	-2.39	(80)	-1.08	(46)	4.98	(1)	1.14	(1)	100.00		100.00	
IM International Large Cap Core Equity (MF) Median	-13.68		0.49		-1.75		-1.16		1.60		-0.49		136.80		111.74	
Domestic Fixed Income Strategies																
Dodge & Cox (DODIX)	0.29	(86)	0.63	(6)	-0.33	(64)	-0.90	(7)	N/A		N/A		N/A		N/A	
Blmbg. Barc. U.S. Aggregate Index	1.64	(11)	0.02	(65)	-0.16	(30)	-1.46	(47)	2.06	(45)	2.52	(28)	100.00		100.00	
IM U.S. Broad Market Core Fixed Income (MF) Median	0.99		0.09		-0.25		-1.48		1.99		2.26		97.22		99.58	
Metropolitan West Bond (MWTIX)	1.53	(18)	0.04	(60)	-0.09	(20)	-1.28	(24)	N/A		N/A		N/A		N/A	
Blmbg. Barc. U.S. Aggregate Index	1.64	(11)	0.02	(65)	-0.16	(30)	-1.46	(47)	2.06	(45)	2.52	(28)	100.00		100.00	
IM U.S. Broad Market Core Fixed Income (MF) Median	0.99		0.09		-0.25		-1.48		1.99		2.26		97.22		99.58	
Global Fixed Income Strategies																
PIMCO Diversified Income (PDIIX)	-1.26	(90)	N/A		N/A		N/A		N/A		N/A		N/A		N/A	
Blmbg. Barc. Global Multiverse	1.02	(23)	-0.80	(67)	-2.83	(54)	1.30	(33)	2.99	(37)	1.20	(53)	100.00		100.00	
IM Global Fixed Income (MF) Median	0.33		-0.39		-2.25		0.77		2.68		1.27		71.88		83.41	
Real Estate Strategies																
UBS - Private Real Estate	1.73	(66)	1.42	(100)	1.75	(99)	1.90	(73)	6.86	(95)	9.00	(95)	N/A		N/A	
NCREIF Fund Index-Open End Diversified Core (EW)	1.62	(76)	2.09	(54)	2.13	(61)	2.17	(55)	8.44	(52)	10.52	(63)	N/A		N/A	
IM U.S. Open End Private Real Estate (SA+CF) Median	1.80		2.10		2.22		2.21		8.66		10.82		N/A		N/A	

Long-Term
Manager Composite
Data

Growth of a Dollar



Trailing Returns

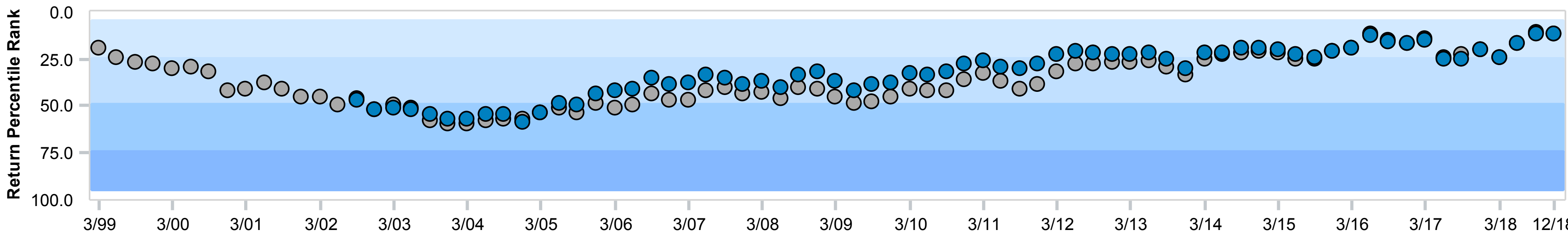
	QTR	YTD	1 YR	2 YR	3 YR	5 YR	7 YR	10 YR	15 YR
Vanguard TSM Idx;Inst (VITSX)	-14.26 (46)	-5.16 (26)	-5.16 (26)	7.20 (23)	8.99 (10)	7.91 (12)	12.46 (13)	13.26 (15)	8.05 (13)
Russell 3000 Index	-14.30 (48)	-5.24 (27)	-5.24 (27)	7.14 (25)	8.97 (11)	7.91 (12)	12.46 (13)	13.18 (16)	7.89 (18)
Median	-14.38	-7.20	-7.20	5.54	7.04	5.85	10.91	11.73	6.91

Fiscal Year Returns

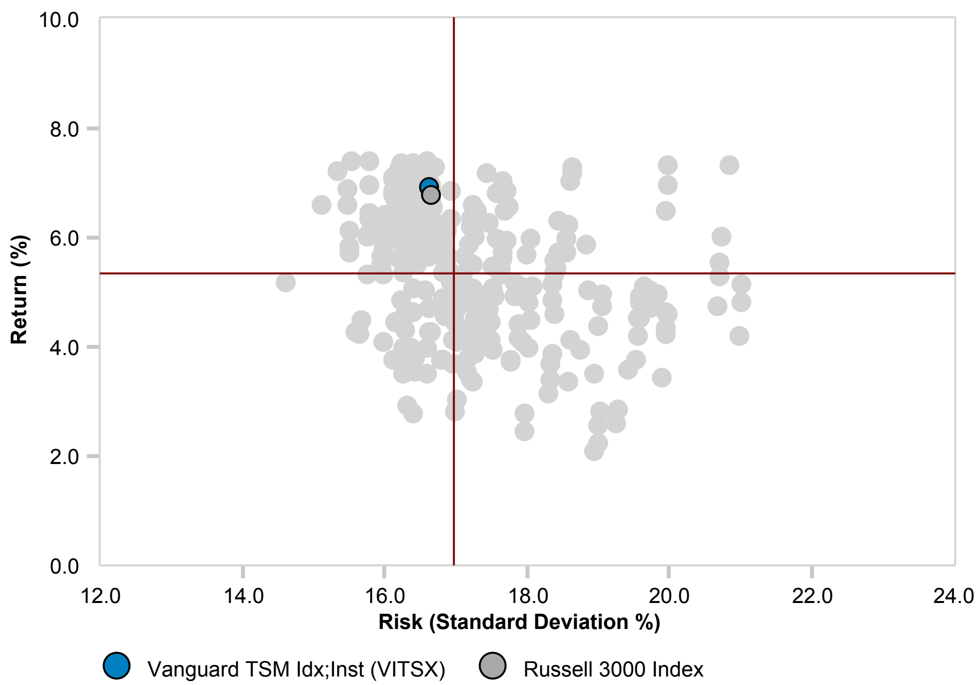
	FYTD	FY 2018	FY 2017	FY 2016	FY 2015	FY 2014	FY 2013	FY 2012	FY 2011
Vanguard TSM Idx;Inst (VITSX)	-14.26 (46)	17.62 (19)	18.64 (37)	15.00 (16)	-0.57 (35)	17.76 (31)	21.52 (60)	30.24 (17)	0.72 (26)
Russell 3000 Index	-14.30 (48)	17.58 (19)	18.71 (35)	14.96 (17)	-0.49 (33)	17.76 (32)	21.60 (59)	30.20 (18)	0.55 (30)
Median	-14.38	14.56	17.48	11.72	-1.79	16.35	22.72	26.92	-1.49

Long-term composite performance. Actual client results may vary.
October 2007 represents the beginning of the current market cycle.
Peer Group: IM U.S. Multi-Cap Core Equity (MF)

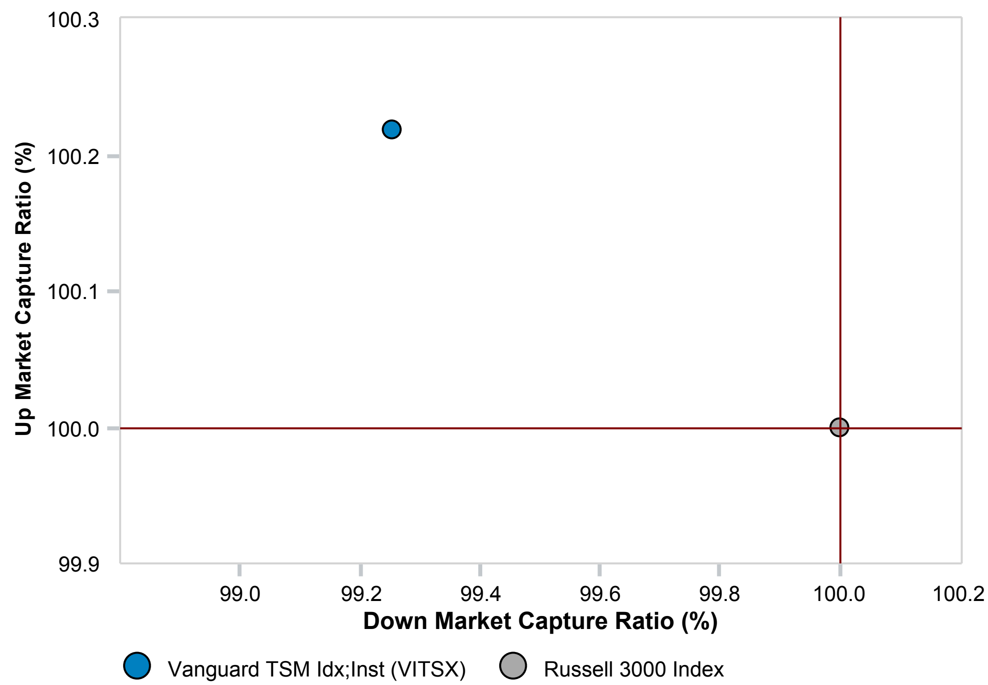
5 Year Rolling Percentile Ranking



Risk vs Return: October 2007 to Present



Up/Down Markets: October 2007 to Present

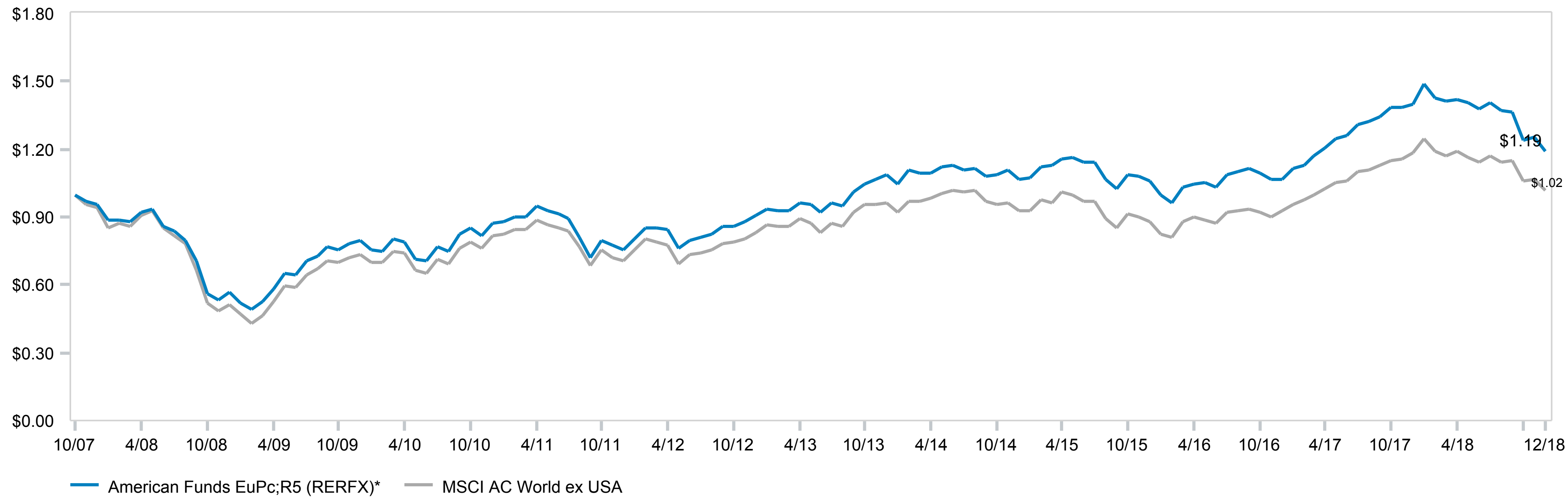


Historical Statistics: October 1, 2007 To December 31, 2018

	Consistency	Maximum Drawdown	Alpha	Active Return	Sharpe Ratio	Information Ratio	Treynor Ratio	Beta	Tracking Error
Vanguard TSM Idx;Inst (VITSX)	60.00	-45.55	0.12	0.11	0.45	0.85	0.08	1.00	0.13
Russell 3000 Index	0.00	-45.95	0.00	0.00	0.44	N/A	0.07	1.00	0.00

Long-term composite performance. Actual client results may vary.
October 2007 represents the beginning of the current market cycle.
Peer Group: IM U.S. Multi-Cap Core Equity (MF)

Growth of a Dollar



Trailing Returns

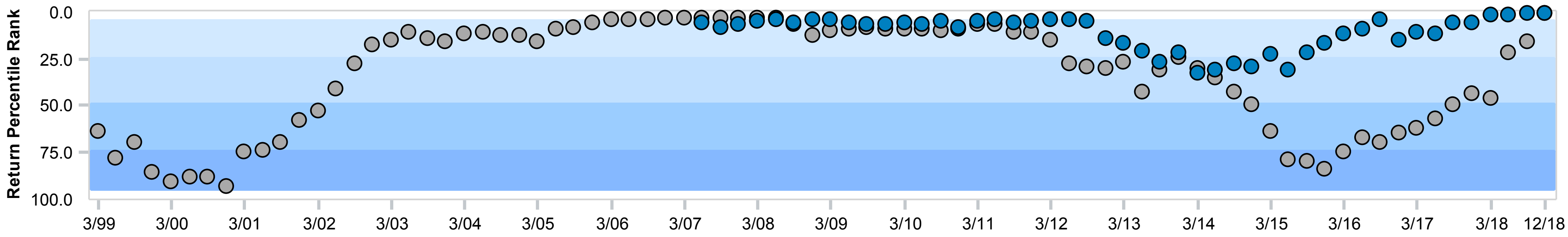
	QTR	YTD	1 YR	2 YR	3 YR	5 YR	7 YR	10 YR	15 YR
American Funds EuPc;R5 (RERFX)*	-12.61 (29)	-14.95 (51)	-14.95 (51)	5.59 (8)	4.04 (6)	1.81 (1)	6.72 (2)	7.66 (6)	6.70 (1)
MSCI AC World ex USA	-11.41 (5)	-13.78 (29)	-13.78 (29)	4.96 (9)	4.98 (1)	1.14 (1)	5.33 (38)	7.06 (24)	5.69 (13)
Median	-13.68	-14.90	-14.90	2.81	1.60	-0.49	5.11	5.54	4.77

Fiscal Year Returns

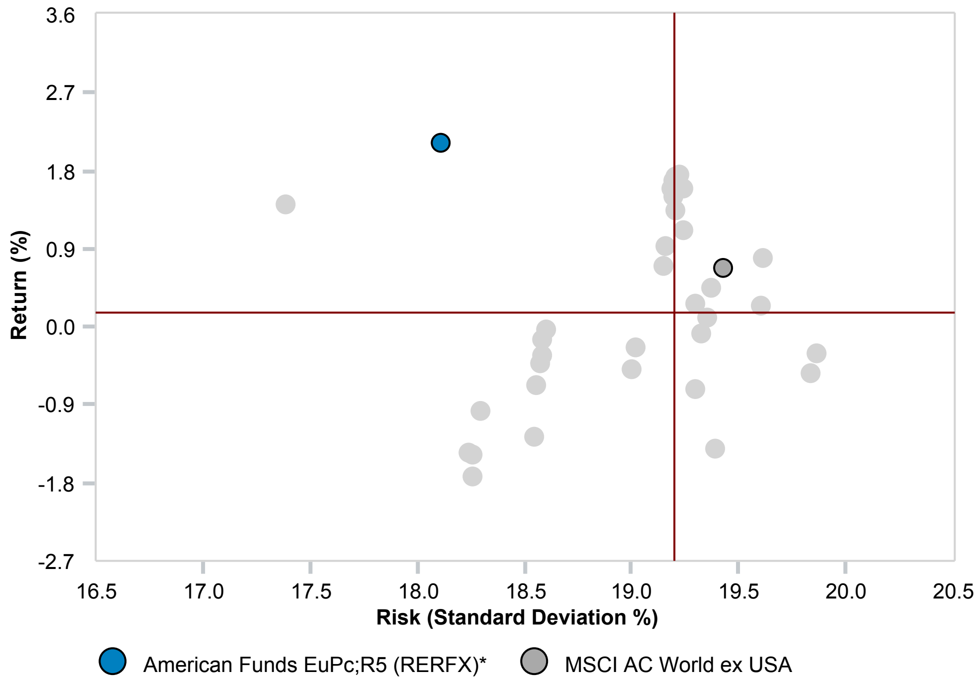
	FYTD	FY 2018	FY 2017	FY 2016	FY 2015	FY 2014	FY 2013	FY 2012	FY 2011
American Funds EuPc;R5 (RERFX)*	-12.61 (29)	1.44 (46)	20.56 (22)	8.47 (7)	-4.97 (8)	6.93 (12)	18.22 (74)	18.39 (13)	-12.38 (75)
MSCI AC World ex USA	-11.41 (5)	2.25 (19)	20.15 (22)	9.80 (4)	-11.78 (77)	5.22 (32)	16.98 (75)	15.04 (47)	-10.42 (29)
Median	-13.68	1.35	18.57	5.51	-7.87	4.30	21.64	14.76	-11.30

Long-term composite performance. Actual client results may vary.
October 2007 represents the beginning of the current market cycle.
Peer Group: IM International Large Cap Core Equity (MF)

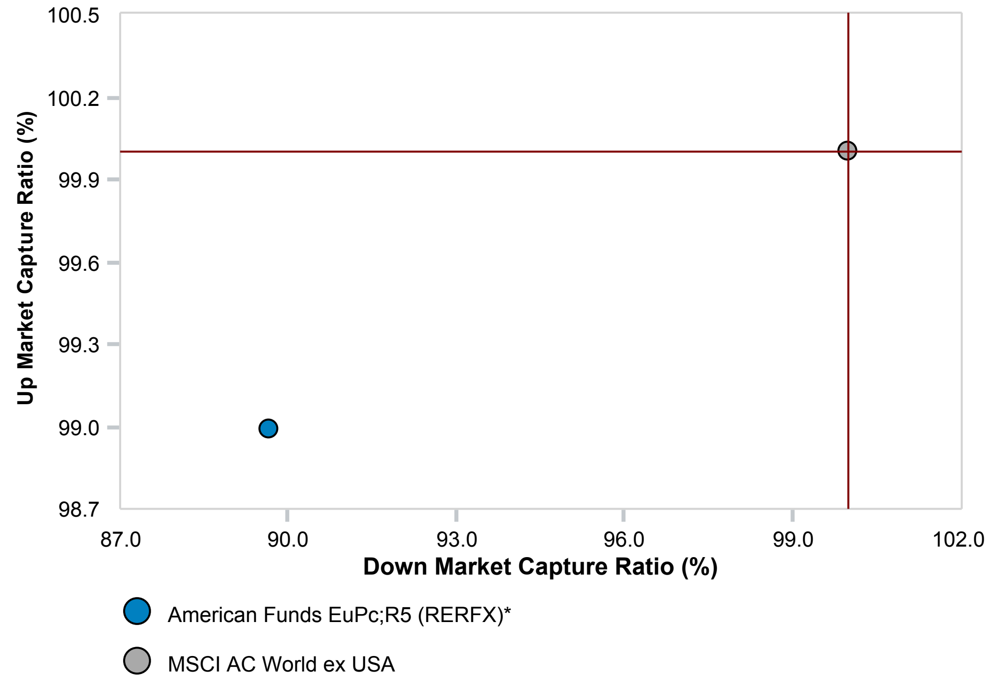
5 Year Rolling Percentile Ranking



Risk vs Return: October 2007 to Present



Up/Down Markets: October 2007 to Present

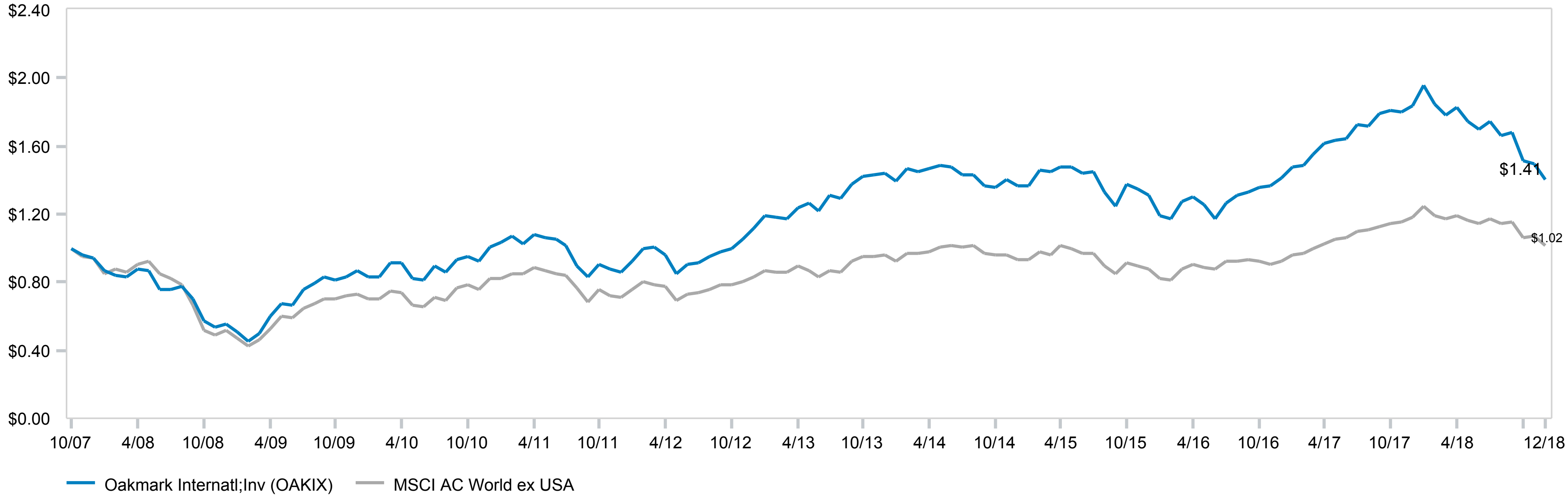


Historical Statistics: October 1, 2007 To December 31, 2018

	Consistency	Maximum Drawdown	Alpha	Active Return	Sharpe Ratio	Information Ratio	Treynor Ratio	Beta	Tracking Error
American Funds EuPc;R5 (RERFX)*	57.78	-45.07	1.40	1.18	0.17	0.34	0.03	0.92	3.50
MSCI AC World ex USA	0.00	-51.36	0.00	0.00	0.10	N/A	0.02	1.00	0.00

Long-term composite performance. Actual client results may vary.
October 2007 represents the beginning of the current market cycle.
Peer Group: IM International Large Cap Core Equity (MF)

Growth of a Dollar



Trailing Returns

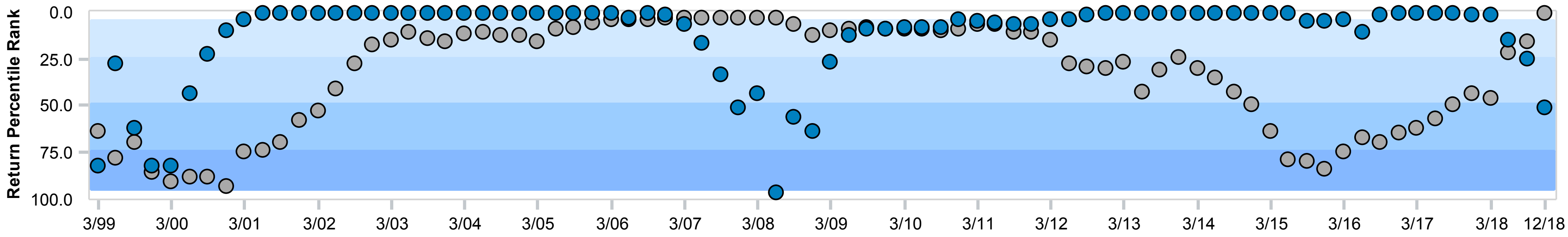
	QTR	YTD	1 YR	2 YR	3 YR	5 YR	7 YR	10 YR	15 YR
Oakmark Internatl;Inv (OAKIX)	-16.31 (99)	-23.43 (100)	-23.43 (100)	-0.32 (87)	2.35 (33)	-0.50 (51)	7.23 (2)	9.79 (1)	6.71 (1)
MSCI AC World ex USA	-11.41 (5)	-13.78 (29)	-13.78 (29)	4.96 (9)	4.98 (1)	1.14 (1)	5.33 (38)	7.06 (24)	5.69 (13)
Median	-13.68	-14.90	-14.90	2.81	1.60	-0.49	5.11	5.54	4.77

Fiscal Year Returns

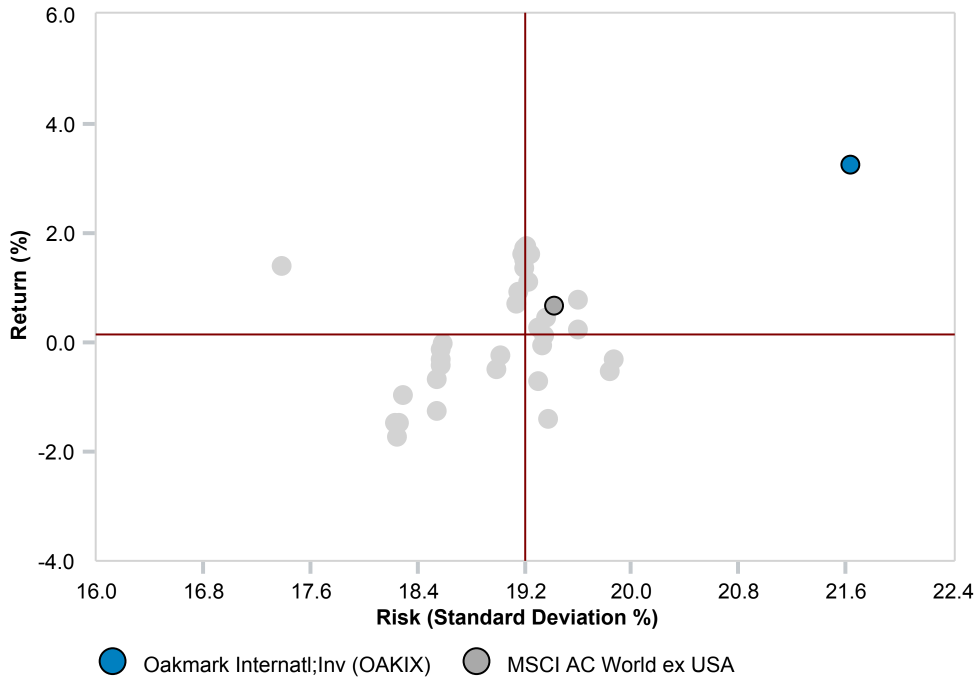
	FYTD	FY 2018	FY 2017	FY 2016	FY 2015	FY 2014	FY 2013	FY 2012	FY 2011
Oakmark Internatl;Inv (OAKIX)	-16.31 (99)	-6.33 (100)	34.88 (1)	6.66 (25)	-8.98 (63)	-0.64 (100)	40.79 (1)	17.40 (24)	-10.54 (29)
MSCI AC World ex USA	-11.41 (5)	2.25 (19)	20.15 (22)	9.80 (4)	-11.78 (77)	5.22 (32)	16.98 (75)	15.04 (47)	-10.42 (29)
Median	-13.68	1.35	18.57	5.51	-7.87	4.30	21.64	14.76	-11.30

Long-term composite performance. Actual client results may vary.
October 2007 represents the beginning of the current market cycle.
Peer Group: IM International Large Cap Core Equity (MF)

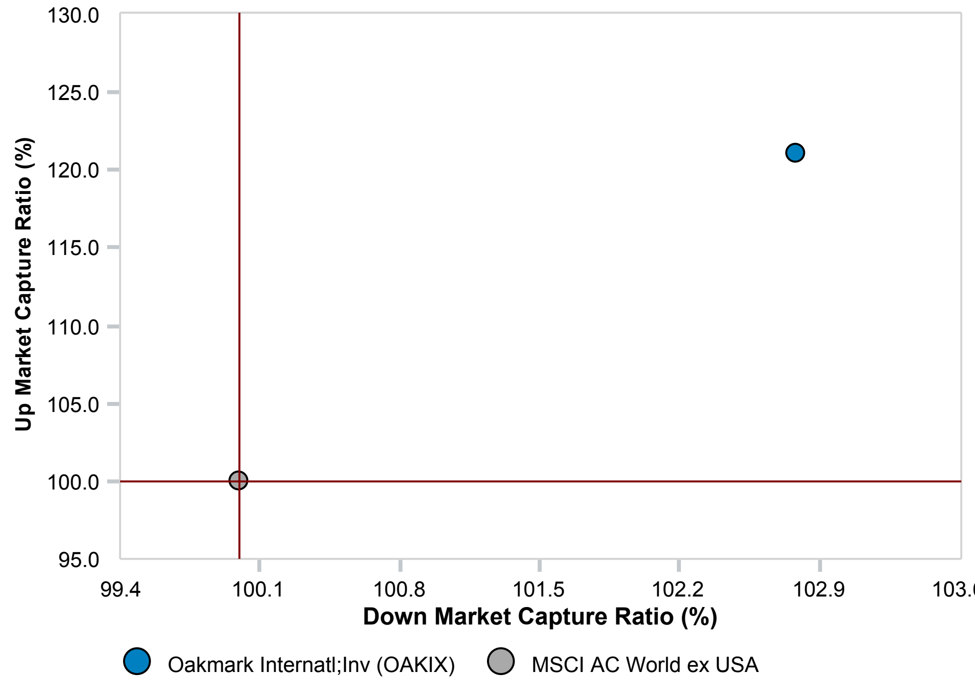
5 Year Rolling Percentile Ranking



Risk vs Return: October 2007 to Present



Up/Down Markets: October 2007 to Present

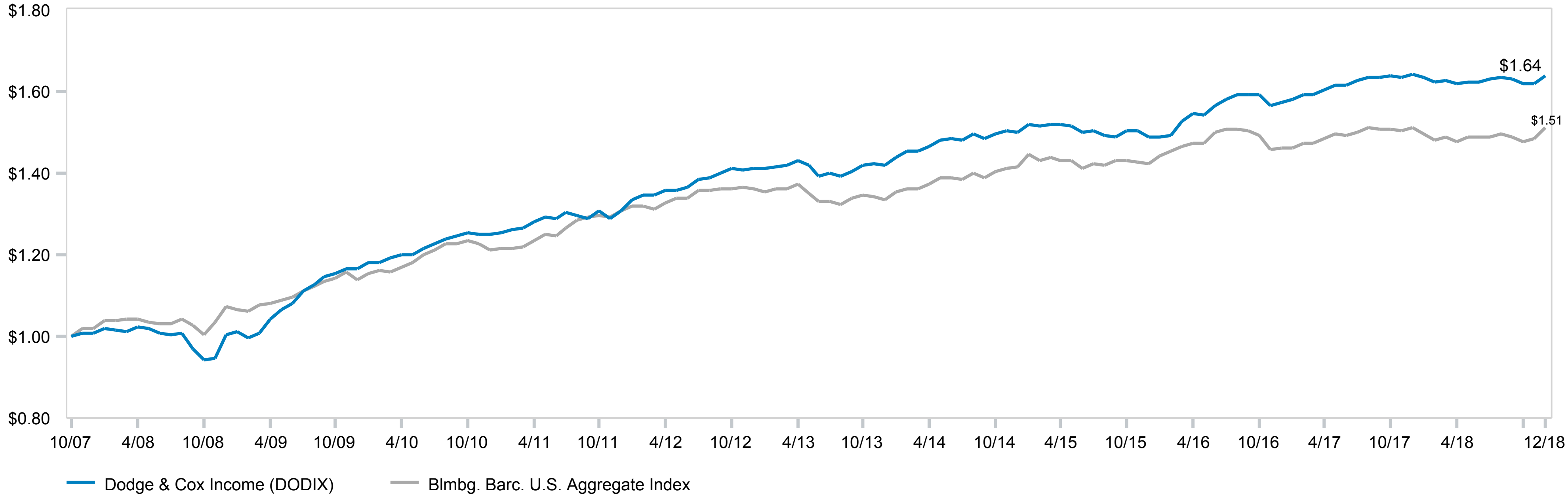


Historical Statistics: October 1, 2007 To December 31, 2018

	Consistency	Maximum Drawdown	Alpha	Active Return	Sharpe Ratio	Information Ratio	Treynor Ratio	Beta	Tracking Error
Oakmark Internatl;Inv (OAKIX)	55.56	-49.10	2.85	2.90	0.22	0.35	0.05	1.03	8.25
MSCI AC World ex USA	0.00	-51.36	0.00	0.00	0.10	N/A	0.02	1.00	0.00

Long-term composite performance. Actual client results may vary.
October 2007 represents the beginning of the current market cycle.
Peer Group: IM International Large Cap Core Equity (MF)

Growth of a Dollar



Trailing Returns

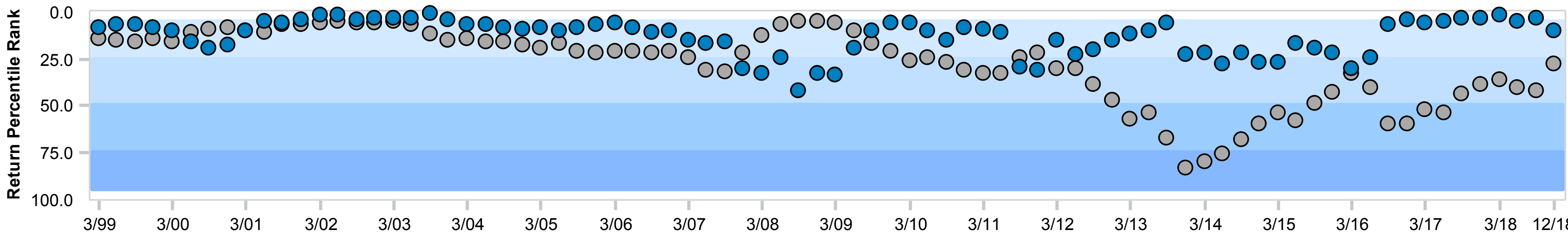
	QTR	YTD	1 YR	2 YR	3 YR	5 YR	7 YR	10 YR	15 YR
Dodge & Cox Income (DODIX)	0.29 (86)	-0.31 (32)	-0.31 (32)	2.00 (12)	3.19 (1)	2.87 (10)	3.26 (3)	5.01 (18)	4.35 (8)
Blmbg. Barc. U.S. Aggregate Index	1.64 (11)	0.01 (18)	0.01 (18)	1.76 (27)	2.06 (45)	2.52 (28)	2.10 (58)	3.48 (78)	3.87 (34)
Median	0.99	-0.63	-0.63	1.49	1.99	2.26	2.18	4.24	3.66

Fiscal Year Returns

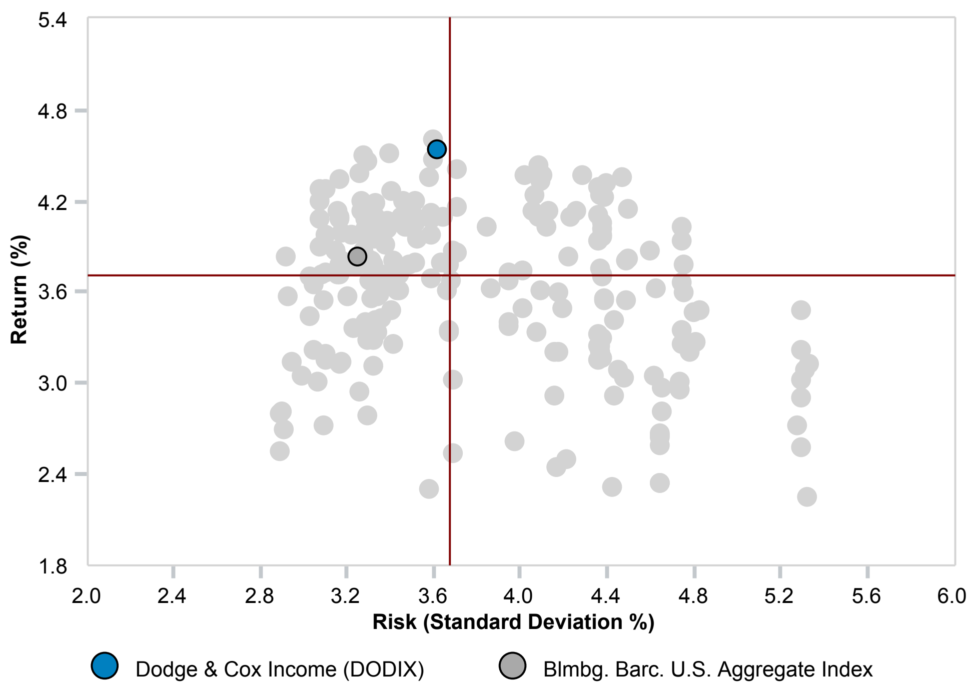
	FYTD	FY 2018	FY 2017	FY 2016	FY 2015	FY 2014	FY 2013	FY 2012	FY 2011
Dodge & Cox Income (DODIX)	0.29 (86)	-0.12 (7)	2.57 (3)	7.09 (3)	0.16 (94)	5.76 (9)	0.46 (5)	8.37 (15)	3.55 (72)
Blmbg. Barc. U.S. Aggregate Index	1.64 (11)	-1.22 (41)	0.07 (64)	5.19 (52)	2.94 (9)	3.96 (59)	-1.68 (53)	5.16 (81)	5.26 (14)
Median	0.99	-1.35	0.48	5.21	1.98	4.19	-1.62	6.79	4.30

