



RVK

# North Dakota Board of University and School Lands

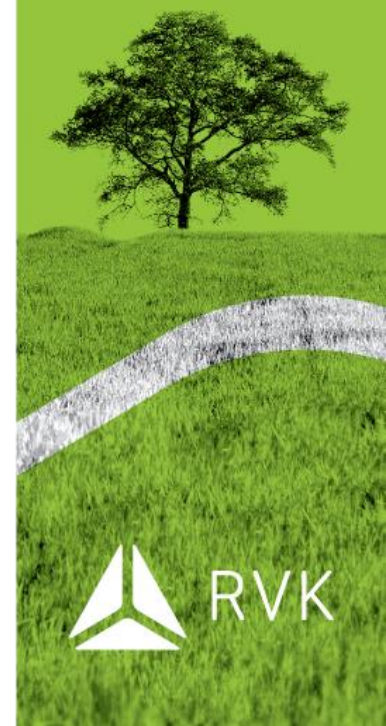
## Investment Performance Analysis

Period Ended: September 30, 2016



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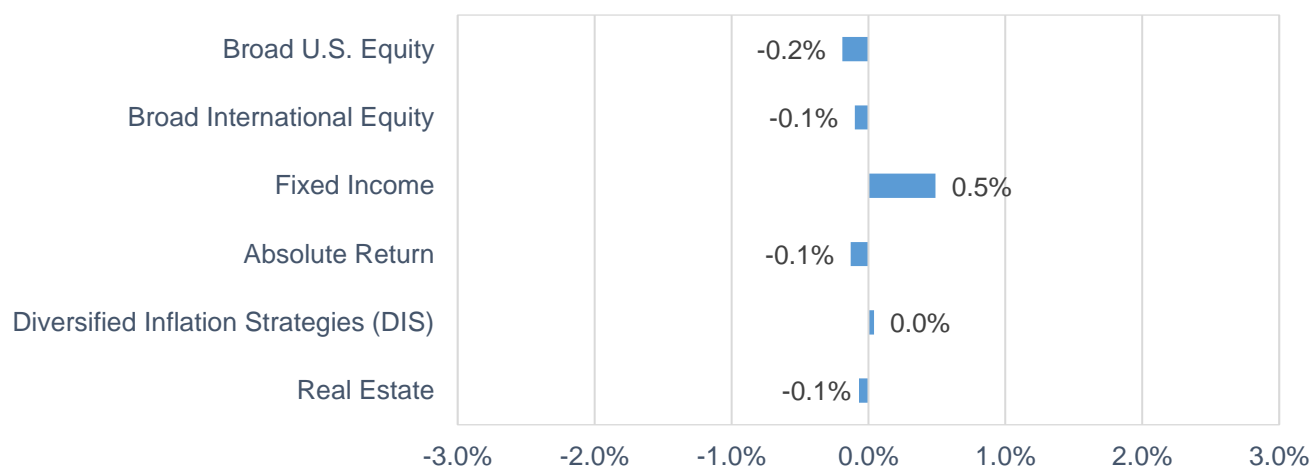
# Board Executive Summary



# Board Executive Summary

	Market Value (\$) as of 9/30/16	Allocation (%)	Target Asset Allocation
Broad U.S. Equity	644,848,478	16.8%	17.0%
Broad International Equity	569,701,575	14.9%	15.0%
Fixed Income	901,096,250	23.5%	23.0%
Absolute Return	762,014,254	19.9%	20.0%
Diversified Inflation Strategies (DIS)	385,067,448	10.0%	10.0%
Real Estate	572,809,553	14.9%	15.0%
Total Fund	3,835,537,558	100.0%	100.0%

## Asset Allocation vs. Target Allocation Differences



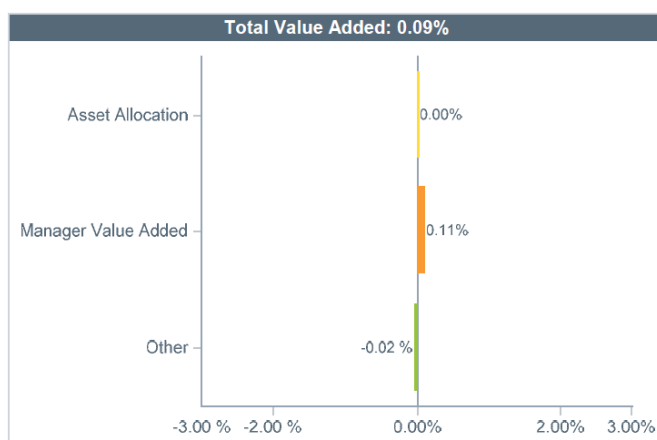
- The Land Board's assets totaled \$3.8 billion as of September 30, 2016, up approximately \$139 million from the previous quarter. Real estate mandates have been fully funded and the Total Fund is now in line with its asset allocation targets.
- The Total Fund increased its real estate allocation from 13.0% at the end of the second quarter to 14.9% as of September 30, just below its 15.0% allocation target. The increase in assets included a partial funding of JP Morgan Income and Growth with approximately \$85 million. The remaining committed assets, \$28.5 million, were called on October 1<sup>st</sup>. As of October 1<sup>st</sup>, the Land Board's real estate portfolio is fully funded.
- There were no additional significant changes to the Total Fund during the third quarter.

