

Callan



Chicago Teachers' Pension Fund

Executive Summary

March 31, 2017

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**Public School Teachers' Pension and Retirement Fund of Chicago
Performance Evaluation Executive Summary
First Quarter 2017**

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Total Fund Commentary

The Fund was valued at \$9.9 billion at the end of the first quarter, representing an increase of \$131 million from December 31, 2016. Investment gains of \$467 million exceeded net cash outflow activity of \$336 million during the quarter, resulting in an increase in assets compared to the prior quarter. Overall, the portfolio's asset allocation was within acceptable parameters. The domestic equity portfolio showed an overweight position though it remained within the Investment Policy range of 26% to 34%. Fixed income, real estate, and private equity had a slight underweight position relative to the Fund's target asset allocation.

Investors continued to show appetite for risk during the first quarter. The S&P 500 Index surged 6.1% over the quarter, its best quarterly performance since the fourth quarter of 2015, as expectations for lower taxes, reduced regulation, and other pro-growth reforms helped propel U.S. equity prices to new highs. Non-U.S. stocks also posted strong returns, and emerging market equities beat developed markets. U.S. Treasury yields were range-bound leading to fairly flat returns, and the riskier sectors in fixed income posted the best results. Commodities delivered a negative return, hurt mostly by oil prices falling due to inventory buildup in the U.S.

In this environment, the Fund registered a positive gross return of 4.85%, outperforming the peer group median by 40 basis points and the Policy Benchmark by a slight margin. The Fund continues to outperform its policy benchmark, net of fees, over the trailing 5-year period. In addition, it continues to rank within the top forty percent of its peer group over the trailing 5- and 7-year periods (gross of fees). Performance is competitive relative to the market benchmark over longer periods measured, net of fees.

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Quarterly Review

- **RFP Activity:** The following RFPs have been approved by the Board:
 1. Passive Core Fixed Income
 2. Active Core Fixed Income
 3. Active Small Cap Growth Equity
 4. Private MWDBE Real Estate
 5. Private Non-Core Real Estate
 6. Private Equity MWDBE
 7. Private Equity Direct Fund

- **Real Estate Update:** The following changes have taken place since our 2016 pacing study:
 - Added real estate debt as a sub-asset class via Blackstone (\$40 million commitment).
 - Allocated capital to two MWDBE managers – Oak Street and Green Oak (each with a \$25 million commitment).
 - \$35 million was reallocated from the JP Morgan Strategic Property Fund to the LaSalle Property Fund.
 - The REIT portfolio, which comprised 23% of the real estate portfolio, was fully liquidated.

- **Private Equity Update:** The following changes have taken place since our 2016 pacing study:
 - Allocated \$10 million to Adams Street Venture Innovation and \$15 million to Adams Street SMB.
 - Negotiating contracts for Mesirov VII, ICV Fund IV and Palladium Fund V.
 - Cancelled HarbourVest HIPEP VIII and Hispania III due to legal issues and due diligence, respectively.

- **First Quarter, 2017 Investment Performance Update:**
 - **Performance:** For the Quarter, the Fund posted positive performance relative to the market benchmark, outperforming 80% of its peers (20th percentile ranking). The Fund continues to exhibit strong relative performance over the long-term, outperforming the peer group median over the trailing 5- and 7-year periods, and outpacing the Policy Target market benchmark by a comfortable margin, net of fees. Performance has been competitive relative to the market benchmark over most periods measured.

- **Watch Status Report:** Based on CTPF's current Watch List Policy, the following managers remain on the Watch List until further notice:
 - Ivy: Included on the Watch List due to inconsistent rolling three- and seven-year performance relative to the market index and peer group median, and five-year risk characteristics.
 - Holland: Included on the Watch List due to inconsistent rolling three-year and seven-year performance relative to the market index and peer group median and not meeting the five-year up market capture criteria.

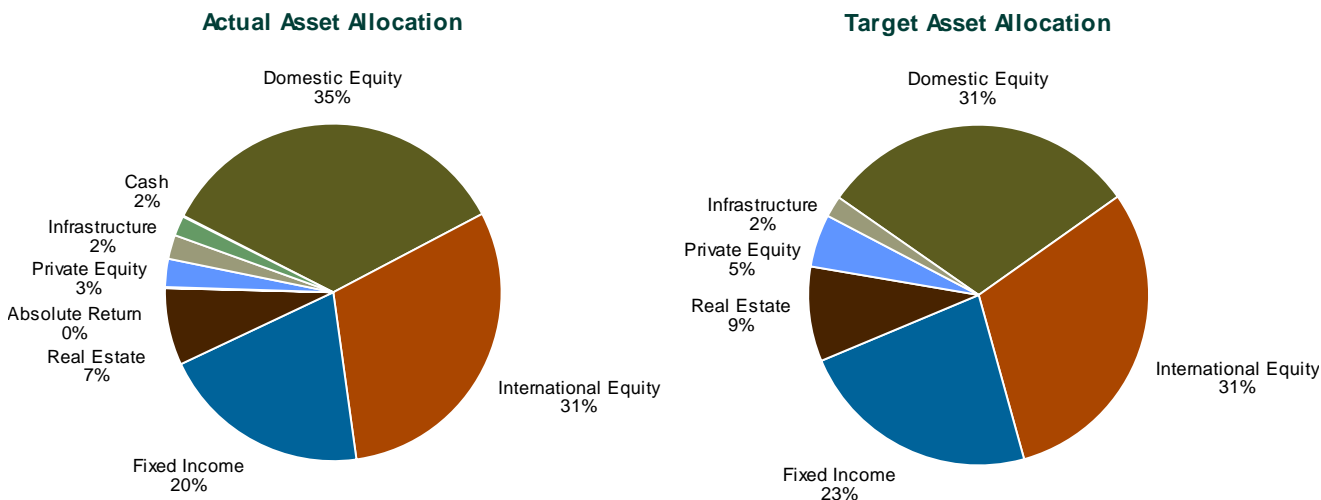
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- Zevenbergen: Included on the Watch List due to inconsistent rolling three-year and seven-year performance relative to the market index and peer group median and missing the five-year down market capture criteria.
- TCH: Included on the Watch List under previous criteria. TCH does not qualify under the new Watch List Policy criteria.
- LM Capital: Included on the Watch List due to personnel turnover.
- Morgan Stanley: Included on the Watch List under previous criteria. Morgan Stanley does not qualify under the current Watch List Policy criteria.
- Channing: Included on the Watch List under previous criteria. Channing does not qualify under the current Watch List Policy criteria.

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Asset Allocation

The Fund was valued at \$9.9 billion at the end of the first quarter, representing an increase of \$131 million from December 31, 2016. Investment gains of \$467 million exceeded net cash outflow activity of \$336 million during the quarter, resulting in a rise in assets compared to the prior quarter. Overall, the portfolio's asset allocation was within acceptable parameters relative to the Investment Policy permissible range.

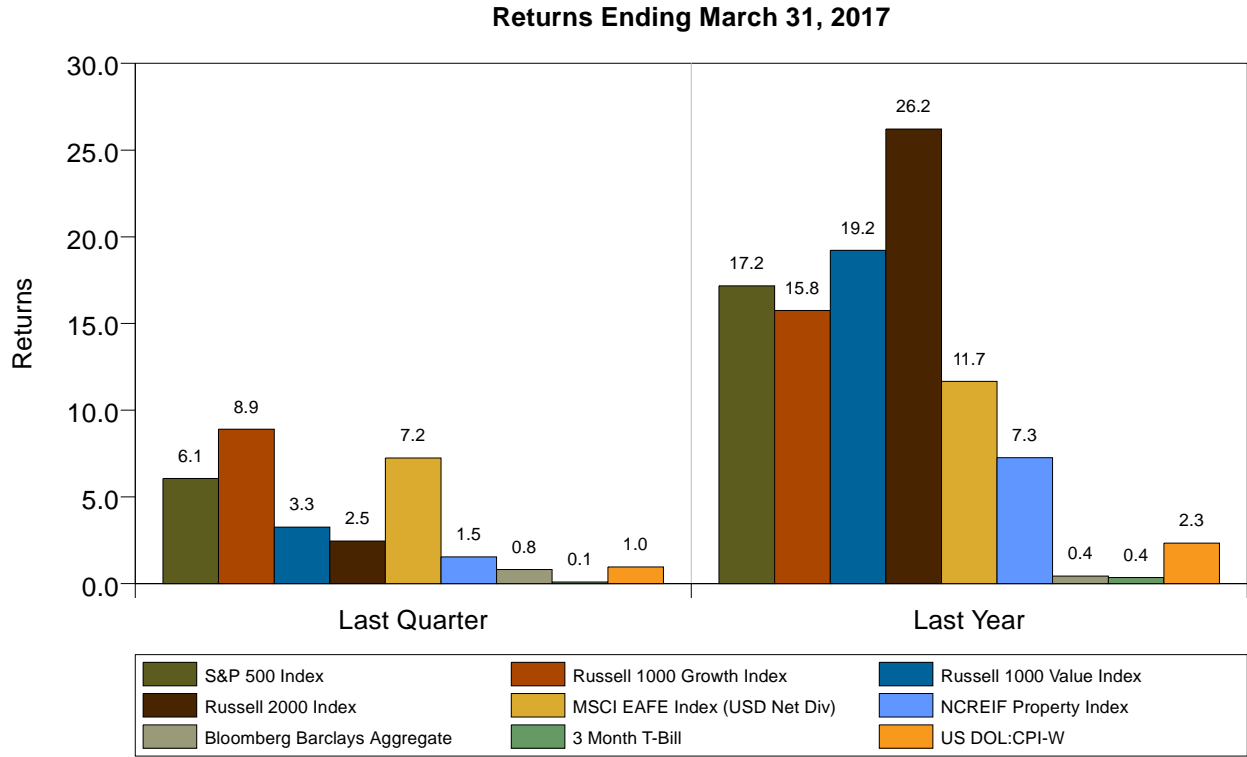


Asset Class	\$000s Actual	Weight Actual	Target	Percent Difference	\$000s Difference
Domestic Equity	3,460,914	34.8%	30.5%	4.3%	430,127
International Equity	3,031,652	30.5%	30.5%	0.0%	865
Fixed Income	2,006,164	20.2%	23.0%	(2.8%)	(279,347)
Real Estate	736,723	7.4%	9.0%	(1.6%)	(157,607)
Absolute Return	10,022	0.1%	0.0%	0.1%	10,022
Private Equity	272,089	2.7%	5.0%	(2.3%)	(224,761)
Infrastructure	232,068	2.3%	2.0%	0.3%	33,328
Cash	187,373	1.9%	0.0%	1.9%	187,373
Total	9,937,004	100.0%	100.0%		

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Select Market Returns

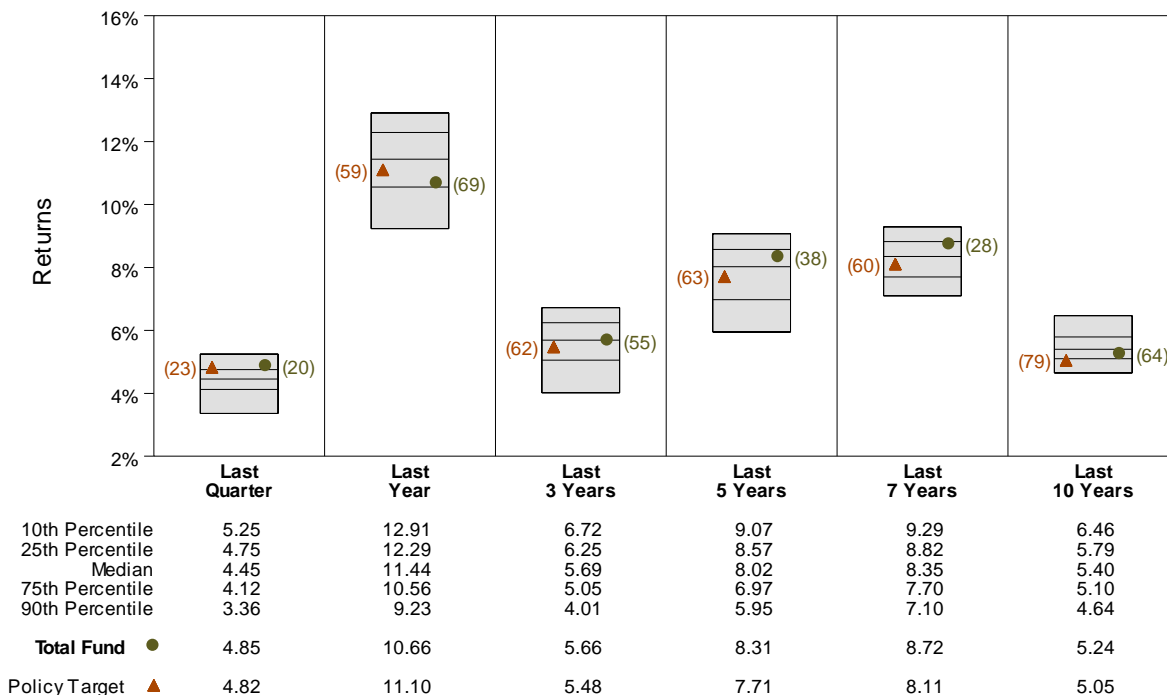


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Total Fund Performance vs. Target

CAI Public Fund Sponsor - Large (>1B)



Note: Performance is shown gross-of-fees.