Long-term composite performance. Actual client results may vary.
October 2007 represents the beginning of the current market cycle.
Peer Group: IM U.S. Broad Market Core Fixed Income (MF)

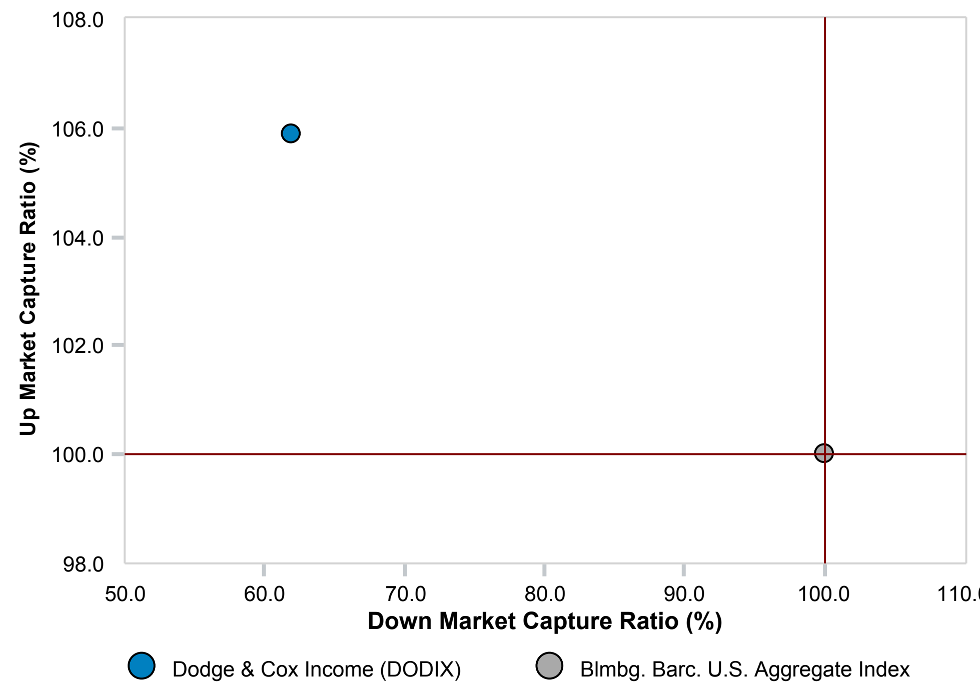
5 Year Rolling Percentile Ranking



Risk vs Return: October 2007 to Present



Up/Down Markets: October 2007 to Present

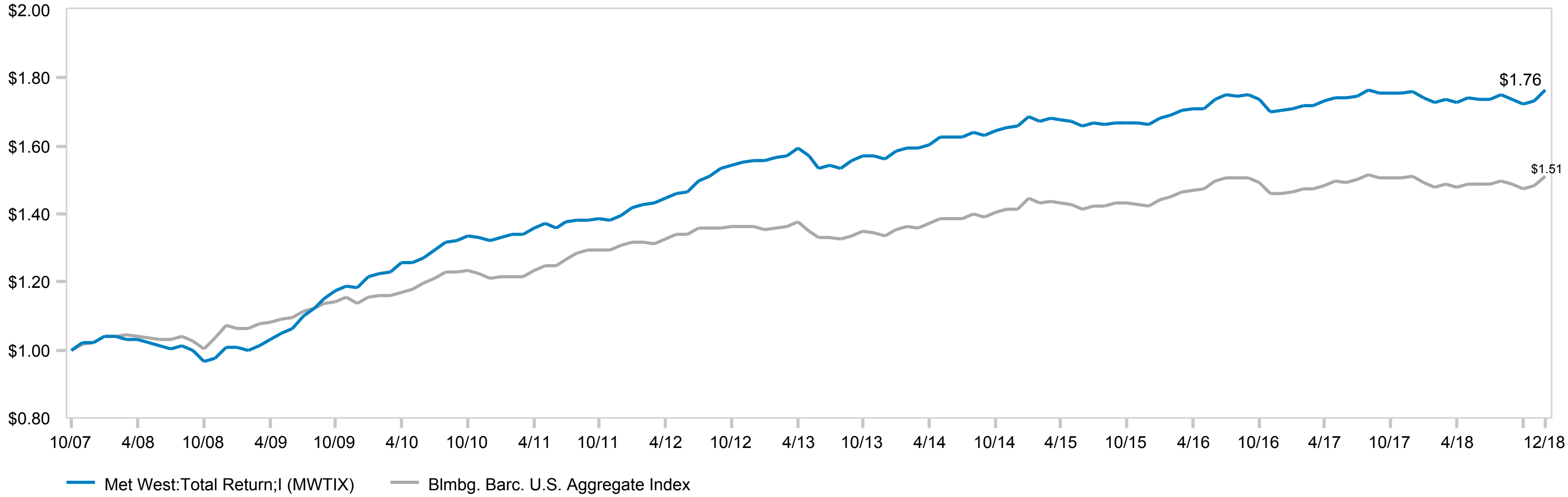


Historical Statistics: October 1, 2007 To December 31, 2018

	Consistency	Maximum Drawdown	Alpha	Active Return	Sharpe Ratio	Information Ratio	Treynor Ratio	Beta	Tracking Error
Dodge & Cox Income (DODIX)	66.67	-4.08	1.87	0.70	1.05	0.23	0.06	0.70	2.99
Blmbg. Barc. U.S. Aggregate Index	0.00	-2.98	0.00	0.00	0.99	N/A	0.03	1.00	0.00

Long-term composite performance. Actual client results may vary.
October 2007 represents the beginning of the current market cycle.
Peer Group: IM U.S. Broad Market Core Fixed Income (MF)

Growth of a Dollar



Trailing Returns

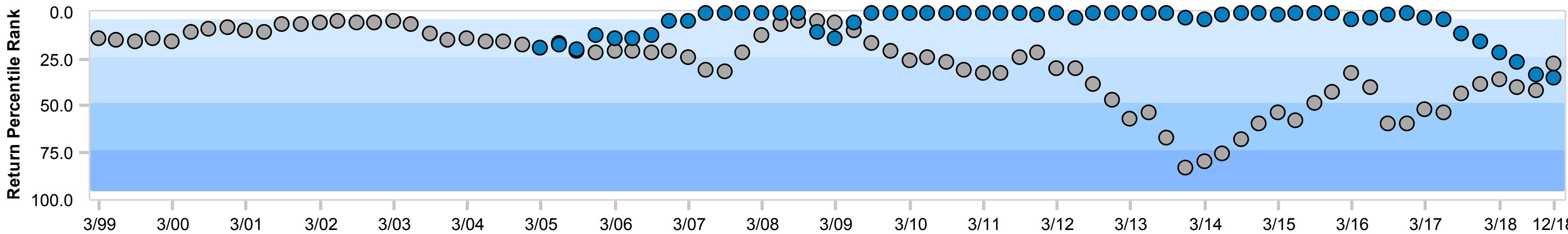
	QTR	YTD	1 YR	2 YR	3 YR	5 YR	7 YR	10 YR	15 YR
Met West:Total Return;I (MWTIX)	1.53 (18)	0.16 (12)	0.16 (12)	1.78 (25)	2.01 (49)	2.44 (35)	3.41 (2)	5.74 (4)	5.22 (1)
Blmbg. Barc. U.S. Aggregate Index	1.64 (11)	0.01 (18)	0.01 (18)	1.76 (27)	2.06 (45)	2.52 (28)	2.10 (58)	3.48 (78)	3.87 (34)
Median	0.99	-0.63	-0.63	1.49	1.99	2.26	2.18	4.24	3.66

Fiscal Year Returns

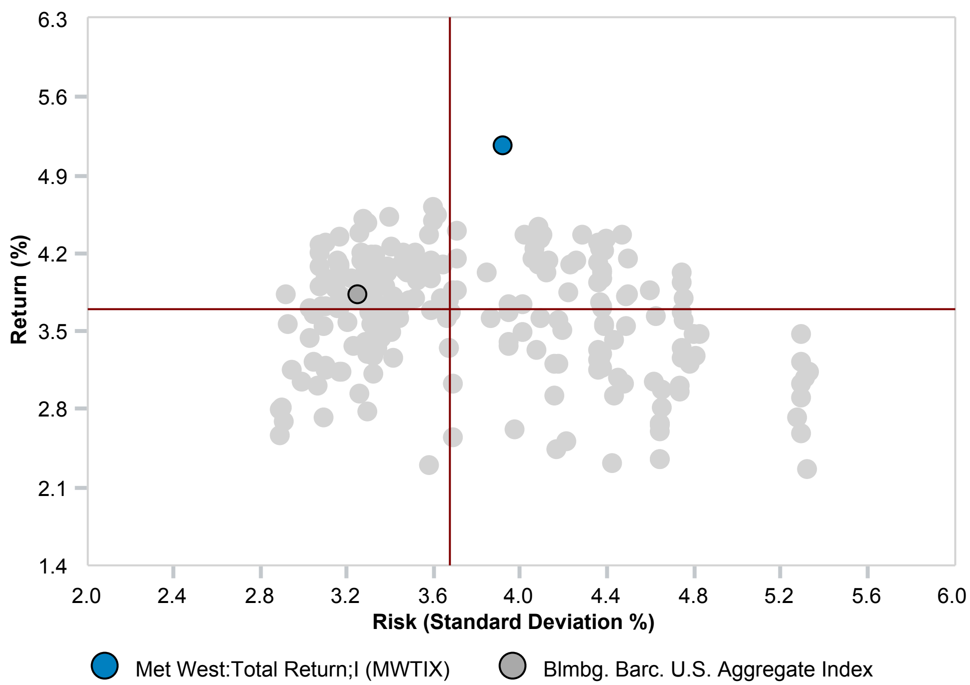
	FYTD	FY 2018	FY 2017	FY 2016	FY 2015	FY 2014	FY 2013	FY 2012	FY 2011
Met West:Total Return;I (MWTIX)	1.53 (18)	-0.97 (27)	0.31 (56)	4.82 (71)	2.27 (37)	4.95 (23)	1.38 (2)	11.02 (1)	4.37 (47)
Blmbg. Barc. U.S. Aggregate Index	1.64 (11)	-1.22 (41)	0.07 (64)	5.19 (52)	2.94 (9)	3.96 (59)	-1.68 (53)	5.16 (81)	5.26 (14)
Median	0.99	-1.35	0.48	5.21	1.98	4.19	-1.62	6.79	4.30

Long-term composite performance. Actual client results may vary.
October 2007 represents the beginning of the current market cycle.
Peer Group: IM U.S. Broad Market Core Fixed Income (MF)

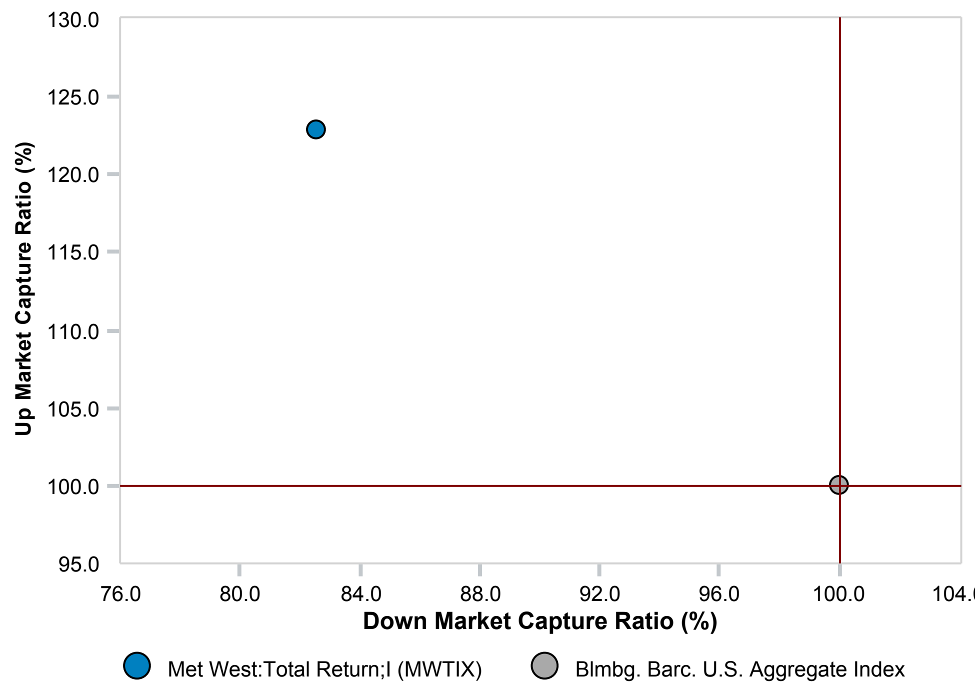
5 Year Rolling Percentile Ranking



Risk vs Return: October 2007 to Present



Up/Down Markets: October 2007 to Present

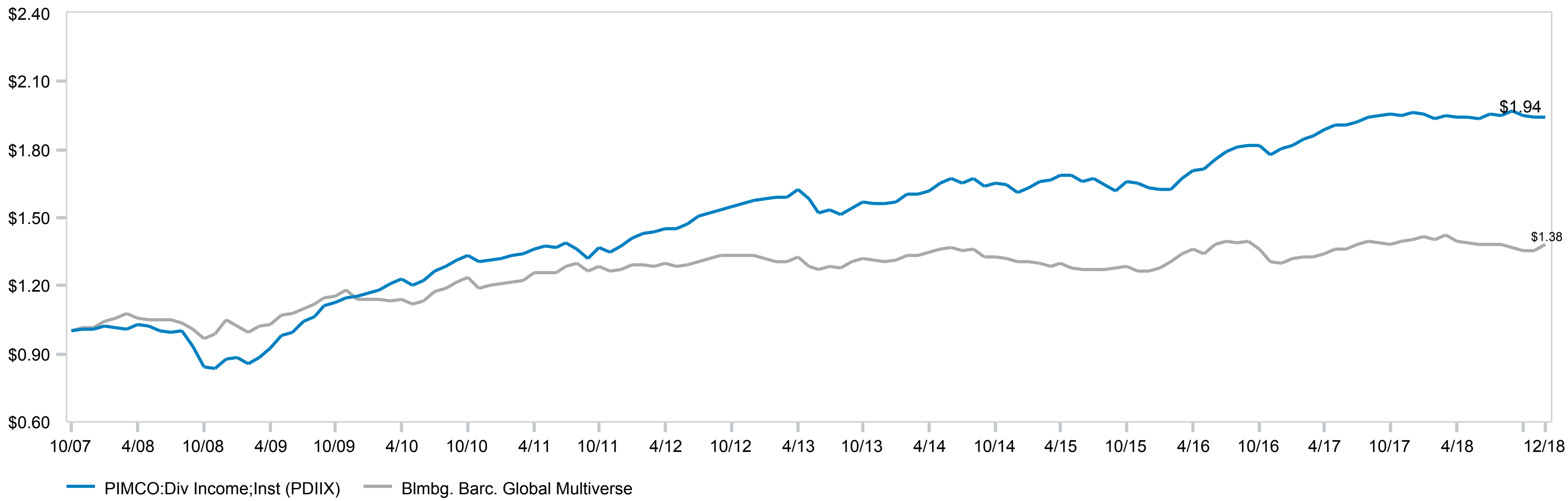


Historical Statistics: October 1, 2007 To December 31, 2018

	Consistency	Maximum Drawdown	Alpha	Active Return	Sharpe Ratio	Information Ratio	Treynor Ratio	Beta	Tracking Error
Met West:Total Return;I (MWTIX)	57.78	-3.50	1.79	1.31	1.13	0.48	0.05	0.88	2.72
Blmbg. Barc. U.S. Aggregate Index	0.00	-2.98	0.00	0.00	0.99	N/A	0.03	1.00	0.00

Long-term composite performance. Actual client results may vary.
October 2007 represents the beginning of the current market cycle.
Peer Group: IM U.S. Broad Market Core Fixed Income (MF)

Growth of a Dollar



Trailing Returns

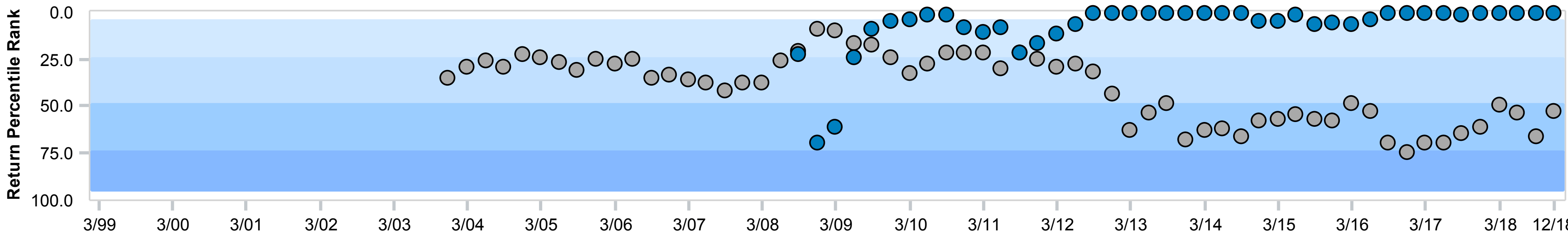
	QTR	YTD	1 YR	2 YR	3 YR	5 YR	7 YR	10 YR	15 YR
PIMCO:Div Income;Inst (PDIIX)	-1.28 (91)	-1.00 (36)	-1.00 (36)	3.81 (4)	6.01 (1)	4.43 (1)	5.09 (1)	8.31 (1)	6.29 (1)
Blmbg. Barc. Global Multiverse	1.02 (23)	-1.36 (41)	-1.36 (41)	3.07 (22)	2.99 (37)	1.20 (53)	1.22 (72)	2.77 (69)	3.48 (56)
Median	0.33	-1.76	-1.76	2.28	2.68	1.27	1.71	3.49	3.55

Fiscal Year Returns

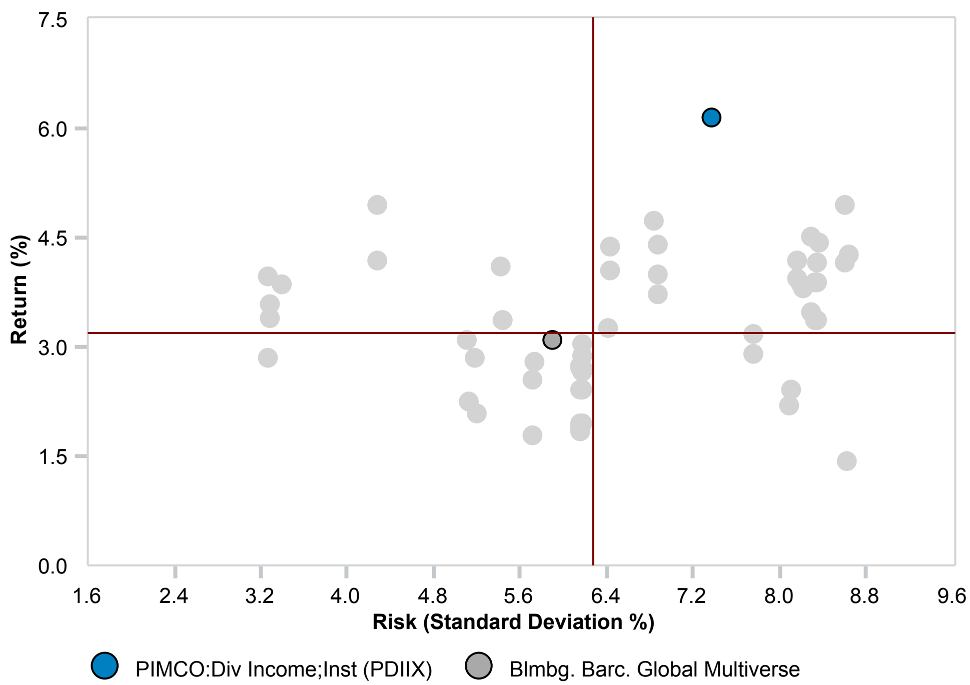
	FYTD	FY 2018	FY 2017	FY 2016	FY 2015	FY 2014	FY 2013	FY 2012	FY 2011
PIMCO:Div Income;Inst (PDIIX)	-1.28 (91)	1.08 (11)	6.97 (2)	12.55 (2)	-1.10 (26)	6.09 (16)	0.37 (22)	16.28 (2)	0.41 (84)
Blmbg. Barc. Global Multiverse	1.02 (23)	-1.32 (52)	-0.56 (77)	9.23 (25)	-3.56 (42)	1.40 (79)	-2.22 (56)	5.57 (81)	3.85 (11)
Median	0.33	-1.24	1.02	7.42	-3.85	3.37	-1.81	7.17	1.74

Long-term composite performance. Actual client results may vary.
October 2007 represents the beginning of the current market cycle.
Peer Group: IM Global Fixed Income (MF)

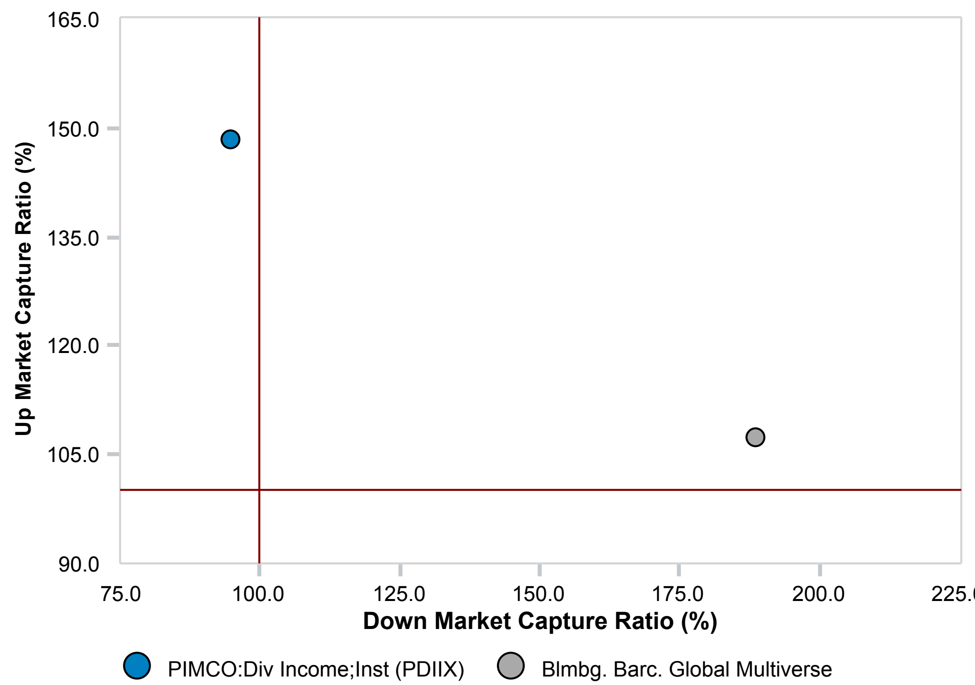
5 Year Rolling Percentile Ranking



Risk vs Return: October 2007 to Present



Up/Down Markets: October 2007 to Present

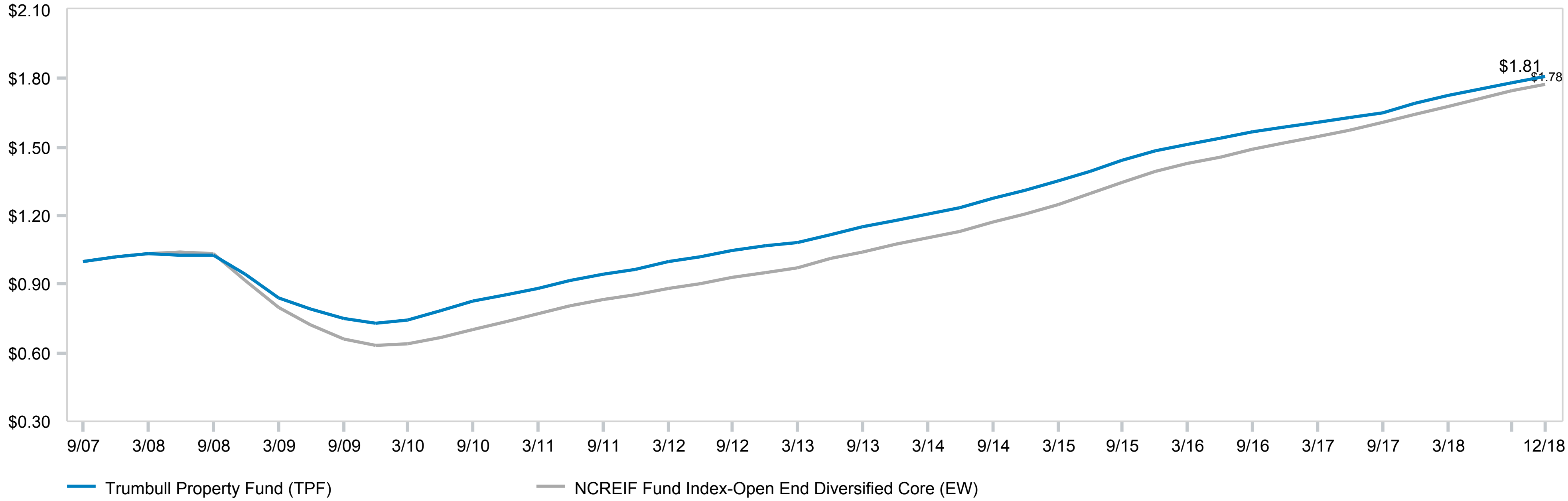


Historical Statistics: October 1, 2007 To December 31, 2018

	Consistency	Maximum Drawdown	Alpha	Active Return	Sharpe Ratio	Information Ratio	Treynor Ratio	Beta	Tracking Error
PIMCO:Div Income;Inst (PDIIX)	66.67	-13.47	3.89	2.43	0.75	0.34	0.09	0.63	7.18
Blmbg. Barc. Global Multiverse	51.11	-7.47	-1.66	-0.61	0.45	-0.14	0.02	1.28	4.29

Long-term composite performance. Actual client results may vary.
October 2007 represents the beginning of the current market cycle.
Peer Group: IM Global Fixed Income (MF)

Growth of a Dollar



Trailing Returns

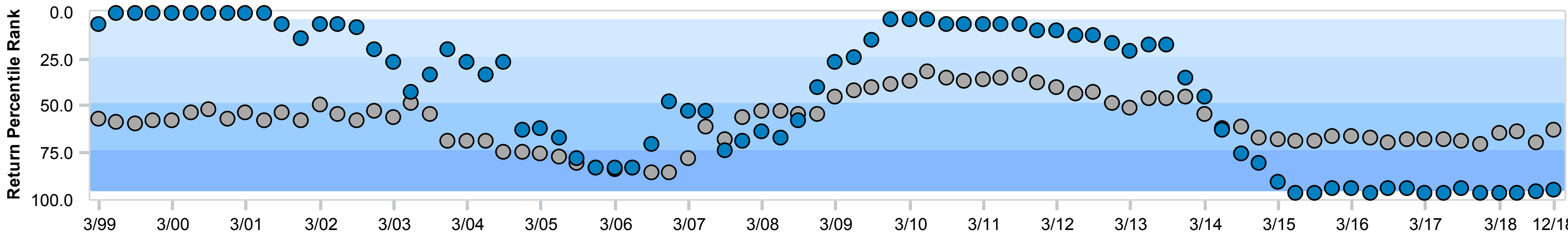
	QTR	YTD	1 YR	2 YR	3 YR	5 YR	7 YR	10 YR	15 YR
Trumbull Property Fund (TPF)	1.73 (65)	6.99 (95)	6.99 (95)	6.64 (91)	6.83 (95)	8.99 (95)	9.36 (95)	6.76 (78)	8.06 (77)
NCREIF Fund Index-Open End Diversified Core (EW)	1.62 (76)	8.25 (66)	8.25 (66)	8.02 (57)	8.44 (52)	10.52 (63)	10.99 (67)	6.84 (73)	7.99 (85)
Median	1.80	8.71	8.71	8.39	8.66	10.82	11.57	7.34	8.63

Fiscal Year Returns

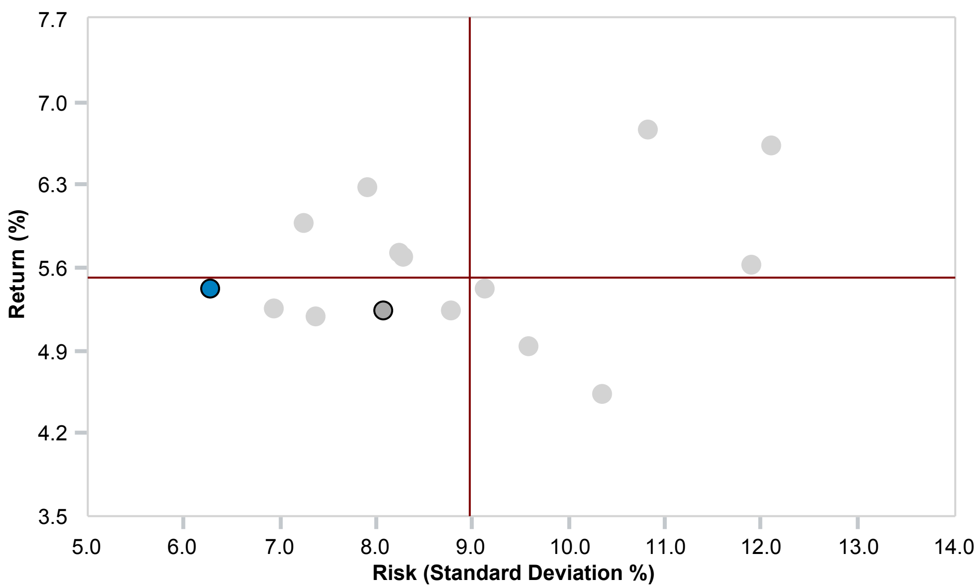
	FYTD	FY 2018	FY 2017	FY 2016	FY 2015	FY 2014	FY 2013	FY 2012	FY 2011
Trumbull Property Fund (TPF)	1.73 (65)	7.64 (81)	5.37 (94)	8.85 (100)	12.94 (82)	10.89 (91)	10.08 (91)	10.53 (84)	14.50 (87)
NCREIF Fund Index-Open End Diversified Core (EW)	1.62 (76)	8.82 (59)	7.81 (60)	10.62 (69)	14.71 (62)	12.39 (68)	12.47 (67)	11.77 (66)	18.03 (44)
Median	1.80	9.04	8.29	11.32	15.45	12.78	13.18	12.90	16.96

Long-term composite performance. Actual client results may vary.
October 2007 represents the beginning of the current market cycle.
Peer Group: IM U.S. Open End Private Real Estate (SA+CF)

5 Year Rolling Percentile Ranking



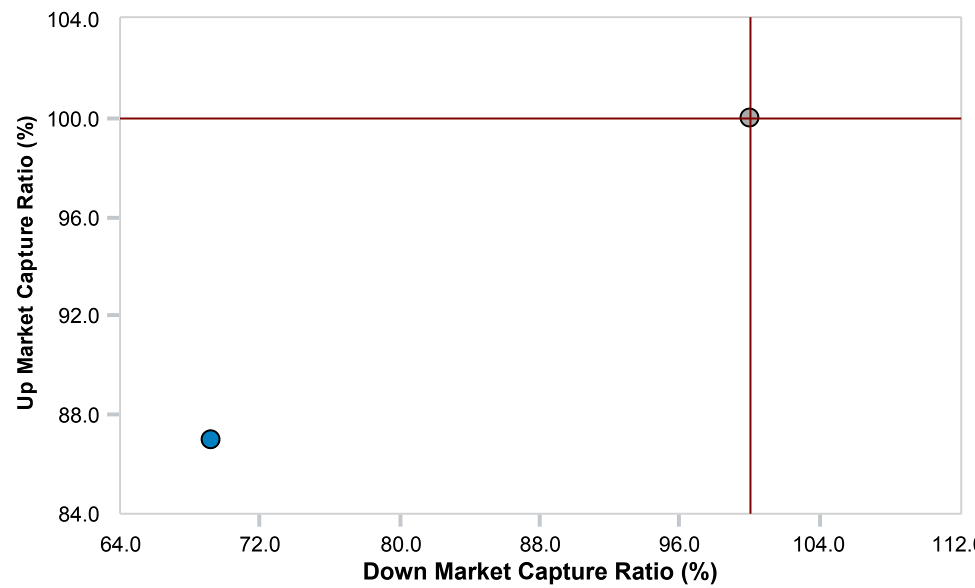
Risk vs Return: October 2007 to Present



Trumbull Property Fund (TPF)

NCREIF Fund Index-Open End Diversified Core (EW)

Up/Down Markets: October 2007 to Present



Trumbull Property Fund (TPF)

NCREIF Fund Index-Open End Diversified Core (EW)

Historical Statistics: October 1, 2007 To December 31, 2018

	Consistency	Maximum Drawdown	Alpha	Active Return	Sharpe Ratio	Information Ratio	Treynor Ratio	Beta	Tracking Error
Trumbull Property Fund (TPF)	31.11	-29.41	1.34	0.03	0.78	0.01	0.06	0.76	2.25
NCREIF Fund Index-Open End Diversified Core (EW)	0.00	-39.11	0.00	0.00	0.60	N/A	0.05	1.00	0.00

Long-term composite performance. Actual client results may vary.
October 2007 represents the beginning of the current market cycle.
Peer Group: IM U.S. Open End Private Real Estate (SA+CF)

	Estimated Annual Fee (%)	12/31/18 Market Value	12/31/18 Allocation (%)	Estimated Annual Fee ($)
Domestic Equity				
Vanguard Total Stock Market Index (VITSX)	0.04	16,602,561	46.91	6,641
International Equity				
EuroPacific Growth (RERGX)	0.49	3,522,845	9.95	17,262
Oakmark Intl (OANIX)	0.77	1,480,475	4.18	11,400
Domestic Fixed Income				
Dodge & Cox (DODIX)	0.43	3,836,794	10.84	16,498
Metropolitan West Bond (MWTIX)	0.45	3,881,655	10.97	17,467
Global Fixed Income				
PIMCO Diversified Income (PDIIX)	0.77	1,904,039	5.38	14,661
Real Estate				
UBS - Private Real Estate	0.96	3,740,067	10.57	35,905
Cash Accounts				
R&D Cash Account		-	0.00	-
C/D Cash Account		421,518	1.19	-
Total Fund	**0.34**	**35,390,042**	**100.00**	**119,834**

Total Fund Compliance:	Yes	No	N/A
1. The Total Plan return equaled or exceeded the 7.35% actuarial earnings assumption over the trailing three year period.		✓	
2. The Total Plan return equaled or exceeded the 7.35% actuarial earnings assumption over the trailing five year period.		✓	
3. The Total Plan return equaled or exceeded the total plan benchmark over the trailing three year period.		✓	
4. The Total Plan return equaled or exceeded the total plan benchmark over the trailing five year period.		✓	
5. The Total Plan return ranked within the top 50th percentile of its peer group over the trailing three year period.		✓	
6. The Total Plan return ranked within the top 50th percentile of its peer group over the trailing five year period.		✓	

Equity Compliance:	Yes	No	N/A
1. Total Equity return equaled or exceeded the benchmark over the trailing three year period.			✓
2. Total Equity return equaled or exceeded the benchmark over the trailing five year period.			✓
3. Total Equity allocation was less than 75% of the total plan assets at market.	✓		
4. Total foreign equity was less than 25% of the total plan assets at market.	✓		

Fixed Income Compliance:	Yes	No	N/A
1. Total Fixed Income return equaled or exceeded the benchmark over the trailing three year period.			✓
2. Total Fixed Income return equaled or exceeded the benchmark over the trailing five year period.			✓
3. No more than 5% of the fixed income portfolio was rated below BBB/Baa.	✓		

Manager Compliance:	VITSX			RERGX			OANIX		
	Yes	No	N/A	Yes	No	N/A	Yes	No	N/A
1. Manager outperformed the index over the trailing three year period.			✓			✓			✓
2. Manager outperformed the index over the trailing five year period.			✓			✓			✓
3. Manager ranked within the top 50th percentile over the trailing three year period.			✓			✓			✓
4. Manager ranked within the top 50th percentile over the trailing five year period.			✓			✓			✓
5. Manager had less than 4 consecutive quarters of underperformance.			✓			✓			✓
6. Manager three year down market capture ratio is less than the index.			✓			✓			✓
7. Manager five year down market capture ratio is less than the index.			✓			✓			✓
8. Manager reports compliance with PFIA.			✓			✓			✓

Manager Compliance:	DODIX			MWTIX			PDIIX			UBS Real Estate		
	Yes	No	N/A	Yes	No	N/A				Yes	No	N/A
1. Manager outperformed the index over the trailing three year period.			✓			✓			✓		✓	
2. Manager outperformed the index over the trailing five year period.			✓			✓			✓		✓	
3. Manager ranked within the top 50th percentile over the trailing three year period.			✓			✓			✓		✓	
4. Manager ranked within the top 50th percentile over the trailing five year period.			✓			✓			✓		✓	
5. Manager had less than 4 consecutive quarters of underperformance.			✓			✓			✓	✓		
6. Manager three year down market capture ratio is less than the index.			✓			✓			✓			✓
7. Manager five year down market capture ratio is less than the index.			✓			✓			✓			✓
8. Manager reports compliance with PFIA.			✓			✓			✓			✓