## Total Fund Performance

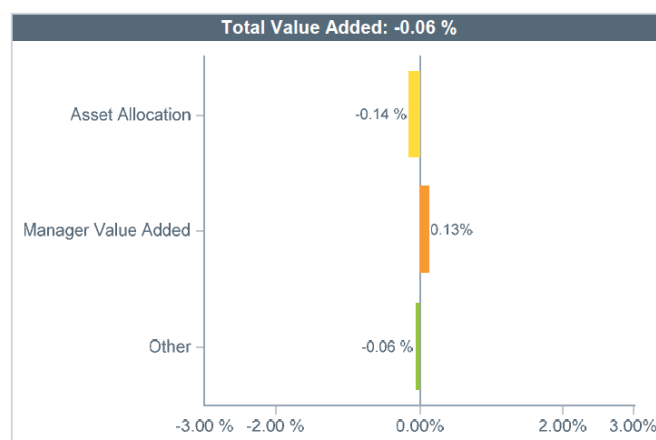
	QTD	CYTD	1 Year	3 Years	5 Years	7 Years	2015	2014	2013	Since Incep.	Inception Date
<b>Total Fund (Net)</b>	<b>3.1</b>	<b>8.1</b>	<b>9.7</b>	<b>4.1</b>	<b>7.6</b>	<b>7.1</b>	<b>-4.6</b>	<b>4.8</b>	<b>13.2</b>	<b>6.7</b>	<b>08/01/1995</b>
Target Allocation Index	3.1	7.8	10.1	5.8	8.8	8.2	-1.0	6.5	13.1	N/A	
<b>Total Fund (Gross)</b>	<b>3.2</b>	<b>8.5</b>	<b>10.2</b>	<b>4.5</b>	<b>7.9</b>	<b>7.4</b>	<b>-4.2</b>	<b>5.1</b>	<b>13.4</b>	<b>8.7</b>	<b>07/01/2009</b>
Target Allocation Index	3.1	7.9	10.3	5.9	8.9	8.2	-0.8	6.6	13.1	9.7	

- The Total Fund returned 3.1% (net of fees) during the quarter, in line with its target allocation index and all asset classes provided positive returns for the quarter.
- Relative performance was aided by the diversified inflation strategies composite, which outperformed its benchmark by 132 basis points, while absolute return detracted from performance, finishing the quarter 69 basis points below its custom benchmark. Equity relative performance was strong for both domestic and international markets. The portfolio's broad U.S. equity returned 4.5% while broad international equity gained 6.6% during the third quarter.
- Fixed income returned 1.3% for the third quarter, 32 basis points ahead of its custom index and 84 basis points above the Bloomberg U.S. Aggregate Index. The recently funded real estate composite returned 2.5% for the quarter and is now up 11.6% since its inception in July 2015.

### Total Fund QTD Attribution (versus Target Allocation)



### Total Fund Trailing 1-Year Attribution (versus Target Allocation)



## Broad U.S. Equity<sup>1</sup>

	QTD	CYTD	1 Year	3 Years	5 Years	7 Years	2015	2014	2013	Since Incep.	Inception Date
<b>Broad U.S. Equity</b>	<b>4.5</b>	<b>8.6</b>	<b>15.6</b>	<b>9.7</b>	<b>14.8</b>	<b>12.5</b>	<b>0.2</b>	<b>12.4</b>	<b>28.3</b>	<b>14.5</b>	<b>07/01/2009</b>
Russell 3000 Index	4.4	8.2	15.0	10.4	16.4	13.2	0.5	12.6	33.6	15.1	
Difference	0.1	0.4	0.6	-0.7	-1.6	-0.7	-0.3	-0.1	-5.3	-0.6	
IM U.S. Equity (SA+CF) Median	5.2	7.8	13.3	9.2	16.2	13.3	-0.5	10.0	35.8	15.3	
Rank	62	43	28	42	74	69	44	34	91	67	