Current quarter Policy Target = 30.5% Russell 3000 Index, 30.5% MSCI ACWI ex US Index, 23% BB BC Aggregate Bond Index, 9% NFI ODCE Value Weight Index, 5% Russell 3000 Index and 2% Annualized 8% Return.

For the first quarter, the Fund outperformed the market benchmark and ranked in the 20th percentile of its peers. For the trailing one-year period, the Fund underperformed the Policy Target by 44 basis points, gross of investment management fees (72 basis points net of investment management fees) and ranked in the bottom 31 percent of its peer group. This is a reflection of the difficult environment most active managers faced during calendar-year 2016.

Fixed income, domestic equity, and real estate investments served as key contributors to the Fund's performance for the quarter (performance commentary relative to benchmarks is net of fees and performance commentary relative to peers is gross of fees):

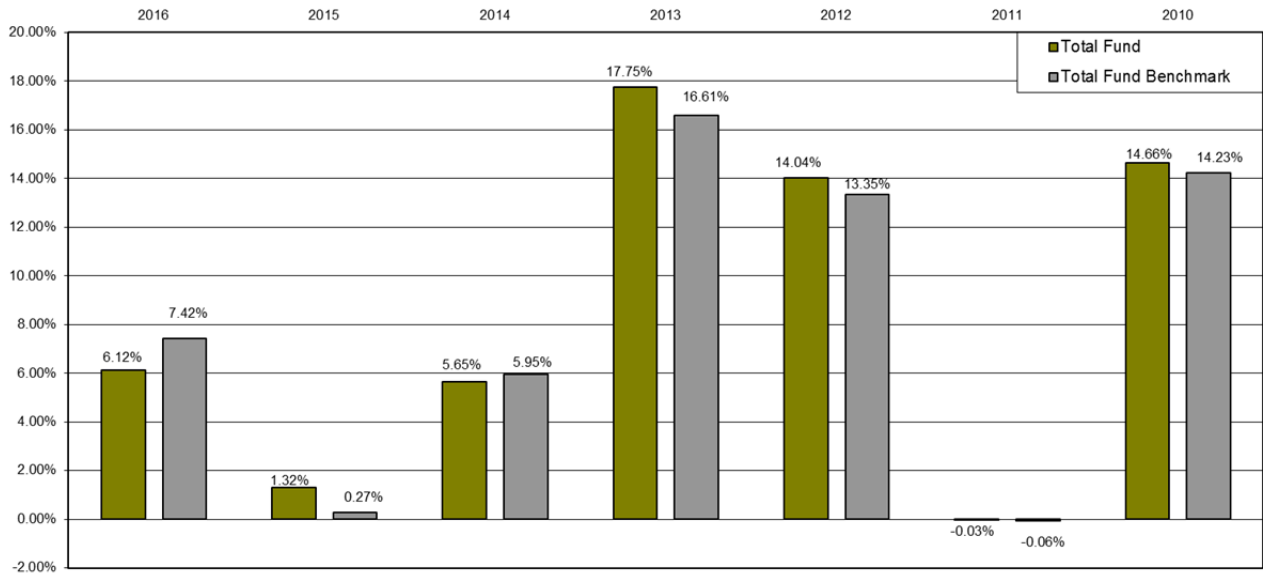
- **Fixed Income:** The fixed income composite outperformed its market benchmark by 36 basis points for the quarter, ranking in the 47th percentile of its peers. WAMCO, Taplin, Canida & Habacht, LM Capital, and Garcia Hamilton outperformed their market benchmarks. Pugh underperformed its benchmark for the quarter. All of the active fixed income managers have outperformed the market index over the trailing five-year period.
- **Domestic Equity:** Performance was mixed for the domestic equity managers this quarter. However, the domestic equity composite slightly underperformed the Russell 3000 Index for the quarter. Zevenbergen, Channing, BMO Harris, and Phocas posted the strongest relative

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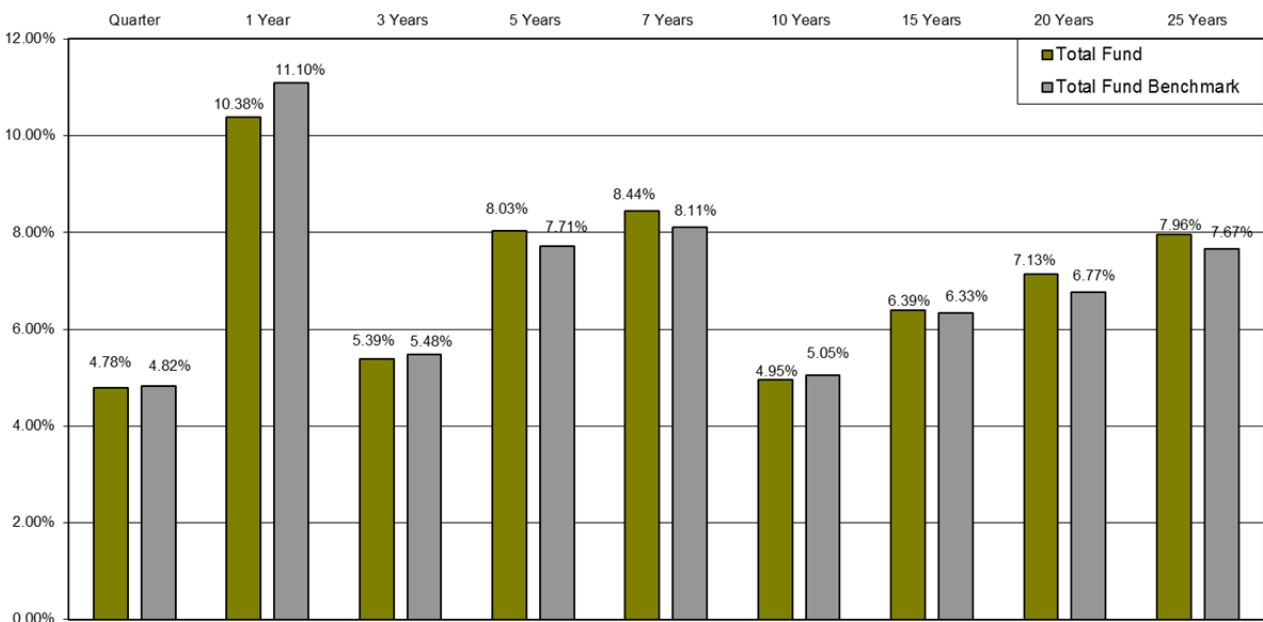
performance over the first quarter. Zevenbergen posted particularly strong returns this quarter, outperforming the Russell 3000 Growth Index by 462 basis points.

- **Alternative Investments:** Real estate contributed to results over the quarter on a time-weighted return basis.

Total Fund Calendar Year Performance Net of Fees



Total Fund Trailing Year Performance Net of Fees



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Manager Performance

Table 1 presents returns for the public market domestic and international equity and fixed income managers and composites in the Chicago Teacher Pension Fund relative to appropriate benchmarks on a net of fee basis. Managers highlighted in red are currently on the Watch List.

Table 1 (Net-of-Fees):

CTPF Investment Strategies	Net Investment Returns as of 3/31/2017						Inception Date	Qtr-End MV
	FUND	Qtr	1 Yr	3 Yr	5 Yr	7 Yr		
Fixed Income								
Northern Trust Gov/ Credit Index Fund	0.98	0.57	2.66	2.45	3.68	5.38	Jan-94	\$937m
Bloomberg Barclays Gov/Credit Index	0.96	0.54	2.69	2.46	3.71	5.37		
Variance	0.02	0.03	-0.03	-0.01	-0.03	0.01		
Garcia Hamilton	0.96	0.70	3.29	3.88	-	4.02	Oct-10	\$103m
Bloomberg Barclays Aggregate Index	0.82	0.44	2.68	2.34	-	2.82		
Variance	0.14	0.26	0.61	1.54	-	1.20		
LM Capital*	1.08	1.72	3.10	2.74	3.73	4.30	Nov-04	\$209m
Bloomberg Barclays Aggregate Index	0.82	0.44	2.68	2.34	3.48	4.12		
Variance	0.26	1.28	0.42	0.40	0.25	0.18		
Pugh Capital Management	0.78	0.48	2.67	2.47	-	3.04	Oct-10	\$167m
Bloomberg Barclays Aggregate Index	0.82	0.44	2.68	2.34	-	2.82		
Variance	-0.04	0.04	-0.01	0.13	-	0.22		
Taplin, Canida & Habacht	1.35	4.18	2.95	3.05	4.24	4.09	Nov-04	\$122m
Bloomberg Barclays Aggregate Index	0.82	0.44	2.68	2.34	3.48	4.12		
Variance	0.53	3.74	0.27	0.71	0.76	-0.03		
Western Asset Management	1.75	3.96	3.73	3.94	5.22	5.31	Feb-03	\$416m
Bloomberg Barclays Aggregate Index	0.82	0.44	2.68	2.34	3.48	4.19		
Variance	0.93	3.52	1.05	1.60	1.74	1.12		

*LM mandate changed from Core Bond to Core Plus Bond as of 7/1/13. Peer group rankings are not applicable to the full track record given the change in mandates.

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Table 1 (Net-of-Fees, Continued):

CTPF Investment Strategies	Net Investment Returns as of 3/31/2017						Inception Date	Qtr-End MV
	FUND	Qtr	1 Yr	3 Yr	5 Yr	7 Yr		
Large Cap Equity								
Northern Trust S&P 500 Index Fund	6.04	17.52	10.43	13.33	12.98	9.68	Apr-90	\$695m
S&P 500 Index	6.07	17.17	10.37	13.30	12.94	9.75		
Variance	-0.03	0.35	0.06	0.03	0.04	-0.07		
Rhumbline Russell 1000 Index Fund	6.00	17.41	9.89	13.25	12.95	6.98	Jun-07	\$1,461m
Russell 1000 Index	6.03	17.43	9.99	13.26	12.95	6.88		
Variance	-0.03	-0.02	-0.10	-0.01	0.00	0.10		
Ivy	4.98	11.19	6.22	11.44	12.65	11.27	Jan-91	\$119m
Russell 1000 Index	6.03	17.43	9.99	13.26	12.95	10.27		
Variance	-1.05	-6.24	-3.77	-1.82	-0.30	1.00		
Holland Capital	8.75	13.19	8.90	11.07	12.32	9.30	Feb-94	\$263m
Russell 1000 Growth Index	8.91	15.76	11.27	13.32	13.68	8.75		
Variance	-0.16	-2.57	-2.37	-2.25	-1.36	0.55		
Zevenbergen Capital Management	13.25	21.95	6.32	12.41	12.15	10.23	Oct-92	\$121m
Russell 3000 Growth Index	8.63	16.27	10.90	13.22	13.61	8.68		
Variance	4.62	5.68	-4.58	-0.81	-1.46	1.55		
Channing*	5.09	20.05	7.09	13.63	12.23	15.30	Jul-09	\$141m
Channing Benchmark	2.99	19.97	8.58	13.08	12.67	16.59		
Variance	2.10	0.08	-1.49	0.55	-0.44	-1.29		
BMO Harris Investment Management	4.38	17.30	8.39	13.52	13.04	7.15	Jul-99	\$281m
Harris Benchmark**	3.27	19.22	8.67	13.13	12.18	5.06		
Variance	1.11	-1.92	-0.28	0.39	0.86	2.09		
Small Cap Equity								
Northern Trust Small Cap	1.71	23.53	8.11	13.44	13.90	12.34	Jan-91	\$153m
Russell 2000 Index	2.47	26.22	7.22	12.35	12.27	10.89		
Variance	-0.76	-2.69	0.89	1.09	1.63	1.45		
Phocas Small Cap Value	0.13	-	-	-	-	19.29	Jul-16	\$144m
Russell 2000 Value Index	-0.13	-	-	-	-	24.03		
Variance	0.26	-	-	-	-	-4.74		
Manager of Managers								
Attucks***	4.92	12.15	4.50	--	--	5.30	Dec-13	\$214m
Custom Benchmark	4.85	14.68	4.75	--	--	5.22		
Variance	0.07	-2.53	-0.25	--	--	0.08		

*Channing mandate changed from Mid Cap Value to All Cap Value as of 10/1/11. Channing Benchmark reflects Russell MC Value Index through 9/30/11 and Russell 3000 Value thereafter. Peer group rankings are not applicable to the full track record given the change in mandates.