Total Fund Policy

Oct-1995

Russell 1000 Value Index	20.00
Russell 1000 Growth Index	17.50
Russell 2500 Growth Index	12.50
Bloomberg Barclays Intermediate US Govt/Credit Idx	50.00

Nov-1995

Russell 1000 Value Index	20.00
Russell 1000 Growth Index	17.50
Russell 2500 Growth Index	12.50
Bloomberg Barclays Intermediate US Govt/Credit Idx	50.00

Oct-2000

Russell 1000 Value Index	20.00
Russell 1000 Growth Index	17.50
Russell 2000 Value Index	6.25
Russell 2000 Growth Index	6.25
MSCI EAFE (Net) Index	10.00
Bloomberg Barclays Intermediate US Govt/Credit Idx	40.00

Aug-2005

Russell 1000 Value Index	18.75
Russell 1000 Growth Index	18.75
Russell 2000 Value Index	6.25
Russell 2000 Growth Index	6.25
MSCI EAFE (Net) Index	10.00
Bloomberg Barclays Intermediate US Govt/Credit Idx	40.00

Feb-2009

Russell 1000 Value Index	18.75
Russell 1000 Growth Index	18.75
Russell 2000 Value Index	6.25
Russell 2000 Growth Index	6.25
MSCI EAFE (Net) Index	5.00
MSCI AC World ex USA (Net)	5.00
Bloomberg Barclays Intermediate US Govt/Credit Idx	40.00

Sep-2013

Russell 1000 Value Index	13.75
Russell 1000 Growth Index	13.75
Russell 2000 Value Index	6.25
Russell 2000 Growth Index	6.25
MSCI EAFE (Net) Index	5.00
MSCI AC World ex USA (Net)	5.00
Bloomberg Barclays Intermediate US Govt/Credit Idx	32.50
S&P 500 Index	10.00
NCREIF Property Index	7.50

Mar-2014

Russell 1000 Value Index	11.25
Russell 1000 Growth Index	11.25
Russell 2000 Value Index	6.25
Russell 2000 Growth Index	6.25
MSCI EAFE (Net) Index	5.00
MSCI AC World ex USA (Net)	5.00
Bloomberg Barclays Intermediate US Govt/Credit Idx	27.50
S&P 500 Index	10.00
NCREIF Property Index	7.50
HFRI FOF: Conservative Index	10.00

Apr-2016

Russell 1000 Value Index	11.25
Russell 1000 Growth Index	11.25
Russell 2500 Value Index	6.25
Russell 2000 Growth Index	6.25
MSCI EAFE (Net) Index	5.00
MSCI AC World ex USA (Net)	5.00
Bloomberg Barclays Intermediate US Govt/Credit Idx	27.50
S&P 500 Index	10.00
NCREIF Property Index	7.50
HFRI FOF: Conservative Index	10.00

Oct-2017

Russell 3000 Index	50.00
MSCI AC World ex USA	10.00
Blmbg. Barc. U.S. Aggregate Index	30.00
NCREIF Property Index	10.00

Sep-2018

Russell 3000 Index	50.00
MSCI AC World ex USA	10.00
Blmbg. Barc. U.S. Aggregate Index	25.00
Blmbg. Barc. Global Multiverse	5.00
NCREIF Fund Index-Open End Diversified Core (EW)	10.00

Total Equity Policy

Oct-2017

Russell 3000 Index	83.00
MSCI AC World ex USA	17.00

Sep-2018

Russell 3000 Index	77.00
MSCI AC World ex USA	23.00

Total Fixed Income Policy

Oct-2017

Blmbg. Barc. U.S. Aggregate Index	100.00

Sep-2018

Blmbg. Barc. U.S. Aggregate Index	80.00
Blmbg. Barc. Global Multiverse	20.00

Active Return	- Arithmetic difference between the manager's performance and the designated benchmark return over a specified time period.
Alpha	- A measure of the difference between a portfolio's actual performance and its expected return based on its level of risk as determined by beta. It determines the portfolio's non-systemic return, or its historical performance not explained by movements of the market.
Beta	- A measure of the sensitivity of a portfolio to the movements in the market. It is a measure of the portfolio's systematic risk.
Consistency	- The percentage of quarters that a product achieved a rate of return higher than that of its benchmark. Higher consistency indicates the manager has contributed more to the product's performance.
Distributed to Paid In (DPI)	- The ratio of money distributed to Limited Partners by the fund, relative to contributions. It is calculated by dividing cumulative distributions by paid in capital. This multiple shows the investor how much money they got back. It is a good measure for evaluating a fund later in its life because there are more distributions to measure against.
Down Market Capture	- The ratio of average portfolio performance over the designated benchmark during periods of negative returns. A lower value indicates better product performance
Downside Risk	- A measure similar to standard deviation that utilizes only the negative movements of the return series. It is calculated by taking the standard deviation of the negative quarterly set of returns. A higher factor is indicative of a riskier product.
Excess Return	- Arithmetic difference between the manager's performance and the risk-free return over a specified time period.
Excess Risk	- A measure of the standard deviation of a portfolio's performance relative to the risk free return.
Information Ratio	- This calculates the value-added contribution of the manager and is derived by dividing the active rate of return of the portfolio by the tracking error. The higher the Information Ratio, the more the manager has added value to the portfolio.
Public Market Equivalent (PME)	- Designs a set of analyses used in the Private Equity Industry to evaluate the performance of a Private Equity Fund against a public benchmark or index.
R-Squared	- The percentage of a portfolio's performance that can be explained by the behavior of the appropriate benchmark. A high R-Squared means the portfolio's performance has historically moved in the same direction as the appropriate benchmark.
Return	- Compounded rate of return for the period.
Sharpe Ratio	- Represents the excess rate of return over the risk free return divided by the standard deviation of the excess return. The result is an absolute rate of return per unit of risk. A higher value demonstrates better historical risk-adjusted performance.
Standard Deviation	- A statistical measure of the range of a portfolio's performance. It represents the variability of returns around the average return over a specified time period.
Total Value to Paid In (TVPI)	- The ratio of the current value of remaining investments within a fund, plus the total value of all distributions to date, relative to the total amount of capital paid into the fund to date. It is a good measure of performance before the end of a fund's life
Tracking Error	- This is a measure of the standard deviation of a portfolio's returns in relation to the performance of its designated market benchmark.
Treynor Ratio	- Similar to Sharpe ratio but utilizes beta rather than excess risk as determined by standard deviation. It is calculated by taking the excess rate of return above the risk free rate divided by beta to derive the absolute rate of return per unit of risk. A higher value indicates a product has achieved better historical risk-adjusted performance.
Up Market Capture	- The ratio of average portfolio performance over the designated benchmark during periods of positive returns. A higher value indicates better product performance.

AndCo compiled this report for the sole use of the client for which it was prepared. AndCo is responsible for evaluating the performance results of the Total Fund along with the investment advisors by comparing their performance with indices and other related peer universe data that is deemed appropriate. AndCo uses the results from this evaluation to make observations and recommendations to the client.

AndCo uses time-weighted calculations which are founded on standards recommended by the CFA Institute. The calculations and values shown are based on information that is received from custodians. AndCo analyzes transactions as indicated on the custodian statements and reviews the custodial market values of the portfolio. As a result, this provides AndCo with a reasonable basis that the investment information presented is free from material misstatement. This methodology of evaluating and measuring performance provides AndCo with a practical foundation for our observations and recommendations. Nothing came to our attention that would cause AndCo to believe that the information presented is significantly misstated.

This performance report is based on data obtained by the client's custodian(s), investment fund administrator, or other sources believed to be reliable. While these sources are believed to be reliable, the data providers are responsible for the accuracy and completeness of their statements. Clients are encouraged to compare the records of their custodian(s) to ensure this report fairly and accurately reflects their various asset positions.

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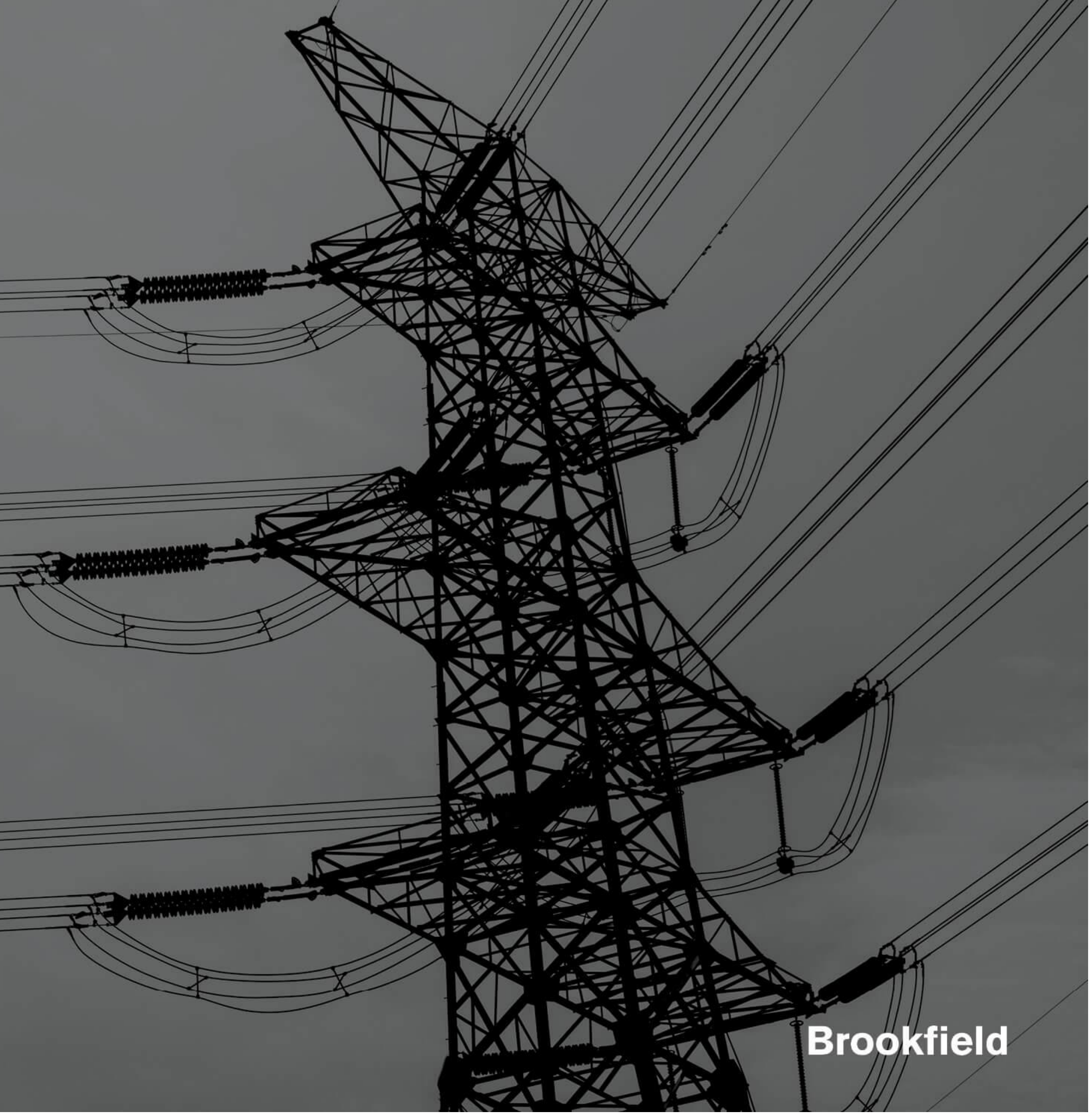
Brookfield Super-Core Infrastructure Partners ("BSIP")

INVESTOR PRESENTATION

FEBRUARY 2019



Please see Notice to Recipients on last two pages
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Brookfield

BSIP is an open-end fund targeting core infrastructure in developed markets with a focus on current yield, diversification and inflation protection[1]

Fund Offering	• Brookfield Super-Core Infrastructure Partners ("BSIP" or the "Fund") is Brookfield's primary private open-end vehicle for making long-duration core infrastructure investments • Target gross internal rate of return ("IRR") of ~9% (net IRR of ~8%) with a target average current yield of 5%–6%[2] • Brookfield committed $50 million to the Fund
Investment Strategy[3]	• Invest in a portfolio of high-quality, stable infrastructure assets • Target mature, cash-generating core infrastructure assets with predominantly contracted/regulated revenues • Pursue investments primarily in OECD markets, principally located in North America, Western Europe and Australia where Brookfield has an investment presence • Focus on the utilities, energy, power and transportation sectors where Brookfield has established operating expertise
A Leading Infrastructure Business with Experienced Leadership	• Brookfield is one of the largest global infrastructure investors and operators with $108 billion of infrastructure AUM[4] • Infrastructure group comprised of over 200 professionals and 31,000 operating employees on five continents[5] • Long history of managing and operating core infrastructure assets • BSIP's senior executive team has an average of 24 years of industry experience and 14 years with Brookfield
Attractive Market Opportunity[6]	• Systemic underinvestment in infrastructure means significant private capital needed to address global funding gap • Market activity catalyzed by strategic and infrastructure fund divestment programs • Recent government initiatives expected to create additional opportunities

Please refer to endnotes on page 22.

Brookfield's Investment Businesses

Brookfield

Brookfield invests in sectors where it believes that its in-depth operating experience gives it a competitive advantage

Infrastructure

$108 billion

AUM[1]

Transportation, Renewable Power, Utilities, Energy, Data, Sustainable Resources

Real Estate

$171 billion

AUM[1]

Office, Retail, Multifamily, Logistics, Hospitality and Other

Private Equity

$44 billion

AUM[1]

Business Services, Industrial Operations and Residential Development

Please refer to endnotes on page 22.

Brookfield is a Leading Infrastructure Manager

Brookfield Infrastructure owns and operates high-quality, long-life assets that provide essential services to the global economy

NORTH AMERICA
$44B AUM

EUROPE
$21B AUM

SOUTH AMERICA
$30B AUM

ASIA PACIFIC
$13B AUM

>200
Professionals[1]

~31,000
Operating Employees[1]

$108B
Managed AUM[2]

TRANSPORTATION
37 ports globally, ~3,900 km of toll roads and over 10,000 km of rail operations

RENEWABLE POWER
A leading producer of renewable power with 218 hydroelectric power plants, 105 wind farms, 544 solar facilities and 4 storage facilities with a total of ~17,000 MW of installed capacity

UTILITIES
Portfolio of utility assets with 2,200 km of electric transmission lines, 6.5 million electricity and gas connections and ~1.1 million smart meters installed

ENERGY
District energy systems servicing ~750 buildings, 1.8 million residential customers[3], over 22,000 km of natural gas pipelines[4] and 600 bcf of gas storage systems

DATA INFRASTRUCTURE
7,000 multi-purpose communications towers active rooftop sites, 5,000km of fibre backbone and ~40 data centers[4]

Please refer to endnotes on page 22.

Brookfield's Advantage

Brookfield

Global scale and expertise

A Leading Infrastructure Asset Manager	• Globally diverse operations with $108 billion of infrastructure assets under management[1] • Broad-based network with local presence on five continents • 115-year history of acquiring, owning and operating real assets, including infrastructure
Established Investment Process	• Disciplined underwriting standards • Track record of profitably investing and divesting significant capital through various business cycles • Extensive sourcing, execution and asset management capabilities supporting the acquisition of core assets • Conservative financing strategy
Operational Expertise	• Long history of managing and operating core infrastructure assets • Business groups with scale in the utilities, energy, power and transportation sectors • Operational expertise that Brookfield believes enhances deal sourcing, formulation of investment theses, due diligence and asset management
Experienced Leadership	• Brookfield's senior executives have an average of 31 years of industry experience and have worked together for an average of 21 years • BSIP's senior executive team has an average of 24 years of industry experience and 14 years with Brookfield • Brookfield has more than 200 infrastructure professionals globally, supported by extensive resources including senior operations professionals and development & construction, energy marketing and economic analysis groups[2]

Please refer to endnotes on page 23.

Investment Strategy

Brookfield

~9% / ~8%
TARGET IRR (GROSS / NET)[1]

5%–6%
TARGET AVERAGE CURRENT YIELD[1]

North America, Western Europe & Australia
TARGET MARKETS[3]

Lower Risk Profile[2,3]

	PRIMARY FOCUS		
ESSENTIAL INFRASTRUCTURE	Essential	Strategic	Secondary
LONG LIVED	Very long productive life	Long productive life	Limited life
GEOGRAPHY	Canada, U.S., Western Europe, Australia	Other developed countries	Emerging markets
CURRENT YIELD	60%+ current yield	<60% current yield or less stable distributions	Prolonged period prior to cash distributions
CASH FLOW PROFILE	Predominantly contracted or regulated	Partially contracted or regulated	Dependent on volume and price
OPERATIONAL MATURITY	Mature	Maturing	Under development
RESTRUCTURING REQUIREMENTS	Stable	Recapitalization	Restructuring

Lower Risk — ***Risk*** — *Higher Risk*

Please refer to endnotes on page 23

Representative Assets[1]

Brookfield

Ontario Transmission & Distribution

Regulated hydro power transmission and distribution in North America

Wind Energy Transmission Texas & Cross Sound Cable

Regulated and fully contracted transmission assets generating stable cash flows

Transelec

Leading supplier of regulated power lines in Chile

North American Hydro

Portfolio of highly contracted hydro assets located in North America

North American Wind & Solar

Portfolio of highly contracted wind and solar assets located in North America

European Wind

Well located assets with long-term contracted cash flows with inflation-escalators

DBCT

Regulated cash flows under long-term, take-or-pay contracts

PPPs

Portfolio of PPPs located in North America, the United Kingdom and Australia

Please refer to the fund-level infrastructure track record on page 20 for additional information and important disclosures. Prior performance is not indicative of future results and there can be no guarantee that the Fund will achieve comparable results or be able to avoid losses.

Please refer to endnotes on page 23.

Matrix Organization Leveraging Brookfield's Operating Groups

Brookfield

Experienced Investment Oversight

Bruce Flatt[1] *Chief Executive Officer*	**Jeff Blidner**[1] *Vice Chairman*	**Brian Kingston**[1] *Senior Managing Partner*	**Barry Blattman**[1] *Vice Chairman*	**Sam Pollock**[2] *Senior Managing Partner*	**Sachin Shah**[2] *Senior Managing Partner*

Senior Executive Team

Harry Goldgut *Vice Chairman, Infrastructure and Power*	**Eduardo Salgado** *Managing Partner*	**Michael Botha** *Managing Director*	**Felipe Ortiz** *Senior Vice President*

Sector Chief Investment Officers

RENEWABLE POWER **Julian Thomas**, *Managing Director*	**UTILITIES & DATA** **Jonathan Kelly**, *Managing Partner*	**ENERGY & TRANSPORTATION** **Brian Baker**, *Managing Partner*

Regional Investment Heads

NORTH AMERICA	SOUTH AMERICA	EUROPE	ASIA PACIFIC
Ben Vaughan, *Senior Managing Partner*	**Marcos Almeida**, *Managing Partner* **Henrique Martins**, *Managing Partner*	**Jonathan Kelly**, *Managing Partner* **Alfredo Zamarriego**, *Managing Partner*	**Stewart Upson**, *Managing Partner*
69 Investment & Asset Managers 52 Corporate Professionals	24 Investment & Asset Managers 2 Corporate Professionals	23 Investment & Asset Managers 1 Corporate Professional	15 Investment & Asset Managers 15 Corporate Professionals

Extensive Resources from Brookfield's Infrastructure Business Groups[3]

31,000 operating employees globally

~90	~50	~80	>20
Senior Operations Professionals	Development & Construction Professionals	Energy Marketing Professionals	Economic Analysis Professionals

Please refer to endnotes on page 23.

Fund Focus

Essential services supporting economic activity, which are generally capital intensive in nature, with high barriers to entry and low demand elasticity

The Fund will focus on the following asset categories:[1]

Utilities

Electricity Distribution & Transmission

Water and Wastewater

Communication Networks & Data

Energy

Midstream Networks

(Contracted/Regulated)

Power

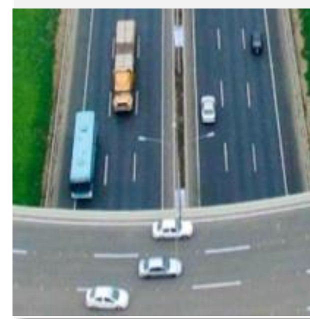
Contracted Generation

(Renewable & Conventional)

Transportation

Transportation Networks

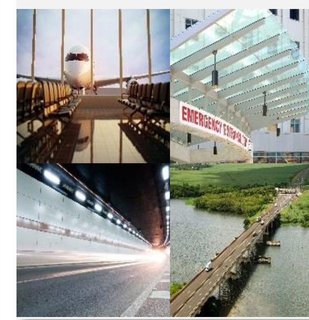
(Annuity-Based/ Regulated)



Other

Public Private Partnerships (“PPPs”)

(PPPs with Attractive Risk Mitigation Characteristics)



Please refer to endnotes on page 23.

Portfolio Benefits of BSIP[1]

Brookfield believes that investing in high-quality core infrastructure can provide several portfolio benefits including:

Significant Cash Yield

Significant percentage of returns from cash distributions vs. appreciation

Lower Volatility[2]

Regulated / contracted cash flows from mature operating assets

Diversification

Low correlation of infrastructure to other major asset classes

Inflation Protection

Inflation-linked cash flows provide natural hedge to rising liabilities

Long Duration

Long operational life of underlying assets

Please refer to endnotes on page 23.

Growing Market Opportunity[1]

Brookfield

Significant Global Funding Gap[2]

- $46 trillion in infrastructure investments required globally through 2030
- Significant share of funding gap in North America ($22 trillion) and Western Europe ($12 trillion)

Mature Private Assets Changing Hands

- Strategic sales of non-core businesses
- End-of-term asset dispositions by infrastructure funds

Recent Government Initiatives

- European Commission Investment Plan (2014)
- Australian Infrastructure Plan (2016)
- U.S. Infrastructure Plan (2017)
- Canada Infrastructure Bank (2017)

Please refer to endnotes on page 24.

Key Drivers of Deal Flow[1]

Brookfield

Drivers

Public and Private Capital Recycling

Industry Evolution

Government Budget Deficits

Sector Themes

Electricity Transmission & Distribution

- Connectivity needed for offshore wind and other alternatives
- Utilities recycling capital as sector fundamentals change

Power Generation

- High growth in renewables driven by climate initiatives
- Divestment activity in conventional generation

Water & Wastewater

- Fragmented market dominated by government utilities
- Refurbishment of pipe systems, treatment plants, tanks and other key assets

Transportation

- Aging infrastructure and general need for expansion
- Budget deficits may drive privatization activity

Oil & Gas Midstream

- Low price environment driving owners to monetize assets to invest upstream

Communications & Data

- Data consumption is increasing need for transmission technologies
- Further investments required in fiber, telecom towers and small cells

PPPs

- Re-investment needed for existing government-owned assets (availability based)
- Introduction of competition to government-owned monopolies

Please refer to endnotes on page 24.

Acquiring Core Assets

Brookfield

Brookfield's investment experience provides BSIP with what it believes are several important sourcing advantages

Preferred Partner	• The Firm's experience as an owner-operator and reputation as a trustworthy steward of essential assets positions Brookfield as a preferred partner
Operational Expertise	• Operating knowledge is expected to support tighter underwriting and pricing discipline • Ability to identify additional pockets of value that other participants may not see
Scale	• Brookfield is one of the largest global infrastructure investors • Ready access to large-scale capital enables us to execute transactions of a size that sets us apart

U.S. Site-Control Infrastructure

2018
INVESTMENT DATE

$254M
EQUITY COMMITTED

Diversified
SECTOR

50-100%
OWNERSHIP INTEREST[1]

TRANSACTION SUMMARY

- Brookfield acquired a portfolio of U.S. based long-term contracted site-control assets primarily in core wireless telecom and renewable power generation infrastructure
- The seller is a leading developer of contracted sites for the telecom and renewables sectors, among others, in the U.S.
- The investment closed in January 2019 for a total purchase price of ~$460 million

SOURCE

- The transaction was secured by Brookfield on a proprietary basis

ASSET OVERVIEW

- Portfolio of 1,293 long-term site-control assets, primarily dedicated to the telecom and renewable power sectors
  - 100% interest in 748 assets (68% telecom, 20% renewable and 12% other by revenue)
  - 49.9% interest in 545 assets (100% telecom) in partnership with Landmark's publicly listed subsidiary, 50/50 governance rights

INVESTMENT THESIS

Brookfield believes this is an attractive investment based upon the following investment characteristics:

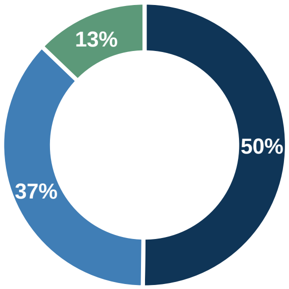
- *Stable and secure cash flow profile:* Long-term contracted revenues (26 years on average) with low re-contracting risk, high cash yield, and minimal capex requirements.
- *Inflation protection:* Contractual revenue escalators above current CPI with potential price uplift during contract renewals
- *Diversification:* Highly diversified portfolio across sectors (telecom and renewables) counterparties (over 90, mostly investment grade) and geography (spans across the U.S.) to help mitigate single asset or counterparty risk.
- *Long duration:* Combination of long-dated (58 years on average) and perpetual asset lives
- *Follow-on transactions:* Access to future pipeline of one of the largest owners and operators of infrastructure site-control assets in the U.S.[2]

Please see notes on page 24.

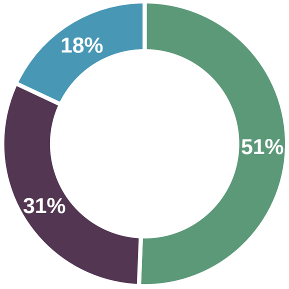
Pipeline[1]

Pipeline represents over $22 billion of acquisition opportunities as of February 2018

BY GEOGRAPHY[2]
Based on Equity Value



BY SECTOR[2]
Based on Equity Value



Illustrative Investment Opportunities

Asset	Region	Sector	Estimated Equity Investment Size	Description
Electricity Distribution	**North America**	**Utilities**	**>$2.0 billion**	• A leading distribution utility • Mature asset • Regulated cashflows
Electricity Transmission	**North America**	**Utilities**	**$0.5 billion**	• Transmission line • Operational asset • Long-term contracted cashflows
Renewable Power	**North America**	**Power**	**$0.5 billion**	• Portfolio of renewable generation • Mature assets • Long-term contracted cashflows
Energy Transmission	**North America**	**Energy**	**$0.2 billion**	• Energy pipeline • Operational asset • Long-term contracted cashflows
Electricity Distribution	**Europe**	**Utilities**	**$1.3 billion**	• A leading distribution utility • Mature asset • Regulated cashflows
Energy Transmission	**Europe**	**Energy**	**$0.4 billion**	• Natural gas transmission • Mature asset • Long-term contracted cashflows

Please refer to endnotes on page 24.

Environmental, Social and Governance (ESG) Management

Long-term sustainability is key to Brookfield, and thus effective management of ESG factors is critical to its success

Environment	• Sustainability is core to Brookfield’s operations and value creation, such as Brookfield’s renewable power businesses, which benefit from demand for low-carbon energy supply
Social	• Health & Safety Steering Committee leads a strong safety culture; Brookfield also focuses on diversity, competitive wages and inclusive hiring practices • Brookfield has adopted a Positive Work Environment Policy that aims to ensure a safe and respectful workplace environment free from any type of discrimination, violence or harassment
Governance	• High standards and a strong framework of governance policies, which includes a code of conduct and an anti-bribery and corruption policy enforced across all portfolio companies

50 TWh

of clean energy generation, replacing 25 million tons of annual emissions

90%

90% reduction in energy usage achieved by district heating & cooling system customers[1]

150,000

Hours of health and safety training provided to employees and contractors at our infrastructure portfolio companies[2]

Please refer to endnotes on page 24.

Summary of Key Terms

Brookfield

TARGET RETURNS:	Gross IRR of ~9% (Net IRR of ~8%)[1]
TARGET YIELD:	Average current yield of 5%–6%[1]
MINIMUM INVESTMENT:	$5 million
TERM:	Open-end
INVESTOR LIQUIDITY:	Quarterly (based on available liquidity)
REDEMPTION LOCKOUT PERIOD:	3 years
FEE STRUCTURE:[2]	Base management fee calculated on Net Asset Value (“NAV”) as follows: i. 0.75% < $100 million; ii. ~0.69% ≥ $100 million and < $300 million (7.5% discount); iii. ~0.64% ≥ $300 million (15% discount) ~0.25% incentive fee calculated as 5% of distributions from operations
EARLY CLOSE DISCOUNT:	10% additional early closing discount on base management fee available for three, five and seven years, based on size after initial capital contribution
ASSET VALUATION:	Quarterly
INDEPENDENT VALUATOR:	KPMG

Note: The information provided herein is presented as a summary of certain key terms of the Fund only and is qualified in its entirety by reference to the Fund’s private placement memorandum (as supplemented) and governing documents, which will be made available in the data room. Please refer to, and review carefully, such documents prior to making an investment in the Fund. The ~0.25% incentive fee presented herein is based on various assumptions made by Brookfield including, among others, the Fund achieving a 6% gross yield and a 9% gross IRR. The actual incentive fee allocation may differ from the percentage presented herein. Additional information about the assumptions used and fees presented are available upon request.

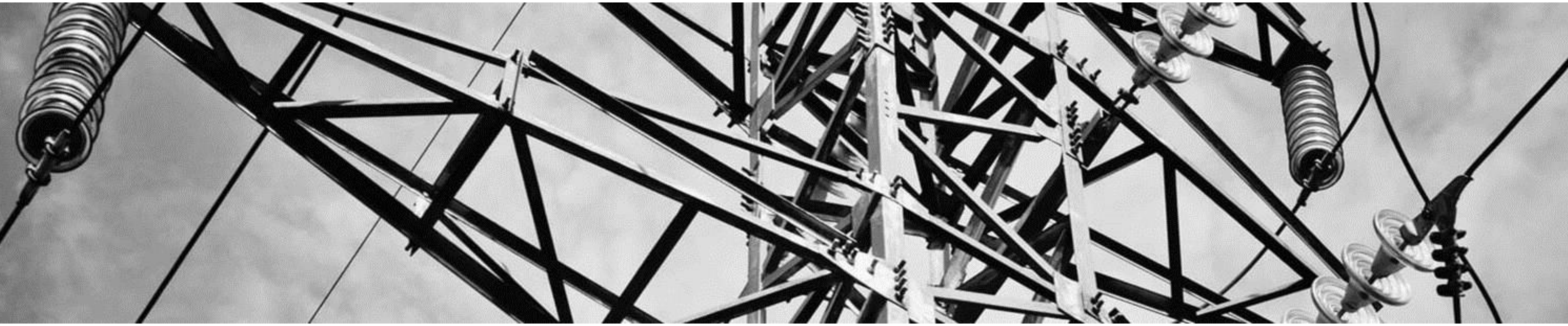
Please refer to endnotes on page 24.

BSIP – A Capital Preservation Strategy

Brookfield

BSIP Plays Key Role in Investment Portfolios[1]	• Expected to provide income, diversification and inflation protection • Capital preservation strategy with anticipated lower volatility and long-duration assets • Enhanced liquidity relative to closed-end funds
Brookfield is a Preferred Partner	• A leading global infrastructure manager • Brookfield believes its operational capabilities are a key differentiator for both underwriting and asset management
Attractive Market Opportunity[1]	• Several drivers of deal flow on the rise • Brookfield believes it is well-positioned to expand investment activity in core infrastructure

Please refer to endnotes on page 24



Appendix: Infrastructure Track Records

Infrastructure Funds Track Record

The summary set forth below includes performance for (i) all discretionary infrastructure funds managed by Brookfield Asset Management Inc. or a management affiliate thereof (collectively, "Brookfield") and (ii) all infrastructure investments made by a consortium of investors formed and managed by Brookfield (collectively, the "Infrastructure Vehicles"). The summary excludes investments made by Brookfield directly, managed accounts, joint ventures, co-investments, publicly listed issuers and investment funds for which Brookfield did not serve as the manager during the investment period. Information regarding such investments and programs is available upon request. Prior performance is not indicative of future results, and there can be no guarantee that the Fund, future funds or their investments will achieve comparable results or be able to avoid losses.

As of September 30, 2018 (US$ millions, except as noted)	**Inception Date**	**Committed Capital**	**Equity Invested**[4]	**Proceeds: Realized**[5]	**Proceeds: Unrealized**[6]	**Proceeds: Total**[7]	**Performance**[1,2,3] **: Gross IRR**	**Gross Investment Multiple**	**Net IRR**[8,9]	**Net Investment Multiple**[8,9]
Infrastructure Fund I[10]	2009	$ 2,655	$ 2,540	$ 1,447	$ 3,704	$ 5,151	14.4%	2.0x	11.4%	1.8x
Infrastructure Fund II[10]	2013	7,000	6,201	1,521	8,056	9,577	14.1%	1.5x	10.5%	1.4x
Infrastructure Fund III[10]	2016	14,000	5,467	890	6,329	7,219	19.4%	1.3x	13.5%	1.2x
Total[11]		**23,655**	**14,208**	**3,858**	**18,089**	**21,947**	**15.0%**	**1.5x**	**11.3%**	**1.4x**
Transelec[12]	2006	n/a	1,368	5,878	-	5,878	15.7%	4.3x	13.4%	3.5x
Colombia Infrastructure Fund[13]	2012	COP 732,431	COP 226,238	COP 224,752	COP 492,231	COP 716,983	23.1%	3.2x	18.5%	2.6x
Infrastructure Debt Fund U.S.[14]	2016	884	328	33	321	354	9.2%	1.1x	5.7%	1.0x
Infrastructure Debt Fund Europe[14]	2018	€ 107	€ 90	€ 3	€ 90	€ 93	–[1]	–[1]	–[1]	–[1]
Grand Total[15]		**$ 24,993**	**$ 16,117**	**$ 9,871**	**$ 18,738**	**$ 28,609**				

Certain of the funds shown above include investments different from and in addition to the representative infrastructure assets described on page 7 herein. The fund-level performance of the funds shown above reflects the performance of each fund as a whole and does not reflect the performance of any single infrastructure asset. One or more investments within a fund's portfolio may have outperformed the infrastructure assets within such portfolio. Brookfield would be happy to provide further information upon request.

Please refer to the representative assets on page 7 and corresponding endnotes for additional information related to those assets and important disclosures related thereto.

Please refer to notes on the following page.

Notes to Infrastructure Track Record

Brookfield

1) Reflects performance from initial investment date to September 30, 2018, except for Transelec which reflects performance from initial investment date to its realization on March 15, 2018. "–" refers to performance measures that are not meaningful, typically where: (a) the performance measurement date is within twelve months of acquisition or (b) where a significant portion of the asset is under development. Accordingly, such performance measures are not disclosed separately; however, they have been included in the calculation of the performance metrics for the composite sub-total. Each Infrastructure Vehicle had or has different investment objectives, targeted investment returns and yields, structures and fees than what is intended for the Fund. As a result of these differences, investment performance of the Infrastructure Vehicles is expected to differ materially from the investment performance of the Fund. For example, none of the Infrastructure Vehicles had or has an open-ended structure similar to the Fund. If such Infrastructure Vehicles had an open-ended structure, they may have been subject to additional restrictions and considerations and would have been subject to different economic terms and fees. Due to the difference between the structure of such Infrastructure Vehicles and the Fund, it is expected that there will be a difference on the types of investments considered for the Fund as well as disposition decisions and timing and, therefore, investment performance. For more information on the investment objectives, targets, structures and fees of the Infrastructure Vehicles and how they differ from the Fund, please contact Brookfield.
2) "Gross IRR" and "Gross Investment Multiple" reflect performance before fund expenses, management fees (or equivalent fees), and carried interest, which would reduce an investor's return. "Net IRR" and "Net Investment Multiple" take into account fund expenses, management fees (or equivalent fees), and carried interest. Prior performance is not indicative of future results and there can be no guarantee that funds, future funds or their respective investments will achieve comparable results or be able to avoid losses. Fund performance is in the functional currency of each fund.
3) Fund-level multiples may be adjusted for recalled capital if applicable.
4) "Equity Invested" represents the initial capital investment including short-term subscription facility drawdowns, follow-on investments, and capital expenditures as applicable.
5) "Realized Proceeds" represents any proceeds from disposition and distributions or other forms of current income and loss.
6) Values ascribed to "Unrealized Proceeds" and used in determining performance results, are based on assumptions that the manager believes are fair and reasonable under the circumstances. The actual realized returns on current unrealized investments may differ materially from the returns shown herein, as it will depend on, among other factors, future operating results, the value of the asset and market conditions at the time of dispositions, any related transactions costs and the time and manner of sale, all of which may differ from the assumptions on which the valuations contained herein are based. The material assumptions made by the manager that were applied in determining the values will be provided upon request.
7) "Total Proceeds" are before fund expenses, management fees (or equivalent fees) and carried interest.
8) "Net IRR" and "Net Investment Multiple" are calculated on a fund-level (or equivalent, as applicable) and not for any particular investor, and take into account fund expenses, management fees (or equivalent fees), and carried interest, if any, allocated to or paid by investors (including fees allocated to or paid by Brookfield and its affiliates as a limited partner (either on an actual or notional basis) based on the applicable rate per the fund's standard investor fee schedule). As a result, the "Net" performance figures set forth herein are reflective of the average fund expenses (or equivalent, as applicable), management fees (or equivalent fees), and carried interest, if any, allocated to or paid by investors (including, as set forth above, Brookfield and its affiliates as a limited partner), and therefore each particular fund investor will likely have a different, and potentially lower, performance return than those indicated under "Net" performance due to varying economic terms. The calculation in respect of any particular set of economic terms will be provided upon request.
9) "Net IRR" and "Net Investment Multiple" may take into account the effects of leverage incurred at the fund-level through the use of the subscription secured credit facility to temporarily fund some of the investments and meet working capital needs. As a result, "Net IRRs" may be higher than what they would have been without the use of such facility.
10) While Brookfield's Infrastructure Funds I, II and III are infrastructure funds focused primarily on equity investments in the infrastructure space, there are material differences in their investment objectives and target returns and yields as compared to the Fund.
11) Composite returns presented are based on funds with similar investment strategies and are calculated by aggregating total cash flows of such funds.
12) Transelec transmission represents a legacy investment in Chile's largest electricity transmission company made by Brookfield and a consortium of investors in 2006. Chile is not currently one of the Fund's Target Markets. In addition, the investment mandate for Transelec is materially different than the Fund and was made outside of a fund structure. Transelec was sold by Brookfield in March 2018.
13) The Colombia Infrastructure Fund has materially different investment objectives and target returns and yields as compared to the Fund, including the fact that Colombia is not currently one of the Fund's Target Markets.
14) Brookfield's Infrastructure Debt Fund U.S. and Infrastructure Debt Fund Europe have materially different investment objectives and target returns and yields as compared to the Fund, including that their primary investment objective is to make debt investments which is not the Fund's primary investment objective.
15) For presentation of totals, an exchange rate of 2,299.47 Colombia Pesos to 1 U.S. dollar was used for Colombia Infrastructure Fund and 1.26916 Euros to 1 U.S. dollar was used for Infrastructure Debt Fund Europe. The rates presented are the 10 year historical averages.