- U.S. equity markets finished the quarter in positive territory across all market capitalizations ranges and styles, with the Russell 3000 Index rising 4.4%. Year-to-date, the U.S. equity market has shifted towards favoring smaller-cap, value-biased stocks compared to 2015, when the market predominantly favored large-cap growth stocks. This shift is representative of a small-cap rally and highlights a change in market style leadership from growth to value.
- The Total Fund's U.S. equity composite slightly outperformed its Russell 3000 Index but ranked in the 62<sup>nd</sup> percentile among its peers.
- The composite's index fund returned 3.9% and the NT Small Cap Core fund gained 6.8%, underperforming the Russell 2000 Index by 222 basis points.
- NT Small Cap Core benefitted from an underweight to utilities and real estate sectors but was ultimately hurt by stock selection in industrial, consumer discretionary, and technology. Of the fund's four underlying managers, Rutabaga was the only manager to outperform its respective benchmark. Cardinal underperformed the Russell 2000 Value Index by 4.7%, while Summit Creek and Riverbridge trailed the Russell 2000 Growth Index by 4.5% and 1.5%, respectively.
- Since the U.S. equity composite was restructured in 2014, it has closely tracked the performance of its benchmark as expected, given its high allocation to passive strategies.

## Broad International Equity

	QTD	CYTD	1 Year	3 Years	5 Years	7 Years	2015	2014	2013	Since Incep.	Inception Date
<b>Broad International Equity</b>	<b>6.6</b>	<b>6.3</b>	<b>9.8</b>	<b>1.0</b>	<b>8.2</b>	<b>4.3</b>	<b>-5.1</b>	<b>-4.9</b>	<b>26.5</b>	<b>6.7</b>	<b>07/01/2009</b>
MSCI ACW Ex U.S. Index (Net)	6.9	5.8	9.3	0.2	6.0	3.7	-5.7	-3.9	15.3	6.1	
Difference	-0.3	0.5	0.5	0.8	2.2	0.7	0.6	-1.1	11.2	0.6	
IM International Large Cap Equity (SA+CF) Median	6.7	3.3	8.3	2.1	8.7	5.9	0.3	-3.7	22.6	8.3	
Rank	51	23	32	70	64	86	89	64	24	86	

- Following the unexpected Brexit vote at the end of June, the international markets, including emerging markets, rebounded in the third quarter, outperforming domestic equities. The Bank of England announced preemptive measures to counteract potential negative effects of the Brexit vote, including an interest rate cut of 0.25% and an expansion of the Bank's quantitative easing program by 70 billion pounds over the coming six months. The rest of Europe took a more measured response to Brexit, as the European Central Bank reaffirmed the bank's existing monetary policy.
- The Total Fund's international equity composite trailed the MSCI All Country World Ex U.S. Index but posted a solid 6.6% return for the quarter. The composite's broad international index

<sup>1</sup> Throughout the Board summary, the Total Fund's composite asset class performance shown is gross of fees. Specific manager performance referenced is net of fees.



fund gained 6.3% during the third quarter. DFA Emerging Markets and Harding Loevner returned 8.0% and 7.9%, respectively, but underperformed their emerging markets benchmarks by 106 and 117 basis points.

- Harding Loevner trailed its emerging markets benchmark for the third quarter but remains over 3.0% ahead of the index year-to-date. During the quarter, the fund suffered due to stock selection in the financial and consumer staples sectors. By geography, performance was hurt by investments in Mexico, with weakness by the peso being a primary factor.
- DFA returned 8.0%, net of fees, underperforming its benchmark by 1.1%. Relative performance was hurt by the fund's tilt toward mid- and small cap stocks as large cap outperformed for the quarter. The fund was additionally hurt by its underweight to and stock selection within the information technology sector. In terms of geography, an underweight to China detracted from performance.
- The international equity composite portfolio has added value relative to the MSCI All Country World ex-U.S. Index over all trailing periods beyond one quarter. Both DFA and Harding Loevner have outperformed their benchmark since being added to the Land Board portfolio in July 2014.

## Fixed Income

	QTD	CYTD	1 Year	3 Years	5 Years	7 Years	2015	2014	2013	Since Incep.	Inception Date
<b>Fixed Income</b>	<b>1.3</b>	<b>6.6</b>	<b>6.3</b>	<b>4.1</b>	<b>4.1</b>	<b>5.0</b>	<b>0.1</b>	<b>5.0</b>	<b>-0.4</b>	<b>5.5</b>	<b>07/01/2009</b>
Gbl Fixed Income Custom Index	1.0	7.6	6.9	3.8	3.2	4.1	-0.5	4.3	-1.6	4.7	
Difference	0.3	-1.0	-0.6	0.3	0.9	0.9	0.6	0.7	1.2	0.8	
IM Global Fixed Income (SA+CF) Median	2.3	9.9	8.9	3.3	3.7	4.6	-2.5	2.5	-0.1	5.3	
Rank	71	78	77	41	48	46	25	27	53	48	