**Harris benchmark reflects the S&P 500 from inception to 12/31/2002 and the Russell 1000 Value benchmark thereafter.

***In 4Q13, Attucks was transitioned from a domestic equity portfolio to a Best in Class portfolio.

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Table 1 (Net-of-Fees, Continued):

CTPF Investment Strategies	Net Investment Returns as of 3/31/2017						Inception Date	Qtr-End MV
	FUND	Qtr	1 Yr	3 Yr	5 Yr	7 Yr		
International Equity								
Ariel Investments	7.39	-	-	-	-	8.34	Jul-16	\$75m
MSCI EAFE Index	7.25	-	-	-	-	13.33		
Variance	0.14	-	-	-	-	-4.99		
EARNEST Partners	8.38	17.29	2.31	5.40	5.69	4.72	Apr-07	\$534m
MSCI ACWI ex-US Index	7.86	13.13	0.56	4.36	3.82	1.35		
Variance	0.52	4.16	1.75	1.04	1.87	3.37		
Lazard	6.19	7.16	1.11	5.83	5.70	5.44	Jan-01	\$549m
MSCI ACWI ex-US Index	7.86	13.13	0.56	4.36	3.82	4.32		
Variance	-1.67	-5.97	0.55	1.47	1.88	1.12		
Morgan Stanley	8.32	9.52	0.61	5.81	5.55	8.44	Apr-95	\$555m
MSCI EAFE Index	7.25	11.67	0.50	5.83	4.72	4.81		
Variance	1.07	-2.15	0.11	-0.02	0.83	3.63		
Strategic Global Advisors	7.32	-	-	-	-	11.97	Jul-16	\$72m
MSCI EAFE Index	7.25	-	-	-	-	13.33		
Variance	0.07	-	-	-	-	-1.36		
William Blair Growth	7.33	8.38	1.51	6.34	6.68	7.59	Feb-10	\$537m
MSCI ACWI ex-US IMI Growth Index	9.11	9.53	1.69	5.05	4.73	5.67		
Variance	-1.78	-1.15	-0.18	1.29	1.95	1.92		
William Blair International Small Cap	7.45	5.37	1.10	7.40	8.19	3.47	Apr-07	\$176m
William Blair ISCE Benchmark*	9.01	8.94	2.63	6.10	6.16	1.91		
Variance	-1.56	-3.57	-1.53	1.30	2.03	1.56		
Dimensional Fund Advisors	7.58	17.10	2.70	--	--	13.92	Jun-12	\$171m
MSCI World Small Cap ex-US	7.61	11.58	2.70	--	--	11.01		
Variance	-0.03	5.52	0.00	--	--	2.91		
EARNEST Partners Emerging Markets	11.81	17.15	1.68	--	--	0.12	Mar-13	\$162m
MSCI Emerging Markets Index	11.44	17.21	1.18	--	--	0.08		
Variance	0.37	-0.06	0.50	--	--	0.04		
International Manager of Managers								
Leading Edge	8.15	13.20	0.99	6.44	4.85	4.85	Apr-10	\$120m
MSCI ACWI ex-US Index	7.86	13.13	0.56	4.36	3.82	3.82		
Variance	0.29	0.07	0.43	2.08	1.03	1.03		

* The William Blair ISCE benchmark is comprised of the MSCI ACWI ex US Small Cap Index through 5/31/12 and the MSCI ACWI ex US Small Cap Growth Index thereafter.

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Table 1 (Net-of-Fees, Continued):

CTPF Investment Strategies	Net Investment Returns as of 3/31/2017						Inception Date	Qtr-End MV
	Qtr	1 Yr	3 Yr	5 Yr	7 Yr	Since Inception		
FUND								
Infrastructure								
Infrastructure Composite	-0.90	1.88	1.07	4.52	4.97	4.82	Nov-08	\$232m
8% Annualized Return	1.94	8.00	8.00	8.00	8.00	8.00		
Variance	-2.84	-6.12	-6.93	-3.48	-3.03	-3.18		
Hedge Funds								
Pluscios	2.31	8.09	-0.01	3.29	-	2.87	Nov-10	\$10m
T-Bill + 5% (1-mo lag)	1.59	5.63	5.25	5.19	-	5.17		
Variance	0.72	2.46	-5.26	-1.90	-	-2.30		
Real Estate								
Real Estate Composite	2.84	7.69	11.72	11.19	11.94	7.32	Jan-02	\$737m
NFI-ODCE Value Weight	1.54	7.36	10.77	10.94	12.44	7.14		
Variance	1.30	0.33	0.95	0.25	-0.50	0.18		
Private Equity								
Private Equity Composite	-0.05	5.95	9.80	10.04	11.15	8.22	Jan-02	\$272m
Russell 3000 Index	5.74	18.07	9.76	13.18	12.87	7.56		
Variance	-5.79	-12.12	0.04	-3.14	-1.72	0.66		

Note: Private market investments shown above are typically reported on a one quarter lag. Private Equity returns are, at times, reported on a longer lag. CTPF Private Equity data is reported for Q3 2016 and the benchmark represents Q4 2016. Comments on Infrastructure, REITS and Real Estate and covered in the quarterly Real Estate Report. Private Equity is discussed in the quarterly Private Equity Report.

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Manager Performance

Table 1 presents returns for the public market domestic and international equity and fixed income managers and composites in the Chicago Teacher Pension Fund relative to appropriate benchmarks on a gross of fee basis. Managers highlighted in red are currently on the Watch List.

Table 2 (Gross-of-Fees):

CTPF Investment Strategies	Gross Investment Returns as of 3/31/2017						Inception Date	Qtr-End MV
	FUND	Qtr	1 Yr	3 Yr	5 Yr	7 Yr		
Fixed Income								
Northern Trust Gov/ Credit Index Fund	0.99	0.58	2.67	2.46	3.69	5.39	Jan-94	\$937m
Bloomberg Barclays Gov/Credit Index	0.96	0.54	2.69	2.46	3.71	5.37		
Variance	0.03	0.04	-0.02	0.00	-0.02	0.02		
Peer Ranking – CAI Core Bond	45	81	89	89	84			
Garcia Hamilton	1.01	0.90	3.49	4.09	-	4.21	Oct-10	\$103m
Bloomberg Barclays Aggregate Index	0.82	0.44	2.68	2.34	-	2.82		
Variance	0.19	0.46	0.81	1.75	-	1.39		
Peer Ranking – CAI Core Bond	40	65	12	1	-			
LM Capital*	1.12	1.88	3.26	2.91	3.90	4.48	Nov-04	\$209m
Bloomberg Barclays Aggregate Index	0.82	0.44	2.68	2.34	3.48	4.12		
Variance	0.30	1.44	0.58	0.57	0.42	0.36		
Peer Ranking - CAI Core Plus Bond	78	81	49	95	100			
Pugh Capital Management	0.82	0.64	2.83	2.65	-	3.22	Oct-10	\$167m
Bloomberg Barclays Aggregate Index	0.82	0.44	2.68	2.34	-	2.82		
Variance	0.00	0.20	0.15	0.31	-	0.40		
Peer Ranking - CAI Core Bond	79	74	83	72	-			
Taplin, Canida & Habacht	1.39	4.33	3.11	3.21	4.40	4.25	Nov-04	\$122m
Bloomberg Barclays Aggregate Index	0.82	0.44	2.68	2.34	3.48	4.12		
Variance	0.57	3.89	0.43	0.87	0.92	0.13		
Peer Ranking - CAI Core Bond	6	2	39	26	22			
Western Asset Management	1.80	4.15	3.92	4.13	5.41	5.50	Feb-03	\$416m
Bloomberg Barclays Aggregate Index	0.82	0.44	2.68	2.34	3.48	4.19		
Variance	0.98	3.71	1.24	1.79	1.93	1.31		
Peer Ranking - CAI Core Plus Bond	10	23	11	17	15			

*LM mandate changed from Core Bond to Core Plus Bond as of 7/1/13. Peer group rankings are not applicable to the full track record given the change in mandates.

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Table 2 (Gross-of-Fees, Continued):

CTPF Investment Strategies	Gross Investment Returns as of 3/31/2017						Inception Date	Qtr-End MV
	FUND	Qtr	1 Yr	3 Yr	5 Yr	7 Yr		
Large Cap Equity								
Northern Trust S&P 500 Index Fund	6.04	17.53	10.44	13.33	12.99	9.69	Apr-90	\$695m
S&P 500 Index	6.07	17.17	10.37	13.30	12.94	9.75		
Variance	-0.03	0.36	0.07	0.03	0.05	-0.06		
Peer Ranking – CAI Large Cap	56	47	28	36	38			
Rhumbline Russell 1000 Index Fund	6.00	17.42	9.90	13.26	12.96	6.99	Jun-07	\$1,461m
Russell 1000 Index	6.03	17.43	9.99	13.26	12.95	6.88		
Variance	-0.03	-0.01	-0.09	0.00	0.01	0.11		
Peer Ranking – CAI Large Cap	56	47	42	38	39			
Ivy	5.03	11.42	6.44	11.67	12.87	11.49	Jan-91	\$119m
Russell 1000 Index	6.03	17.43	9.99	13.26	12.95	10.27		
Variance	-1.00	-6.01	-3.55	-1.59	-0.08	1.22		
Peer Ranking - CAI Large Cap Core	85	95	98	85	45			
Holland Capital	8.83	13.55	9.26	11.44	12.68	9.67	Feb-94	\$263m
Russell 1000 Growth Index	8.91	15.76	11.27	13.32	13.68	8.75		
Variance	-0.08	-2.21	-2.01	-1.88	-1.00	0.92		
Peer Ranking - CAI Large Cap Growth	56	66	63	82	57			
Zevenbergen Capital Management	13.35	22.41	6.75	12.86	12.59	10.67	Oct-92	\$121m
Russell 3000 Growth Index	8.63	16.27	10.90	13.22	13.61	8.68		
Variance	4.72	6.14	-4.15	-0.36	-1.02	1.99		
Peer Ranking - CAI All Cap	3	3	54	21	54			
Channing*	5.21	20.60	7.60	14.17	12.80	15.90	Jul-09	\$141m
Channing Benchmark	2.99	19.97	8.58	13.08	12.67	16.59		
Variance	2.22	0.63	-0.98	1.09	0.13	-0.69		
Peer Ranking – CAI All Cap Value	25	41	52	27	24			
BMO Harris Investment Management	4.44	17.57	8.63	13.77	13.29	7.44	Jul-99	\$281m
Harris Benchmark**	3.27	19.22	8.67	13.13	12.18	5.06		
Variance	1.17	-1.65	-0.04	0.64	1.11	2.38		
Peer Ranking - CAI Large Cap Value	29	71	43	23	13			
Small Cap Equity								
Northern Trust Small Cap	1.75	23.67	8.20	13.51	13.95	12.42	Jan-91	\$153m
Russell 2000 Index	2.47	26.22	7.22	12.35	12.27	10.89		
Variance	-0.72	-2.55	0.98	1.16	1.68	1.53		
Peer Ranking - CAI Small Cap	71	55	56	59	54			
Phocas Small Cap Value	0.32	-	-	-	-	19.74	Jul-16	\$144m
Russell 2000 Value Index	-0.13	-	-	-	-	24.03		
Variance	0.45	-	-	-	-	-4.29		
Peer Ranking - CAI Small Cap Value	52	-	-	-	-			
Manager of Managers								
Attucks***	0.51	7.28	4.03	--	--	--	Dec-13	\$214m
Custom Benchmark	4.85	14.68	4.75	--	--	5.22		
Variance	-4.34	-7.40	-0.72	--	--	--		

*Channing mandate changed from Mid Cap Value to All Cap Value as of 10/1/11. Channing Benchmark reflects Russell MC Value Index through 9/30/11 and Russell 3000 Value thereafter. Peer group rankings are not applicable to the full track record given the change in mandates.