Endnotes

Brookfield

Page 2

1) There can be no assurance that diversification or asset allocations will be met or that the Fund will be able to implement its investment strategy or achieve its investment objectives.
2) The target returns set forth herein are for illustrative and informational purposes only and have been presented based on various assumptions made by Brookfield Asset Management Private Institutional Capital Adviser (Canada), L.P. (the "Manager") in relation to the investment strategy being pursued by BSIP, any of which may prove to be incorrect. The target returns are based on historical performance for similar investment strategies within the sector and assumptions including fund growth and capital deployment expectations for BSIP. Target gross returns do not reflect fund expenses, management fees and incentive fees, which would reduce an investor's returns. Target net returns take into account these items but do not include the effect of intermediary tax vehicles which may be established for BSIP. Due to various risks, uncertainties and changes (including changes in economic, operational, political or other circumstances) beyond the control of Brookfield, the actual performance of the Fund could differ materially from the target returns set forth herein. In addition, industry experts may disagree with the assumptions used in presenting the target returns. No assurance, representation or warranty is made by any person that the target returns will be achieved and undue reliance should not be put on them. Additional information about the assumptions used in determining the target returns and the factors that could cause actual results to differ materially from the target returns are available upon request. Prior performance is not indicative of future results and there can be no guarantee that the Fund will achieve the target returns or be able to avoid losses. Average cash yield reflects anticipated distributions after taking into account appreciation of the underlying capital invested.
3) There can be no assurance that the Fund will be able to execute on these or other similar investments or implement the investment strategy described herein.
4) "AUM" is calculated as total assets presented on a fair value basis, and at 100%, for investments that Brookfield consolidates for accounting purposes or actively manages, including investments of which Brookfield or a controlled investment vehicle is the largest shareholder or the primary operator or manager. For all other investments, AUM is presented at Brookfield's or its controlled investment vehicles', as applicable, proportionate share of the investment's total assets on a fair value basis. In addition, infrastructure AUM includes pro-forma amounts to reflect infrastructure transactions that closed between September 30, 2018 and November 16, 2018, and infrastructure transactions that have been signed but were not closed as of September 30, 2018 totaling in aggregate approximately $12 billion (i.e., a North American Residential Infrastructure business, a Western Canadian Midstream business, a U.S. Data Center business, a Brazilian Data Center Business, an Indian Toll Road asset, an Indian Gas Pipeline and a U.S. portfolio of site-control assets in telecom and renewable power). Infrastructure AUM includes that of Brookfield and its publicly traded affiliates, Brookfield Infrastructure Partners L.P. ("BIP") and Brookfield Renewable Partners L.P. ("BEP"), as well as sustainable resources investments managed by Brookfield's infrastructure group. AUM excludes public securities managed by Brookfield Investment Management Inc. ("Public Securities Group" or "PSG").
5) Headcount figures are as of December 31, 2017 and include infrastructure business professionals and operating employees of Brookfield, its publicly-traded affiliates, BIP and BEP, and related operating businesses and portfolio companies, and exclude sustainable resources employees. Infrastructure business professionals includes investment professionals, and asset management professionals, and employees in corporate functions including finance, tax, legal and investor relations.
6) Source: Brookfield internal research. The information provided herein reflects Brookfield's perspectives and beliefs. Investors should consult with their advisors prior to making an investment in any fund, including a Brookfield-sponsored fund. Please refer to the Notice to Recipients for additional information related to Brookfield's internal research.

Page 3

1) "AUM" is calculated as total assets presented on a fair value basis, and at 100%, for investments that Brookfield consolidates for accounting purposes or actively manages, including investments of which Brookfield or a controlled investment vehicle is the largest shareholder or the primary operator or manager. For all other investments, AUM is presented at Brookfield's or its controlled investment vehicles', as applicable, proportionate share of the investment's total assets on a fair value basis. In addition, infrastructure AUM includes pro-forma amounts to reflect infrastructure transactions that closed between September 30, 2018 and November 16, 2018, and infrastructure transactions that have been signed but were not closed as of September 30, 2018 closed totaling in aggregate approximately $12 billion (i.e., a North American Residential Infrastructure business, a Western Canadian Midstream business, a U.S. Data Center business, a Brazilian Data Center Business, an Indian Toll Road asset, an Indian Gas Pipeline and a U.S. portfolio of site-control assets in telecom and renewable power). Infrastructure AUM includes that of Brookfield and its publicly traded affiliates, BIP and BEP, as well as sustainable resources investments managed by Brookfield's infrastructure group. AUM excludes public securities managed by PSG.

Page 4

1) Headcount figures are as of December 31, 2017 and include infrastructure business professionals and operating employees of Brookfield, its publicly-traded affiliates, BIP and BEP, and related operating businesses and portfolio companies, and exclude sustainable resources employees. Infrastructure business professionals includes investment professionals, and asset management professionals, and employees in corporate functions including finance, tax, legal and investor relations.
2) "AUM" is calculated as total assets presented on a fair value basis, and at 100%, for investments that Brookfield consolidates for accounting purposes or actively manages, including investments of which Brookfield or a controlled investment vehicle is the largest shareholder or the primary operator or manager. For all other investments, AUM is presented at Brookfield's or its controlled investment vehicles', as applicable, proportionate share of the investment's total assets on a fair value basis. In addition, infrastructure AUM includes pro-forma amounts to reflect infrastructure transactions that closed between September 30, 2018 and November 16, 2018, and infrastructure transactions that have been signed but were not closed as of September 30, 2018 closed totaling in aggregate approximately $12 billion (i.e., a North American Residential Infrastructure business, a Western Canadian Midstream business, a U.S. Data Center business, a Brazilian Data Center Business, an Indian Toll Road asset, an Indian Gas Pipeline and a U.S. portfolio of site-control assets in telecom and renewable power). Infrastructure AUM includes that of Brookfield and its publicly traded affiliates, BIP and BEP, as well as sustainable resources investments managed by Brookfield's infrastructure group. AUM excludes public securities managed by PSG.
3) Figures reflect inclusion of transaction closed subsequent to September 30, 2018.
4) Figures for residential customers reflects inclusion of transactions not yet closed as of September 30, 2018, but for which there exists definitive, binding agreements to complete the transactions subject to customary closing conditions. There can be no assurance that Brookfield will successfully execute on these transactions.

Endnotes

Brookfield

Page 5

1) "AUM" is calculated as total assets presented on a fair value basis, and at 100%, for investments that Brookfield consolidates for accounting purposes or actively manages, including investments of which Brookfield or a controlled investment vehicle is the largest shareholder or the primary operator or manager. For all other investments, AUM is presented at Brookfield's or its controlled investment vehicles', as applicable, proportionate share of the investment's total assets on a fair value basis. In addition, infrastructure AUM includes pro-forma amounts to reflect infrastructure transactions that closed between September 30, 2018 and November 16, 2018, and infrastructure transactions that have been signed but were not closed as of September 30, 2018 closed totaling in aggregate approximately $12 billion (i.e., a North American Residential Infrastructure business, a Western Canadian Midstream business, a U.S. Data Center business, a Brazilian Data Center Business, an Indian Toll Road asset, an Indian Gas Pipeline and a U.S. portfolio of site-control assets in telecom and renewable power). Infrastructure AUM includes that of Brookfield and its publicly traded affiliates, BIP and BEP, as well as sustainable resources investments managed by Brookfield's infrastructure group. AUM excludes public securities managed by PSG.
2) Headcount figures are as of December 31, 2017 and includes Brookfield Infrastructure business professionals, investment professionals, and asset management professionals, and employees in corporate functions including finance, tax, legal and investor relations.

Page 6

1) The target returns set forth herein are for illustrative and informational purposes only and have been presented based on various assumptions made the Manager in relation to the investment strategy being pursued by the Fund, any of which may prove to be incorrect. The target returns are based on historical performance for similar investment strategies within the sector and assumptions including fund growth and capital deployment expectations for BSIP. Target gross returns do not reflect fund expenses, management fees and incentive fees, which would reduce an investor's returns. Target net returns take into account these items but do not include the effect of intermediary tax vehicles which may be established for BSIP. Due to various risks, uncertainties and changes (including changes in economic, operational, political or other circumstances) beyond the control of the Manager, the actual performance of the Fund could differ materially from the target returns set forth herein. In addition, industry experts may disagree with the assumptions used in presenting the target returns. No assurance, representation or warranty is made by any person that the target returns will be achieved and undue reliance should not be put on them. Additional information about the assumptions used in determining the target returns and the factors that could cause actual results to differ materially from the target returns are available upon request. Prior performance is not indicative of future results and there can be no guarantee that the Fund will achieve the target returns or be able to avoid losses. Average cash yield reflects anticipated distributions after taking into account appreciation of the underlying capital invested.
2) Source: Brookfield internal research. Please see the Notice to Recipients for further details on Brookfield internal research. For illustrative purposes only. Actual results will vary based on, among other things, the specific characteristics of the asset, transaction structure and geography. An investment in infrastructure involves substantial risks and there is no assurance that any such investments will achieve comparable returns or avoid losses. Average cash yield reflects anticipated distributions taking into account appreciation.
3) There can be no assurance that the Fund will be able to execute on these or other similar investments or implement the investment strategy described herein. These examples are provided for illustrative purposes only. Investing in BSIP includes significant risks, please refer to the Fund's PPM for additional detail.

Page 7

1) The following transactions represent historical transactions entered into by Brookfield are illustrative of the types of investments that may be entered into by the Fund. Although Brookfield acquired such assets through its other strategies and investment vehicles, the assets are generally characteristic of BSIP's target investment profile as illustrated on page 9. It should not be assumed that any investment made by the Fund will be profitable or will equal the performance (or share the characteristics) of the investments listed herein or that the Fund will be able to make investments similar to the historic investments listed herein (because of economic conditions, the availability of investment opportunities or otherwise). Prior performance is not indicative of future results and there can be no guarantee that the Fund will achieve comparable results or be able to avoid losses. For greater certainty, it is not intended that the Fund invest in any of the investments listed herein.

Page 8

1) Investment Committee member – each of their consent is required prior to any investment being made.
2) Investment Committee member – Sam Pollock's consent is required for investments in sectors outside of the renewable power sector. Sachin Shah's consent is required for renewable power investments.
3) Headcount figures are as of December 31, 2017 and include infrastructure business professionals and operating employees of Brookfield, its publicly-traded affiliates, BIP and BEP, and related operating businesses and portfolio companies, and exclude sustainable resources employees. Infrastructure business professionals includes investment professionals, and asset management professionals, and employees in corporate functions including finance, tax, legal and investor relations.

Page 9

1) There can be no assurance that the Fund will be able to execute on these or other similar investments or implement the investment strategy described herein. These examples are provided for illustrative purposes only. Investing in the Fund includes significant risks. Please see the Fund's confidential offering memorandum for additional disclosure.

Page 10

1) Source: Brookfield internal research. The information provided herein reflects Brookfield's perspectives and beliefs. Investors should consult with their advisors prior to making an investment in any fund, including a Brookfield-sponsored fund. Please refer to the Notice to Recipients for additional information related to Brookfield's internal research.
2) Relative to unregulated or uncontracted assets.

Endnotes

Brookfield

Page 11
1) Source: Brookfield internal research. The information provided herein reflects Brookfield's perspectives and beliefs. Investors should consult with their advisors prior to making an investment in any fund, including a Brookfield-sponsored fund. Please refer to the Notice to Recipients for additional information related to Brookfield's internal research.
2) Source: Bridging Global Infrastructure Gaps (McKinsey Global Institute – June 2016).

Page 12
1) Source: Brookfield internal research. The information provided herein reflects Brookfield's perspectives and beliefs. Investors should consult with their advisors prior to making an investment in any fund, including a Brookfield-sponsored fund. Please refer to the Notice to Recipients for additional information related to Brookfield's internal research.

Page 14
1) Ownership percentage varies by asset. Brookfield will own 100.0% interest in 748 assets (68% telecom, 20% renewable and 12% other by revenue) ("Wholly Owned"). Brookfield will own 49.99% interest in 545 assets (100% telecom) in partnership with Landmark's publicly listed subsidiary, 50/50 governance rights ("Jointly Owned")
2) There can be no assurance that the Fund will be able to execute on any such potential pipeline transactions.

Page 15
1) The information presented herein is intended to be illustrative of the types of deals the Fund is considering. There can be no assurance that the Fund will be able to execute on these or other similar investments or implement the investment strategy described herein. These examples are provided for illustrative purposes only. The Estimated Equity Investment Size values are estimates and subject to change. The Estimated Equity Investment Size values are presented in USD, and potential investments not denominated in USD have been converted from local currency to USD as of February 6, 2019. Brookfield made various estimations and assumptions about events that have not occurred, any which may vary materially from actual results. In addition, industry experts may disagree with the estimations and assumptions used in preparing the information herein. Note that pipeline is not meant to be exhaustive.
2) There can be no guarantee that comparable diversifications or asset allocations will be met or that BSIP will be able to implement its investment strategy or achieve its investment objectives.

Page 16
1) Across the Enwave U.S. and Canada Businesses. As compared to a conventional system.
2) For the year ended December 31, 2017.

Page 17
1) The target returns set forth herein are for illustrative and informational purposes only and have been presented based on various assumptions made the Manager in relation to the investment strategy being pursued by the Fund, any of which may prove to be incorrect. The target returns are based on historical performance for similar investment strategies within the sector and assumptions including fund growth and capital deployment expectations for BSIP. Target gross returns do not reflect fund expenses, management fees and incentive fees, which would reduce an investor's returns. Target net returns take into account these items but do not include the effect of intermediary tax vehicles which may be established for BSIP. Due to various risks, uncertainties and changes (including changes in economic, operational, political or other circumstances) beyond the control of the Manager, the actual performance of the Fund could differ materially from the target returns set forth herein. In addition, industry experts may disagree with the assumptions used in presenting the target returns. No assurance, representation or warranty is made by any person that the target returns will be achieved and undue reliance should not be put on them. Additional information about the assumptions used in determining the target returns and the factors that could cause actual results to differ materially from the target returns are available upon request. Prior performance is not indicative of future results and there can be no guarantee that the Fund will achieve the target returns or be able to avoid losses. Average cash yield reflects anticipated distributions after taking into account appreciation of the underlying capital invested.
2) An investor's base management fee will be calculated on a blended basis with aggregate NAV subject to the various base management fee rates at each of the thresholds noted herein. For purposes on references to "NAV" mean "Indirect NAV" as defined in the PPM. The Discount on Early Closing Investments is available only for investors designated as "early close investors" by the general partner of BSIP and will be applied on top of an investor's blended base management fee.

Page 18
1) Source: Brookfield internal research. The information provided herein reflects Brookfield's perspectives and beliefs. Investors should consult with their advisors prior to making an investment in any fund, including a Brookfield-sponsored fund. Please refer to the Notice to Recipients for additional information related to Brookfield's internal research.

Notice to Recipients

Brookfield

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An investment in the Fund is speculative and involves significant risks, including loss of the entire investment. There can be no guarantees that the Fund's investment objective will be achieved or that the investment will be successful. Interests in the Fund will be illiquid as there will be no secondary market for such interests and none is expected to develop. There will be restrictions on transferring interests in the Fund. The Fund's investments may be leveraged and its investment performance may be volatile. An investment in the Fund is suitable only for sophisticated investors and requires the financial ability and willingness to accept the risks and lack of liquidity that are characteristic of an investment in the Fund described herein. Any references to "committed capital" include all pledged commitments.

Except where otherwise indicated herein, the information provided herein is based on matters as they exist as of the date of preparation and not as of any future date, is subject to change, and will not be updated or otherwise revised to reflect information that subsequently becomes available or circumstances existing or changes occurring after the date hereof.

Certain information contained herein constitutes "forward-looking statements," which can be identified by the use of forward-looking terminology such as "may," "will," "should," "expect," "anticipate," "target," "project," "estimate," "intend," "continue," or "believe," or the negative thereof or other variations thereon or comparable terminology. Due to various risks and uncertainties, actual events or results or the actual performance of the Fund may differ materially from those reflected or contemplated in such forward-looking statements. Although Brookfield believes that the anticipated future results, performance or achievements for the Fund expressed or implied by the forward-looking statements and information are based upon reasonable assumptions and expectations in light of the information presently available, the reader should not place undue reliance on forward-looking statements and information because they involve known and unknown risks, uncertainties and other factors which may cause the actual results, performance or achievements of the Fund to differ materially from anticipated future results, performance or achievement expressed or implied by such forward-looking statements and information. Factors that could cause actual results to differ materially from those set forward in the forward-looking statements or information include but are not limited to: general economic conditions, changes in interest and exchange rates, availability of equity and debt financing and risks particular to underlying portfolio company investments.

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This document includes Brookfield's estimates of the projected performance of certain unrealized investments currently held by other Brookfield-managed funds, including any predecessor funds, and investment programs managed by Brookfield. Although this information is forward-looking by its nature and actual results are likely to differ, perhaps materially, from these estimates, Brookfield believes that the estimates have a reasonable basis.`

Notice to Recipients (cont'd)

Brookfield

Any changes to assumptions could have a material impact on projections and actual returns. Actual returns on unrealized investments will depend on, among other factors, future operating results, the value of the assets and market conditions at the time of disposition, legal and contractual restrictions on transfer that may limit liquidity, any related transaction costs and the timing and manner of sale, all of which may differ from the assumptions and circumstances on which the valuations used in the prior performance data contained herein are based. Accordingly, the actual realized returns on unrealized investments may differ materially from the returns indicated herein. Brookfield will provide more detailed information on the material factors or assumptions that were applied in making the projections and the material factors that could cause actual results to differ materially from the projections to any investor on request.

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Unless otherwise noted, all references to "$" or "Dollars" are to U.S. Dollars. All representations are made as of December 31, 2018, unless otherwise expressly indicated, and no duty to update said representations is assumed.

Infrastructure Investments Fund

Port Orange Police Pension

February 21, 2019

As of September 30, 2018 and in U.S. dollar terms unless otherwise specified

ALTs by J.P.Morgan Asset Management

Infrastructure Investments Fund ("IIF") — Open Ended Core / Core+ Infrastructure Portfolio

Seeks to deliver stable cash yield, diversification, attractive risk-adjusted returns and inflation protection through market cycles

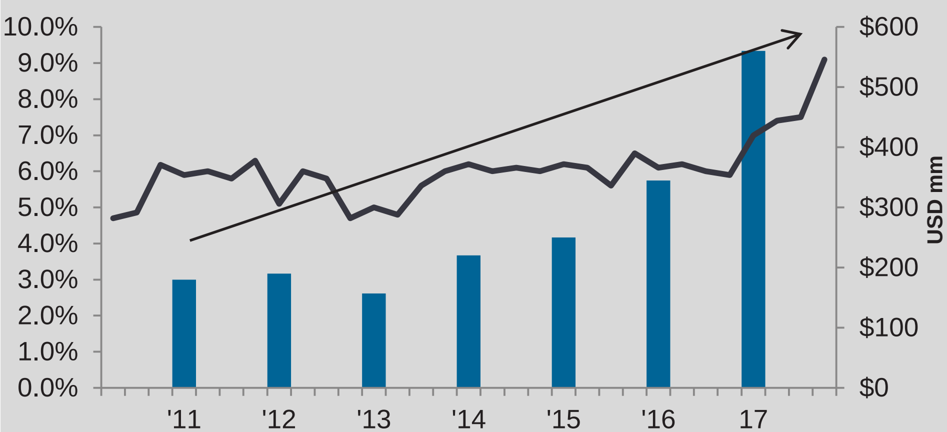
Strategy Overview

- Founded in 2006
- Open-ended perpetual structure
- Core/core+ infrastructure. Focus on Diversification, Inflation Protection & Yield ("D.I.Y.")
- 17 portfolio companies (326 assets) in 25 countries & 11 subsectors
- Focus on middle market platform investing – *Average transaction size since 2013 of approx. USD 75mm*
- **Queue currently expected to be 3 months or less from next quarter end close**

Summary of Key Strategy Elements

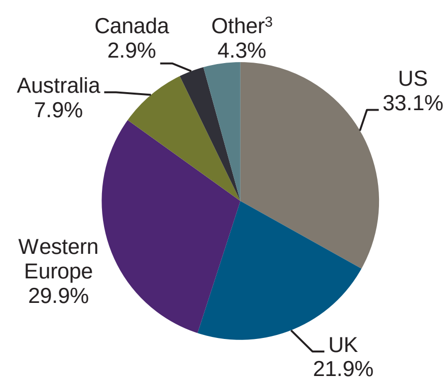
Net Asset Value	USD 9.8 billion
Gross Asset Value	USD 21.4 billion (54% loan-to-value)
Target Return	8-12% net[1]
Target Cash Yield	5-7% on NAV[1] (cash distributions)
Sector Focus	Distribution/Regulated, GDP-Sensitive & Contracted/Power
Geographic Focus	U.S., Canada, Western Europe, and other OECD

Cash Yield and Distributions as Foundation of Total Return[2]

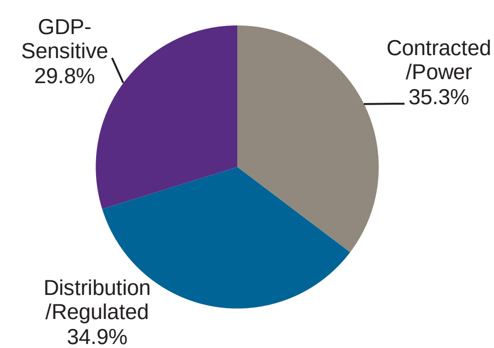


Existing Portfolio

Geographic Breakdown:



Sector Breakdown:



All data as of September 30, 2018. The advisor seeks to achieve the stated objectives. There can be no guarantee the objectives will be met. [1] The target returns and cash yield are for illustrative purposes only and are subject to significant limitations. An investor should not expect to achieve actual returns or yield similar to the targets shown above. Please see the complete Target Return disclosure at the conclusion of the presentation for more information on the risks and limitation of target returns.
[2] Yield on NAV, the trailing one-year cash yields were calculated using individual quarterly cash yields. [3] Other includes Japan, Chile and South Africa.

ALTs by J.P.Morgan Asset Management

IIF Strategy – Aligned to Investor Outcomes Since 2006

Governance	▪ Control positions in middle market platforms and companies ▪ Independent boards of directors aligned to investor outcomes and local communities ▪ Consistent risk management frameworks across sectors and geographies
Alignment	▪ Diversified, risk-adjusted returns aid in protecting against rising rates and inflation ▪ 9.1% last 12 months cash yield; 6.7% p.a. for last 5 years ▪ 84% regulated or contracted[1]; 1.5% p.a. local currency total return volatility over 5 years
Transparency	▪ Consistent and detailed fund and asset level reporting ▪ Access to investment professionals and dedicated research team ▪ ESG leadership: annual reporting; UNPRI "A" rated; GRESB 2nd rank of peer group[2]

All data as of September 30, 2018 unless otherwise specified.
The manager seeks to achieve the stated objectives. There can be no guarantee the objectives will be met

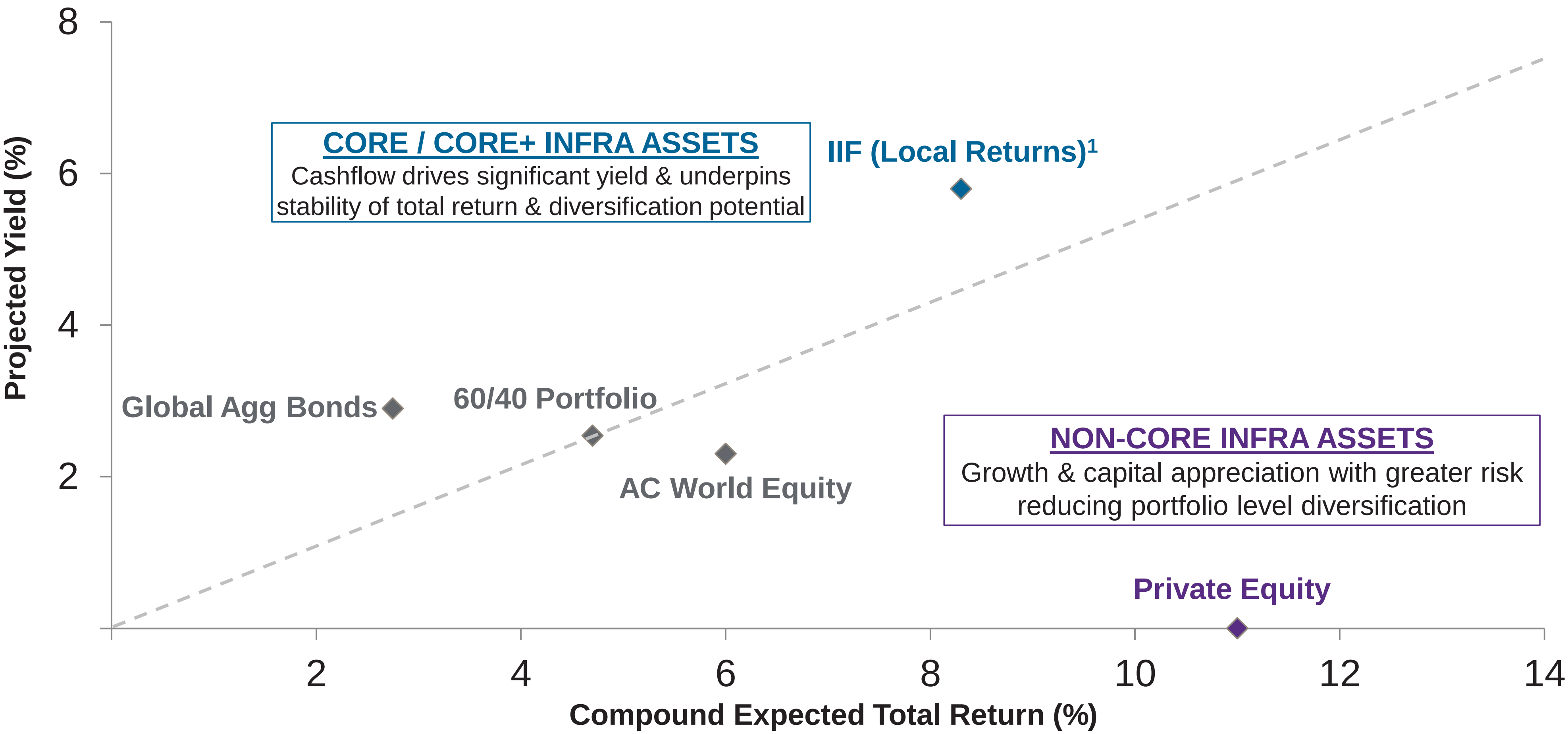
[1] 2019 estimated portfolio company revenues as of June 2018

[2] JPMAM is the signatory to The United Nations-supported Principles for Responsible Investment (UNPRI). PRI Ratings: 0% = E, 0-25% = D, 25-50%= C, 50-75 = B, 75-95% = A, 95% and above= A+. JPMAM Direct Infrastructure rating as of July 2018. For more on UNPRI's annual assessment, please see additional information at the conclusion of the presentation. JPMAM is a member of The Global Real Estate Sustainability Benchmark (GRESB) for Infrastructure. The Infrastructure Assessment assesses ESG performance at the asset and fund level for infrastructure fund managers, operators and assets, and investors that invest directly in infrastructure. 18 peers.

Core Infrastructure is a Foundational Element of a Balanced Portfolio

Consistent Cash Generation Provides a Lower Expected Risk Profile

Illustrative Expected Yield vs. Total Return Profile



Source: J.P. Morgan Asset Management ("JPMAM") & JPMAM Long-term Capital Market Assumptions, version 2018

The projections in the chart above are based on JPMAM proprietary long term capital markets assumptions (10 – 15 years) for risk, return and correlations between major asset classes. The assumptions are presented for illustrative purposes only. They must not be used, or relied upon, to make investment decisions. The assumptions are not meant to be a representation of, nor should they be interpreted as JPMAM investment recommendations. *Note that these asset class assumptions are passive-only; they do not consider the impact of active management.* [1]IIF in local currency assumptions based on a 10.3% Fund level weighted average discount rate as of 6/30/2018 net of fees, tax and expenses. The target returns are for illustrative purposes only and are subject to significant limitations.

ALTs by J.P.Morgan Asset Management

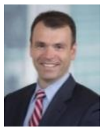
Dedicated IIG Team Supported by 78 Independent Directors Across the Portfolio


Paul Ryan, MD
Portfolio Manager
New York


Matthew LeBlanc, MD
Chief Investment Officer
New York


Brian Goodwin, MD
Head of Portfolio Asset Management
New York

Investment & Asset Management Team — *New York*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Managing Director
Power, Utilities & Energy


Andrew Kapp
Managing Director
Power, Utilities & Energy


Hai-Gi Li
Managing Director
Transportation/ Utilities


Ed Wu
Executive Director
Portfolio Asset Mgmt


Kathleen Lawler
Executive Director
Power, Utilities & Energy


Dan Mitaro
Executive Director
Power, Utilities & Energy

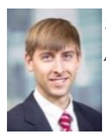

Robin Lutz
Vice President
Transportation/ Power


Marko Josipovic
Vice President
Transportation, Power & Utilities


Preston Scherer
Vice President
Power, Utilities & Energy


Georgina Yea
Associate


Clara Lequin
Associate


Stephen Leh
Associate


Michael Karp
Associate

Investment & Asset Management Team — *London*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Managing Director
Power, Utilities & Energy


Rob Hardy
Managing Director
Transportation


Mark Walters
Managing Director
Power, Utilities and Energy


Sara Sulaiman
Executive Director
Power, Utilities & Energy


Mark Scarsella
Executive Director
Transportation/ Utilities


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Farah Meroue
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Sneha Sinha
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Michelle van Ryneveld
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Chris Simard
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Cassie Winn
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Ebru Sert
Executive Director
New York


Karthik Narayan
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Manura Miriyagalla, ED
Esther Cho, VP
Joe Kim, VP
April Lee, VP
Adnan Afzal, Associate
Simon Choi, Associate

Client Service

Melissa Grant, VP
Jonathan Schwartz, VP
Frances Huang, Associate
Penn Sednaoui, Analyst

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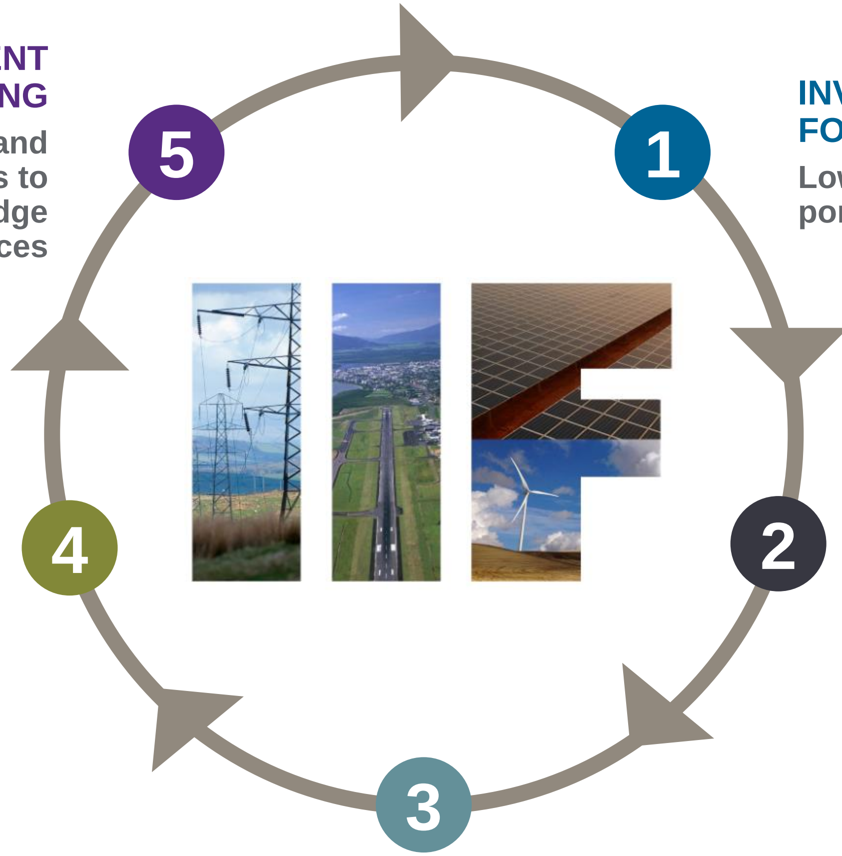
Source: JPMAM, as of January 2019.

Active Asset Management for Investor and Stakeholder Outcomes



1 INVEST & MANAGE FOR CLEAR OUTCOMES

Lower risk, core / core+ portfolio focused on D.I.Y.

2 CONTROL POSITIONS & GOVERNANCE

IIF manages boards and portfolio company executives to drive investor outcomes, demonstrate industry leadership, and deliver community improvements

3 UTILIZE CONSISTENT FRAMEWORKS

IIF streamlines processes, actively manages costs and focuses on best practices and ESG across the portfolio

4 STRATEGIC PLATFORMS DRIVE ACCRETIVE GROWTH

Increased access to and capacity for deals and platform company growth diversifies the portfolio and protects the downside with increased cash yield

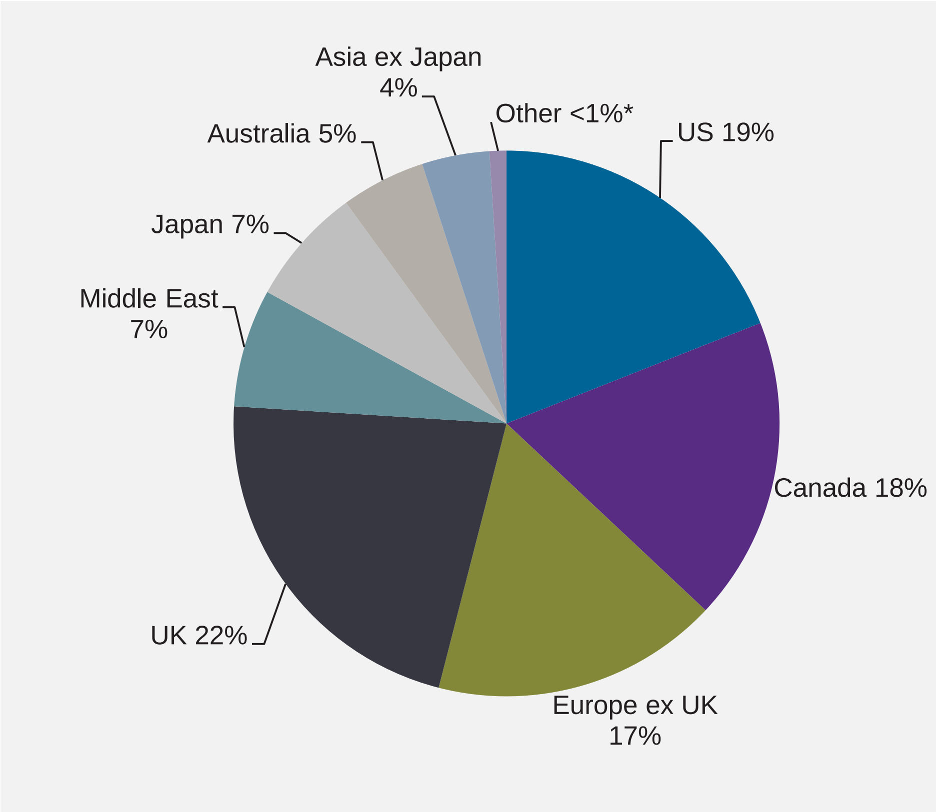
5 PROVIDE TRANSPARENT REPORTING

Quarterly progress and performance updates to investors includes knowledge sharing of best practices

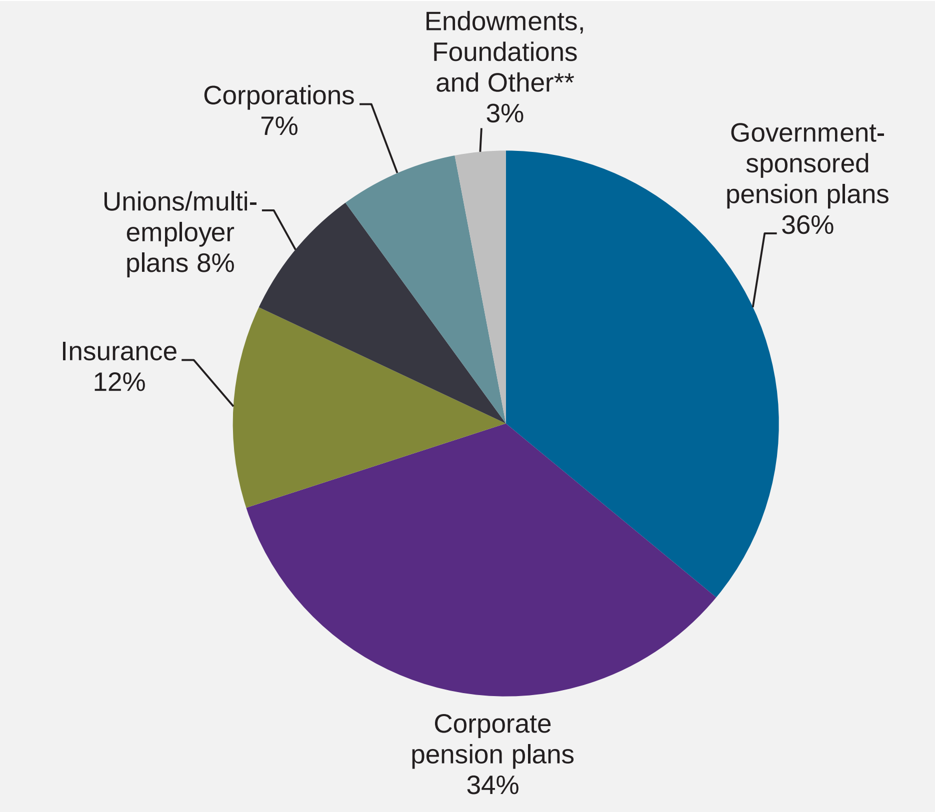
A Diversified Long Term Investor Base Built Over More Than a Decade

IIF has commitments from 346 client accounts across 24 countries

Commitments By Geography



Commitments by Investor Type

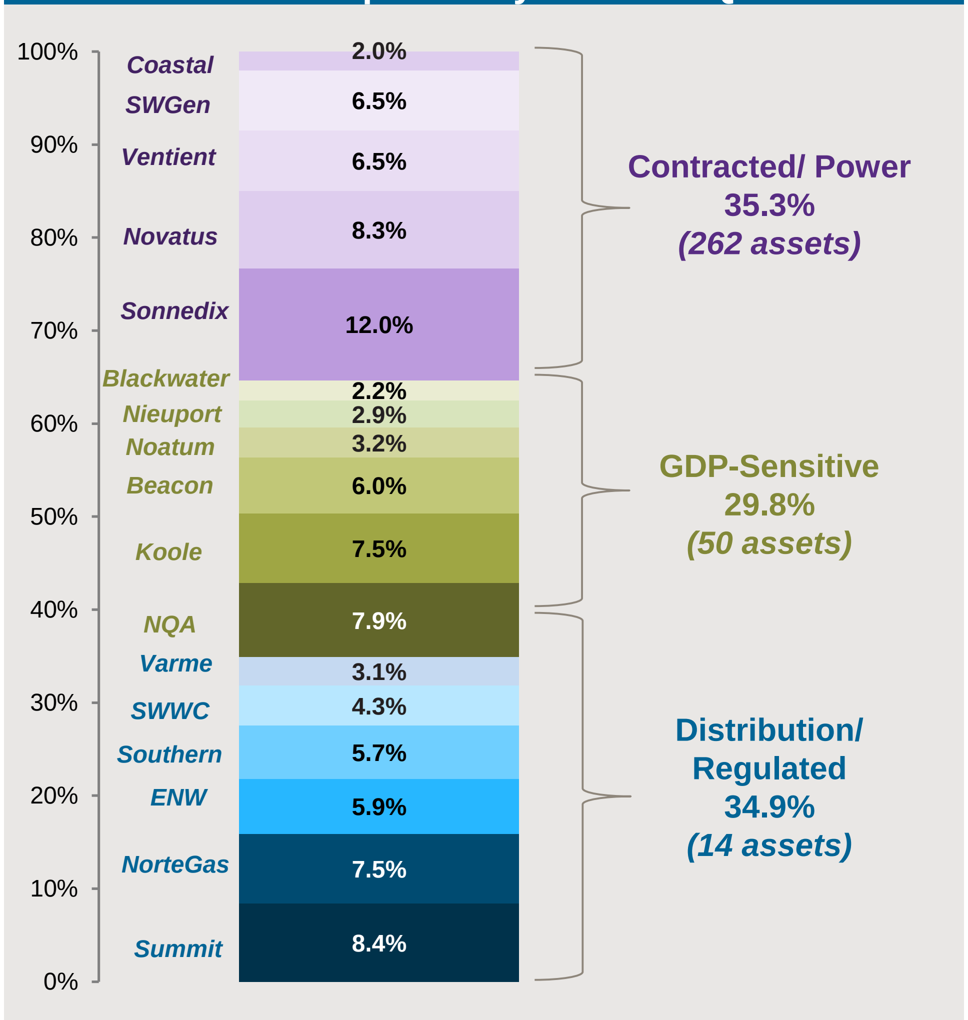


Based on committed client accounts as of September 30, 2018 (some client commitments made across multiple underlying accounts). *Other includes Cayman Islands and Thailand. ** Other includes fund of funds, international organizations and High Net Worth Investors. Based on J.P. Morgan estimate of client classification.

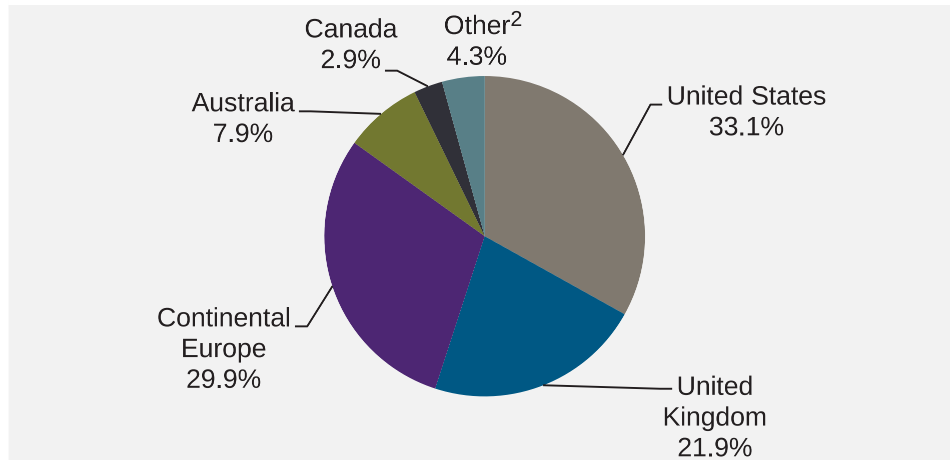
A Diversified Portfolio: USD 9.8 Billion; 17 Portfolio Companies, 326 Underlying Assets

No single asset comprises more than 7.5% of the portfolio

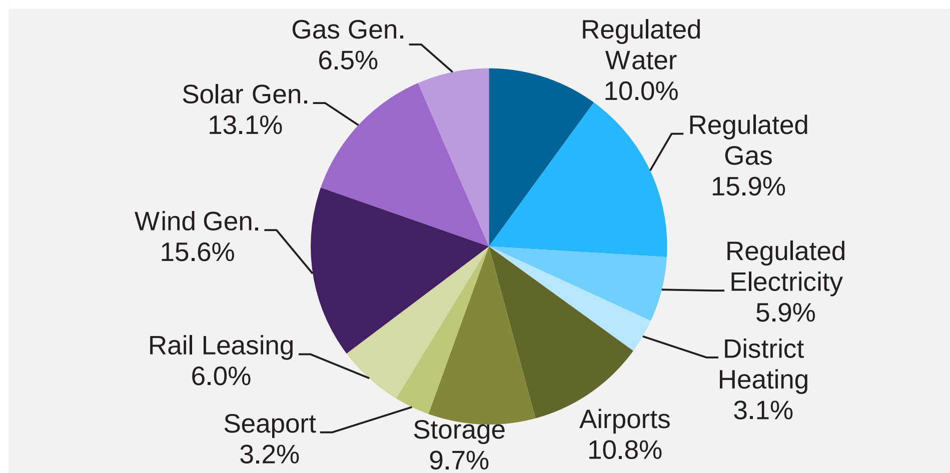
Portfolio Companies by % NAV – Q3 2018



Diversity By Country (NAV%) – Q3 2018



Diversity By Subsector (NAV%) – Q3 2018



Data as of September 30, 2018.

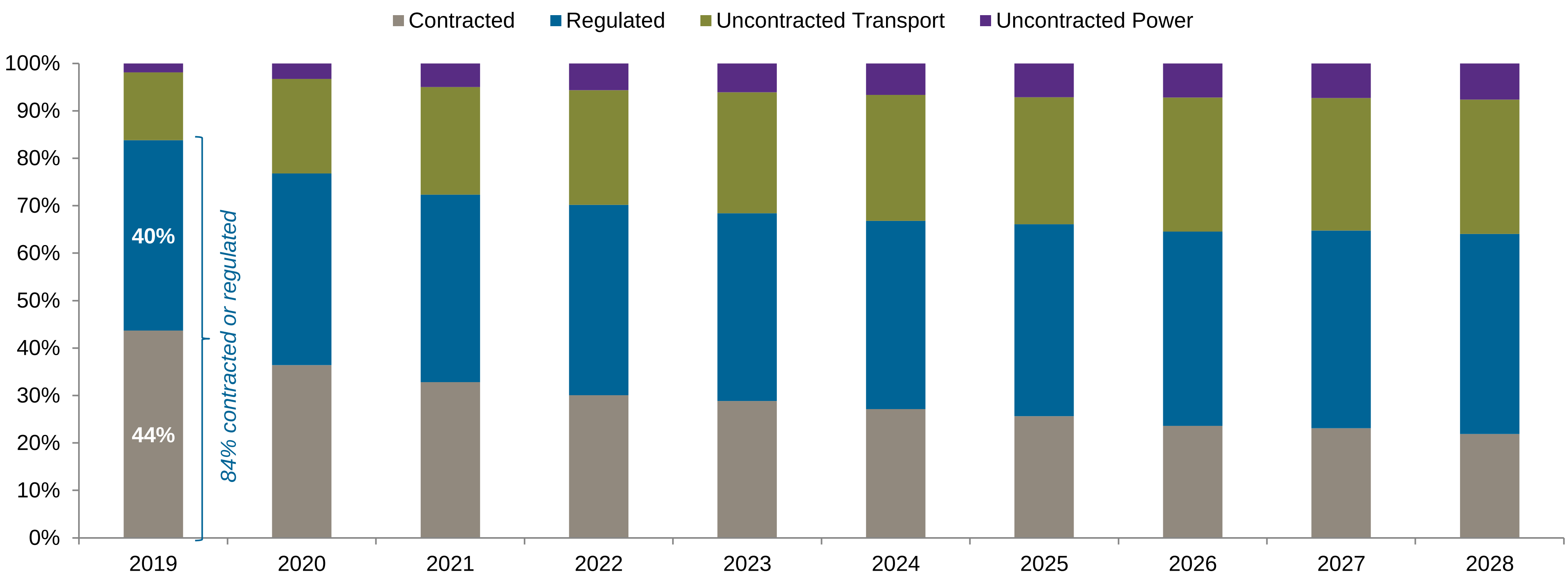
[2] Other includes Chile, Japan, and South Africa. Diversification does not guarantee investment returns and does not eliminate the risk of loss.

Portfolio Construction Reflects Long-term Core Positioning

- **IIF's portfolio cash flows reflect its core positioning, with 84% of estimated 2019 portfolio company revenues coming from contracts/regulated sources**
- **Even if no re-contracting or new investments, nearly two-thirds of estimated revenues are expected to be contracted or regulated after 10 years**
- **Team is focused on growing IIF's platforms, with the intention of retaining its emphasis on regulated/contracted assets**

IIF Pro Forma Revenues By Type

(existing portfolio, with no new acquisitions, divestitures, or re-contracting)



Source: JPMAM, data as of June 2018. Opinions, estimates, forecasts, and projections are based current market conditions, constitute our judgment and are subject to change without notice. There can be no guarantee they will be met. Past performance is no guarantee of comparable future results.

Current Portfolio – 17 Companies with 326 Underlying Assets[1]

Distribution/Regulated (35%)

Electricity North West
Regulated electric distribution network providing power to 6mm people in northwest England

Nortegas
Gas distribution system in Northern Spain

Southern Water Services
Regulated water and wastewater network in southeast England serving over 7mm customers

SouthWest Water Company ✓
Regulated water and wastewater utilities serving over 500,000 people in Alabama, California, Oregon, South Carolina, and Texas

Summit Utilities ✓
Regulated natural gas distribution utilities with operations in Arkansas, Colorado, Maine, Missouri and Oklahoma

Värmevärden ✓
Swedish District Heating company

Contracted/Power (35%)

Coastal Winds
North American wind portfolio in New York, Oregon, and Texas totalling 354 MW's

Ventient Energy ✓
Diversified portfolio of 37 contracted wind farms totaling 800 MW of capacity throughout the UK

Novatus Energy ✓
More than 1200 MW of wind and solar projects in the U.S.

Sonnedix Power Holdings ✓
Interest in global solar developer, owner and operator

Southwest Generation[2] ✓
IPP owning 1,600 MW of gas fired generation facilities in Arizona, California, Colorado, and New Mexico

GDP-Sensitive (30%)

Beacon Rail ✓
Leading European passenger and freight rail leasing platform

Blackwater Midstream ✓
Liquid bulk storage business with over 2.4 million barrels of capacity located in Louisiana and Georgia

Koole Terminals ✓
European liquid bulk storage company with c.3.6m cubic meter capacity focused on the Amsterdam-Rotterdam-Antwerp region

Nieuport Aviation
Located in Toronto, Canada's fastest growing airport, serving 2.8mm passengers in 2017

Noatum Ports
Leading operator in the Iberian Peninsula comprised of 18 terminals in Spain, along with Marmedsa, the largest Iberian port services group

North Queensland Airports
Cairns and Mackay Airports, serving the Great Barrier Reef and Bowen Basin, one of the largest coal deposits in the world.

✓ ***Denotes Platform Investments***

Assets identified for future potential equity capital deployment. The companies above are shown for illustrative purposes only. Their inclusion should not be interpreted as a recommendation to buy or sell.

[1] Data as of September 30, 2018. Diversification does not guarantee investment returns and does not eliminate the risk of loss.

[2] In Q2 2018 Southwest Generation completed the integration of Pio Pico Energy Center, a 318 MW quick-start gas fire power plan location in California, to the SWGen platform.

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ESG Overview and Qualifications

The Fund incorporates core ESG principles throughout its investment and ongoing asset management processes

UN PRI
- United Nations Principles for Responsible Investing (UNPRI) signatory[1]
- "A" rating from the 2018 UN PRI annual assessment report[2]

GRESB
- Global Real Estate Sustainability Benchmark (GRESB) member[3] and Fund ranked 2nd out of 18 in its peer group of global, unlisted infrastructure funds in 2018
- 9 companies received 5 stars; 5 companies received 4 stars and 1 company received 3 stars; 3 assets were #1 in peer group and sector leaders[4]

SDG
- We believe 72% of the IIF portfolio provides exposure to the United Nations Sustainable Development Goals

ESG Workshops
- Since the last IC Meeting, six ESG workshops were held with portfolio company management teams

Governance
- National Association of Corporate Directors or Institute of Directors membership across all portfolio company appointees
- Hosted Chairpersons, Director and CEO forums in addition to sector-focused forums (example: Renewables Summit)

IIF ESG Initiatives

– **Information Protection and Cybersecurity**

– **Supply Chain Management**

– **Resilience and Disaster Preparedness**

– **Stakeholder and Community Engagement**

[1] JPMAM is the signatory to UNPRI. [2] For more information regarding the PRI assessment methodology or to view the 2018 JPMAM RI Transparency Report, please go to www.unpri.org.The 2018 JPMAM assessment Report is available upon request. [3]JPMAM is a member of GRESB Infrastructure. [4]15 of 17 portfolio companies completed the 2018 GRESB submission. Coastal Winds and NorteGas did not participate; NorteGas did not participate because ownership was less than six months of the submission period. The portfolio company submissions includes separate submissions by Noatum Ports and Noatum Maritime.

IIF Has Demonstrated Strong Risk-Adjusted Returns

IIF has demonstrated robust returns with less volatility than other asset classes since inception

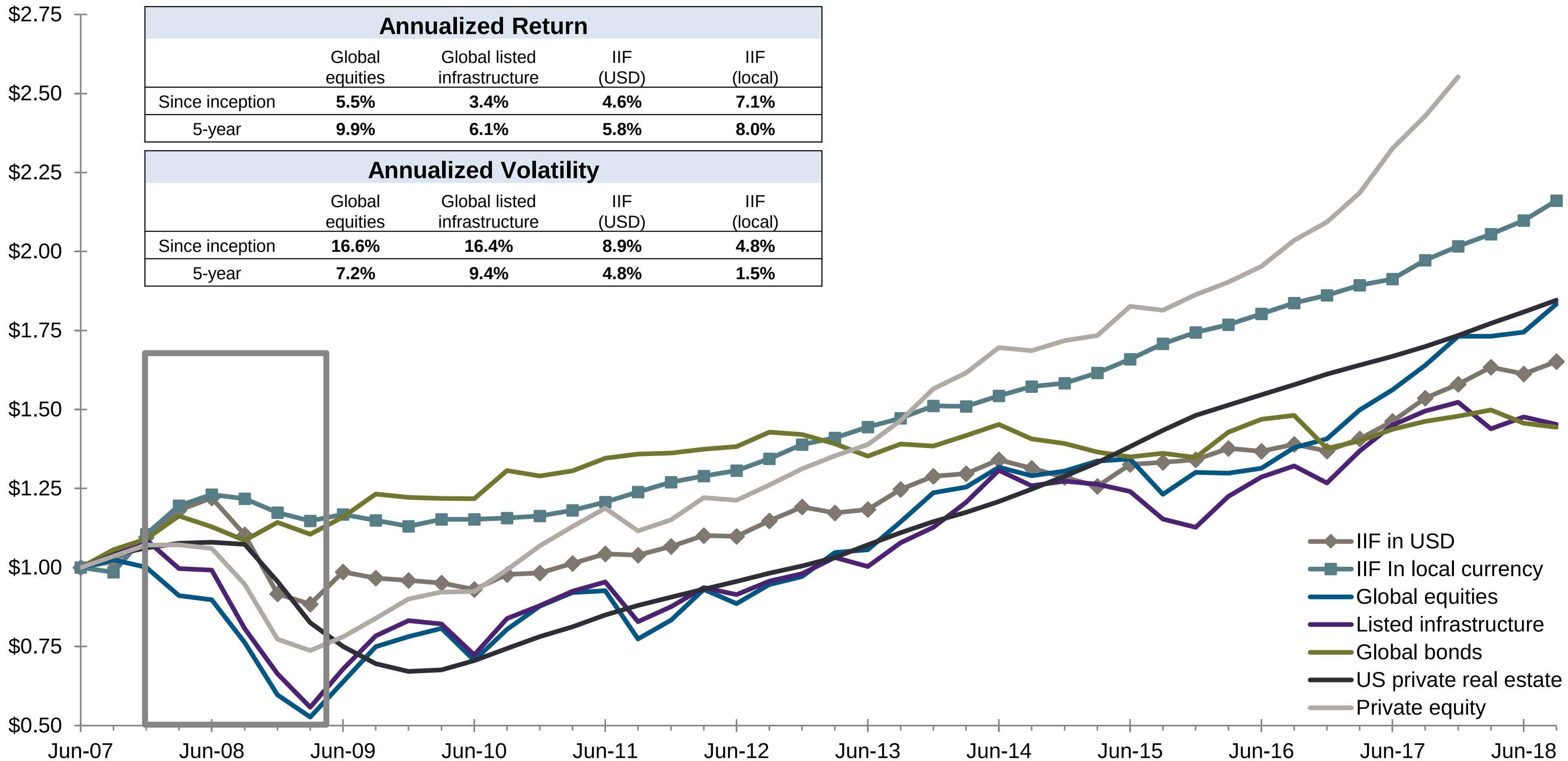
Evolution of USD 1 Invested in Q2 2007 to Q3 2018

Annualized Return

	Global equities	Global listed infrastructure	IIF (USD)	IIF (local)
Since inception	**5.5%**	**3.4%**	**4.6%**	**7.1%**
5-year	**9.9%**	**6.1%**	**5.8%**	**8.0%**

Annualized Volatility

	Global equities	Global listed infrastructure	IIF (USD)	IIF (local)
Since inception	**16.6%**	**16.4%**	**8.9%**	**4.8%**
5-year	**7.2%**	**9.4%**	**4.8%**	**1.5%**



Source: Bloomberg, NCREIF, J.P.Morgan Asset Management. Global equities, global listed infrastructure, global bonds, and US real estate are measured by MSCI World, S&P Global Infrastructure Index, Barclays Global Agg, and NFI-ODCE, respectively. Private Equity from 15 year quarterly Burgiss data, and available through Q2-2018. All series are based on gross of fees total return indices, and denominated in USD; please refer to slide 10 for returns for IIF net of fees and full disclosure regarding fee calculations. Data as of Q3-2018. Past performance is not indicative of future results. Indices do not include fees or operating expenses and are not available for actual investment.

IIF Historical Return & Yield Summary

- **Net local currency returns represent significant premium to CPI +5.5% and risk-free rate +6.3% over 5 years[1]**
- **The portfolio is currently being held at a 10.3% weighted average equity discount rate which reflects the long-term business plans of the underlying portfolio companies[2]**

Returns for Periods Ended September 30, 2018[4]

	One Year[3]	Three Year[3]	Five Year[3]	Ten Year[3]	*Five Year Volatility*
Gross Asset Performance (Local Currency)	10.5%	9.1%	8.9%	6.9%	
Taxes[4]	(0.5%)	(0.3%)	(0.4%)	(0.5%)	
Fund Expenses[4]	(0.5%)	(0.6%)	(0.5%)	(0.5%)	
Management Fees[4]	(0.9%)	(0.9%)	(1.0%)	(1.3%)	
Net Total Return Local Currency	**8.5%**	**7.1%**	**6.9%**	**4.6%**	***1.5%***
F/X Impact[5]	*(1.9%)*	*(0.7%)*	*(2.1%)*	*(1.6%)*	
Net Total USD Return	**6.5%**	**6.4%**	**4.7%**	**2.8%**	***5.0%***
Cash Yield (Distributions / NAV)	**9.1%**	**7.2%**	**6.7%**	**5.7%**	***1.2%***

Past performance is no guarantee of future results. Returns include the re-investment of income.

[1] Global weighted average CPI and risk-free rate across IIF's currency exposures (US, UK, Eurozone, Canada, Australia, and Sweden)

[2] Represents the weighted average discount rate for the portfolio as of September 30, 2018.

[3] Performance numbers represent a composite return of the combined fund investor vehicles (FIVs) in existence as of September 30, 2018. Specific FIV and investor returns are shown on the quarterly investor statements.

[4] Includes Fund-level income and expenses; taxes mainly relate to deferred taxes on net appreciation of the Fund

[5] FX gains and losses at the underlying portfolio companies are included in FX and represent an impact on the One Year, Three Year, Five Year, Ten Year returns of 0.1%, -0.1%, 0.0% and 0.0% respectively.

Select Acquisitions — 2017 to 2018 YTD

From 2017 to 2018 YTD, IIF deployed over USD 4.3 bn of capital through 35 transactions of which 30 were platform investments – *average transaction size since 2013 of approximately USD 75mm*

Pio Pico Energy Center

- 323 MW simple cycle gas fired peaking facility located near San Diego, California
- Acquisition: February 2017
- Ownership: 100%

Värmevärden

- Leading private company operating District Heating infrastructure in Sweden
- Acquisition: March 2017
- Ownership: 100%

Beacon Rail Leasing

- Rolling stock rail leasing company which provides passenger and freight leasing services in the UK and Europe
- Acquisition: April 2017
- Ownership: 100%

NorteGas Energía Distribución

- Second largest gas distribution network in Spain
- Acquisition: July 2017
- Ownership: 59%

Mesquite Power

- 625 MW natural gas combined cycle power plant located near Phoenix, Arizona
- Acquisition: July 2018
- Ownership: 100%

Blackwater Midstream

- Liquid bulk storage business with over 2.4 million barrels of capacity in Louisiana and Georgia
- Acquisition: July 2018
- Ownership: 100%

As of September 30, 2018.

These examples are included solely to illustrate the investment process and strategies which have been utilized by the manager. It should not be assumed that investments within the portfolio have or will perform in a similar manner to the investment above. Please note that this investment is not necessarily representative of future investments that the manager will make. There can be no guarantee of future success.

Execution of Strategic Platform Investing

Through YTD 2018, 79% of net invested capital was deployed through IIF's platform investments[1]

Beacon Rail Leasing	In Q1, Beacon closed on the acquisition of two nine-year old locomotives which will operate in the UK. In Q2, Beacon closed on the acquisition of eight new Vectron locomotives which will operate in Sweden and Norway.
North Queensland Airports	In Q1, IIF closed on the acquisition of an additional stake in NQA, increasing its ownership from 49.9% to 66.1%.
Southwest Generation	IIF acquired the 55% interest in SWGen managed by Hastings Fund Management, which brings IIF's ownership of SWGen to 100%. In Q2, SWGen completed the integration of Pio Pico Energy Center into SWGen. In July, SWGen closed on the acquisition of 100% of Mesquite Power.
Koole Terminals	In July, Koole reached an agreement to acquire 100% of Odfjell Terminal Rotterdam, the second largest liquid bulk storage terminal in the Port of Rotterdam in the Netherlands. The transaction closed in Q3.
Sonnedix Power Holding	In Q1, Sonnedix agreed to acquire an 11MW portfolio in Italy. In Q2, Sonnedix closed on the acquisition of the 138MW Meseta solar PV project. Meseta is a large-scale development project located in the Santiago region of Chile.
SouthWest Water Company	In Q2, SWWC closed on the acquisition of Double Oak Water Reclamation, a wastewater utility located south of Birmingham, Alabama that provides services to approximately 5,700 equivalent dwelling units. The acquisition increases SWWC's existing Alabama customer base and provides diversification to the overall company.

As of September 30, 2018.

These examples are included solely to illustrate the investment process and strategies which have been utilized by the manager. It should not be assumed that investments within the portfolio have or will perform in a similar manner to the investment above. Please note that this investment is not necessarily representative of future investments that the manager will make. There can be no guarantee of future success.

Infrastructure Outlook and IIF Key Takeaways

All Weather Investment	■ **Challenging yield environment and increased volatility in other asset classes** ■ **Rising rates and inflation are both expected to be positive for IIF** ■ **Core infrastructure's expected "D.I.Y." benefits as powerful as ever**
Long-Term Foundational Allocation	■ **~USD 9.8bn portfolio with 17 portfolio companies and 326 assets** ■ **Attractive risk adjusted returns versus other major assets classes** ■ **Immediate access to target 5-7% cash[1] yield once capital is called; no J-curve**
Established Strategic Investor	■ **Better value in the middle market, avoiding high priced trophy auctions** ■ **~USD 7.1bn raised and deployed in the last 5 years** ■ **Estimated new investment queue of 3 months or less from next quarter end close**

Past performance is no guarantee of future results. The target returns and yield are for illustrative purposes only and are subject to significant limitations. An investor should not expect to achieve actual returns or yield similar to the targets shown above. Please see the complete Target Return disclosure at the conclusion of the presentation for more information on the risks and limitation of target returns. Data as of September 30, 2018.

Appendix

Key Terms & Conditions

Summary of Key Terms & Conditions	
Currency	■ Denominated in USD; Unhedged and select currency hedged Fund Vehicles available[1]
Target Return	■ 8-12% net[2]
Target Cash Yield	■ 5-7% on NAV[2] (Cash distributions)
Sector Focus	■ Distribution/Regulated, GDP-Sensitive & Contracted/Power
Geographic Focus	■ U.S., Canada, Western Europe, and other OECD
Distributions	■ Quarterly. *Can be received as cash or reinvested*
Repurchases	■ Semi-annual on best efforts basis with 4-year soft lock ■ Repurchase requests made prior to the fourth anniversary of the final drawdown of an Investor's Commitment subject to a 4% repurchase discount
Minimum Commitment	■ USD 10 million; Can be waived at investment advisor's discretion
Management Fees (On NAV)	■ <USD 100mm: *100bps* ■ USD 100mm to USD 300mm: *90bps* ■ USD 300mm: *80bps*
Incentive Fee	■ 15% over 7% return hurdle (incentive fee calculation excludes the impact of F/X) ■ Cap of 13.5% return; No catch-up
Reporting	■ Snapshot: ~30 days after quarter end ■ Client Statement: ~37 days after quarter end ■ Quarterly Report: ~60 days after quarter end ■ Annual Report: ~90 days after year end

Note: Please refer to the PPM for additional information.

[1] Please refer to the PPM for important additional risks, disclosures and information.
[2] The target returns and yield are for illustrative purposes only and are subject to significant limitations. An investor should not expect to achieve actual returns or yield similar to the targets shown above. Please see the complete Target Return disclosure at the conclusion of the presentation for more information on the risks and limitation of target returns.

IIF Currency Hedging Program — *Summary*

- On October 1, 2018, IIF established an optional currency hedging program with USD 1.6 bln from 41 investors
- While we believe the Fund's long-term investment horizon alleviates the impact of currency movements over-time, certain investors have sought a 'within the Fund' currency hedge to reduce short-term currency volatility
- Hedged Fund Investor Vehicles ("HFIVs") are offered as parallel vehicles to certain existing un-hedged FIVs, subject to certain tax, regulatory and legal considerations where there was a *sufficient level* of investor interest during the initial election period (i.e., there is not currently hedging options for every FIV)

Summary of IIF Currency Hedging Program

HFIVs Currently Available	▪ IIF Australian 1 Trust, IIF LP, IIF Canadian 1 LP, IIF Cayman 1 Ltd, IIF UK 1 LP & IIF ERISA LP
Currencies Offered	▪ AUD, EUR, GBP, JPY, SEK & USD currently
Hedging Strategy	▪ Anticipate rolling 3 month forwards; directly hedge portfolio company reporting currencies
Fees	▪ JPM will not charge any additional fees for managing the program
Estimated Costs	▪ Anticipate ongoing operational costs to be 8–13bps[1] p.a. dependent on program scale ▪ Additional interest cost of use of credit facility to cover F/X mark-to-market ("MTM") (if necessary) will be allocated to the applicable Hedging Investors ▪ F/X forward market pricing also results in a benefit or cost. Depends on market conditions and currencies being hedged and evolves over time as the result of relative interest rates
F/X Settlement	▪ Settled with use of the Fund's credit facility and then repaid by Hedging Investors ▪ Fund distributions held back (if necessary) to recover F/X MTM ▪ Ability to redeem units or call capital above commitment amount from the hedged investor to cover MTM of the hedge
Election (Existing Investors)	▪ Annual election anticipated May 31 for every July 1 ▪ Ability to partially hedge and move into and out of HFIV
Third Party Administrator	▪ Chatham Financial

1. Assumes program size of USD 1.6bn – USD 2.5bn, costs will be higher if interest is more muted.

Please refer to the PPM for important additional risks, disclosures and information.

As at January 2019.

IIF's Values

Integrity

We uphold the highest standards of professional behavior and ethics. We seek to earn and maintain the trust of our stakeholders and teammates by consistently demonstrating and valuing honesty, transparency and fairness.

Accountability

We invest the retirement funds of tens of millions of families in assets that employ thousands of employees and serve millions of customers, and we recognize and accept our responsibility to our stakeholders. We are accountable for the safety, sustainability and resilience of our operations, communities and the environment. As owners and partners, we are also accountable to one another as we strive for continuous improvement and the achievement of collective results.

Inclusion

We value diversity of opinion and are committed to hiring, developing, retaining and promoting diverse and talented team members. We encourage open and honest dialogue, healthy debate and respectful challenge to consensus opinion. We strive to work collaboratively, communicate clearly, listen effectively and solicit and deliver feedback frequently.

Leadership

We are driven, results-oriented and resilient. We are committed to disciplined and efficient decision-making, long-term sustainability and innovative solutions. Through clarity and certainty, we build strong relationships and exercise dynamic and adaptable leadership to achieve appropriate outcomes for all stakeholders.

Portfolio Company Boards are an Extension of the Infrastructure Investments Group

Sector knowledge, expertise & networks of these board members are critical to the effective management of portfolio companies and sourcing new strategic platform investments

Distribution/Regulated Board Members (39 Total)

Randy Daniels
SouthWest Water Company, Blackwater Midstream; U.S.
Former New York Secretary of State from 2001-2005

Kathy Alexander
Summit Utilities
U.S.
Extensive experience in utilities and security sectors

Susan Howard
Southern Water Services
UK
Extensive experience in law, water and other infrastructure

Wendy Barnes
Southern Water Services
UK
Extensive experience in utilities and security sectors

Conrado Navarro
NorteGas
Spain
25+ yrs of gas distribution and operational experience

Karen Plessinger
SouthWest Water Company, Sonnedix; U.S.
22+ yrs energy finance and private equity experience

Peter Kind
SouthWest Water Company
U.S.
30+ yrs utility and power investment banking experience

Contracted/Power Assets Board Members (15 Total)

Bob Foster
Southwest Generation
U.S.
40+ yrs in government, energy, and power

Petros Kitsos
Sonnedix Power Holdings
U.S.
22+ yrs in aerospace, defense & diversified industrials

Leanne Bell
Ventient Energy, Southwest Generation; U.S.
35+ yrs experience investment banking

Lindsay Brace-Martinez
Novatus Energy
U.S.
Inv. experience in sustainability, natural resources

Steen Stavnsbo
Sonnedix, Ventient Energy
UK
25+ yrs experience global wind energy industry

Mikael Kramer
Ventient Energy, Värmevärden
UK
30+ yrs energy experience

Barry Welch
Novatus, Southwest Generation; U.S.
Former CEO of Atlantic Power Corporation

Anne Cleary
Southwest Generation
U.S.
30+ years experience in the electrical utility space

GDP-Sensitive Board Members (24 Total)

Keith Howard
Beacon Rail Leasing
UK
20+ yrs in rolling stock owning companies

Ross Rolfe
North Queensland Airports
Australia
CEO of Infigen Energy and former CEO of Alinta Energy

Chris Ward
Nieuport Aviation
U.S.
30+ years experience, Port Authority of NY and NJ

Jane Bird
Nieuport Aviation
Canada
20+ yrs in infrastructure project management

Diane Smith-Gander
North Queensland Airports
Australia
Former management consultant

Henk Rottinghuis
Koole Terminals
Netherlands
30+ yrs experience in the shipping industry

Source: JPMAM, as of December 2018.

Risk and Disclosures

Supplementary Information

The Target Return and Target Cash Yield have been established by J.P. Morgan Investment Management Inc. ("J.P. Morgan") based on its assumptions and calculations using data available to it and in light of current market conditions and available investment opportunities and is subject to the risks set forth herein and as set forth more fully in the current Private Placement Memorandum of the Infrastructure Investments Fund ("The Memorandum"). The Target Returns and Target Cash Yield are for illustrative purposes only and are subject to significant limitations. An investor should not expect to achieve actual returns similar to the Target Returns and Target Cash Yield shown above. Because of the inherent limitations of the Target Returns or Target Cash Yield, potential investors should not rely on them when making a decision on whether or not to invest in the strategy. The Target Returns and Target Cash Yield cannot account for the impact that economic, market, and other factors may have on the implementation of an actual investment program. Unlike actual performance, the Target Returns and Target Cash Yield do not reflect actual trading, liquidity constraints, fees, expenses, and other factors that could impact the future returns of the strategy. The manager's ability to achieve the target returns is subject to risk factors over which the Investment Advisor may have no or limited control. There can be no assurance that the Fund will achieve its investment objective, the Target Return, the Target Cash Yield or any other objectives. The return achieved may be more or less than the Target Return and/or Target Cash Yield. The data supporting the Target Returns and Target Cash Yield is on file with J.P. Morgan and is available for inspection upon request.

Investing in infrastructure assets or debt associated with infrastructure involve a variety of risks, not all of which can be foreseen or quantified, and which include, among others: the burdens of ownership of infrastructure; local, national and international economic conditions; the supply and demand for services from and access to infrastructure; the financial condition of users and suppliers of infrastructure assets; risks related to construction, regulatory requirements, labor actions, health and safety matters, government contracts, operating and technical needs, capital expenditures, demand and user conflicts, bypass attempts, strategic assets, changes in interest rates and the availability of funds which may render the purchase, sale or refinancing of infrastructure assets difficult or impracticable; changes in environmental laws and regulations, investments in other funds, troubled infrastructure assets and planning laws and other governmental rules; changes in energy prices; negative developments in the economy that may depress travel activity; force majeure acts, terrorist events, under-insured or uninsurable losses; and other factors which are beyond the reasonable control of the Fund or the Investment Adviser. Many of these factors could cause fluctuations in usage, expenses and revenues, causing the value of the Investments to decline and negatively affecting the Fund's returns.
Information contained in this Booklet, except where otherwise indicated, solely represents J.P. Morgan's views based on available information and current market conditions. The views expressed herein may change at any time based on new information, changing conditions or revised analyses.