**Harris benchmark reflects the S&P 500 from inception to 12/31/2002 and the Russell 1000 Value benchmark thereafter.

***In 4Q13, Attucks was transitioned from a domestic equity portfolio to a Best in Class portfolio.

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Table 2 (Gross-of-Fees, Continued):

CTPF Investment Strategies	Gross Investment Returns as of 3/31/2017						Inception Date	Qtr-End MV
	FUND	Qtr	1 Yr	3 Yr	5 Yr	7 Yr		
International Equity								
Ariel Investments	7.58	-	-	-	-	-	8.72	Jul-16 \$75m
MSCI EAFE Index	7.25	-	-	-	-	-	13.33	
Variance	0.33	-	-	-	-	-	-4.61	
Peer Ranking - CAI Non-US Equity	63	-	-	-	-	-		
EARNEST Partners	8.49	17.76	2.73	5.83	6.12	5.23	Apr-07 \$534m	
MSCI ACWI ex-US Index	7.86	13.13	0.56	4.36	3.82	1.35		
Variance	0.63	4.63	2.17	1.47	2.30	3.88		
Peer Ranking - CAI Non-US Equity	31	5	26	70	48			
Lazard	6.23	7.39	1.29	6.01	5.89	5.81	Jan-01 \$549m	
MSCI ACWI ex-US Index	7.86	13.13	0.56	4.36	3.82	4.32		
Variance	-1.63	-5.74	0.73	1.65	2.07	1.49		
Peer Ranking - CAI Non-US Equity	91	87	60	66	52			
Morgan Stanley	8.43	9.98	1.07	6.27	6.00	8.91	Apr-95 \$555m	
MSCI EAFE Index	7.25	11.67	0.50	5.83	4.72	4.81		
Variance	1.18	-1.69	0.57	0.44	1.28	4.10		
Peer Ranking - CAI Non-US Equity	32	70	66	59	51			
Strategic Global Advisors	7.44	-	-	-	-	-	12.24	Jul-16 \$72m
MSCI EAFE Index	7.25	-	-	-	-	-	13.33	
Variance	0.19	-	-	-	-	-	-1.09	
Peer Ranking - CAI Non-US Equity	67	-	-	-	-	-		
William Blair Growth	7.43	8.77	1.88	6.73	7.08	8.00	Feb-10 \$537m	
MSCI ACWI ex-US IMI Growth Index	9.11	9.53	1.69	5.05	4.73	5.67		
Variance	-1.68	-0.76	0.19	1.68	2.35	2.33		
Peer Ranking - CAI Core Growth Int'l Equity	78	65	69	33	26			
William Blair International Small Cap	7.67	6.26	1.96	8.33	9.11	4.49	Apr-07 \$176m	
William Blair ISCE Benchmark*	9.01	8.94	2.63	6.10	6.16	1.91		
Variance	-1.34	-2.68	-0.67	2.23	2.95	2.58		
Peer Ranking - CAI Int'l Small Cap Equity	80	92	85	80	73			
Dimensional Fund Advisors	7.58	17.10	2.75	--	--	--	14.07	Jun-12 \$171m
MSCI World Small Cap ex-US	7.61	11.58	2.70	--	--	--	11.01	
Variance	-0.03	5.52	0.05	--	--	--	3.06	
Peer Ranking - CAI Int'l Small Cap Equity	81	8	76	--	--	--		
EARNEST Partners Emerging Markets	11.95	17.75	2.20	--	--	--	0.62	Mar-13 \$162m
MSCI Emerging Markets Index	11.44	17.21	1.18	--	--	--	0.08	
Variance	0.51	0.54	1.02	--	--	--	0.54	
Peer Ranking - CAI EM Equity	48	55	55	--	--	--		
International Manager of Managers								
Leading Edge	8.35	14.08	1.77	7.27	5.67	5.67	Apr-10 \$120m	
MSCI ACWI ex-US Index	7.86	13.13	0.56	4.36	3.82	3.82		
Variance	0.49	0.95	1.21	2.91	1.85	1.85		
Peer Ranking - CAI Non-US Equity	33	23	51	33	59			

* The William Blair ISCE benchmark is comprised of the MSCI ACWI ex US Small Cap Index through 5/31/12 and the MSCI ACWI ex US Small Cap Growth Index thereafter.

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Table 2 (Gross-of-Fees, Continued):

CTPF Investment Strategies	Gross Investment Returns as of 3/31/2017						Inception Date	Qtr-End MV
	Qtr	1 Yr	3 Yr	5 Yr	7 Yr	Since Inception		
FUND								
Infrastructure								
Infrastructure Composite	-0.70	2.56	1.66	5.11	5.61	5.35	Nov-08	\$232m
8% Annualized Return	1.94	8.00	8.00	8.00	8.00	8.00		
Variance	-2.64	-5.44	-6.34	-2.89	-2.39	-2.65		
Hedge Funds								
Pluscios	2.31	8.09	-0.01	3.29	-	2.87	Nov-10	\$10m
T-Bill + 5% (1-mo lag)	1.59	5.63	5.25	5.19	-	5.17		
Variance	0.72	2.46	-5.26	-1.90	-	-2.30		
Real Estate								
Real Estate Composite	2.99	8.40	12.47	11.95	12.62	7.75	Jan-02	\$737m
NFI-ODCE Value Weight	1.54	7.36	10.77	10.94	12.44	7.14		
Variance	1.45	1.04	1.70	1.01	0.18	0.61		
Private Equity								
Private Equity Composite	0.14	6.29	10.01	10.24	11.30	8.30	Jan-02	\$272m
Russell 3000 Index	5.74	18.07	9.76	13.18	12.87	7.56		
Variance	-5.60	-11.78	0.25	-2.94	-1.57	0.74		

Note: Private market investments shown above are typically reported on a one quarter lag. Private Equity returns are, at times, reported on a longer lag. CTPF Private Equity data is reported for Q3 2016 and the benchmark represents Q4 2016. Comments on Infrastructure, REITS and Real Estate are covered in the quarterly Real Estate Report. Private Equity is discussed in the quarterly Private Equity Report.

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MANAGER COMMENTARIES

Please note that performance commentary relative to a managers' market benchmark is made on a net of fee basis. Performance commentary relative to a managers' peer group is made on a gross of fee basis.

Active Domestic Equity Manager Commentary

- Ivy underperformed the Russell 1000 Index for the quarter and ranked in the 85th percentile among their peers. The one-, three-, five-, and seven-year returns also lagged the benchmark, but the portfolio has outperformed over the last ten years and since inception. Ivy's underperformance for the quarter was due to an overweight in the Energy sector and poor stock selection in the Health Care, Industrials, Financials, Energy, and Consumer Discretionary sectors.
- Holland underperformed the Russell 1000 Growth Index in the first quarter and ranked in the 56th percentile in the large cap growth equity peer group. Holland's poor selection in Financials and Health Care stocks detracted from performance. Holland's one-, three-, and five-year performance is challenged relative to the Russell 1000 Growth Index and peer group median. Since inception, Holland has outperformed the market index.
- Zevenbergen, the Fund's all-cap growth manager, outperformed the Russell 3000 Growth Index by 462 basis points this quarter and ranked in the 3rd percentile in its peer group. The portfolio's outperformance was mainly attributable to security selection in Health Care, Consumer Discretionary, and Information Technology sectors. Since inception, returns continue to be favorable compared to the Russell 3000 Growth Index.
- Channing, the Fund's all-cap value manager, outperformed the index and ranked in the 25th percentile among its peers for the quarter. Overweight positions in Information Technology and Health Care sectors contributed to relative results over the quarter. Strong security selection in Consumer Discretionary, Information Technology, and Financials also boosted relative performance over the quarter. Performance over longer time periods is mixed relative to the index.
- BMO Harris outperformed the market index in the first quarter and ranked in the 29th percentile among its peers. Positive stock selection in the Industrials and Information Technology sectors boosted relative quarterly results. An underweight position in Energy also contributed. Performance over five-, seven-, and ten-year time periods continues to be attractive relative to the benchmark.
- The Northern Trust Small Cap Fund underperformed the Russell 2000 Index for the quarter and ranked in the 71st percentile in its peer group. Poor stock selection in the Health Care, Materials, and Consumer Discretionary sectors detracted most from relative quarterly performance. The Fund has outperformed the market benchmark over the trailing three-, five-, and seven-year time periods.
- Phocas outperformed the Russell 2000 Value Index in the first quarter and ranked in the 52nd percentile in its peer group. Strong security selection in the Financials, Consumer Discretionary, and Real Estate sectors contributed to relative quarterly performance. The Ariel Small Cap Value strategy was transitioned to Phocas in June 2016.

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Active International Equity Manager Commentary

- Ariel outperformed its benchmarks in the first quarter and ranked in the 63rd percentile among peers. Ariel underperformed its benchmarks in the fourth quarter and has underperformed its benchmarks since inception. Ariel was added to the international equity lineup in July 2016.
- EARNEST Partners outperformed its benchmark in the first quarter and ranked in the 31st percentile in its peer group. Performance continues to be favorable relative to the market index over the five-year period, seven-year period, and since inception.
- Lazard underperformed the MSCI ACWI ex US index in the quarter and ranked in the 91st percentile in its peer group. Performance is strong relative to the market benchmark and mixed relative to the peer group median over the long term.
- Morgan Stanley outperformed the MSCI EAFE Index in the first quarter and ranked in the 32nd percentile in its peer group. Morgan Stanley's long term performance is strong relative to the market benchmark but mixed compared to the peer group median.
- Strategic Global Advisors outperformed its benchmark and ranked in the 67th percentile among peers over the first quarter. Strategic Global Advisors underperformed its benchmark over the fourth quarter and since inception. Strategic Global Advisors was added to the lineup in July 2016.
- During the first quarter, William Blair International Growth underperformed its benchmark index and ranked in the 78th percentile in its peer group. The portfolio exhibits mixed results relative to the market benchmark and peer group median over longer periods measured.
- William Blair International Small Cap underperformed its benchmark index and ranked in the 80th percentile in its peer group for the quarter. Performance relative to the market benchmark has been mixed over long-term trailing time periods.
- International MWBDE manager-of-managers, Leading Edge, outperformed the MSCI ACWI ex US Index for the quarter and ranked above median in its peer group at the 33rd percentile. Long-term performance is above the MSCI ACWI ex-US Index and mixed relative to the peer group median.
- Dimensional Fund Advisors (DFA) underperformed the MSCI World Small Cap ex US Index and ranked in the 81st percentile in its peer group for the quarter. The strategy's since inception performance continues to be favorable relative to the market benchmark.
- EARNEST Partners outperformed the MSCI Emerging Markets Index in the first quarter and ranked in the 48th percentile in its peer group. EARNEST Partner's long term performance is mixed relative to the market benchmark and below the peer group median.

Fixed Income

- Taplin, Canida & Habacht outperformed the Bloomberg Barclay's Aggregate Bond Index and ranked in the 6th percentile of their peer group for the quarter. Performance is strong relative to the market benchmark and mixed relative to the peer group median over the long term.

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- Western Asset Management outperformed the Bloomberg Barclays Capital Aggregate Index for the quarter, and ranked in the 10th percentile in its peer group. The strategy has registered strong performance compared to the benchmark and peers over longer time periods.
- Pugh underperformed the Bloomberg Barclays Capital Aggregate Index and ranked in the 79th percentile in its peer group for the quarter. The strategy's long term performance is strong compared to the Bloomberg Barclay's Aggregate Index, but challenged compared to the median member of the Core Bond peer group.
- Garcia Hamilton outperformed the Bloomberg Barclays Capital Aggregate Bond Index in the first quarter and ranked in the 40th percentile in its peer group. The strategy's performance is very favorable over the trailing three and five year periods.
- LM Capital outperformed the Bloomberg Barclays Capital Aggregate Bond Index and ranked in the 78th percentile in the Core Plus Bond peer group for the quarter. Long term performance is above the market benchmark and mixed relative to the peer group median.