The deduction of an advisory fee reduces an investor's return. Actual account performance will vary on individual portfolio security selection and the applicable fee schedule. Fees are available upon request.

The UNPRI assessment methodology (10 assessed modules) and assessment report together aim to achieve three objectives set by the PRI Advisory Council (Facilitate learning and development; Identify areas for further improvement; and Facilitate dialogue between asset owners and investment managers) on responsible investment activities and capabilities. JPMAM Direct Infrastructure asset class was ranked with a number of firms in the United Nations Principal for Responsible Investment, which JPM is a signature. The 2017 JPMAM assessment Report is available upon request.

Risks Associated with Investing in the Strategy:
Please consult the Memorandum for other key risk factors associated with investments in the Fund.

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Risk and Disclosures (cont'd)

An investment in the funds involves a number of risks. For a description of the risk factors associated with an investment in a fund, please refer to the section discussing risk factors in the offering memorandum (available upon request). Shares of the funds are not deposits, obligations of, or endorsed or guaranteed by, JPMorgan Chase Bank, NA or any other bank and are not insured by the FDIC, the Federal Reserve Board or any other government agency. Any forecasts, figures, opinions, statements of financial market trends or investment techniques and strategies expressed are those of J.P. Morgan Asset Management, unless otherwise stated, as of the date of issuance. They are considered to be reliable at the time of production, but no warranty as to the accuracy and reliability or completeness in respect of any error or omission is accepted, and may be subject to change without reference or notification to you. Investments in Alternative Investment Funds (AIFs) involves a high degree of risks, including the possible loss of the original amount invested. The value of investments and the income from them may fluctuate in accordance with market conditions and taxation agreements. Changes in exchange rates may have an adverse effect on the value, price or income of the products or underlying investment. Both past performance and yields are not reliable indicators of current and future results. There is no guarantee that any forecast will come to pass. Any investment decision should be based solely on the basis of any applicable local offering documents such as the prospectus, annual report, semi-annual report, private placement or offering memorandum. For further information, any questions and for copies of the offering material you can contact your usual J.P. Morgan Asset Management representative. Any reproduction, retransmission, dissemination or other unauthorized use of this document or the information contained herein by any person or entity without the express prior written consent of J.P. Morgan Asset Management is strictly prohibited.

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CITY OF PORT ORANGE
(PLAN SPONSOR)
POLICE PENSION FUND

Investment Policy Statement

I. PURPOSE OF INVESTMENT POLICY STATEMENT

The Pension Board of Trustees (Board) maintains that an important determinant of future investment returns is the expression and periodic review of the City of Port Orange Police Pension Fund (the Plan) investment objectives. To that end, the Board has adopted this statement of Investment Policy and directs that it apply to all assets under their control.

In fulfilling their fiduciary responsibility, as named fiduciaries, the Board recognizes that the retirement system is an essential vehicle for providing income benefits to retired participants or their beneficiaries. The Board also recognizes that the obligations of the Plan are long-term and that investment policy should be made with a view toward performance and return over a number of years. The general investment objective is to obtain a reasonable total rate of return - defined as interest and dividend income plus realized and unrealized capital gains or losses - commensurate with the Prudent Investor Rule and any other applicable ordinances and statutes.

Reasonable consistency of return and protection of assets against the inroads of inflation are paramount. However, interest rate fluctuations and volatility of securities markets make it necessary to judge results within the context of several years rather than over short periods of five years or less.

The Board will employ investment professionals to oversee and invest the assets of the Plan. Within the parameters allowed in this document and their agreements with the Board, the investment management professionals shall have investment discretion over their mandates, including security selection, sector weightings and investment style.

The Board, in performing their investment duties, shall comply with the fiduciary standards set forth in Employee Retirement Income Security Act of 1974 (ERISA) at 29 U.S.C. s. 1104(a) (1) (A) – (C). In case of conflict with other provisions of law authorizing investments, the investment and fiduciary standards set forth in this section shall prevail.

II. TARGET ALLOCATIONS

In order to provide for a diversified portfolio, the Board has engaged investment professional(s) to manage and administer the fund. The investment manager(s) are responsible for the assets and allocation of their mandate only and may be provided an addendum to this policy with their specific performance objectives and investment criteria. The Board has established the following asset allocation targets for the total fund:

Asset Class	Target	Range	Benchmark Index
Domestic Equity	45% ~~50%~~	40% - 50% ~~45% - 50%~~	Russell 3000
International Equity	15%	10% - 20%	MSCI AC World ex USA
Total Equities	**60%**	**55% - 65%**	
Domestic Fixed Income	20%	15% - 25%	Barclays Aggregate
Global Fixed Income*	5%	0% - 10%	Barclays Multiverse
Total Fixed Income	**25%**	**20% - 30%**	
Core Real Estate*	10%	5% - 15%	NCREIF ODCE (EW)
Core Infrastructure**	5%	0% - 10%	CPI +4%
Total Alternatives*	**~~10%~~ 15%**	**~~5% - 10%~~ 10% - 20%**	

**Allocation/Benchmark will default to Domestic Fixed Income if these portfolios are not funded. Targets and ranges above are based on market value of total Plan assets.*

*** Allocation/Benchmark will default to 50% Domestic Equity / 50% Domestic Fixed Income if these portfolios are not funded. Targets and ranges above are based on market value of total Plan assets.*

The Board will monitor the aggregate asset allocation of the portfolio, and will rebalance to the target asset allocation based on market conditions. If at the end of any calendar quarter, the allocation of an asset class falls outside of its allowable range, barring extenuating circumstances such as pending cash flows or allocation levels viewed as temporary, the asset allocation will be rebalanced into the allowable range. To the extent possible, contributions and withdrawals from the portfolio will be executed proportionally based on the most current market values available. The Board does not intend to exercise short-term changes to the target allocation.

III. INVESTMENT PERFORMANCE OBJECTIVES

The following performance measures will be used as objective criteria for evaluating the effectiveness of the Investment Managers.

A. Total Portfolio Performance

1. The performance of the total portfolio will be measured for rolling three and five year periods. The performance of the portfolio will be compared to the return of the policy indexes comprised of 45~~50~~% Russell 3000, 15% MSCI ACWI ex US, 20% Barclays Aggregate, 5% Barclays Multiverse Index, 10% NCREIF ODCE (EW) and 5% CPI+4%.

2. On a relative basis, it is expected that the total portfolio performance will rank in the top 50th percentile of the appropriate peer universe over three and five-year time periods.

3. On an absolute basis, the objective is that the return of the total portfolio will equal or exceed the actuarial earnings assumption (7.45%), and provide inflation protection by meeting Consumer Price Index plus 3%. The actuarial earnings assumption is expected to drop 10 bps every fiscal year beginning on 10/1/2018 as follows:

    a. 10/1/2017 Valuation: 7.45%
    b. 10/1/2018 Valuation: 7.35%
    c. 10/1/2019 Valuation: 7.25%

B. <u>Equity Performance</u>

The combined equity portion of the portfolio, defined as common stocks and convertible bonds, is expected to perform at a rate at least equal to 75~~7~~% of the Russell 3000 Index and of the 25~~3~~% MSCI ACWI ex US Index. Individual components of the equity portfolio will be compared to the specific benchmarks defined in each Investment Manager addendum. All portfolios are expected to rank in the top 50th percentile of the appropriate peer universe over three and five-year time periods.

C. <u>Fixed Income Performance</u>

The overall objective of the fixed income portion of the portfolio is to add stability and liquidity to the total portfolio. The fixed income portion of the portfolio is expected to perform at a rate at least equal to 80% of the Barclays Capital U.S. Aggregate Bond Index and 20% of the Barclays Multiverse*. All portfolios are expected to rank in the top 50th percentile of the appropriate peer universe over three and five-year time periods.
** Benchmark will default to "Barclays Aggregate" if these portfolios are not funded.*

D. <u>Real Estate Performance</u>

The overall objective of the real estate portion of the portfolio, if utilized, is to add diversification and another stable income stream to the total fund. The real estate portion of the portfolio, defined as core, open ended private real estate, is expected to perform at a rate at least equal to the NCREIF Open End Diversified Core (ODCE) (EW) Index and rank in the top 50th percentile of the appropriate peer universe over three and five-year time periods.

E. <u>Other Assets</u>

The overall objective of the alternative investment portion of the portfolio, if utilized, is to reduce the overall volatility of the portfolio and/or enhance returns. This portion of the Plan will be benchmarked against the most appropriate index, combination of indices, or absolute return target for the investment(s) in question. The "strategy index" will be determined at the time of engagement based on the specific investment's long-term objective, prospectus, and/or governing documents.

IV. INVESTMENT GUIDELINES

A. Authorized Investments

Pursuant to the investment powers of the Board of Trustees as set forth in the Florida Statutes and local ordinances, the Board of Trustees sets forth the following investment guidelines and limitations:

1. Equities:

   a. Must be traded on a national exchange or electronic network; and

   b. Not more than 5% of the Plan's assets, at the time of purchase, shall be invested in the common stock, capital stock or convertible stock of any one issuing company, nor shall the aggregate investment in any one issuing company exceed 5% of the outstanding capital stock of the company (this restriction shall not apply to any single holding within a diversified pooled fund); and

   c. Additional criteria may be outlined in the manager's addendum.

2. Fixed Income:

   a. All fixed income investments shall have a minimum rating in one of the four highest classifications by a major rating service, except that no more than 5% of the total portfolio may be invested in securities that fall below these rating guidelines.

   b. The value of bonds issued by any single corporation shall not exceed 10% of the total fund (excluding issues from the U.S. government, or agency thereof; and this restriction shall not apply to any single holding within a diversified pooled fund); and

   c. Additional criteria may be outlined in the manager's addendum.

3. Money Market:

   a. The money market fund or STIF options provided by the Plan's custodian; and

   b. Have a minimum rating of Standard & Poor's A1 or Moody's P1.

4. Pooled Funds:

   Investments made by the Board may include pooled funds. For purposes of this policy pooled funds may include mutual funds, commingled funds, and exchange-traded funds.

   a. Pooled funds may be governed by separate prospectus which may include investments not expressly permitted in this Investment Policy Statement. In the event of investment by the Plan into a pooled fund the Board the prospectus or governing policy of that pooled fund, as updated from time to time, shall be treated as an addendum to this Investment Policy Statement.

   b. The asset classification of the fund will be based upon its investment objective.

B. Trading Parameters

When feasible and appropriate, all securities shall be competitively bid. Except as otherwise required by law, the most economically advantageous bid shall be selected. Commissions paid for purchase of securities must meet the prevailing best-execution rates. The responsibility of monitoring best price and execution of trades placed by each manager on behalf of the Plan will be governed by the Portfolio Management Agreement between the Plan and the Investment Managers.

C. Limitations

1. Investments in corporate common stock and convertible bonds shall not exceed sixty-five (65%) of the Plan assets at market.

2. Foreign securities shall not exceed twenty-five percent (25%) of Plan's market value.

3. All equity and fixed income securities must be readily marketable. Commingled funds must be independently appraised at least annually.

D. Absolute Restrictions

No investments shall be permitted in;

1. Any investment not specifically allowed as part of this policy.

2. Illiquid investments, as described in Chapter 215.47, Florida Statutes.

V. COMMUNICATIONS

A. On a monthly basis, the custodian shall supply an accounting statement that will include a summary of all receipts and disbursements and the cost and the market value of all assets.

B. On a quarterly basis, the Investment Managers shall provide a written report affirming compliance with the security restrictions of Section IV (as well as any provisions outlined in the Investment Manager's addendum). In addition, the Investment Managers shall deliver a report each quarter detailing the Plan's performance, forecast of the market and economy, portfolio analysis and current assets of the Plan. Written reports shall be delivered to the Board within 30 days of the end of the quarter. A copy of the written report shall be submitted to the person designated by the City, and shall be available for public inspection. The Investment Managers will provide immediate written and telephone notice to the Board of any significant market related or non-market related event, specifically including, but not limited to, any deviation from the standards set forth in Section IV or their Investment Manager addendum. In the event of any deviation from the standards set forth in Section IV or their Investment Manager addendum an action plan outlining the investment strategy shall be provided to the Board immediately.

C. If the Fund owns investments, that complied with section IV at the time of purchase, which subsequently exceed the applicable limit or do not satisfy the applicable investment standard, such excess or noncompliant investments may be continued until it is economically feasible to dispose of such investment in accordance with the prudent man standard of care, but no additional investment may be made unless authorized by law or ordinance. An action plan outlining the investment 'hold or sell' strategy shall be provided to the Board immediately; and followed by a required detailed quarterly report from the investment manager indicating the status of the non-compliant security. The detailed report should include the original date of purchase and corresponding rating agency and rating change dates.

D. The Investment Consultant shall evaluate and report on a quarterly basis the rate of return net of investment fees and relative performance of the Plan.

E. The Board will meet periodically to review the Investment Consultant performance report. The Board will meet with the investment manager and appropriate outside consultants to discuss performance results, economic outlook, investment strategy and tactics and other pertinent matters affecting the Plan on a periodic basis.

F. At least annually, the Board shall provide the Investment Managers with projected disbursement needs of the Plan so that the investment portfolio can be structured in such a manner as to provide sufficient liquidity to pay obligations as they come due. To this end the Investment Managers should, to the extent possible, attempt to match investment maturities with known cash needs and anticipated cash-flow requirements.

VI. COMPLIANCE

A. It is the direction of the Board that the plan assets are held by a third party custodian, and that all securities purchased by, and all collateral obtained by the plan shall be properly designated as Plan assets. No withdrawal of assets, in whole or in part, shall be made from safekeeping except by an authorized member of the Board or their designee. Securities transactions between a broker-dealer and the custodian involving purchase or sale of securities by transfer of money or securities must be made on a "delivery vs. payment" basis to insure that the custodian will have the security or money in hand at conclusion of the transaction.

B. The investment policy shall require all approved institutions and dealers transacting repurchase agreements to execute and perform as stated in the Master Repurchase Agreement. All repurchase agreement transactions shall adhere to the requirements of the Master Repurchase Agreement.

C. At the direction of the Board, the Plan's compliance with "Section IV. Authorized Investments" shall be reviewed by independent certified public accountants as part of any financial audit periodically required. Compliance with the Board's internal controls over financial reporting shall also be verified. These controls have been designed to prevent losses of assets that might arise from fraud, error, or misrepresentation by third parties or imprudent actions by the Board or employees of the plan sponsor, to the extent possible.

D. Each member of the Board shall participate in a continuing education program relating to investments and the Board's responsibilities to the Plan. It is suggested that this education process begin during each Trustee's first term.

E. With each actuarial valuation, the Board shall determine the total expected annual rate of return for the current year, for each of the next several years and for the long term thereafter. This determination shall be filed promptly with the Department of Management Services, the plan's sponsor and the consulting actuary.

F. The proxy votes must be exercised for the exclusive benefit of the participants of the Plan. Each Investment Manager shall provide the Board with a copy of their proxy voting policy for approval. On a regular basis, at least annually, each manager shall report a record of their proxy vote.

G. Investments for which there is no generally recognized market or consistent accepted pricing mechanism shall be valued at 50% cost. Assets without a fair market value shall be excluded from determination of annual funding cost. The board will disclose to the Department of Management Services and the plan's sponsor each such investment for which the fair market value is not provided

VII. CRITERIA FOR INVESTMENT MANAGER REVIEW

The Board wishes to adopt standards by which judgments of the ongoing performance of a portfolio manager may be made. If, at any time, any three of the following is breached, the portfolio manager may be warned of the Board's serious concern for the Plan's continued safety and performance. If any five of these are violated the consultant may recommend a manager search for that mandate.

- Four (4) consecutive quarters of relative under-performance verses the benchmark.
- Three (3) year trailing return below the top 50th percentile within the appropriate peer group and under performance verses the benchmark.
- Five (5) year trailing return below the top 50th percentile and under performance verses the benchmark.
- Three (3) year downside volatility greater than the index (greater than 100), as measured by down market capture ratio.
- Five (5) year downside volatility greater than the index (greater than 100), as measured by down market capture ratio.
- Style consistency or purity drift from the mandate.
- Management turnover in portfolio team or senior management.
- Investment process change, including varying the index or benchmark.
- Failure to adhere to the IPS or other compliance issues.
- Investigation of the firm by the Securities and Exchange Commission (SEC).
- Significant asset flows into or out of the company.
- Merger or sale of firm.
- Fee increases outside of the competitive range.
- Servicing issues – key personnel stop servicing the account without proper notification.
- Failure to attain a 60% vote of confidence by the Board.

Nothing in this section shall limit or diminish the Board’s right to terminate the manager at any time for any reason.

VIII. APPLICABLE CITY ORDINANCES

If at any time this document is found to be in conflict with the City Ordinances or applicable Florida Statutes, the Ordinances and Statutes shall prevail.

IX. REVIEW AND AMENDMENTS

It is the Board's intention to review this document at least annually subsequent to the actuarial report and to amend this statement to reflect any changes in philosophy, objectives, or guidelines. In this regard, the Investment Manager's interest in consistency in these matters is recognized and will be taken into account when changes are being considered. If, at any time, the Investment Manager feels that the specific objectives defined herein cannot be met, or the guidelines constrict performance, the Board should be notified in writing. By initialing and continuing acceptance of this Investment Policy Statement, the Investment Managers concur with the provisions of this document. By signing this document, the Chairman attests that this policy has been recommended by the Investment Consultant, reviewed by the plan's legal counsel for compliance with applicable law, and approved by the Board of Trustees.

X. FILING OF THE INVESTMENT POLICY

Upon adoption by the Board, the investment policy shall be promptly filed with the Florida Department of Management Services, the City, and the plan's actuary. The effective date of the Investment Policy shall be the 31 days following the filing date with the City.

CITY OF PORT ORANGE POLICE PENSION FUND

______________________________ ____________

Sgt. Warren Carman Date

ATTEST:

____

Karan Rounsavall, Plan Administrator

FREIMAN LITTLE ACTUARIES

Freiman Little Actuaries, LLC
4105 Savannahs Trail
Merritt Island, FL 32953

(321) 453-6542 office
(321) 453-6998 facsimile

RECEIVED KJR
By Karan Rounsavall at 1:31 pm, Feb 04, 2019

City of Port Orange

Police Pension Fund

Actuarial Valuation as of October 1, 2018

February 4, 2019

REPORT TO DETERMINE MINIMUM FUNDING REQUIREMENTS
FOR THE PLAN AND FISCAL YEAR
ENDING SEPTEMBER 30, 2020

February 4, 2019

Board of Trustees
City of Port Orange Police Pension Fund
Port Orange, Florida

RE: Actuarial Valuation as of October 1, 2018

Dear Board Members:

We are pleased to present the actuarial valuation as of October 1, 2018 for the City of Port Orange Police Pension Fund (the Plan). This report provides a review of the current funded status of the Plan, establishes the minimum funding requirements for the fiscal year ending September 30, 2020 and provides an analysis of experience since the last valuation. In addition to providing the summary and derivation of actuarial findings, this report describes the data, assumptions, and methods used to create these results.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: plan experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the plan's funded status); and changes in plan provisions or applicable law.

Statement by Enrolled Actuary:

"This actuarial valuation and/or cost determination was prepared and completed by me or under my direct supervision, and I acknowledge responsibility for the results. To the best of my knowledge, the results are complete and accurate, and in my opinion, the techniques and assumptions used are reasonable and meet the requirements and intent of Part VII, Chapter 112, Florida Statutes. There is no benefit or expense to be provided by the plan and/or paid from the plan's assets for which liabilities or current costs have not been established or otherwise taken into account in the valuation. All known events or trends which may require a material increase in plan costs or required contribution rates have been taken into account in the valuation."

We look forward to the presentation of these results to you in person and we are always available to answer any questions you may have.

Sincerely,

Chad M. Little, ASA, EA
Partner, Consulting Actuary
Enrollment Number 17-6619

Paula C. Freiman, ASA, EA
Partner, Consulting Actuary
Enrollment Number 17-5796

Table of Contents

Section 1 Board Summary

This report presents the results of the October 1, 2018 actuarial valuation of the City of Port Orange Police Pension Fund (the Plan).

Summary of Principal Valuation Results

A summary of the key valuation findings as of October 1, 2018 are compared with the results of the prior valuation below.

Fiscal Year Ending September 30,	**2019**	**2020**
As a Dollar Amount		
Estimated Minimum Required City Contribution	$2,842,943	$2,900,634
Estimated State Contribution	397,680	444,090
Total Minimum Funding Requirement (City plus State)	$3,240,623	$3,344,724
As a Percentage of Payroll		
Estimated Minimum Required City Contribution	57.88%	57.85%
Estimated State Contribution	8.10%	8.86%
Total Minimum Funding Requirement (City plus State)	65.98%	66.71%

Valuation Date October 1,	**2017**	**2018**
Accrued Liability (AL)	$48,774,256	$51,784,659
Actuarial Value of Assets	34,941,463	38,301,511
Unfunded Accrued Liability (UAL)	$13,832,793	$13,483,148
Funded Percentage	71.64%	73.96%

Valuation Date October 1,	**2017**	**2018**
Assumed Rate of Investment Return	7.45%	7.35%
Individual Salary Increases	7.50%	7.25%
Long-term Payroll Inflation	3.50%	1.00%
Payroll Inflation for Amortization of Unfunded	1.00%	1.00%
Funding Method	Entry Age	Entry Age

Note: We recommend the deposit of at least the minimum required contributions as a dollar amount shown above.

Summary of Significant Events

Determination of the funded status of the Plan and minimum funding requirements are based on participant data, asset information, Plan provisions, actuarial methods and assumptions, as well as contributions made to the Plan by the State of Florida. Any significant events associated with these items are discussed in the following.

In preparing our report we relied, without audit, on information (some oral and some written) supplied by the City and the Plan Administrator. This information includes, but is not limited to, statutory provisions, employee census, and financial information. In our examination of these data, we have found them to be reasonably consistent and comparable with data used for other purposes. Since the valuation results are dependent on the integrity of the data supplied, the results can be expected to differ if the underlying data is incomplete or missing. It should be noted that if any data or other information is inaccurate or incomplete, our calculations may need to be revised.

Participant Data

The number of active members increased from 86 to 87 with an average individual salary increase of 3.1% as compared to the 7.5% assumption used in the valuation. Actual total payroll increased 1.9% on average over the last 10 years as compared to the 1% payroll growth assumption used to amortize the unfunded accrued liability and the 3.5% increase assumption used to project total payroll to the funding year. The average annual payroll growth for the last ten years is shown below.

Fiscal Year	Payroll	Increase
2018	4,855,965	5.0 %
2017	4,622,671	8.1 %
2016	4,275,349	(0.4)%
2015	4,293,316	8.8 %
2014	3,944,464	10.3 %
2013	3,575,109	3.3 %
2012	3,460,703	7.7 %
2011	3,212,337	(23.7)%
2010	4,211,533	(2.7)%
2009	4,329,474	7.4 %
2008	4,032,313	
10-Year Geometric Average		1.9 %

There was a demographic loss on an actuarial accrued liability basis mostly due to termination less than expected along with retirement experience offset by the gain associated with corrections to service dates since the prior valuation. A table of historical actuarial gains and losses by source since October 1, 2006 is included in Section 2 of this report. In general, should a pattern of consistent gains or losses develop, assumptions may require revision.

Assets

Whereas the assets were assumed to achieve a 7.45% investment return net of expenses, the return on the market value of assets was 8.50% producing a gain on a market value basis. Due to the smoothing method used to produce the actuarial value of assets which recognizes market value gains and losses over a five-year period, a 6.39% return was achieved on the actuarial value of assets such that an actuarial investment related loss was experienced for the year ended September 30, 2018. The following provides a summary of the actual return on investments for the 12-month periods ending on the date specified.

	Year Ended 9/30	Market Investment Return	Actuarial Investment Return	Assumed Net Return
1	1996	13.1 %	13.1 %	8.50%
2	1997	18.4 %	18.4 %	8.50%
3	1998	3.7 %	3.7 %	8.50%
4	1999	8.2 %	8.2 %	8.50%
5	2000	11.4 %	11.4 %	8.50%
6	2001	(11.3)%	(11.3)%	8.50%
7	2002	(7.3)%	(7.3)%	8.50%
8	2003	21.0 %	21.0 %	8.50%
9	2004	8.1 %	8.1 %	8.50%
10	2005	7.7 %	7.7 %	8.50%
11	2006	6.2 %	6.2 %	8.50%
12	2007	10.6 %	10.6 %	8.00%
13	2008	(12.1)%	(12.1)%	8.00%
14	2009	8.2 %	3.3 %	8.00%
15	2010	8.4 %	4.2 %	8.00%
16	2011	(0.6)%	3.4 %	8.00%
17	2012	17.5 %	5.0 %	8.00%
18	2013	11.1 %	8.9 %	7.75%
19	2014	7.6 %	8.8 %	7.75%
20	2015	(0.1)%	7.0 %	7.75%
21	2016	6.0 %	7.1 %	7.65%
22	2017	10.0 %	6.4 %	7.55%
22	2018	8.5 %	6.4 %	7.45%
23-Year Average		6.4 %	5.7 %	8.15%
10-Year Average		7.5 %	6.0 %	7.79%

The average return on the Market Value of Assets has been 6.4%, when looking over the last 23 valuations performed and 7.5% over the last 10 years, as shown above.

Net investment returns less than the assumed rate of return result in increased annual minimum required contributions.

Plan Provisions

Ordinance No. 2017-32 adopted effective December 12, 2017 amended the plan to provide that all annual premium tax revenues received pursuant to Chapter 185 and all accumulated excess Chapter 185 premium tax revenues as of October 1, 2016 are used to offset the City's pension contributions. For this October 1, 2017 actuarial valuation of the Plan the $7,192 accumulated excess was released into the actuarial value of assets as if the funding had been received for the year ending September 30, 2017. This ordinance also created a defined contribution plan component commonly referred to as the Share Plan. Our letter dated December 12, 2017 indicated that the increase in cost to the City would be equal to any contributions made to the Share Plan in the future. As currently the City of Port Orange and the union representing police officers have mutually agreed that no Chapter 185 premium tax revenues will be allocated to the Share Plan, there is no impact for the Share Plan at this time.

Ordinance No. 2018-19 adopted effective July 17, 2018 modified language relating to the percentage of assets that may be invested in common stocks. Our statement of no impact was issued February 16, 2018.

Methods

There have been no changes in methods since the prior valuation of the Plan.

Assumptions

A review of experience was performed for the five-year period from October 1, 2012 to October 1, 2017. As a result of this review, the Board of Trustees adopted revised assumptions. However, the Board of Trustees adopted the change in termination assumptions described below to be phased in over a three-year period. For each liability component, the difference between the value of that component determined under the revised assumptions not including the revision to termination assumptions and under all revised assumptions was determined. One-third of the change has been reflected in this valuation. The remaining change in assumptions for the change in termination rates will be recognized in valuation results over a three-year period as follows:

As of October 1,	Recognized	Unrecognized
2018	33%	67%
2019	67%	33%
2020	100%	0%

The assumptions changed were the total payroll growth assumption, the individual salary increase assumption, a marital assumption for actives at retirement, as well as rates of retirement and termination, as follows.

Salary Increase – Total Payroll: The increase in valuation payroll to the fiscal year in which contributions are payable has been revised to 1.0% per year in comparison to 3.5% per year used in the prior valuation. This assumption is now in sync with the 1% payroll growth assumption used to amortize unfunded accrued liability as a level percent of payroll.

Salary Increase – Individual: Individual salary growth was lower than expected until members reach 22 to 23 years of service. High salary increases at later service levels have more impact. The individual salary increase assumption has been changed to 7.25% per year (revised from 7.5% per year in the prior valuation).

Percentage Married at Retirement: Actuarial assumptions used to determine optional forms of benefit differ from the assumptions used in the actuarial valuation of the Plan. The actuarial valuation has been revised to assume 40% of actives are married and elect a 100% joint & survivor form of benefit at retirement.

Mortality: Mortality assumptions are not revised from that used in the prior valuation and are determined by state statute.

Retirement: Due to the actual incidence of retirement prior to normal retirement eligibility, rates of retirement were revised for members hired before January 31, 2011, as follows:

	Prior Rates Service			Current Rates Service		
Age	<10	10-24	25+	<10	10-24	25+
<=44	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
45	0.00%	0.00%	100.00%	0.00%	10.00%	100.00%
46	0.00%	0.00%	100.00%	0.00%	5.00%	100.00%
47	0.00%	0.00%	100.00%	0.00%	2.50%	100.00%
48	0.00%	0.00%	100.00%	0.00%	25.00%	100.00%
49-51	0.00%	0.00%	100.00%	0.00%	2.50%	100.00%
52+	0.00%	100.00%	100.00%	0.00%	100.00%	100.00%

Termination: Due to the actual incidence of termination much lower than expected, unisex rates of termination are revised as follows:

Service	Prior Rate	Current Rate	Service	Prior Rate	Current Rate
0	23%	24%	11	5%	3%
1	23%	21%	12	5%	3%
2	23%	18%	13	4%	3%
3	8%	13%	14	4%	3%
4	8%	12%	15	3%	3%
5	8%	8%	16	3%	2%
6	8%	8%	17	2%	1%
7	8%	7%	18	2%	1%
8	8%	6%	19	1%	1%
9	8%	5%	>=20	0%	0%
10	30%	5%			

Disability: Rates of disability were not revised from those used in the prior valuation. Whereas one member was deemed disabled in the last five years, 0.57 disabilities were expected.

Net Assumed Investment Return: The net assumed rate of investment return was revised from 7.45% used in the October 1, 2017 actuarial valuation to 7.35% for this October 1, 2018 actuarial valuation of the Plan as directed by the Board of Trustees. The 7.35% assumed return is a prescribed assumption as defined by Actuarial Standard of Practice No. 27 (ASOP 27), as it is set by the Board. The prescribed assumption significantly conflicts with our judgment regarding what would constitute a reasonable assumption for the purpose of the measurement as discussed in ASOP 27. As discussed with the Board we recommend lowering the net assumed return further.

An Example: Normal Cost Determination with 3-Year Phase In: Whereas the normal cost was $1,267,065 after all assumption changes were made, the normal cost would have been $1,110,365 if all assumption changes were made except the revision to termination assumptions. The resulting normal cost as of October 1, 2018 is $1,162,598 after reflecting one-third of the increase in normal cost for the change in termination assumptions. The present value of future benefits, accrued liability, normal cost, present value of future salary, and accrued benefit obligation shown in this report as of October 1, 2018 all reflect the same type of calculation for the three-year phase in of termination assumptions.

State Contributions

The Estimated Minimum Required City Contribution assumes that the premium tax money received from the State will be in the same amount received in the prior year. Should the amount received in the fiscal years ending September 30, 2019 and 2020 be less than expected, the City will need to contribute any potential shortfall to the Plan.

Section 2 Results Derivation

In this section, the assets and liabilities of the Plan are shown in detail. Assets and liabilities are then compared to determine the funded status and minimum funding requirements. Finally, analysis is performed to explain movement in results from the prior valuation.

While asset information is based on the fair market value of assets, along with any techniques used to smooth out market fluctuations, liabilities are determined through a combination of the benefit provisions, participant census data which contains information for the members who will receive those benefits, and the methods and assumptions used with regard to how benefits will be paid to members. A summary of participant data, an outline of the benefit provisions, and a description of the methods and assumptions used in this valuation are described in Section 4.

Financial Information

Over the life of the Plan, the majority of assets are typically generated from investment return. In this section, we describe how the assets of the Plan are invested, show how the actuarial value of assets is derived, and review the investment results since the prior valuation.

Investment Allocation

Valuation Date	**October 1, 2017**		**October 1, 2018**	
Equity securities	$20,858,735	61%	$25,162,597	65%
Fixed income	8,747,724	25%	9,561,649	25%
Real estate	2,879,056	8%	3,097,437	8%
Cash and cash equivalents	1,663,095	5%	774,147	2%
Net receivables	235,119	1%	(171,870)	0%
Fair Market Value of Assets	$34,383,729	100%	$38,423,960	100%

Note: The report of the auditor shows $34,724,246 in "mutual fund" investments as of October 1, 2018. We have split this into the portion representing equity securities and the portion which is fixed income based on asset statements provided by the Plan administrator. Information as of October 1, 2017 has been revised from that shown in the prior valuation by combining the categories shown supplemented with information from the 2017 annual report to the State of Florida regarding the portion of mutual funds which were equity and the portion which were fixed income.

Reconciliation of Market Value of Assets

Year Ending September 30,		2017	2018
1.	**Market Value of Assets Beginning of Year**	$30,105,688	$34,383,729
2.	Contributions		
	a. City	$2,824,801	$2,813,517
	b. State	397,680	444,090
	c. Plan Members	355,777	375,306
	d. Total Contributions	$3,578,258	$3,632,913
3.	Investment earnings		
	a. Realized gains and (losses)	$282,913	$228,408
	b. Unrealized gains and (losses)	2,542,552	1,959,587
	c. Interest and dividends	475,423	820,854
	d. Investment expense	(237,571)	(60,229)
	e. Net investment income	$3,063,317	$2,948,620
4.	Deductions		
	a. Regular pension benefits	$(2,245,308)	$(2,396,855)
	b. DROP distributions	0	0
	c. Contribution refunds	(11,688)	(28,302)
	d. Administrative expenses	(106,538)	(116,145)
	e. Total Deductions	$(2,363,534)	$(2,541,302)
5.	Net Increase	$4,278,041	$4,040,231
6.	**Market Value of Assets End of Year**	$34,383,729	$38,423,960
7.	Actual Return on Market Value of Assets	10.04 %	8.50 %

Note: As of October 1, 2018, we have used the unrealized gain from the asset statements provided by the Plan administrator and have solved for the realized gain based on the net appreciation in fair value of investments provided by the auditor.

Development of Actuarial Value of Assets

The market value of assets is adjusted to recognize gains and losses over a five-year period. However, the Actuarial Value of Assets is limited to no more than 120% or less than 80% of the market value of assets.

Determination of Actuarial Value of Assets for the Plan Year Ended September 30, 2018

1.	Market Value of Assets as of October 1, 2018			$38,423,960
2.	Phase-In Gains (Losses) Over Five Year Period			
		Original Gain (Loss)	**Percent Unrecognized**	**Unrecognized Gain (Loss)**
	a. Year Ending 9/30/2018	$362,912	80%	$290,329
	b. Year Ending 9/30/2017	759,494	60%	455,696
	c. Year Ending 9/30/2016	(460,853)	40%	(184,341)
	d. Year Ending 9/30/2015	(2,196,177)	20%	(439,235)
	e. Total			$122,449
3.	Preliminary Actuarial Value of Assets as of October 1, 2018			$38,301,511
4.	Corridor Around Market Value			
	a. Minimum = 80% of Market Value of Assets			$30,739,168
	b. Maximum = 120% of Market Value of Assets			$46,108,752
	c. Corridor Adjustment to Preliminary Actuarial Value			$0
5.	Actuarial Value of Assets as of October 1, 2018 (3. + 4.c.)			$38,301,511

Development of Historical Gain or Loss on Market Value of Assets

		2018	2017
1.	Market Value of Assets - Beginning of Year	$34,383,729	$30,105,688
2.	Contributions	3,632,913	3,578,258
3.	Benefit Payments plus Administrative Expense	(2,541,302)	(2,363,534)
4.	Expected Return on Assets	2,585,708	2,303,823
5.	Expected Value of Assets at End of Year	$38,061,048	$33,624,235
6.	Market Value of Assets - End of Year	$38,423,960	$34,383,729
7.	Gain (Loss) for Plan Year = (6) - (5)	$362,912	$759,494

		2016	2015
1.	Market Value of Assets - Beginning of Year	$28,157,398	$28,294,900
2.	Contributions	3,527,880	3,403,714
3.	Benefit Payments plus Administrative Expense	(3,268,422)	(3,519,988)
4.	Expected Return on Assets	2,149,685	2,174,949
5.	Expected Value of Assets at End of Year	$30,566,541	$30,353,575
6.	Market Value of Assets - End of Year	$30,105,688	$28,157,398
7.	Gain (Loss) for Plan Year = (6) - (5)	$(460,853)	$(2,196,177)

State Contributions

Year Ending September 30	State Contributions	Recurring Cost Benefit Improvements	Base Plus Benefit Improvements	Recognized State Funding	Cumulative Balance Available Upon Benefit Improvement
2018	$444,090	$0	$699,961	$444,090	$0
2017	397,680	0	699,961	397,680	0
2016	373,343	0	699,961	373,343	7,192
2015	345,822	0	699,961	345,822	7,192
2014	331,402	0	699,961	331,402	7,192
2013	316,074	0	699,961	316,074	7,192
2012	314,094	0	699,961	314,094	7,192
2011	303,356	0	699,961	303,356	7,192
2010	302,888	0	699,961	302,888	7,192
2009	314,162	0	699,961	314,162	7,192
2008	293,562	0	699,961	293,562	7,192
2007	296,758	0	699,961	296,758	7,192
2006	279,159	0	699,961	279,159	7,192
2005	267,203	0	699,961	267,203	7,192
2004	245,105	0	699,961	245,105	7,192
2003	198,169	454,127	699,961	198,169	7,192
2002	165,823	0	245,834	165,823	7,192
2001	135,870	121,320	245,834	135,870	7,192
2000	121,555	0	124,514	121,555	7,192
1999	131,706	0	124,514	124,514	7,192
1998	124,514	0	124,514	124,514	0

Note: The $7,192 cumulative balance as of September 30, 2017 has been released into the actuarial valuation of assets per the collective bargaining agreement and Ordinance No. 2017-32.