Hedge Funds

- Pluscios returned 2.31% in the first quarter. The fund has added 2.87%, on an annualized basis, since inception. This account was completely liquidated after quarter-end. The proceeds were used to fund benefit payments.

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Manager Watch List

MANAGER	DATE WATCH STARTED, REASON	LAST DUE DILIGENCE MEETING	ACTIONS TAKEN	POLICY/ RECOMMENDED ACTIONS	AUM as of 3/31/2017	Current Quarter Watch List Score	Previous Quarter Watch List Score
Ivy	February – 16 Performance	Mar - 17	Monitor	Monitor	\$119 mil.	0.8	0.5
Holland	August – 14 Performance	Mar - 17	Monitor	Monitor	\$263 mil.	0.7	0.7
Zevenbergen	December – 16 Performance	Jan - 17	Monitor	Monitor	\$121 mil.	0.7	0.7
Morgan Stanley	August – 15 Performance	Apr - 17	Monitor	Remove	\$555 mil.	0.3	0.3
TCH	February – 16 Org Changes & June –16 Performance	Apr - 17	Monitor	Remove	\$122 mil.	0.1	0.1
Channing	December – 16 Performance	Jan - 17	Monitor	Remove	\$141 mil.	0.3	0.4
LM Capital	May - 17 Personnel Turnover	May - 17	Monitor	Monitor	\$209 mil.	0.2	0.2

Policy/Recommended Actions Legend

Remove = Policy action taken due to IPS guidelines. Remove manager from the watch list as performance improves.

Termination = Recommended action for the Board

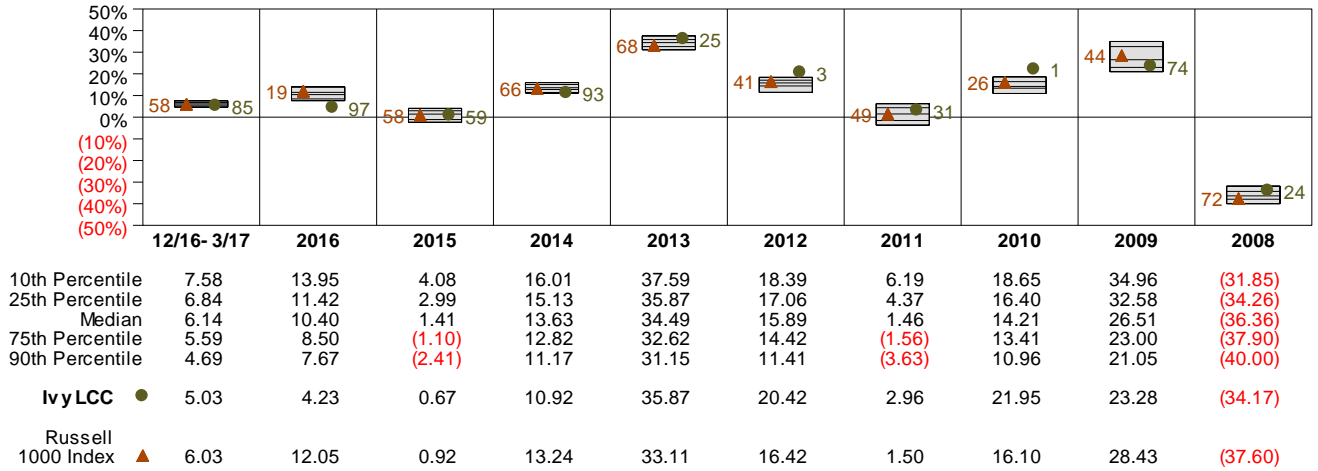
Monitor = Recommended action for the Board

Search = Board authorized a manager search

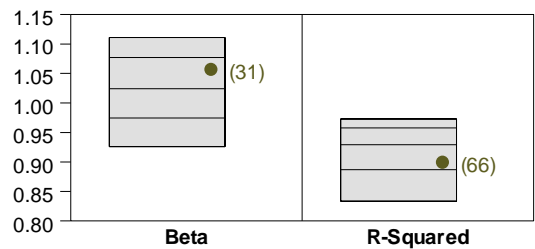
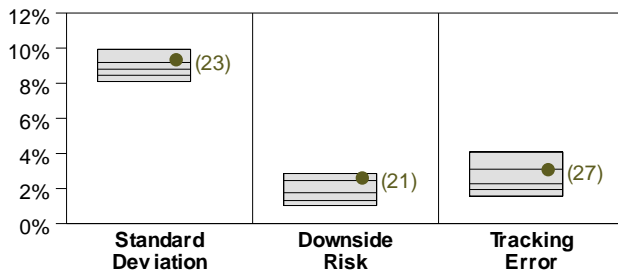
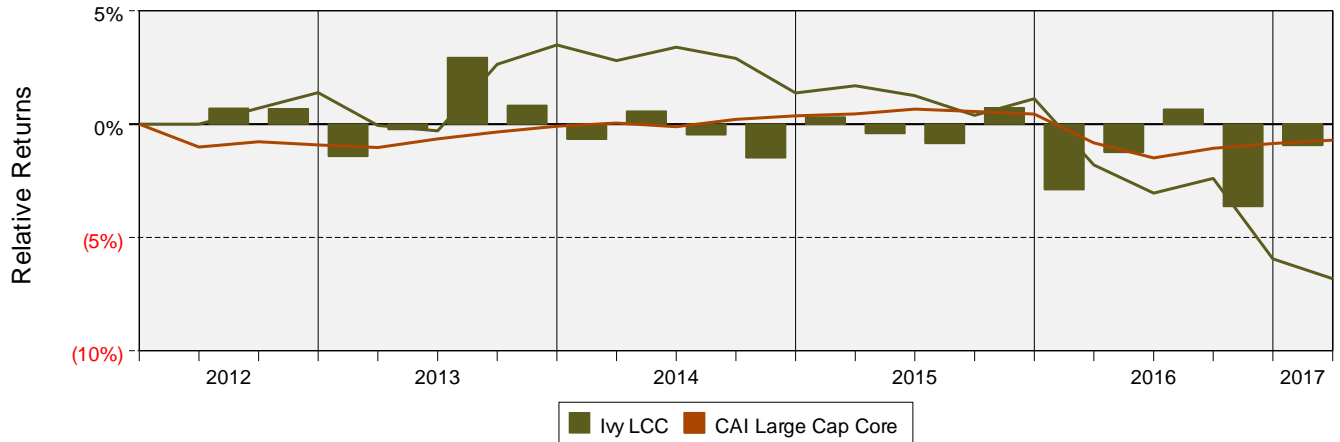
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Manager Watch List: Ivy

Performance vs CAI Large Cap Core (Gross)



Cumulative and Quarterly Relative Return vs Russell 1000 Index

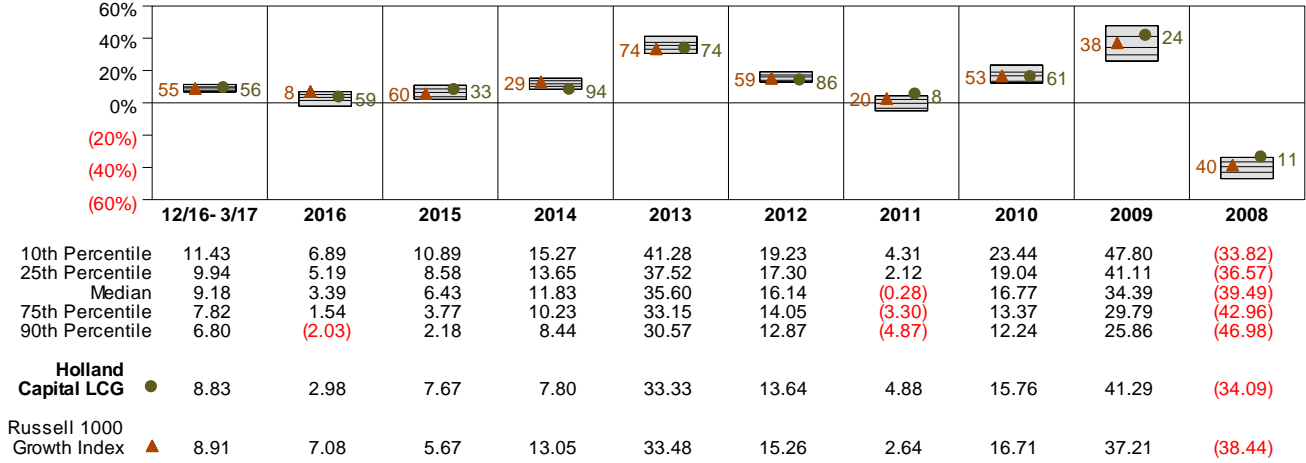


	Standard Deviation	Downside Risk	Tracking Error	Beta	R-Squared
10th Percentile	9.93	2.86	4.08	1.11	0.97
25th Percentile	9.19	2.45	3.11	1.08	0.96
Median	8.81	1.77	2.27	1.02	0.93
75th Percentile	8.46	1.31	1.94	0.97	0.89
90th Percentile	8.09	1.03	1.56	0.93	0.83
IvyLCC	9.25	2.53	3.00	1.05	0.90

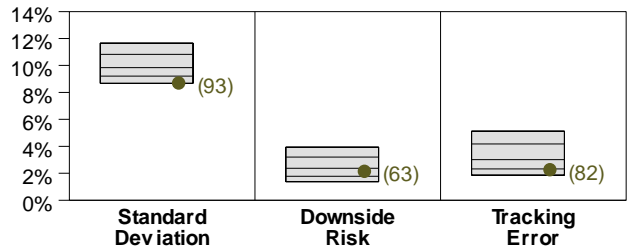
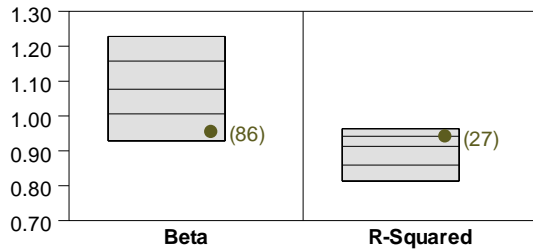
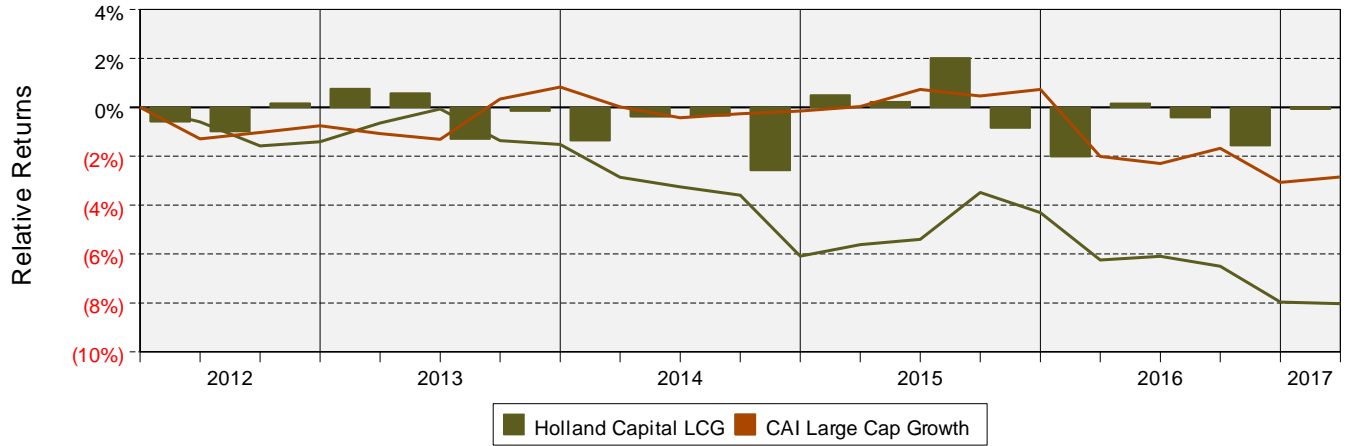
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Manager Watch List: Holland

Performance vs CAI Large Cap Growth (Gross)



Cumulative and Quarterly Relative Return vs Russell 1000 Growth Index

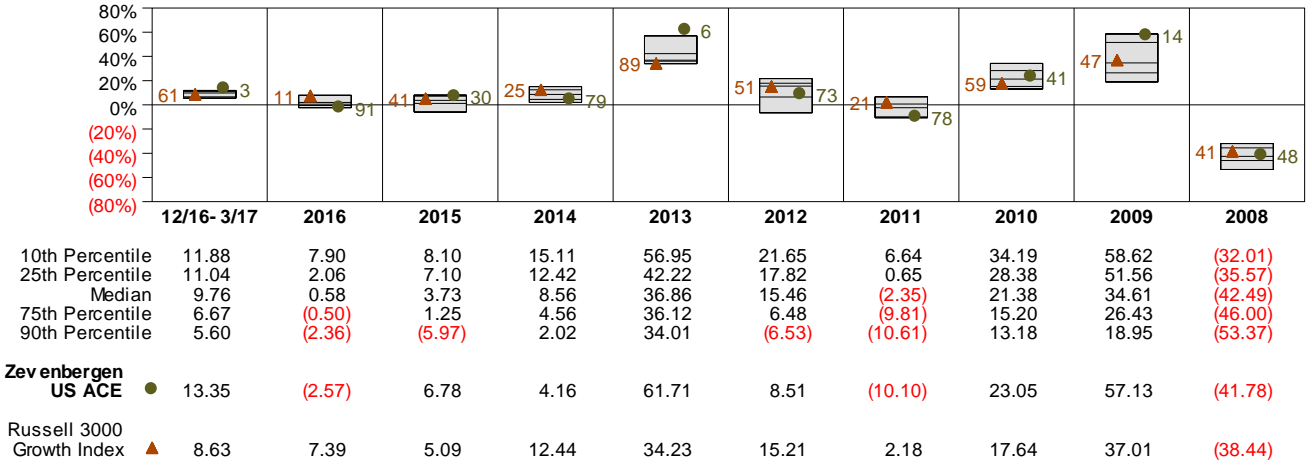


10th Percentile	1.23	0.96	11.66	3.94	5.13	
25th Percentile	1.16	0.94	10.83	3.21	4.18	
Median	1.08	0.91	9.83	2.38	3.02	
75th Percentile	1.01	0.86	9.21	1.78	2.33	
90th Percentile	0.93	0.81	8.67	1.37	1.86	
Holland Capital LCG	0.95	0.94	Holland Capital LCG	8.59	2.04	2.16

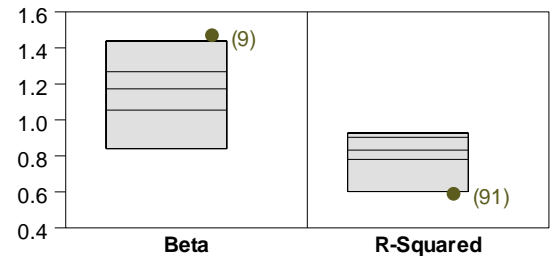
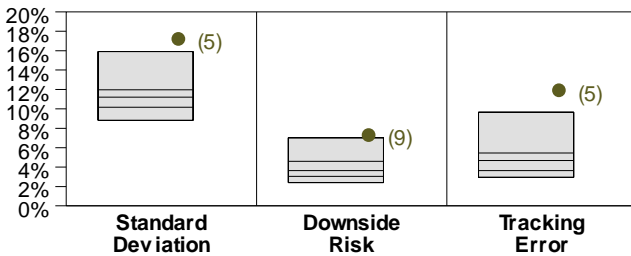
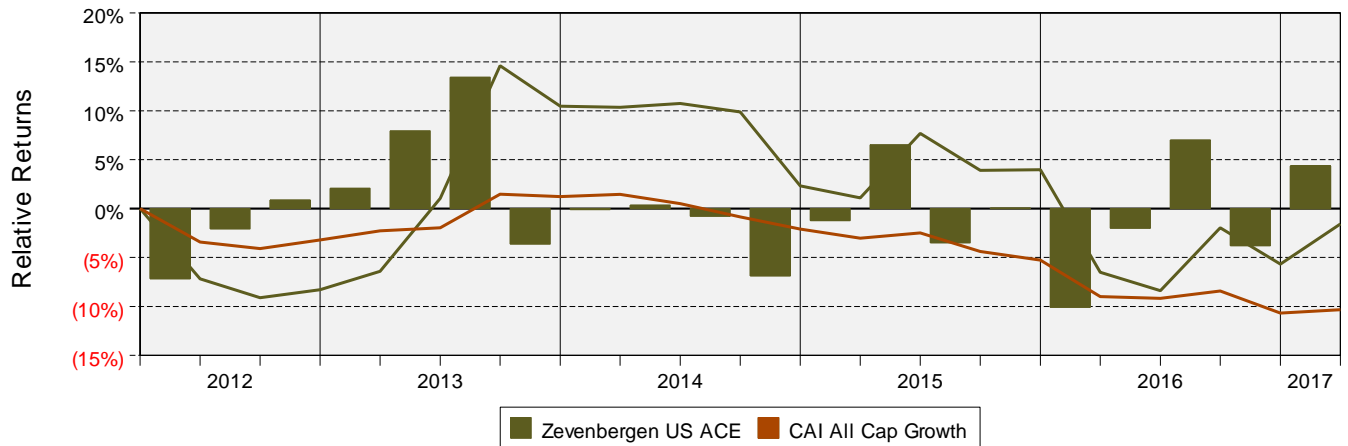
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Manager Watch List: Zevenbergen

Performance vs CAI All Cap Growth (Gross)



Cumulative and Quarterly Relative Return vs Russell 3000 Growth Index



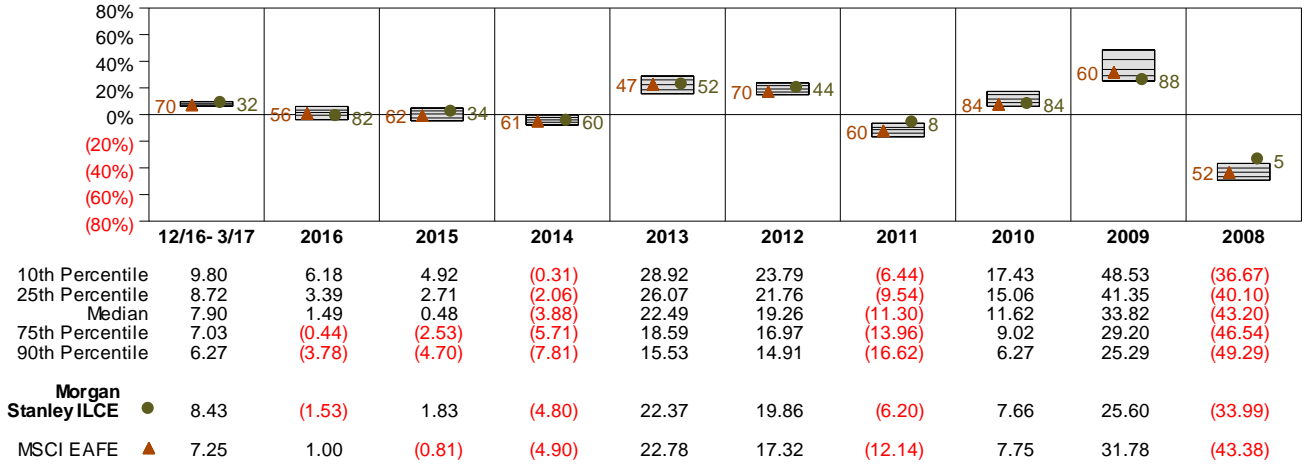
	Standard Deviation	Downside Risk	Tracking Error
10th Percentile	15.92	7.01	9.66
25th Percentile	11.96	4.60	5.45
Median	11.20	3.64	4.69
75th Percentile	10.17	3.04	3.63
90th Percentile	8.82	2.41	2.94
Zevenbergen US ACE	● 17.06	7.14	11.77

	Beta	R-Squared
10th Percentile	1.44	0.93
25th Percentile	1.27	0.90
Median	1.17	0.83
75th Percentile	1.05	0.78
90th Percentile	0.84	0.60
Zevenbergen US ACE	● 1.46	0.58

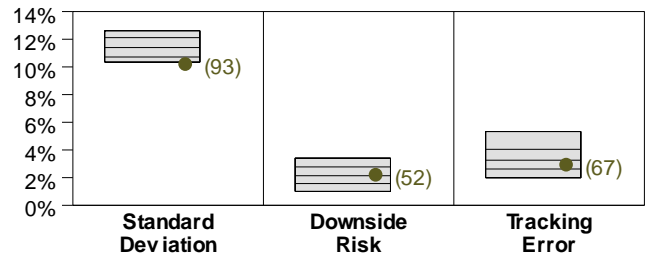
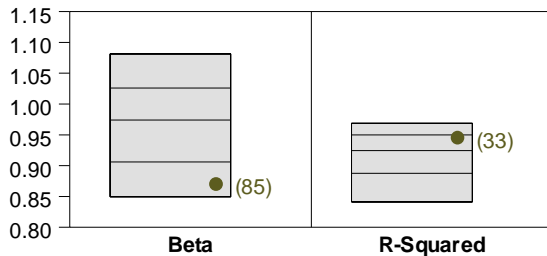
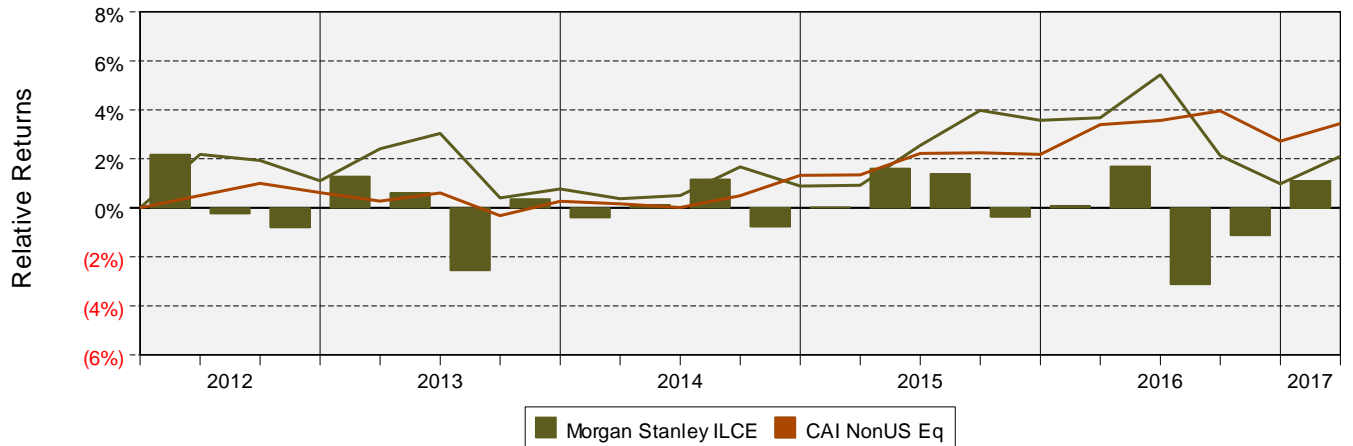
**Public School Teachers' Pension and Retirement Fund of Chicago
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Manager Watch List: Morgan Stanley

Performance vs CAI Non-US Equity (Gross)



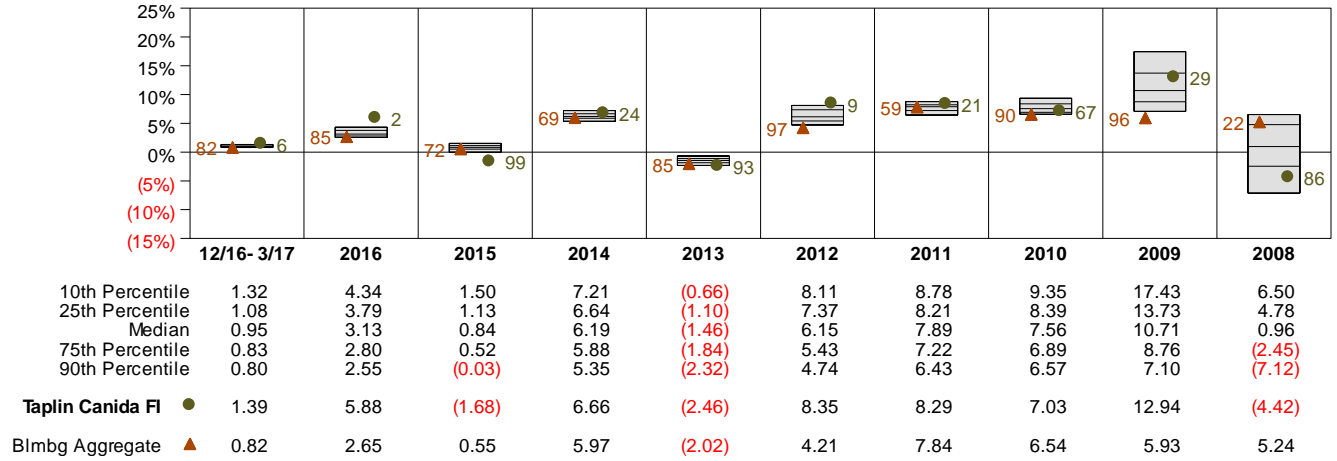
Cumulative and Quarterly Relative Return vs MSCI EAFE