Present Value of Benefits

Valuation as of October 1,		2017	2018
1.	**Active Members**		
	a. Retirement Benefits	$21,450,575	$22,773,648
	b. Deferred Benefits	2,046,753	1,662,693
	c. Survivor Benefits	206,774	186,876
	d. Disability Retirement	448,278	434,916
	e. Total	$24,152,380	$25,058,133
2.	**Inactive Members**		
	a. Retirement and DROP	$27,103,336	$30,071,503
	b. Terminated Vested	1,362,308	804,016
	c. Beneficiaries	1,158,301	1,165,035
	d. Disability Retirement	1,682,435	2,094,558
	e. Total	$31,306,380	$34,135,112
3.	**Present Value of Benefits (PVB)**	$55,458,760	$59,193,245

Accrued Liability

Valuation as of October 1,		2017	2018
1.	**Active Members**		
	a. Retirement Benefits	$16,678,481	$17,076,397
	b. Deferred Benefits	509,494	332,240
	c. Survivor Benefits	144,512	124,488
	d. Disability Retirement	135,389	116,422
	e. Total	$17,467,876	$17,649,547
3.	**Inactive Members**		
	a. Retirement and DROP	$27,103,336	$30,071,503
	b. Terminated Vested	1,362,308	804,016
	c. Beneficiaries	1,158,301	1,165,035
	d. Disability Retirement	1,682,435	2,094,558
	e. Total	$31,306,380	$34,135,112
3.	**Accrued Liability (AL)**	$48,774,256	$51,784,659

Normal Cost – Entry Age Normal

Valuation as of October 1,		2017	2018
1.	**Preliminary Normal Cost**		
a.	Retirement Benefits	$669,642	$814,238
b.	Deferred Benefits	211,130	177,200
c.	Survivor Benefits	8,587	8,741
d.	Disability Retirement	44,185	46,274
e.	Total	$933,544	$1,046,453
2.	**Total Normal Cost**		
a.	Preliminary Normal Cost	$933,544	$1,046,453
b.	Estimated Administrative Expense	106,538	116,145
c.	Total Normal Cost	$1,040,082	$1,162,598
d.	Total Normal Cost as a % of Pay	21.92 %	23.42 %
3.	**Normal Cost Net of Actual Employee Contributions**		
a.	Preliminary Normal Cost	$933,544	
b.	Actual Administrative Expense	116,145	
c.	Actual Employee Contributions	(375,306)	
d.	Actual Employer Normal Cost	$674,383	
4.	**Valuation Payroll**	$4,745,191	$4,964,332

Unfunded Accrued Liability

Valuation as of October 1,	**2018**
Unfunded Actuarial Liability	
1. Accrued Liability	$51,784,659
2. Actuarial Value of Assets	38,301,511
3. Unfunded Accrued Liability	$13,483,148
Determination of Expected Unfunded Accrued Liability	
1. Unfunded Accrued Liability as of Prior Year	$13,832,793
2. Normal Cost (Net of Employee Contributions)	674,383
3. Interest on UAL and NC	1,080,785
4. Contributions	
a. City	$(2,813,517)
b. State of Florida	(444,090)
c. Total	$(3,257,607)
5. Interest on Contribution for Time on Deposit	(104,804)
6. Change in Plan, Methods or Assumptions	485,735
7. Expected UAL as of Current Year	$12,711,285
Calculation of (Gain) or Loss	
1. Actual Unfunded Accrued Liability	$13,483,148
2. Expected UAL	12,711,285
3. Total (Gain) or Loss	$771,863
4. Breakdown of (Gain) or Loss	
a. Investment Experience	$358,822
b. Demographic Experience	413,041
c. Total (Gain) or Loss	$771,863
Calculation of Actuarial Asset Gain or (Loss)	
1. Actuarial Value of Assets - Beginning of Year	$34,941,463
2. Contributions	3,632,913
3. Benefit Payments plus Administrative Expense	(2,541,302)
4. Expected Return on Assets	2,627,259
5. Expected Value of Assets at End of Year	$38,660,333
6. Actuarial Value of Assets - End of Year	$38,301,511
7. Gain (Loss) for Plan Year = (6) - (5)	$(358,822)
8. Actual Investment Income	$2,268,437
9. Actual % Return	6.39%

Amortization of Unfunded Liability

The Unfunded Actuarial Accrued Liability is being amortized as a level percentage of payroll based on the interest and payroll growth assumptions. In the October 1, 2014 valuation, unfunded accrued liability from changes in Plan provisions, actuarial assumptions, or changes in methods was amortized over 30 years and unfunded accrued liability from actuarial gains or losses was amortized over 15 years. Effective October 1, 2015 all new bases are amortized over 25 years.

Amortization Bases

	10/1	Source	Original Balance	Remaining Balance	Remaining Balance Adjusted for Actual Contributions	Years Remain	Amort.
1.	2002	Fresh Start	$2,755,021	$1,244,643	$1,216,734	4	$332,543
2.	2002	Plan Amendment	1,976,338	1,944,886	1,901,276	14	195,885
3.	2004	Actuarial Loss	1,824,146	264,082	258,160	1	258,160
4.	2005	Actuarial Loss	613,985	150,926	147,542	2	76,019
5.	2005	Plan Amendment	333,316	334,551	327,049	17	29,978
6.	2006	Actuarial Loss	854,961	299,748	293,027	3	103,688
7.	2006	Method Change	753,708	759,481	742,451	18	65,912
8.	2006	Assumption Change	2,579,202	2,598,959	2,540,683	18	225,553
9.	2007	Actuarial Loss	1,227,859	521,117	509,432	4	139,232
10.	2007	Method Change	581,177	562,560	549,946	19	47,418
11.	2008	Actuarial Loss	2,599,494	1,289,153	1,260,246	5	283,683
12.	2008	Method Change	(1,970,274)	(1,881,094)	(1,838,914)	20	(154,376)
13.	2009	Actuarial Loss	1,538,368	869,825	850,321	6	164,165
14.	2010	Actuarial Loss	121,763	75,282	73,594	7	12,530
15.	2010	Plan Amendment	(2,045,217)	(1,921,821)	(1,878,728)	22	(150,476)
16.	2011	Actuarial Loss	190,481	128,051	125,180	8	19,182
17.	2012	Actuarial Loss	680,484	491,357	480,339	9	67,276
18.	2012	Plan Amendment	607,166	569,329	556,563	24	42,837
19.	2012	Assumption Change	1,502,286	1,408,670	1,377,083	24	105,989
20.	2013	Actuarial Gain	(181,623)	(140,395)	(137,247)	10	(17,784)
21.	2013	Assumption Change	53,066	50,142	49,018	25	3,707
22.	2014	Actuarial Loss	278,366	229,680	224,530	11	27,180
23.	2014	Assumption Change	56,887	54,459	53,238	26	3,961
24.	2015	Actuarial Loss	801,046	764,141	747,007	22	59,831
25.	2015	Assumption Change	568,624	542,428	530,265	22	42,472
26.	2016	Actuarial Gain	(809,648)	(783,779)	(766,204)	23	(60,110)
27.	2016	Assumption Change	771,544	746,891	730,143	23	57,281
28.	2017	Actuarial Loss	756,776	751,153	734,310	24	56,517
29.	2017	Assumption Change	585,900	581,546	568,506	24	43,756
30.	2018	Actuarial Loss	771,863	771,863	771,863	25	58,368
31.	2018	Assumption Change	485,735	485,735	485,735	25	36,731
		Scheduled Amortization Payment					$2,177,108
		Unfunded Accrued Liability			$13,483,148		

Projected Unfunded Accrued Liability and Amortization Payments

Valuation as of October 1,	Unfunded Accrued Liability	Amortization Payment
2018	$13,483,148	$2,177,108
2019	12,137,034	1,938,137
2020	10,948,516	1,879,971
2021	9,735,083	1,791,940
2022	8,526,964	1,318,929
2023	7,737,826	1,033,964
2024	7,196,596	870,039
2025	6,791,559	865,305
2026	6,361,833	853,187
2027	5,913,532	788,140
2028	5,502,108	815,666
2029	5,030,896	793,499
2030	4,548,846	801,434
2031	4,022,846	809,448
2032	3,449,583	592,378
2033	3,067,209	598,302
2034	2,650,372	604,285
2035	2,196,475	574,824
2036	1,740,843	231,937
2037	1,619,810	176,971
2038	1,548,887	367,109
2039	1,268,638	370,780
2040	963,851	434,451
2041	568,311	442,352
2042	135,217	130,486
2043	5,079	5,079

Actions Taken to Reduce Unfunded Actuarial Accrued Liability

The required contributions calculated each year include a payment for the amortization of the unfunded accrued liability. This payment is designed to reduce the unfunded accrued liability in an orderly fashion. The Unfunded Actuarial Accrued Liability is being amortized as a level percentage of payroll based on the interest and payroll growth assumptions. In the October 1, 2014 valuation, unfunded accrued liability from changes in Plan provisions, actuarial assumptions, or changes in methods was amortized over 30 years and unfunded accrued liability from actuarial gains or losses was amortized over 15 years. Effective October 1, 2015 all new bases are amortized over 25 years.

Minimum Funding Requirements

Valuation as of October 1, **Required Contribution for FYE September 30,**	**2017** **2019**	**2018** **2020**
1. Normal Cost	$1,040,082	$1,162,598
2. Amortization of Unfunded Actuarial Liability	2,193,918	2,177,108
3. Minimum Required Contribution at Valuation Date [1. + 2.]	$3,234,000	$3,339,706
4. Minimum Required Contribution Projected to Beginning of Budget Year	$3,474,933	$3,585,174
5. Interest for Periodic Payments	144,255	148,075
6. Minimum Required Contribution Adjusted for Periodic Payments [4. + 5.]	$3,619,188	$3,733,249
7. Expected Employee Contributions	$378,565	$388,525
8. Expected State Contribution	397,680	444,090
9. Estimated City Contribution	2,842,943	2,900,634
10. Minimum Required Contribution for Funding Year	$3,619,188	$3,733,249
11. City Plus State Contribution	$3,240,623	$3,344,724
12. Expected Employee Contribution Rate	7.71%	7.75%
13. Expected State Contribution Rate	8.10%	8.86%
14. Estimated City Contribution Rate	57.88%	57.85%
15. Minimum Required Contribution Rate	73.69%	74.46%
16. City Plus State Contribution Rate	65.98%	66.71%
17. Payroll		
a. Valuation Payroll	$4,745,191	$4,964,332
b. Projected Valuation Payroll	$4,911,273	$5,013,975
c. Hired < January 31, 2011	2,867,394	2,518,483
d. Hired > January 31, 2011	2,043,879	2,495,492
18. Assumptions		
a. Net Assumed Investment Return	7.45%	7.35%
b. Contribution Projected to Next FY	7.45%	7.35%
c. Total Payroll Inflation	3.50%	1.00%
d. Payroll Inflation for Amortization of UAL	1.00%	1.00%

Reconciliation of Unfunded Accrued Liability

	Unfunded Accrued Liability	Funded Percentage	Change in Unfunded Accrued Liability	Change in Funded Percentage
As of October 1, 2017:	$13,832,793	71.64 %		
Changes due to:				
Normal Operation of Plan	$12,225,550	75.97 %	$(1,607,243)	4.33 %
Investment Experience	12,584,372	75.27 %	358,822	(0.70)%
Demographic Experience	12,997,413	74.66 %	413,041	(0.61)%
Assumption Changes	13,483,148	73.96 %	485,735	(0.70)%
Total			$(349,645)	2.32 %
As of October 1, 2018:	$13,483,148	73.96 %		

Reconciliation of City Minimum Required Contribution

	Dollar Amount	Percent of Pay
For Fiscal Year Ending September 30, 2019:	$2,842,943	57.88 %
Changes due to:		
Normal Operation of Plan	$(36,866)	(2.68)%
Administrative Expense Change	10,707	0.22 %
State Contribution Increase	(44,682)	(0.89)%
Investment Experience	30,494	0.60 %
Contributions More Than Expected	(53,377)	(1.05)%
Demographic Experience	41,526	0.11 %
Assumption Changes	109,889	3.66 %
Total	$57,691	(0.03)%
For Fiscal Year Ending September 30, 2020:	$2,900,634	57.85 %

Historical Actuarial Gains and Losses

Valuation Date		Total	Investment Related	Demographic
10/01/2007	Actuarial Loss	1,227,859	(278,370)	1,506,229
10/01/2008	Actuarial Loss	2,599,494	2,579,310	20,184
10/01/2009	Actuarial Loss	1,538,368	661,567	880,810
10/01/2010	Actuarial Loss	121,763	591,163	(469,400)
10/01/2011	Actuarial Loss	190,481	805,498	(615,017)
10/01/2012	Actuarial Loss	680,484	578,926	101,558
10/01/2013	Actuarial Gain	(181,623)	(255,604)	73,981
10/01/2014	Actuarial Loss	278,366	(279,250)	557,616
10/01/2015	Actuarial Loss	801,046	191,273	609,773
10/01/2016	Actuarial Gain	(809,648)	141,056	(950,704)
10/01/2017	Actuarial Loss	756,776	359,073	397,703
10/01/2018	Actuarial Loss	771,863	358,822	413,041

Section 3 Accounting Information

Information Required by GASB 67/68

A supplemental report provides information under the Governmental Accounting Standards Board No. 67/68.

Statement of Accumulated Plan Benefits (FASB 35)

The following table is based on prior accounting standards and is required by the State. The actuarial present value of accumulated plan benefits is an estimate of the liability for all benefits accrued to date.

Year Beginning October 1,	**2017**	**2018**
1. Actuarial present value of accumulated plan benefits		
a. Participants currently receiving benefits	$29,944,072	$33,331,096
b. Other participants	11,887,475	11,660,966
c. Total vested plan benefits	$41,831,547	$44,992,062
d. Total non-vested plan benefits	1,139,207	1,544,370
e. Total accumulated plan benefits	$42,970,754	$46,536,432
2. Change in present value of accumulated plan benefits		
a. Accumulated plan benefits beginning of year		$42,970,754
b. Increase (decrease) during year due to:		
i. Plan amendment		$0
ii. Change in assumptions or methods		948,098
iii. Increase for interest and probability of payment due to decrease in discount period and benefits accrued		5,042,737
iv. Benefits paid		(2,425,157)
v. Other changes		0
vi. Net increase (decrease)		$3,565,678
c. Accumulated plan benefits end of year		$46,536,432

Other Disclosures Required by the State of Florida

Year Beginning October 1,	**2017**	**2018**
Present value of active member:		
Future salaries (attained age)	$35,244,191	$36,289,008
Future contributions (attained age)	$2,722,821	$2,823,329
Active Member accumulated contributions	$1,799,003	$1,972,216

Required Disclosure Under F.S. 112.664(1)

As required under F.S. Section 112.664(1) we have produced the following information:

(a) Total pension liability calculated based on mortality used in one of the last two Florida Retirement System (FRS) valuations. This actuarial valuation assumes mortality as used in the July 1, 2016, 2017, and 2018 actuarial valuation for special risk members of FRS.

(b) Total pension liability calculated using an assumed interest rate that is 200 basis points lower than that assumed in the valuation of the Plan.

(c) Determination of the number of months or years for which the current market value of assets is adequate to sustain the payment of expected retirement benefits.

(d) Recommended contribution to the Plan using the most recent valuation and the contributions necessary prepared pursuant to (a) and (b) stated as a dollar amount and % of payroll.

	2% Decrease (5.35%)	Current Discount Rate (7.35%)	2% Increase (9.35%)
Total pension liability	$66,891,072	$51,784,659	$41,586,923
Plan fiduciary net position	(38,423,960)	(38,423,960)	(38,423,960)
Net pension liability	$28,467,112	$13,360,699	$3,162,963
Plan fiduciary net position as a percentage of the total pension liability	57.44%	74.20%	92.39%
Years of benefit payments:			
Expected for current members:	100	100	100
Paid for with current assets:	13.58	16.16	20.84
City Plus State Contribution Requirement, Plus Expected Employee Contributions			
Dollar Amount	$5,157,684	$3,733,249	$2,570,649
Percent of Payroll	102.87%	74.46%	51.27%

Required Disclosure Under F.S. 112.664(2)(b)2.

F.S. Section 112.664(2)(b)2. - For the previous five years, beginning with 2013, a side-by-side comparison of the plan's assumed rate of return compared to the actual rate of return, as well as the percentages of cash, equity, bond and alternative investments in the plan portfolio. The actual rate of return is as provided by the investment monitor.

Year Ending September 30,	**2018**	**2017**	**2016**	**2015**	**2014**
Assumed rate of return	7.45%	7.55%	7.65%	7.75%	7.75%
Actual rate of return	8.50%	10.04%	6.01%	(0.08%)	7.55%
Percentages of assets in:					
Cash	2%	6%	1%	0%	2%
Equity	65%	56%	59%	57%	57%
Bond	25%	25%	25%	25%	25%
Alternative	8%	13%	15%	18%	16%
Total	100%	100%	100%	100%	100%

Section 4 Supplementary Information

Summary of Participant Data

Member Statistics

Year Beginning October 1,	2017	2018
Active Participants		
Number	86	87
Average Age	36.4	36.5
Average Credited Service	8.3	8.2
Percent Male	90.7	90.8
Average Valuation Salary	$56,915	$59,437
Actual Total Payroll - Annual Report	$4,622,671	$4,855,965
Total Valuation Salary	$4,894,714	$5,171,041
Payroll Covered in Valuation	$4,745,191	$4,964,332
Terminated With Rights to Deferred Benefits		
Number	7	4
Average Age	42.2	41.4
Percent Male	85.7	75.0
Average Monthly Benefit (Estimate)	$1,926	$2,112
DROP		
Number	0	0
Average Age	0.0	0.0
Percent Male	0.0	0.0
Average Monthly Benefit	$0	$0
DROP Balances	$0	$0
Service Retirements		
Number	44	50
Average Age	60.8	60.2
Percent Male	95.5	96.0
Average Monthly Benefit	$3,838	$3,733
Beneficiaries		
Number	3	3
Average Age	68.6	69.6
Percent Male	33.3	33.3
Average Monthly Benefit	$2,643	$2,726
Disability Retirements		
Number	4	5
Average Age	51.1	51.3
Percent Male	100.0	100.0
Average Monthly Benefit	$3,369	$3,355

Number of Active Members by Age and Service as of October 1, 2018

	Service							
Age	< 1	< 5	< 10	< 15	< 20	< 25	25+	Total
< 20								
< 25	2	1						3
< 30	1	12	2					15
< 35	3	11	7	2				23
< 40	2	3	6	8				19
< 45			1	3	6	1		11
< 50		1	1	4	4	2	1	13
< 55			1		1	1		3
< 60								
60+								
Total	8	28	18	17	11	4	1	87

Active Valuation Pay by Age and Service as of October 1, 2018

	Service							
Age	< 1	< 5	< 10	< 15	< 20	< 25	25+	Total
< 20								
< 25	48,377	49,738						48,831
< 30	43,901	50,060	53,355					50,089
< 35	44,224	46,501	54,831	62,017				50,088
< 40	45,690	47,938	53,988	70,658				59,178
< 45			55,954	75,116	72,289	86,434		72,861
< 50		47,581	54,405	68,485	80,222	71,855	114,395	73,455
< 55			59,274		88,822	92,314		80,137
< 60								
60+								
Total	45,588	48,335	54,671	69,917	76,677	80,615	114,395	59,437

Reconciliation of Plan Participants

	Active	Vested Terms	DROP	Retired	Survivor	Disability	Total
As of October 1, 2017	86	7	0	44	3	4	144
Nonvested Termination	(3)						(3)
Disability	(1)					1	0
Retired	(3)	(3)		6			0
New Hires	8	0	0	0	0	0	8
As of October 1, 2018	87	4	0	50	3	5	149

Reconciliation of DROP Account Balances

1.	Beginning Balance as of October 1, 2017	$0
2.	Monthly Benefit Additions	0
3.	Interest Earned	0
4.	Distributions	0
5.	Ending Balance as of September 30, 2018	$0

Outline of Plan Provisions

Plan Type: Single-employer Defined Benefit Pension Plan

Effective Date: The Plan was originally effective September 28, 1993. Prior to the Effective Date, Members were part of a "Chapter Plan" where a slightly different level of benefits was effective. The most recent amendments to the Plan were Ordinance No. 2017-32 adopted effective December 12, 2017 and Ordinance No. 2018-19 adopted effective July 17, 2018.

Legal Authority: The Plan was established and is amended by local ordinance.

Plan Administrator: The Board of Trustees

Board Composition: Two members are elected from among the police employees of the City, who are members of the plan, two city residents appointed by the Commission and one person is chosen by a majority of the previous four members.

Plan Year: The 12-month period from October 1st to the following September 30th.

Funding Requirements: Employer contributions are actuarially determined and subject to State statute. Employee contributions are as described below and may be amended by ordinance.

Member: Full-time employees who satisfy the definition of a police officer in F.S. Section 185.02(11) become Members immediately upon hire.

Credited Service: Years and completed months of full-time employment as a police officer of the city during which a person contributes to the Plan. Credited Service also includes certain military service. Additional Credited Service may be purchased at full actuarial cost. Credited Service purchased after January 31, 2011 is not counted towards vesting.

Vesting: 100% upon earning ten years of Credited Service.

Compensation: Prior to Ordinance No. 2012-4, Monthly salary paid for work performed including overtime payments from a salary fund up to 300 hours in a calendar year, 50% of accumulated sick and annual leave payouts, amounts withheld for tax sheltered annuities, tax deferred compensation, and payments in addition to the employee's base rate of pay if the payments are paid according to a formal written policy that applies to all eligible employee equally, payments are paid for as long as the employee continues employment, and payments are paid at least annually.

Effective with Ordinance No. 2012-4, Monthly salary paid for work performed including overtime payments from a salary fund up to 300 hours in a calendar year, lump sum payments for accumulated sick and annual leave for employees hired on or before January 31, 2011 (but not to exceed the hours of sick and annual leave accumulated as of March 1, 2011 plus 50% of the hours of sick and annual leave accumulated between March 1, 2011 and March 1, 2012, and excluding lump sum payments for accumulated sick and annual leave accumulated on or after March 1, 2012), amounts withheld for tax sheltered annuities, tax deferred compensation, and payments in addition to the employee's base rate of pay if the payments are paid according to a formal written policy that applies to all eligible employee equally, payments are paid for as long as the employee continues employment, and payments are paid at least annually.

Employee Contributions: 7.5% of Compensation for members hired on or before January 31, 2011 and 8.0% for members hired after that date. A Member who terminates non-vested is entitled to refund of accumulated Employee Contributions without interest. Contributions may be repaid with interest upon reentry into the Plan due to rehire.

<u>Average Final Compensation:</u> For members hired on or before January 31, 2011, one-twelfth the average of Compensation for the three highest years of Credited Service. For members hired after January 31, 2011, one-twelfth of the average of Compensation for the five highest years of Credited Service.

<u>Normal Retirement Date:</u> For members hired on or before January 31, 2011, the first day of the month coincident with or next following the earlier of (i) age 48 and ten years of Credited Service, or (ii) age 45 and 25 years of Credited Service. For members hired after January 31, 2011, the Normal Retirement Date is the first day of the month coincident with or next following the date the member attains age 48 and ten years of Credited Service.

<u>Accrued Benefit (for Members Hired On or Before January 31, 2011):</u> 3% x Average Final Compensation x Credited Service, plus, for Members who retire (i) with ten years of Credited Service prior to October 1, 2002, (ii) after having attained age 50 with ten years of Credited Service by October 1, 2002, (iii) with 20 years of Credited Service between October 1, 2002 and January 31, 2011, or (iv) with 25 years of Credited Service after January 31, 2011, a Supplemental Benefit (commonly referred to as a "health subsidy") is payable as follows:

(a) $200 per month

(b) $20 x Credited Service Over 10 Years (Maximum $400) per month

(c) Where (a) plus (b) is not more than $600 per month

For Members who retired prior to October 1, 1993 the monthly benefit was defined as 2% x Average Final Compensation x Credited Service (hereafter referred to as the "2% Multiplier Formula") plus the Supplemental Benefit defined above (the lesser of $600 and $200 + ($20 x Credited Service Over 10, but no more than $400)). A cost-of-living adjustment (CPI COLA) is payable annually effective January 1, 1994 on the portion of the benefit determined under the 2% Multiplier Formula. The amount of the CPI COLA is the increase in the Consumer Price Index (urban wage earner as calculated by the United States Department of Labor) between July of the immediately preceding year as compared to July of the prior year. The CPI COLA is granted until the participant's benefit determined under the 2% Multiplier Formula reaches the benefit amount provided for members who retire after October 1, 1993 (3% x Average Final Compensation x Credited Service) plus the Supplemental Benefit (the lesser of $600 and $200 + ($20 x Credited Service Over 10, but no more than $400)). This portion of Plan provisions was applicable to only one Member of the Plan. The last time the CPI COLA was paid was on January 1, 2006. The Plan provision defining the CPI COLA will not apply to Plan participants after January 1, 2006.

Effective October 1, 2001, Members who retired prior to October 1, 2002 (including disability retirees) are granted a 1% cost-of-living adjustment annually commencing the January 1 following the first anniversary of retirement annuity commencement (1% COLA). For a DROP retiree, the 1% COLA is granted commencing on the January 1 following the first anniversary of actual annuity commencement after the end of the DROP period. The 1% COLA is not payable to any participant eligible to receive the 3% COLA, as described in the following.

Effective October 1, 2002, retirees are granted a deferred annual 3% cost-of-living adjustment (3% COLA) as follows: (i) Members who are retired on October 1, 2002 and had earned at least 20 years of Credited Service, (ii) Members who are actively employed on October 1, 2002 and had attained age 50 with ten years of Credited Service at that date, (iii) Members who are actively employed on October 1, 2002 with 20 years of Credited Service at that date, (iv) Members who attain 20 years of Credited Service after October 1, 2002 and who retire or enter the DROP by January 31, 2011, and (v) Members who attain 25 years of Credited Service after January 31, 2011. The deferred 3% COLA is payable annually commencing as specified in the following:

(a) 5 years after retirement (or DROP) for participants who retire (or DROP) on or before January 31, 2011 upon attaining age 45 and 25 years of Credited Service or age 50 and 20 Years of Credited Service.

(b) The later of 5 years after retirement (or DROP) or age 59 for participants who were hired prior to January 1, 2003 and who retire (or DROP) on or before January 31, 2011 upon attaining age 48 and 20 years of Credited Service.

(c) On the first day of the month coincident with or next following attainment of age 59

   a. for participants who were hired prior to January 1, 2003 and who separate employment on or before January 31, 2011 with 20 years of Credited Service but before reaching age 48.

   b. for participants hired on or after January 1, 2003 who retire (or DROP) on or before January 31, 2011 with at least 20 years of Credited Service (but prior to age 45 and 25 Years of Credited Service and prior to age 50).

   c. for participants who retire after January 31, 2011.

(d) 5 years after commencement of disability benefits on or before January 31, 2011 if 20 years of Credited Service have been earned during employment.

For members actively employed on January 31, 2011, in no event will the annual benefit payable exceed $95,000, inclusive of any COLAs to which the member may be entitled.

<u>Accrued Benefit (for Members Hired After January 31, 2011):</u> 3% x Average Final Compensation x Credited Service, plus a Supplemental Benefit (commonly referred to as a “health subsidy”) is payable as follows:

(a) $100 per month

(b) $10 x Credited Service Over 10 Years (Maximum $100) per month

(c) Where (a) plus (b) is not more than $200 per month

No COLA is payable for members hired after January 31, 2011.

In no event will the annual benefit exceed $95,000.

<u>Late Retirement Benefit:</u> The higher of the benefit determined using the Average Final Compensation and Credited Service at the actual date of retirement from employment, or the benefit that would have been paid had the Member retired at the Normal Retirement Date increased actuarially from the Normal Retirement Date to the actual date of retirement.

<u>Early Retirement Date:</u> The first day of the month coincident with or next following the date the Member earns ten years of Credited Service and attains age 45.

<u>Early Retirement Benefit:</u> The Accrued Benefit reduced by 3% for each year the Member is younger than the Normal Retirement Date.

Disability Benefits: Members are eligible for service-connected Disability Benefits immediately upon hire. The monthly service-connected Disability Benefit is the greater of (i) the Accrued Benefit and (ii) 51% of average monthly compensation for the most recent 12 months of full-time employment. Members are eligible for a non-service-connected Disability Benefit after earning at least ten years of Credited Service. The monthly non-service-connected disability benefit is the greater of (i) the Accrued Benefit and (ii) 25% of average monthly compensation for the most recent 12 months of full-time employment. Disability Benefits are offset by disability income received from workers' compensation only to the extent by which the total of the workers' compensation benefit plus the Disability Benefit payable exceeds the employee's average monthly compensation at disability. However, any offset for workers' compensation will not result in less than 42% of average monthly compensation, in the event of service-connected disability, or in less than 25% of average monthly compensation, in the event of non-service-connected disability.

Pre-Retirement Survivor Benefits: Vested Members who die prior to the commencement of benefits shall have a survivor benefit payable on their behalf. The amount of the monthly income payable is the (i) Accrued Benefit at the date of death payable at the Normal Retirement Date, or (2) the actuarial equivalent of this Accrued Benefit payable on the first day of the month following death, as elected by the designated beneficiary.

Optional Forms of Benefit: Pension benefits described above are payable in the form of a 10 year certain and continuous annuity. Members may optionally choose an actuarially equivalent single life annuity, or joint and survivor annuity (with 50%, 66 2/3, 75%, or 100% continuance). Actuarial equivalence for healthy lives is determined based the RP-2000 mortality table projected using Scale AA to 2010 (50% male blend) and an 8.0% annual interest assumption. The RP-2000 mortality table for disabled retirees projected using Scale AA to 2010 (50% male blend) is used for disabled lives.

Deferred Retirement Option Plan (DROP): Members hired on or before January 31, 2011 are eligible to enter the DROP upon earning 25 years of Credited Service. The Accrued Benefit is frozen and no further Employee Contributions are payable at DROP entry. The Accrued Benefit accumulates with interest at the fund's assumed rate of investment return in the DROP account (credited quarterly) and is payable as a single-lump sum within 60 days following DROP exit. The maximum DROP participation duration is 60 months. DROP participants are not eligible for pre-retirement death or disability benefits. No DROP is available to members hired after January 31, 2011.

Share Plan: Ordinance No. 2017-32 adopted effective December 12, 2017 amended the plan to provide that all annual premium tax revenues received pursuant to Chapter 185 and all accumulated excess Chapter 185 premium tax revenues as of October 1, 2016 are used to offset the City's pension contributions. This ordinance also created a defined contribution plan component commonly referred to as the Share Plan. Currently, the City of Port Orange and the union representing police officers have mutually agreed that no Chapter 185 premium tax revenues will be allocated to the Share Plan. At such time that the City of Port Orange and the union mutually agree to allocate premium tax revenues to the Share Plan, the details will be negotiated.

Description of Assumptions and Methods

A review of experience was performed for the five-year period from October 1, 2012 to October 1, 2017. As a result of this review, the Board of Trustees adopted revised assumptions. However, the Board of Trustees adopted the change in termination assumptions described below to be phased in over a three-year period. For each liability component, the difference between the value of that component determined under the revised assumptions not including the revision to termination assumptions and under all revised assumptions was determined. One-third of the change has been reflected in this valuation.

Assumed Rate of Investment Return: 7.35% per year net of investment expenses (revised from 7.45% in the prior valuation)

Inflation: 2.0% per year

Salary Increase – Total Payroll: 1.0% per year (revised from 3.5% per year in the prior valuation)

The payroll growth assumption used to amortize unfunded accrued liability as a level percent of payroll is 1.0%.

Salary Increase – Individual: 7.25% per year (revised from 7.5% per year in the prior valuation)

Members hired after January 31, 2011 are assumed to have no payout for accrued hours includable in their pension.

For Members hired on or before January 31, 2011 the final year of Salary is increased to account for the number of accrued hours available at March 1, 2011 plus half of the number of accrued hours between March 1, 2011 and March 1, 2012, assuming members typically work 2,184 hours in a year.

Mortality: The mortality table is that used for special risk employees in the valuation of FRS as of July 1, 2016, 2017, and 2018, as required by state statute. The mortality rates are as follows:

Healthy mortality (Pre-retirement):
Males: 10% RP-00 Combined Healthy White Collar +
90% RP-00 Combined Healthy Blue Collar
Females: 100% RP-00 Combined Healthy White Collar
Both male and female rates fully generational using Scale BB

Healthy mortality (Post-retirement):
Males: 10% RP-00 Annuitant White Collar +
90% RP-00 Annuitant Blue Collar
Females: 100% RP-00 Annuitant White Collar
Both male and female rates fully generational using Scale BB

Disabled mortality:
Males: 60% RP-00 Disabled Retiree Set Back 4 Years +
40% RP-00 Annuitant White Collar
Females: 60% RP-00 Disabled Retiree Set Forward 2 Yrs +
40% RP-00 Annuitant White Collar
No mortality improvement is assumed for disabled lives.

Retirement: Unisex rates, as follows:

Rates of retirement were revised for members hired before January 31, 2011, as follows:

	Prior Rates Service			Current Rates Service		
Age	<10	10-24	25+	<10	10-24	25+
<=44	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
45	0.00%	0.00%	100.00%	0.00%	10.00%	100.00%
46	0.00%	0.00%	100.00%	0.00%	5.00%	100.00%
47	0.00%	0.00%	100.00%	0.00%	2.50%	100.00%
48	0.00%	0.00%	100.00%	0.00%	25.00%	100.00%
49-51	0.00%	0.00%	100.00%	0.00%	2.50%	100.00%
52+	0.00%	100.00%	100.00%	0.00%	100.00%	100.00%

Members Hired After January 31, 2011: 100% at Age 48 and 10 Years of Service

Termination: Unisex rates of termination were revised as follows:

Service	Prior Rate	Current Rate	Service	Prior Rate	Current Rate
0	23%	24%	11	5%	3%
1	23%	21%	12	5%	3%
2	23%	18%	13	4%	3%
3	8%	13%	14	4%	3%
4	8%	12%	15	3%	3%
5	8%	8%	16	3%	2%
6	8%	8%	17	2%	1%
7	8%	7%	18	2%	1%
8	8%	6%	19	1%	1%
9	8%	5%	>=20	0%	0%
10	30%	5%			

Disability: Unisex rates, as follows:

Age	Rate	Age	Rate	Age	Rate	Age	Rate
15	0.050%	29	0.106%	43	0.186%	57	0.704%
16	0.054%	30	0.110%	44	0.193%	58	0.746%
17	0.058%	31	0.114%	45	0.200%	59	0.788%
18	0.062%	32	0.118%	46	0.242%	60	0.830%
19	0.066%	33	0.122%	47	0.284%	61	0.872%
20	0.070%	34	0.126%	48	0.326%	62	0.914%
21	0.074%	35	0.130%	49	0.368%	63	0.956%
22	0.078%	36	0.137%	50	0.410%	64	0.998%
23	0.082%	37	0.144%	51	0.452%	65	1.040%
24	0.086%	38	0.151%	52	0.494%	66	1.082%
25	0.090%	39	0.158%	53	0.536%	67	1.124%
26	0.094%	40	0.165%	54	0.578%	68	1.166%
27	0.098%	41	0.172%	55	0.620%	69	1.208%
28	0.102%	42	0.179%	56	0.662%	70+	1.250%

100% of disabilities are assumed to be service connected.

Percentage Married at Retirement: Effective for the October 1, 2018 actuarial valuation, 40% of active Members are assumed to be married at retirement and elect the 100% joint & survivor form of benefit.

Marital Age Difference Assumption: Husbands are assumed to be three years older than wives.

Plan Expenses: The prior year administrative expense is added to the normal cost.

Funding Method: Entry Age (level percent of salary)

Glossary of Actuarial Terms

Present Value of Benefits (PVB): The present value, as of the valuation date, of all benefits that will become payable by the Plan for the current group of members in the census.

Normal Cost (NC): The value of the portion of the total benefit for active members which accrues in the year following the valuation date. Under the Entry Age Normal (Level Percent of Salary) funding method, the NC is a constant fraction of salary from the member's date of entry into the Plan to the member's assumed date of termination, retirement, disability or death.

Accrued Liability (AL): This is the portion of the PVB attributable to the past at the valuation date. For active members, AL is the annual NC accumulated from date of entry to the valuation date for each member. For retired and terminated members, the PVB and the AL are equal. The AL is the estimated liability owed by the pension fund at the valuation date.

Unfunded Accrued Liability (UAL): Any excess of the Accrued Liability over the fund assets. A negative UAL indicates fund assets are greater than the Accrued Liability, otherwise known as a surplus.

Actuarial Value of Assets: The market value of assets is adjusted to recognize gains and losses over a five-year period. The Actuarial Value of Assets shall not be more than 120% or less than 80% of the market value of assets.

CITY OF PORT ORANGE POLICE PENSION PLAN

FINANCIAL STATEMENTS

FOR THE YEAR ENDED SEPTEMBER 30, 2018

CITY OF PORT ORANGE POLICE PENSION PLAN
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SEPTEMBER 30, 2018

James Moore
Certified Public Accountants and Consultants

INDEPENDENT AUDITORS' REPORT

To the Board of Trustees,
City of Port Orange Police Pension Plan:

Report on the Financial Statements

We have audited the accompanying financial statements of the City of Port Orange Police Pension Plan (the Plan), which comprise the statement of fiduciary net position as of September 30, 2018, the statement of changes in fiduciary net position for the year then ended, and the related notes to the financial statements, which collectively comprise the Plan's basic financial statements as listed in the table of contents.