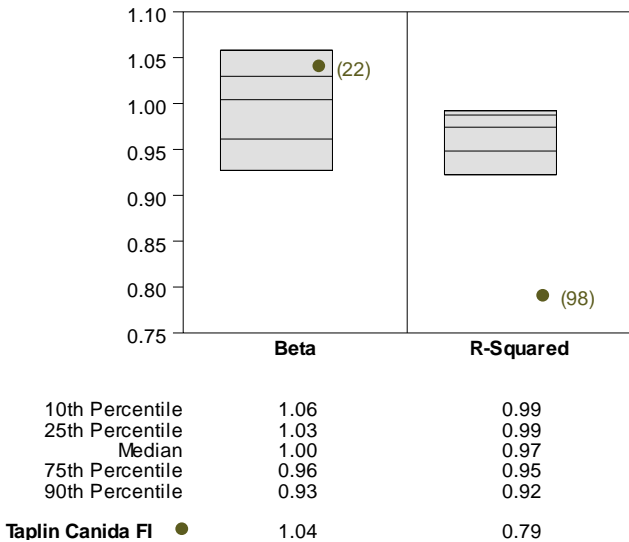
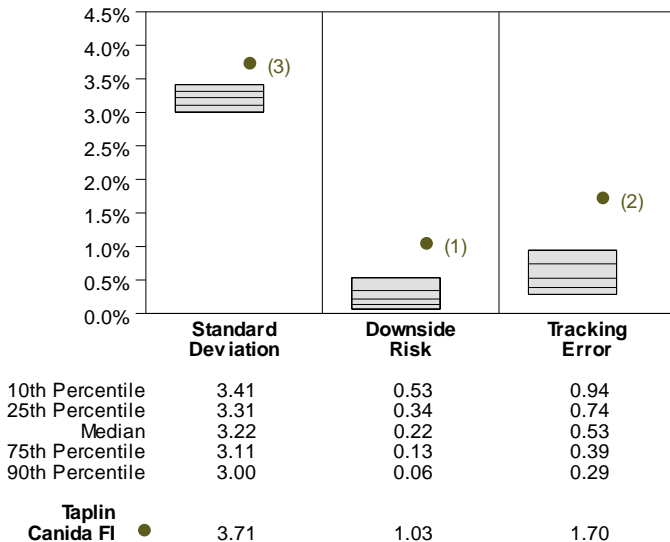
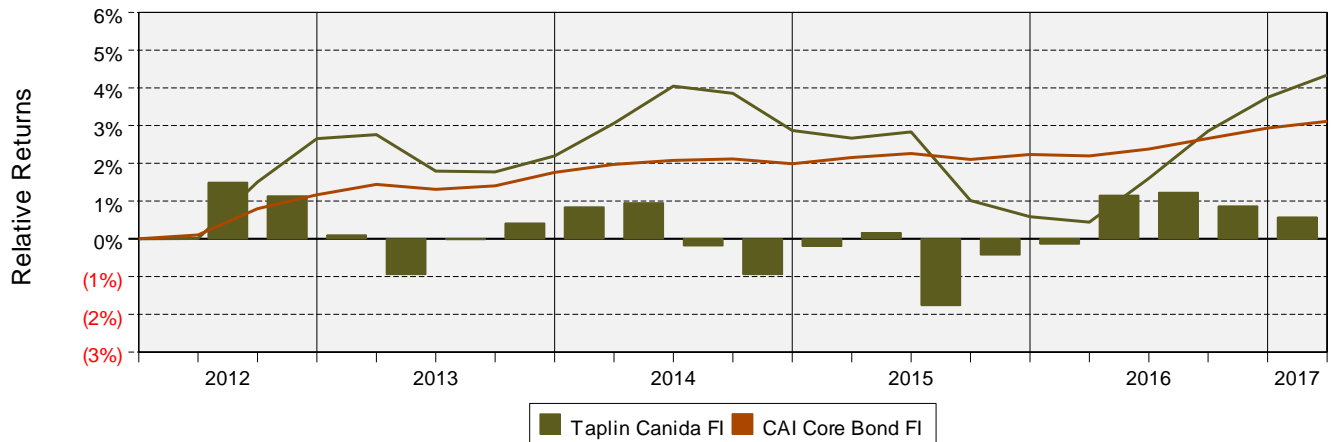
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Manager Watch List: TCH

Performance vs CAI Core Bond Fixed Income (Gross)



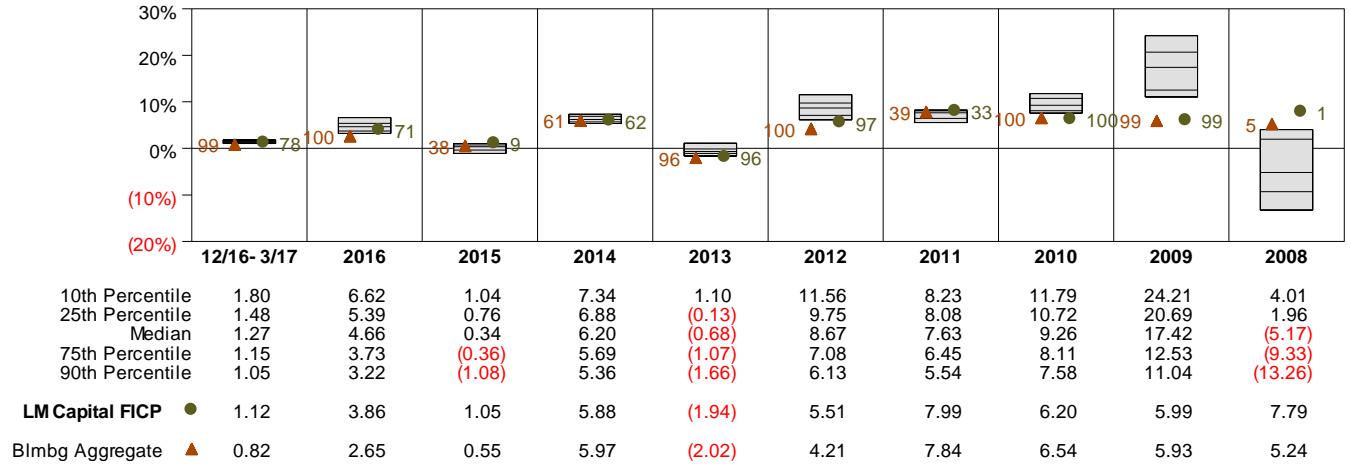
Cumulative and Quarterly Relative Return vs Blmbg Aggregate



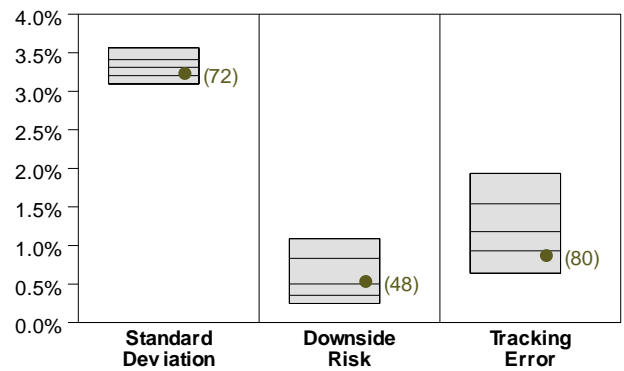
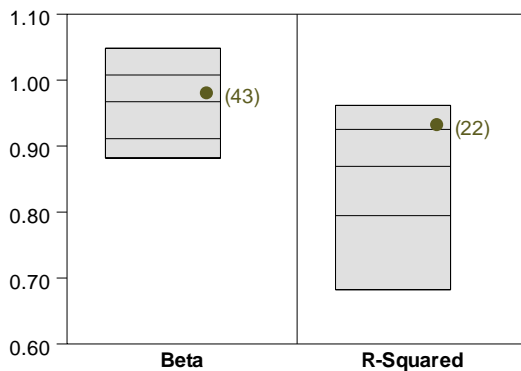
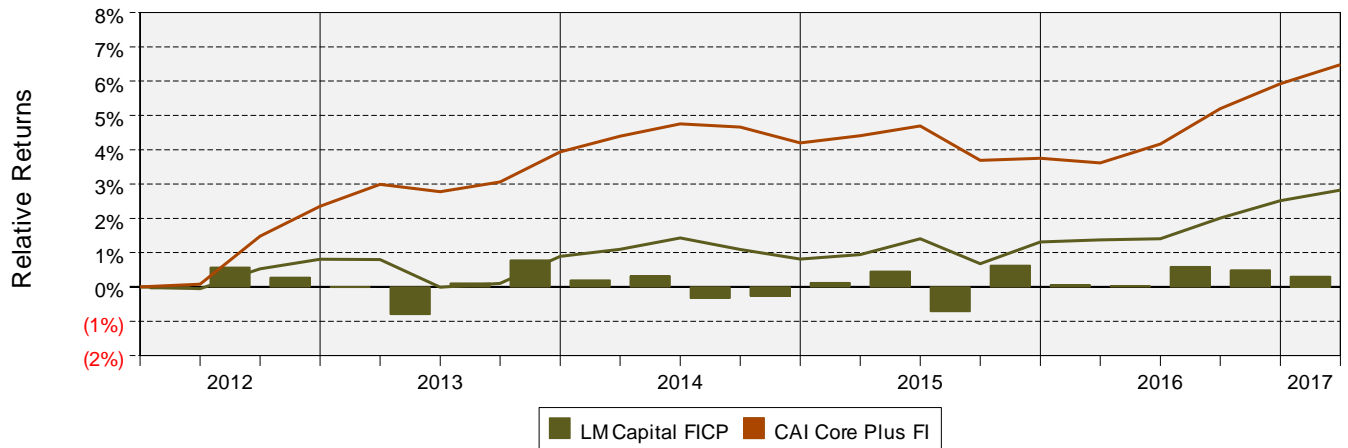
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Manager Watch List: LM Capital

Performance vs CAI Core Plus Fixed Income (Gross)



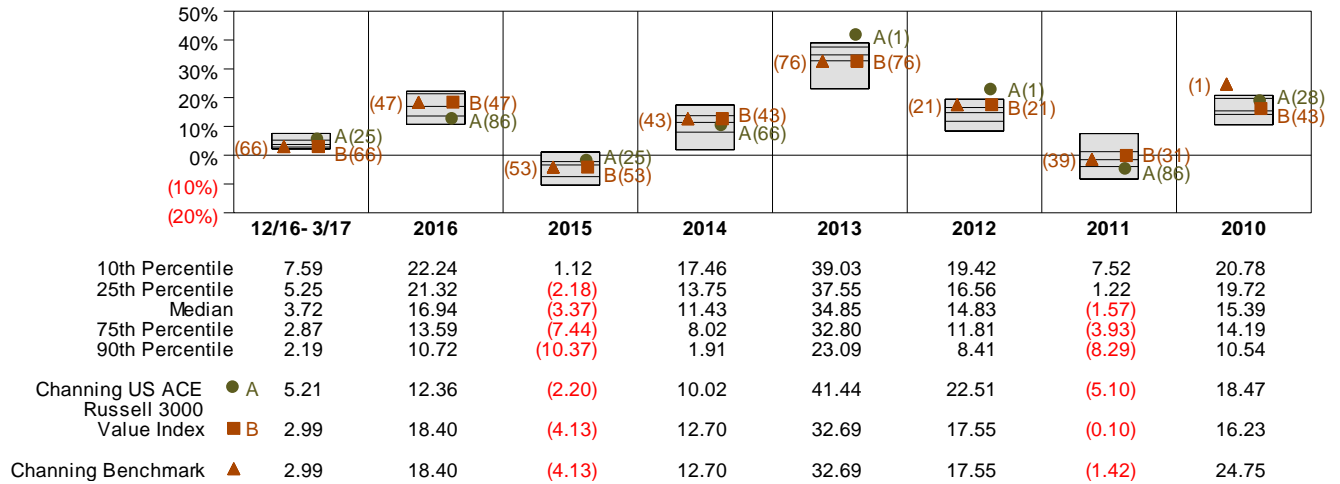
Cumulative and Quarterly Relative Return vs Blmbg Aggregate



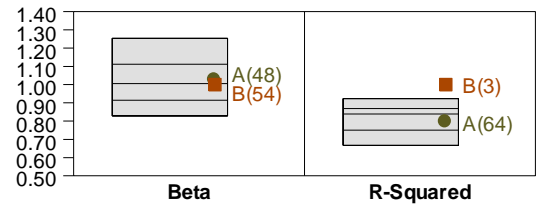
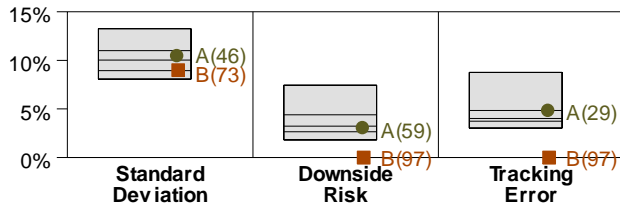
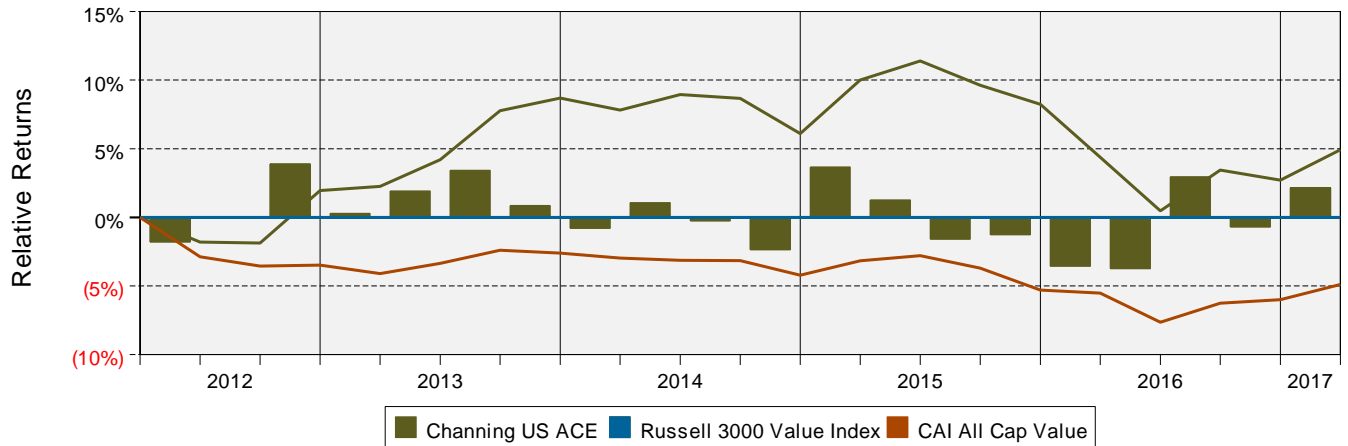
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Manager Watch List: Channing

Performance vs CAI All Cap Value (Gross)



Cumulative and Quarterly Relative Return vs Channing Benchmark



10th Percentile	13.26	7.44	8.77	10th Percentile	1.25	0.92		
25th Percentile	11.01	4.40	4.85	25th Percentile	1.11	0.87		
Median	10.03	3.22	4.01	Median	1.01	0.84		
75th Percentile	8.94	2.66	3.75	75th Percentile	0.91	0.75		
90th Percentile	8.07	1.82	3.05	90th Percentile	0.83	0.67		
Channing US ACE	● A	10.34	2.93	4.70	Channing US ACE	● A	1.02	0.79
Russell 3000 Value Index	■ B	9.00	0.00	0.00	Russell 3000 Value Index	■ B	1.00	1.00

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General Market and Economic Conditions

Economic data in the U.S. were generally strong in the first quarter. Unemployment fell to 4.7% and private nonfarm payroll growth was robust. Consumer Confidence, as measured by the Conference Board, hit its highest level since December 2000. Fourth-quarter GDP was revised up to 2.1% (year-over-year). Personal consumption expenditures growth was revised up to 3.5% and before-tax corporate profits grew 9.3% year-over-year. However, dollar strength was reflected in trade figures as exports fell 4.5%. Housing data also continued to show strength; U.S. single family home starts approached a 10-year high. The Composite Housing Market Index (National Association of Home Builders-Wells Fargo) jumped 9.2% during March, representing the largest gain since June 2005. Inflation edged up with February's headline CPI figure at 2.8% (year-over-year), the fastest rate in five years, and core CPI (excluding food and energy) at 2.2%. The Fed's favored measure, the Personal Consumption Expenditures Price Index, grew 2.1% year-over-year, the most since April 2012. Excluding food and energy, the Index was up 1.8% (year-over-year), nearing the Fed's 2.0% target. Wage growth also picked up; average hourly earnings grew 2.8% (year-over-year) as of February. In a widely expected move, the Fed raised rates in March by 25 bps, bringing the Fed Funds rate to 0.75% - 1.0%. The Federal Reserve Board expects two more rate hikes this year. Markets were unfazed and both stocks and bonds rallied.

The most notable events overseas were on the political front. On March 29, U.K. Prime Minister Theresa May officially notified the European Council of the U.K.'s intent to withdraw from the European Union (EU). Details of this withdrawal will be negotiated over the next two years. The U.K. has been part of the EU for more than 40 years and negotiating the terms of this "divorce" will not be straightforward. Trade and immigration are the thorniest issues and require resolution before the country's EU membership ends in March 2019. A high-profile election in the Netherlands ended with the mainstream ruling party retaining power and the anti-EU party falling short. Similarly, France's presidential elections will be held in April and May, with far-right contender Marine Le Pen making a bid for power. Additionally, the outcome of the German federal election to be held in September of this year is far from certain. Finally, South Korean President Park Geun-hye was impeached and removed from office in March; elections will be held in May.

Economic momentum appears to be picking up in the eurozone. Inflation has been rising and hit a four-year high (2%) at the February reading. Fourth quarter eurozone GDP was 1.7% (year-over-year) and, notably, positive in each country except Greece (-1.2%). Unemployment remained high at 9.5%, though down from its peak of 12.1% in July 2013. Outside of Europe, manufacturing growth in China was strong and its fourth quarter GDP came in at 6.8%, but concerns over excessive credit remain. In Japan, growth remained weak but positive at 1.2% year-over-year as of the fourth quarter.

First Quarter 2017 Market Performance

The S&P 500 Index has lodged gains for eight consecutive calendar years, and the first quarter continued on that trajectory. The Index climbed 6.1% while the tech-heavy NASDAQ gained 10%. In the Tech sector, the "FANG" collective drove results: Facebook (+24%), Amazon (+18%), Netflix (19%), and Google (+8%). Solid quarterly earnings and expectations that President Trump's pro-

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growth agenda will be executed translated into strong investor sentiment. Growth stocks outperformed value by a wide margin across the capitalization spectrum; the most pronounced difference was in large caps (R1000 G +8.9% vs. R1000 V +3.3%). Large cap stocks also broadly outperformed small (R1000 +6.0% vs. R2000 +2.5%). Small cap value was the only segment to post a negative return (R2000 V -0.1%) for the quarter after leading in 2016 (+31.7%). Within the S&P 500, the Tech sector performed the best (+12.6%). Health Care—the worst performer in 2016—rebounded with an 8.4% return. The worst performing sectors for the quarter were Energy (-6.7%) and Telecom (-4.0%). Pre-tax corporate profits grew sharply in the fourth quarter at 9.3% year-over-year, the fastest gain since 2012.

The equity market's subdued volatility in the first quarter was also noteworthy. The S&P 500 Index had more than 100 days without a 1% decline prior to March 21 when the Index sank 1.2%—the longest stretch since 1995—and only two days during the quarter saw such moves. The VIX, which measures the implied volatility of S&P 500 Index options, closed the quarter at 12, well below its long-term average (since 2004) of roughly 20. At the same time, valuations are lofty (as measured by several oft-cited metrics), potentially painting a scenario for rocky times ahead.

Overseas, the MSCI EAFE Index (+7.2%) modestly outperformed U.S. markets. Dollar weakness bolstered results; in local terms the Index gained just -4.7%. Gains spanned multiple countries including Spain (+14.8%), Germany (+8.4%), the U.K. (+5.0%), France (+7.3%), and Japan (+4.5%). Emerging markets bested developed (MSCI EM USD: +11.4%; MSCI EM Local: +7.8%) and were also helped by dollar weakness. Countries with the top performance included India (+17.1%), Mexico (+16.0%), Korea (+16.8%), China (+12.9%), and Brazil (+10.4%). Russia fared the worst (-4.6%), pulling back from a 55% gain in 2016.

U.S. Treasury yields were relatively range-bound in the first quarter despite a Fed hike in March. The 10-year U.S. Treasury hit an intra-quarter high of 2.62% on March 13 and closed the quarter at 2.40%, five basis points lower than at year-end. TIPS performed relatively well as expectations for future inflation climbed. The 10-year breakeven spread (the difference between nominal and real yields) was 197 bps as of quarter-end, and the Bloomberg Barclays TIPS Index gained 1.3% for the quarter. The Bloomberg Barclays Aggregate Index earned 0.8%; within the Index, corporate bonds outperformed like-duration Treasuries, with BBB-rated credit (+1.7%) posting the strongest returns. Mortgages underperformed Treasuries on a duration-adjusted basis, as expectations that the Fed would begin to trim its reinvestment in the sector weighed on the market. The Bloomberg Barclays High Yield Index gained 2.7%, with lower-rated bonds again outperforming higher-rated issues.

Overseas, rates were generally modestly higher. However, broad-based dollar weakness boosted returns. The U.S. dollar lost nearly 5% versus the yen and depreciated to a lesser extent versus other developed markets currencies. The Bloomberg Barclays Global Aggregate Index returned 1.8% (unhedged) versus 0.4% for the hedged version. Consistent with the risk-on theme evident across asset classes, emerging markets debt outperformed developed markets. The JPM EMBI Global Diversified Index (\$ denominated) gained 3.9% and the local currency JPM GBI-EM Global Diversified Index was up 6.5%.

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The Bloomberg Barclays Municipal Bond Index gained 1.6%. Consistent with other sectors, lower-quality issues outperformed. Relatively light issuance and strong demand provided a solid technical backdrop. Concerns over the impact of potential tax reform were assuaged by the Trump administration's focus on health care and its struggles executing on planned agenda items. While troubled credits remain (Illinois, New Jersey, Puerto Rico), fundamentals more broadly remained stable to improving.

After rising more than 50% in 2016, Brent crude prices fell 7% to \$52.83 in the first quarter. The S&P GSCI Commodity Index lost 5.1%. However, MLPs posted positive returns for the quarter (Alerian MLP Index +3.9%). REITs were essentially flat (MSCI REIT: +1.0%) and gold was up nearly 9%. U.S. TIPS also did well (relative to nominal U.S. Treasuries) as expectations for future inflation climbed. The Barclays U.S. TIPS Index returned 1.3% for the quarter.

Closing Thoughts

We entered 2017 with U.S. stock markets at record highs, interest rates rising, and historically low volatility. The first quarter saw a continuation of most of those themes, with rising interest rates being the exception. While economies in the U.S. and Europe continued to gain traction, investors exhibited a high degree of complacency. Valuations are stretched by many measures across asset classes and markets have experienced extraordinarily low volatility, relative to historical norms. However, many risks lurk and there is no certainty that the pro-growth policies envisioned by enthusiastic market participants will come to fruition. Given the sanguine view reflected in market prices, we encourage clients to temper expectations for returns and brace for more volatility, which we expect to increase from current levels. Much uncertainty remains with respect to the scope, implementation, and timing of Trump's agenda, and myriad other geopolitical issues are confronting the world, as well. As always, Callan encourages investors to maintain a long-term perspective and prudent asset allocation with appropriate levels of diversification.

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Appendix