Management's Responsibility for the Financial Statements

The Plan's management is responsible for the preparation and fair presentation of these financial statements in accordance with accounting principles generally accepted in the United States of America; this includes the design, implementation, and maintenance of internal control relevant to the preparation and fair presentation of financial statements that are free from material misstatement, whether due to fraud or error.

Auditors' Responsibility

Our responsibility is to express an opinion on these financial statements based on our audit. We conducted our audit in accordance with auditing standards generally accepted in the United States of America and the standards applicable to financial audits contained in *Government Auditing Standards*, issued by the Comptroller General of the United States. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the financial statements. The procedures selected depend on the auditors' judgment, including the assessment of the risks of material misstatement of the financial statements, whether due to fraud or error. In making those risk assessments, the auditor considers internal control relevant to the entity's preparation and fair presentation of the financial statements in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the entity's internal control. Accordingly, we express no such opinion. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of significant accounting estimates made by management, as well as evaluating the overall presentation of the financial statements.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

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Opinion

In our opinion, the financial statements referred to above present fairly, in all material respects, the fiduciary net position of the Plan as of September 30, 2018, and the changes in fiduciary net position for the year then ended in accordance with accounting principles generally accepted in the United States of America.

Other Matters

Required Supplementary Information

Accounting principles generally accepted in the United States of America require that the required supplementary schedules, as listed in the table of contents, be presented to supplement the basic financial statements. Such information, although not a part of the basic financial statements, is required by the Governmental Accounting Standards Board who considers it to be an essential part of financial reporting for placing the basic financial statements in an appropriate operational, economic, or historical context. We have applied certain limited procedures to the required supplementary information in accordance with auditing standards generally accepted in the United States of America, which consisted of inquiries of the Plan's management and independent actuary regarding the methods of measurement and presentation of the required supplementary information. We do not express an opinion or provide any assurance on the information because the limited procedures do not provide us with sufficient evidence to express an opinion or provide any assurance.

Management has omitted Management's Discussion and Analysis that accounting principles generally accepted in the United States of America require to be presented to supplement the basic financial statements. Such missing information, although not a part of the basic financial statements, is required by the Governmental Accounting Standards Board who considers it to be an essential part of financial reporting for placing the basic financial statements in an appropriate operational, economic, or historical context. Our opinion on the basic financial statements is not affected by this missing information.

Other Reporting Required by *Government Auditing Standards*

In accordance with *Government Auditing Standards*, we have issued our report dated February 21, 2019, on our consideration of the Plan's internal control over financial reporting and on our tests of its compliance with certain provisions of laws, regulations, contracts, and grant agreements and other matters. The purpose of that report is to describe the scope of our testing of internal control over financial reporting and compliance and the results of that testing, and not to provide an opinion on internal control over financial reporting or on compliance. That report is an integral part of an audit performed in accordance with *Government Auditing Standards* in considering the Plan's internal control over financial reporting and compliance.

James Moore & Co., P.L.

Daytona Beach, Florida
February 21, 2019

CITY OF PORT ORANGE POLICE PENSION PLAN
STATEMENT OF FIDUCIARY NET POSITION
SEPTEMBER 30, 2018

ASSETS		
Cash and cash equivalents with trustee	$	774,147
Prepaid benefit payments		202,670
Interest and dividends receivable		16,190
Investments, at fair value		
Mutual funds - equity securities		25,162,597
Mutual funds - fixed income		9,561,649
Real estate		3,097,437
Total investments		37,821,683
Total assets	$	38,814,690
LIABILITIES		
Accounts payable	$	8,750
Prepaid employer contributions		381,980
Total liabilities	$	390,730
NET POSITION RESTRICTED FOR PENSIONS	$	38,423,960

The accompanying notes to financial statements are an intergral part of this statement.

CITY OF PORT ORANGE POLICE PENSION PLAN
STATEMENT OF CHANGES IN FIDUCIARY NET POSITION
FOR THE YEAR ENDED SEPTEMBER 30, 2018

Additions	
Contributions:	
Employer	$ 2,813,517
Plan members	375,306
State	444,090
Total contributions	3,632,913
Investment income:	
Net appreciation in fair value of investments	2,187,995
Interest and dividends	820,854
Total investment income	3,008,849
Less: investment expense	(60,229)
Net investment income	2,948,620
Total additions	6,581,533
Deductions	
Benefit payments	
Recurring payments	2,396,855
Lump sum distributions and refunds	28,302
Administrative expenses	116,145
Total deductions	2,541,302
Change in net position	4,040,231
Net position restricted for pensions, beginning of year	34,383,729
Net position restricted for pensions, end of year	$ 38,423,960

The accompanying notes to financial statements are an intergral part of this statement.

CITY OF PORT ORANGE POLICE PENSION PLAN
NOTES TO FINANCIAL STATEMENTS
SEPTEMBER 30, 2018

(1) Summary of Significant Accounting Policies:

The following is a summary of the more significant accounting policies and practices of the City of Port Orange Police Pension Plan (the Plan), which affects significant elements in the accompanying financial statements:

(a) **Plan description**—The City of Port Orange Police Pension Fund (the “Plan”) is a single-employer, defined benefit plan covering the police officers of the City of Port Orange, Florida (the City). Eligible employees of the Plan consist of full-time sworn police officers of the City. The Plan is governed by a Board of Trustees (the Board), made up of five individuals, including: two active participants of the Plan, two citizens of the City, and one member appointed by the Board.

Funds are accumulated from employee contributions, City contributions, State appropriations, and investment earnings from accumulated funds. All benefits and refunds of the Plan are recognized when due and payable in accordance with the terms of the plan. City Ordinance No. 2002-59 provides the authority under which the City establishes or amends Plan policies, procedures and/or benefits. The investments of the Plan are administered, managed and operated by the Board using the services of the City staff, consultants, and financial institutions. All investment management expenses and other administrative costs are financed by the Plan.

Full-time police officers are eligible to participate in the Plan immediately upon employment by the City. Police officers have the option to resign from the plan after the first year of employment. Plan participants were required to contribute 0.5% of their base salary to the plan through January 31, 2011. Plan participants who were employed on or before January 31, 2011, are required to contribute 7.5% of their base salary to the plan after January 31, 2011. Plan participants who were hired after January 31, 2011 are required to contribute 8.0% of their base salary to the Plan.

(b) **Pension benefits**—Participants have a stepped vesting program and achieve full benefits depending on hire date. Participants hired before January 31, 2011, achieve full benefits at age 45 with 25 years of service or at age 48 with 10 years of services. Participants hired after January 31, 2011, achieve full benefits at age 48 and 10 years of service.

An independent actuary is engaged to calculate benefits to be paid to retirees. Upon retirement, Plan participants are entitled to an annual pension benefit equal to 3.0% of their average final compensation (equivalent to the average of the three highest years of service for participants hired prior to January 31, 2011, and five highest years of service for participants hired after January 31, 2011) for each year of credited service at their normal retirement date.

Early retirement benefits are available, but are actuarially reduced to reflect early payment when the commencement of benefits precedes the normal retirement date.

(c) **Disability benefits**—The Plan pays out disability benefits to employees with varying levels of benefits for those with disabilities. Disability benefits are paid out on a multi-tier approach based on years of services and whether the disability resulted from events occurring while in the line of duty or not in the line of duty.

(d) **Death benefits**—In the event of an employee’s death, the survivor portion of the annuity, actuarially-reduced to reflect payment prior to the employee’s normal retirement date, is payable to the employee’s spouse, or other designated financial dependent, in accordance with the Plan document.

(1) **Summary of Significant Accounting Policies:** (Continued)

(e) **Deferred retirement option program**—The Plan offers a deferred retirement option program (DROP) for participants who were employed by the city on January 31, 2011, and who met the requirements for DROP on or after that date. Participants who enter the DROP program may participate until separating from City employment, not to exceed five years from entering the DROP program. While in the DROP program, employees no longer contribute to the Plan or accrue benefits, but instead earn monthly retirement benefits which are accumulated in a DROP account and paid out in a lump sum upon separation from employment with the City.

(f) **Plan membership**— Membership of the Plan consisted of the following at September 30, 2018, the date of the last actuarial valuation:

Retirees and beneficiaries receiving benefits	58
Terminated vested participants	4
Active participants	87
Total	149

(g) **Basis of accounting**—The Plan's financial statements are prepared in accordance with accounting principles generally accepted in the United States of America and accounted for in accordance with Governmental Accounting Standards Board ("GASB") Statement No. 67, *Financial Reporting for Pension Plans*. Contributions are recognized when due and the employer has made a formal commitment to provide the contributions. Benefit payments are recognized when due and payable to the Plan participants in accordance with the terms of the Plan.

(h) **Use of estimates—**The preparation of financial statements in conformity with accounting principles generally accepted in the United States requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and changes therein, disclosure of contingent assets and liabilities, and the actuarial present value of accumulated plan benefits and changes therein at the date of the financial statements. Actual results could differ from those estimates.

(i) **Cash and cash equivalents**—The Plan's cash and cash equivalents are considered to be cash on hand, demand deposits, money market accounts, and short-term investments with original maturities of three months or less from the date of acquisition. Cash and cash equivalents included $774,147 of money market funds at September 30, 2018, which are measured at fair value using Level 2 inputs, as discussed in Note (2).

(j) **Investment policy**—The investments of the Plan are governed by investment guidelines adopted by the Board of Trustees for the Plan. Authorized investments of the Plan include the following investments:

a. Equity securities (including convertible bonds) listed on the New York, American and principal regional and foreign (for foreign securities) exchanges.

b. Marketable debt securities issued or guaranteed by either (a) the United States Government or its agencies, (b) domestic corporations (including industrial and utilities) or Israel Bonds, (c) domestic banks and other U.S. financial institutions.

c. Private real estate investments expected to improve total portfolio diversification and provide income and opportunities for higher incremental returns in the long-term.

(1) **Summary of Significant Accounting Policies:** (Continued)

(k) **Investment valuation and income recognition**—Investments are stated at fair value based on quoted market prices. Purchases and sales of securities are reflected on a trade-date basis. Changes in the current value of investments and gains and losses on disposal of investments are reported in the statements of changes in fiduciary net position as the net appreciation or depreciation in current value of investments. Interest income is recorded on the accrual basis. Dividends are recorded on the ex-dividend date.

(l) **Risk and uncertainties**—The Plan utilizes various investment securities including U.S. government securities, corporate debt instruments, mutual funds, and corporate stocks. Investment securities, in general, are exposed to various risks, such as interest rate risk, credit risk, and overall market volatility. Due to the level of risk associated with certain investment securities, it is reasonably possible that changes in the values of investment securities will occur in the near term and that such changes could materially affect the amounts reported in the financial statements.

(m) **Expenses—**Administrative expenses of the Plan are paid for directly by the Plan.

(2) **Investments:**

The Plan measures and records its investments, assets whose use is limited, and restricted assets using fair value measurement guidelines established by the GASB Codification. These guidelines recognize a three-tiered fair value hierarchy, as follows:

- *Level 1:* Quoted prices for identical investments in active markets;
- *Level 2:* Observable inputs other than quoted market prices; and,
- *Level 3:* Unobservable inputs.

The real estate partnership, valued based upon level 3 inputs, is valued based on the Plan's share of the real estate investment portfolio, which was most recently audited as of December 31, 2017.

The following chart shows the Plan's investment accounts by investment portfolios and their respective maturities (in years) and fair value measurements at September 30, 2018:

				Measured at Fair Value:		
	Carrying Value	Weighted Average Maturity (years)	Credit Rating Range (Moody)	Level 1	Level 2	Level 3
Mutual funds – equity	$ 25,162,597	N/A	NR	$ 25,162,597	$ -	$ -
Mutual funds – fixed income	9,561,649	N/A	NR	9,561,649	-	-
Real estate partnership	3,097,437	N/A	NR	-	-	3,097,437
Total Investments	$ 37,821,683			$ 34,724,246	$ -	$ 3,097,437

(2) **Investments:** (Continued)

Interest Rate Risk: Interest rate risk is the risk that changes in interest rates will adversely affect the fair value of investments. Generally, the longer the time to maturity, the greater the exposure to interest rate risk. The established performance objectives of the Pension Plans require investment maturities to provide sufficient liquidity to pay obligations as they become due. At September 30, 2018, the weighted average maturity in years for each investment type is included in the preceding table.

Credit Risk: Credit risk is the risk that a debt issuer or other counter-party to an investment will not fulfill its obligations. The Plan utilizes portfolio diversification in order to limit investments to the highest-rated securities as rated by nationally recognized rating agencies. The ratings of the investments held at year end are shown above. All are rated within the investment policy guidelines at September 30, 2018.

Concentration of Credit Risk: Concentration of credit risk is the risk of loss attributed to the magnitude of an investment in a single issuer. The Plan does not allow more than five (5) percent of its assets in the common stock, capital stock, or convertible securities of any one issuing company, nor shall the aggregate investment in any one issuing company, exceed five (5) percent of the outstanding stock of that company. Target allocations in investment types include domestic equity (50 percent), international equity (15 percent), private real estate (10 percent), domestic fixed income (20 percent), and global fixed income (5 percent). At September 30, 2018, the investment portfolios met the single issuer limitations.

Custodial Credit Risk: Custodial credit risk is the risk that the City may not recover cash and investments held by another party in the event of financial failure. Custodial credit risk is limited since investments are held in independent custodial safekeeping accounts or mutual funds.

Foreign Currency Risk: Foreign currency risk is the risk that changes in exchange rates will adversely affect the fair value of an investment. The Plan investment policy allows for up to fifteen (15) percent of its investments in common stock, capital stock and convertible securities at market value in foreign securities. At September 30, 2018, the investment portfolios met the foreign securities limitations.

For the year ended September 30, 2018, the annual money-weighted rate of return on Plan investments, net of expenses, was 8.45%. This percentage is a measure of investment performance, net of expenses, as adjusted for changes in amounts contributed and invested.

(3) **Funding Policy:**

For the year ended September 30, 2018, Plan participants were required to contribute, depending on their hire date, either 7.5% or 8.0% of their base salary to the Plan, which accounted for $375,306 of total contributions to the Plan.

The aggregate funding method is utilized to calculate the City's contribution requirements, as calculated by an independent actuary. For the year ended September 30, 2018, the City contributed $2,813,517 to the Plan. Also counted toward the City's contributions were $444,090 of insurance premium tax monies received from the State of Florida.

(4) Net Pension Liability:

The net pension liability is the Plan's total pension liability offset by the Plan's fiduciary net position. The components of the net pension liability and the net pension liability as a percentage of the total pension liability were the following at September 30, 2018:

Total pension liability	$ 51,784,659
Fiduciary net position	(38,423,960)
Net pension liability	$ 13,360,699
Fiduciary net position as a percentage of the total pension liability	74.20%

Significant actuarial methods and assumptions of the Plan are presented in the following table:

Interest rate	7.35% net of investment expense, including inflation	
Pay increase	7.25%, including inflation	
Inflation	2.0%	
Measurement date	September 30, 2018	
Valuation date	October 1, 2018	
Mortality tables	From the July 1, 2016, 2017, and 2018 FRS special risk valuation	
Healthy pre-retirement	Males:	10% RP-00 Combined Healthy White Collar + 90% RP-00 Combined Healthy Blue Collar
	Females:	100% RP-00 Combined Healthy White Collar
Healthy post-retirement	Males:	10% RP-00 Annuitant White Collar + 90% RP-00 Annuitant Blue Collar
	Females:	100% RP-00 Annuitant White Collar
Disabled mortality	Males:	60% RP-00 Disabled Retiree Set Back 4 Years + 40% RP-00 Annuitant White Collar
	Females:	60% RP-00 Disabled Retiree Set Forward 2 Years + 40% RP-00 Annuitant White Collar

Best estimates of arithmetic real rates of return for each major class included in the pension plan's target asset allocation as of September 30, 2018, are summarized in the following table:

Investment Type	Long-term Expected Real Rate of Return	Target Asset Allocation
Domestic Equity	7.5%	50.00%
International Equity	8.5%	15.00%
Domestic Bonds	2.5%	20.00%
Real Estate	4.5%	10.00%
International Bonds	3.5%	5.00%

(4) **Net Pension Liability:** (Continued)

Additionally, a review of experience was performed for the five-year period from October 1, 2012 to October 1, 2017. As a result of this review, the Board of Trustees adopted revised assumptions. However, the Board of Trustees adopted the change in termination assumptions described below to be phased in over a three-year period. For each liability component, the difference between the value of that component determined under the revised assumptions not including the revision to termination assumptions and under all revised assumptions was determined. One-third of the change has been reflected in the current year valuation.

The discount rate used to measure the total pension liability for the Plan was 7.35%. The projection of cash flows used to determine the discount rate assumed the plan member contributions will be made at the current contribution rate and that City contributions will be made as rates equal to the difference between actuarially determined contribution rates and the member rate. Based on those assumptions, the pension plan's fiduciary net position was projected to be available to make all projected future benefit payments of current plan members. Therefore, the long-term expected rate of return on pension plan investments was applied to all periods of projected benefit payments to determine the total pension liability.

The following table provides the sensitivity of the net pension liability to changes in the discount rate as of September 30, 2018. In particular, the table presents the plan's net pension liability, if it were calculated using a single discount rate that is one-percentage-point lower or one percentage-point higher than the single discount rate:

	1% Decrease: 6.35%	Current Rate: 7.35%	1% Increase: 8.35%
Net pension liability	$20,132,133	$13,360,699	$7,792,674

REQUIRED SUPPLEMENTARY INFORMATION

CITY OF PORT ORANGE POLICE PENSION PLAN
SCHEDULE OF CHANGES IN NET PENSION LIABILITY
SEPTEMBER 30, 2018
(UNAUDITED)

Fiscal Year Ending September 30,	2018	2017	2016	2015	2014
Total Pension Liability					
Service cost	$ 933,544	$ 820,072	$ 885,450	$ 801,785	$ 753,000
Interest	3,603,240	3,425,372	3,371,771	3,257,812	3,123,215
Changes in benefit terms	-	(7,192)	-	-	-
Difference between actual and expected experience	413,041	397,703	(950,704)	609,774	557,616
Assumption changes	485,735	585,900	771,544	568,624	56,887
Benefit payments including refunds of contributions	(2,425,157)	(2,256,996)	(3,144,461)	(3,415,712)	(2,165,565)
Net change in total pension liability	3,010,403	2,964,859	933,600	1,822,283	2,325,153
Total pension liability - beginning	48,774,256	45,809,397	44,875,797	43,053,514	40,728,361
Total pension liability - ending (a)	$ 51,784,659	$ 48,774,256	$ 45,809,397	$ 44,875,797	$ 43,053,514
Total Fiduciary Net Position					
Contributions - employer	$ 2,813,517	$ 2,824,801	$ 2,817,806	$ 2,731,326	$ 2,670,260
Contributions - state	444,090	397,680	373,343	345,822	331,402
Contributions - employee	375,306	355,777	336,731	326,566	301,375
Net investment income	2,948,620	3,063,317	1,688,832	(21,228)	1,812,759
Benefit payments, including refunds of contributions	(2,425,157)	(2,256,996)	(3,151,653)	(3,415,712)	(2,165,565)
Administrative expense	(116,145)	(106,538)	(116,769)	(104,276)	(103,311)
Net change in plan fiduciary net position	4,040,231	4,278,041	1,948,290	(137,502)	2,846,920
Plan fiduciary net position - beginning	34,383,729	30,105,688	28,157,398	28,294,900	25,447,980
Plan fiduciary net position - ending (b)	$ 38,423,960	$ 34,383,729	$ 30,105,688	$ 28,157,398	$ 28,294,900
Net pension liability - ending (a) - (b)	$ 13,360,699	$ 14,390,527	$ 15,703,709	$ 16,718,399	$ 14,758,614
Plan fiduciary net position as a percentage of the total pension liability	74.20%	70.50%	65.72%	62.75%	65.72%
Covered employee payroll	$ 4,855,965	$ 4,622,671	$ 4,275,349	$ 4,293,316	$ 3,944,464
Net pension liability as a percentage of covered employee payroll	275.14%	311.30%	367.31%	389.41%	374.16%

CITY OF PORT ORANGE POLICE PENSION PLAN
SCHEDULE OF CONTRIBUTIONS
SEPTEMBER 30, 2018
(UNAUDITED)

Fiscal Year	Actuarially Determined Contribution (ADC)	Contributions in Relation to ADC	Contribution Deficiency (Excess)	Covered Payroll	Contributions as Percentage of Employee Payroll
2018	$ 3,197,607	$ 3,257,607	$ (60,000)	$ 4,855,965	67.08%
2017	3,214,965	3,222,481	(7,516)	4,622,671	69.71%
2016	3,054,694	3,191,149	(136,455)	4,275,349	74.64%
2015	2,916,745	3,077,148	(160,403)	4,293,316	71.67%
2014	2,826,275	3,001,662	(175,387)	3,944,464	76.10%
2013	2,515,286	2,814,596	(299,310)	3,575,109	78.73%
2012	2,304,028	2,393,122	(89,094)	3,460,703	69.15%
2011	2,071,957	2,841,994	(770,037)	3,212,337	88.47%
2010	2,597,318	2,601,217	(3,899)	4,211,533	61.76%
2009	2,413,516	2,597,319	(183,803)	4,329,474	59.99%

Notes to Schedule:

Valuation Date: 10/01/2018

Methods and assumptions used to determine contribution rates:

Actuarial Cost Method:	Entry Age
Amortization Method:	Level percent of pay, closed
Remaining Amortization Period:	25 years for change in Plan provisions, assumptions, and methods. (2015 and later) 30 years for plan provisions; 15 years for actuarial gains and losses (prior to 2015)
Asset Valuation Method:	5-year smoothed market
Inflation:	2.00%
Salary Increases:	7.5% (7.25% beginning October 1, 2018)
Investment Rate of Return:	7.75%, net of pension plan investment expense including inflation, as of 10/1/14 (7.65% beginning with 2016 contributions; 7.55% with 2017 contributions) (7.45% beginning with 2018 contributions, 7.35% with 2019 contributions)
Mortality:	The mortality table was revised with the October 1, 2017 actuarial valuation to be that used for special risk employees in te valuation of the Florida Retirement System (FRS) as of July 1, 2016 and 2017, as required by state statute. The mortality table was revised with the October 1, 2016 to be that used for special risk employees in the valuation of FRS as of July 1, 2015, as required by state statute. Prior to this change the RP-2000 Combined Mortality Table using Scale AA projected to the valuation year was used.
Retirement Age:	Members hired after January 31, 2011 – 100% at age 48 and 10 years of service Members hired before January 31, 2011 – 100% at age 45 with 25 years of service or at age 48 with 10 years of service

CITY OF PORT ORANGE POLICE PENSION PLAN
SCHEDULE OF ANNUAL MONEY-WEIGHTED RATE OF RETURN
SEPTEMBER 30, 2018
(UNAUDITED)

Fiscal Year	Annual Money- Weighted Rate of Return Net of Investment Expense
2018	8.45%
2017	10.34%
2016	6.18%
2015	-0.49%
2014	7.48%

James Moore
Certified Public Accountants and Consultants

INDEPENDENT AUDITORS' REPORT ON INTERNAL CONTROL OVER FINANCIAL REPORTING AND ON COMPLIANCE AND OTHER MATTERS BASED ON AN AUDIT OF FINANCIAL STATEMENTS PERFORMED IN ACCORDANCE WITH *GOVERNMENT AUDITING STANDARDS*

To the Board of Trustees,
City of Port Orange Police Pension Plan:

We have audited, in accordance with auditing standards generally accepted in the United States of America and the standards applicable to financial audits contained in *Government Auditing Standards* issued by the Comptroller General of the United States, the basic financial statements of City of Port Orange Police Pension Plan (the Plan), which comprise the statement of fiduciary net position as of September 30, 2018, the statement of changes in fiduciary net position for the year then ended, and the related notes to the financial statements, which collectively comprise the Plan's basic financial statements, and have issued our report thereon dated February 21, 2019.

Internal Control over Financial Reporting

In planning and performing our audit of the financial statements, we considered the Plan's internal control over financial reporting (internal control) to determine the audit procedures that are appropriate in the circumstances for the purpose of expressing our opinions on the financial statements, but not for the purpose of expressing an opinion on the effectiveness of the Plan's internal control. Accordingly, we do not express an opinion on the effectiveness of the Plan's internal control.

A *deficiency in internal control* exists when the design or operation of a control does not allow management or employees in the normal course of performing their assigned functions, to prevent, or detect and correct misstatements on a timely basis. A *material weakness* is a deficiency, or a combination of deficiencies, in internal control, such that there is a reasonable possibility that a material misstatement of the entity's financial statements will not be prevented, or detected and corrected on a timely basis. A *significant deficiency* is a deficiency, or a combination of deficiencies, in internal control that is less severe than a material weakness, yet important enough to merit attention by those charged with governance.

Our consideration of internal control over financial reporting was for the limited purpose described in the first paragraph of this section and was not designed to identify all deficiencies in internal control over financial reporting that might be material weaknesses or significant deficiencies, and therefore, material weaknesses or significant deficiencies may exist that were not identified. Given these limitations, during our audit we did not identify any deficiencies in internal control over financial reporting that we consider to be material weaknesses. However, material weaknesses may exist that have not been identified.

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Compliance and Other Matters

As part of obtaining reasonable assurance about whether the Plan's financial statements are free from material misstatement, we performed tests of its compliance with certain provisions of laws, regulations, contracts, and grant agreements, noncompliance with which could have a direct and material effect on the determination of financial statement amounts. However, providing an opinion on compliance with those provisions was not an objective of our audit and, accordingly, we do not express such an opinion. The results of our tests disclosed no instances of noncompliance or other matters that are required to be reported under *Government Auditing Standards.*

Purpose of this Report

The purpose of this report is solely to describe the scope of our testing of internal control and compliance and the results of that testing, and not to provide an opinion on the effectiveness of the entity's internal control or on compliance. This report is an integral part of an audit performed in accordance with *Government Auditing Standards* in considering the entity's internal control and compliance. Accordingly, this communication is not suitable for any other purpose.

James Moore & Co., P.L.

Daytona Beach, Florida
February 21, 2019

SUGARMAN & SUSSKIND

PROFESSIONAL ASSOCIATION
ATTORNEYS AT LAW

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D. Marcus Braswell, Jr.
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RECEIVED KJR
By Karan Rounsavall at 7:49 pm, Feb 15, 2019

February 15, 2019

Board of Trustees
Port Orange Police Pension Fund
c/o Karan Rounsavall, Plan Administrator
3695 Indian River Drive
Cocoa, FL 32926

Re: Survivor Annuitant $95,000 Cap and COLA Benefits

Dear Trustees:

At its last regular meeting, the Board of Trustees discussed several hypotheticals with its actuary regarding the pension plan's benefit cap and its application with respect to cost of living adjustments ("COLA's") and designated beneficiary benefits paid as an optional form. You have asked our opinion regarding whether a survivor annuitant who receives a benefit below the $95,000 benefit cap can receive a COLA until such time as the benefit cap is met. For the reasons, and based upon the understandings below, our answer is, yes.

We understand that Section 54-130(7) of the Port Orange Code of ordinances establishes a pension benefit cap of $95,000 for certain plan participants. Further, we understand that the language here specifically provides that the benefit cap is set to include any potential COLA increases applied to eligible participants as specified in the ordinance.

Section 54-130(7) states:

> *(7) For participants who are employed and not participating in the DROP on January 31, 2011, and for participants hired after that date, the maximum total benefit amount provided under section 54-130 shall not exceed $95,000.00 <u>inclusive of any cost of living adjustments to which the member may be entitled</u>.* (emphasis added)

Further, you asked whether a 50%, 66-2/3% or 75% survivor benefit, afforded by the ordinance as an optional form of benefit, is also subject to the $95,000 benefit cap. A hypothetical was presented regarding the application of the benefit cap to a survivor beneficiary's benefit payments. Under this example, a member who chose a 50%, 66-2/3% or 75% joint and survivor option and, either through initial benefit calculation or by the addition of COLA's, reached the $95,000 benefit cap and then died. You then ask if the survivor's benefit can be increased by the annual COLA's until the $95,000 benefit cap is again reached.

Similar to the benefit cap for a participant including any paid COLA increases, the answer here is that the survivor or joint annuitant benefit is also subject to the $95,000 benefit cap and a benefit below that amount can be increased by COLA's until the $95,000 cap is hit.

Section 54-130(7) states that, "the maximum total <u>benefit amount</u> … shall not exceed $95,000." Section 53-130(3) of the City's ordinance describes how such "benefit amount" is determined. It states:

> *(3) The actual <u>benefit amount</u> is determined by making the adjustment, if any, for early retirement and for the form of benefit which the participant selects in accordance with this pension plan.* (emphasis added)

Thus, the "benefit amount" subject to the $95,000 cap is determined after accounting for the form of benefit payable as elected by the participant, which in this case is a survivor annuity.

We trust this opinion addresses your questions and look forward to discussing further at your next meeting. Our opinion is based upon the aforementioned understandings. Should those change, our opinion may differ.

Please do not hesitate to contact us should you have any questions or further comments.

Yours truly,

Robert A. Sugarman

ROBERT A. SUGARMAN

RAS/jdv

SUGARMAN & SUSSKIND
PROFESSIONAL ASSOCIATION
ATTORNEYS AT LAW

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RECEIVED KJR
By Karan Rounsavall at 2:17 pm, Jan 19, 2019

January 16, 2019

Board of Trustees
Port Orange Police Pension Fund
c/o Karan Rounsavall, Plan Administrator
3695 Indian River Drive
Cocoa, FL 32926

Re: High Yield Bond Investments

Dear Trustees:

You have inquired about the permissibility of investing in "bank loans," as recommended by your financial consultant AndCo., which are classified as floating rate debt securities that rank below investment grade. Based upon the facts and understandings set forth below, our opinion is that such an investment would be permissible, provided the ordinance for the Port Orange Police Pension Fund is amended to allow for the deviation from F.S. 185.06 and the Board of Trustees verify that the limitations imposed in the existing Investment Policy Statement ("IPS") are properly satisfied.

Section 185.06(1)(b)(4)(a), Florida Statutes, provides parameters for permissible investments stating specifically:

> The corporation is listed on any one or more of the recognized national stock exchanges or on the National Market System of the NASDAQ Stock Market and, **<u>in the case of bonds only, holds a rating in one of the three highest classifications by a major rating service</u>**; (emphasis added)

While this section maintains limitations on local law police pension funds such as yours, the statute also provides for a variance therefrom through local legislative action. The statute goes on to provide:

> This paragraph applies to all boards of trustees and participants. However, if a municipality or special fire control district has a duly enacted pension plan pursuant to, and in compliance with, s. 185.35, and the trustees desire to vary the investment

> procedures, **the trustees of such plan must request a variance of the investment procedures as outlined herein only through a municipal ordinance**, special act of the Legislature, or resolution by the governing body of the special fire control district… (emphasis added)

Section 54-134(e)(10) of the governing ordinance states:

> To invest and reinvest such funds as are not necessary for current expenditures or liquid reserves, as the board may from time to time determine, in a manner consistent with the investment policies or guidelines adopted by the board, provided that pension fund investments in common stocks shall not exceed 70 percent of the value of the pension fund investment portfolio, at market value. The board of trustees may sell, exchange or otherwise dispose of such investments at any time, and from time to time, as determined appropriate by the board. The board of trustees shall have the authority, in respect to any stocks, bonds or other property, real or personal, held by the board, to exercise all such rights, powers and privileges as may be lawfully exercised by any person owning similar stocks, bonds or other property in his own right. Notwithstanding the above, no more than 25 percent of fund assets may be invested in foreign securities.

Here, the ordinance provides the Board of Trustees with the authority to "invest and reinvest" plan assets in conformity with the governing IPS. Based on the existing broad language in the controlling ordinance and the aforementioned statutory restrictions, we recommend amending this section to provide for conformity with the existing IPS as well as the necessary variance from statutory requirements with respect to permissible debt securities.

Furthermore, Sec. 112.661, F.S., requires that a duly adopted IPS detail permissible investments. It is our understanding that the most current IPS was adopted by the Board in August of 2018. Here, Sec. IV(A)(2)(a), states:

> All fixed income investments shall have a minimum rating in one of the four highest classifications by a major rating service, except that no more than 5% of the total portfolio may be invested in securities that fall below these rating guidelines.

The adopted IPS properly permits investment in lower grade debt instruments, provided that the total allocation to below investment grade securities does not exceed 5% of the total portfolio. The IPS requires that you know the rating of any below investment grade investment. It also requires that you review the rating scale with your financial consultant to ensure any holdings are rated at one of the four highest classifications. Should the proposed bank loan mandate meet this requirement, nothing in the IPS prohibits you from holding it. If, however, the bank loans are rated at a level below one of the four highest classifications by a major rating service, then you must ensure with AndCo. whether the 5% threshold has been, or is anticipated to be, met.

Please be advised that our opinion may change if the facts described in this letter change. If any of the facts described in this letter are incorrect or incomplete or have changed, please let us know. Feel free to contact me directly should you have any further questions or comments. We look forward to discussing this opinion with you at your convenience.

Yours truly,

PEDRO A. HERRERA

PAH/jdv

Subject: Save the Date! Police & Fire Pension Trustees School April 30 - May 2, 2019
From: DoNotReply@rol.frs.state.fl.us
Date: 2/13/2019, 8:02 AM
To: rounsavall@earthlink.net

TO:	Board of Trustee Members and Other Interested Parties
FROM:	Florida Division of Retirement Municipal Police Officers' and Firefighters' Pension Office
SUBJECT:	**SAVE THE DATE!** 40th Annual Police Officers' & Firefighters' Pension Trustees' School April 30 through May 2, 2019, Tallahassee, FL

You are cordially invited to attend the 40th Annual Police Officers' & Firefighters' Pension Trustees' School scheduled for April 30 through May 2, 2019, sponsored by the Department of Management Services' Division of Retirement (Division), in conjunction with The Florida State University's Center for Academic & Professional Development. This program is uniquely designed for pension plans established under Chapters 175 & 185, Florida Statutes.

Tuesday's program, on April 30, is designed specifically for new trustees, for those interested in becoming trustees, and for those who want a basic understanding of the operation of police and fire pension plans. The program will offer a no-nonsense explanation of how the plans work. An attorney, an actuary, and the Division will provide presentations on the trustees' responsibilities. We encourage participants to ask questions and participate in group discussions focusing on the fundamentals of pension fund management. If you are a new trustee, we encourage you to participate in this special program. The registration fee for the one-day program is $120.

Wednesday and Thursday's programs, on May 1 and 2, are designed for both the new and seasoned trustee and will feature presentations on legal, investment, administrative, and ethics issues, as well as an update on the Police and Fire annual report submission. Speakers will range from State of Florida agency representatives to experts in the field of pension plans. There will be an opportunity for questions and answers after each speaker, to provide you a chance to address concerns specific to your plan.

We are always open to new ideas and topics. If there is a topic you would like discussed, please let our office know.

The registration fee for the two-day program is $210.

If you wish to attend all three days, the registration fee is $300. Each day's registration fee covers the cost of materials, refreshment breaks and lunch.

Cancellations must be received in writing by April 19, 2019, or you may be liable for the full registration fee. Any cancellations received after April 19, 2019, must be accompanied by notarized documentation from a supervisor indicating that you have been called to duty.

Please remember, we are only able to continue providing these low cost conferences for our plans based on satisfactory attendance. We know that plan participants and board members fulfill a vital role in our communities, and although you may not be able to attend every program, Florida Statutes require that the plan investment policy provide for continuing education of board members. This program will help to satisfy that requirement and educate the attendees on how the plans may be most effectively administered to ensure their continued health. Please consider our program when making your training plans so that we can continue to offer them to you.

The program will be held at the Augustus B. Turnbull, III Florida State Conference Center, home of the Center for Academic & Professional Development. The Conference Center is located at 555 West Pensacola Street, Tallahassee, FL, across from the Tallahassee-Leon County Civic Center. You may register with Florida State University (FSU) for the program at the following link:

Trustees' School registration link

Please note, prior to registering, make sure you have the correct billing information, and attendee information. If you are registering on behalf of another individual, please use that individual's contact information and email address as the contact email and select the third party payment option, if the individual is not paying the registration personally. If you are registering more than one individual, you must log off entirely and start over at the entry page. Do not change the account information for the previous registration or use the same email address or you will delete the first registration.

Florida State University has asked that all returning guests please make sure to select the option for previous registrations on the online log-in page. If someone else is registering for you, that individual should have your email address and the password used the last time you registered online. If you forgot the password, there is an option to create a new one.

Florida State University will award a Certificate of Completion at the closing of the school. The Florida Public Pension Trustee Association will make Continuing Education Credits available for each participant. Attendance confirmation will be provided for accountants and attorneys wishing to apply for CPE and CLE credits.

Hotel accommodations may be made at the Residence Inn Tallahassee Universities at the Capitol, located directly next door to the conference center. The room rate is $199.00 per night and includes free parking, high speed internet, breakfast and fitness center. When reserving the room, please note that the website states $15 for parking. We received confirmation that this fee will be waived, but the hotel was unable to remove that statement from their website. To make a reservation, please contact the hotel at 1 (800) 331-3131 or (850) 329-9080 before April 2, 2019. You must identify yourself as part of the Police Officers and Firefighters Pension Trustees' School to receive the room rate. You may also register online using the following link:

Trustees School hotel registration link.

All police officer and firefighter plan participants, board of trustee members, plan sponsors, administrators, accountants, actuaries, investment advisors, legal counselors, other advisors, and anyone interested in the administration and operation of the Chapters 175 and 185 Pension Plans, should take advantage of this unique, insightful and informative program.

Further information will be posted soon to our website.

I look forward to meeting with you in Tallahassee in April

Sincerely,

Municipal Police and Fire Pension Office