- Virtually all fixed income sectors posted slightly positive performance as interest rates remained flat during the quarter. The Bloomberg U.S. Aggregate Bond Index posted a quarterly return of 0.46%. There was little interest rate movement during the quarter amid uncertainty around whether the Fed would raise rates.
- The portfolio's fixed income composite gained 1.3% in the third quarter, beating its custom global fixed income benchmark by 32 basis points. The composite ranked in the 71<sup>st</sup> percentile relative to peers for the quarter, but has outperformed the median performance of its peers for the 3-, 5-, and 7-year trailing time periods. The fixed income composite's benchmark now consists of 75% Barclay U.S. Universal and 25% Barclays Multiverse as approved in the Investment Policy Statement amendment at the prior Board meeting. The benchmark was changed to better reflect the mandate and investable universe of its managers.
- Most fixed income managers outperformed their respective benchmarks for the third quarter. While Lazard High Yield had the weakest relative performance, it provided the composite's strongest absolute return of 3.2%.
- The Payden & Rygel U.S. aggregate bond strategy gained 1.2%, 78 basis points ahead of the Bloomberg U.S. Aggregate Bond Index. The portfolio benefitted from an overweight to investment grade corporate bonds. Security selection within the new issue market further added to positive performance as did securitized bonds, including mortgages and commercial-backed paper.
- Brandywine gained 1.7% for the quarter, outperforming its benchmark by 138 basis points. Holdings in Brazil, South Africa, and Indonesia contributed positively to the fund's performance, while investments in Mexico, and the sharp decline in the peso, detracted from returns.

- Lazard High Yield gained 3.2% for the quarter, trailing its benchmark by 179 basis points. A major factor in the fund's underperformance was an underweight to lower quality securities. The CCC and lower index, as well as the B- rated index, returned over 8.0%. The portfolio held a significantly shorter duration (3 years versus 4.3 years for the benchmark), which also detracted from performance.

## Absolute Return

	QTD	CYTD	1 Year	2015	Since Incep.	Inception Date
<b>Absolute Return</b>	<b>2.8</b>	<b>8.7</b>	<b>10.1</b>	<b>-5.5</b>	<b>-0.1</b>	<b>07/01/2014</b>
Absolute Return Custom Index <sup>2</sup>	3.5	6.7	9.6	-0.9	2.3	
Difference	-0.7	2.0	0.4	-4.6	-2.4	
Consumer Price Index + 5%	1.4	5.9	6.5	5.8	5.6	
Difference	1.4	2.8	3.5	-11.3	-5.7	

- GTAA managers provided a relatively narrow range of performance during the third quarter. Those among the top performing managers avoided or deemphasized U.S. large cap equity exposure in favor of emerging market equity and credit-sensitive fixed income. Managers with overweight exposure to Japan were also rewarded. Despite strong performance for the broader group during the quarter, those with larger positions in cash, yield-oriented U.S. equity, and MLP exposure lagged the group by the widest margin.
- The Land Board's absolute return composite gained 2.8% during the third quarter and was up 8.7% year-to-date. While all three managers outperformed their respective benchmarks, the composite trailed its 60% MSCI ACW IMI/40% Bloomberg U.S. Aggregate benchmark on relatively poor performance from Westwood.
- GMO rose 3.6% during the quarter, outperforming its benchmark by 6 basis points. Equity strategies were the main driver of performance with emerging markets providing the largest gains. Fixed income and alternatives also contributed, led by credit sectors. Cash again weighed on performance as the fund held 27% in cash at the end of the quarter.
- PIMCO All Asset All Authority again had a strong quarter having posted a return of 3.9% and outperforming its benchmark by 156 basis points. The fund was up 14.7% year-to-date. PIMCO's strong performance for the quarter is attributed in large part to equity, bond, and currency exposures in emerging markets. Credit also contributed as they benefited from continued decline in spreads.
- During the third quarter, Westwood returned 0.4%, slightly below its custom benchmark. Holdings in the financial and technology sectors contributed to performance while the fund was hurt by energy-related investments.
- It is important to note that the GTAA funds have only been in the Total Fund for a short time period. GTAA managers are expected to outperform their respective benchmarks during a full market cycle. Periods of underperformance are expected to occur.

<sup>2</sup> The Absolute Return Custom Index consists of 60% MSCI ACW Investable Mkt Index (Net) and 40% Barclays U.S. Aggregate Bond Index.



## Diversified Inflation Strategies (DIS)

	QTD	CYTD	1 Year	2015	Since Incep.	Inception Date
<b>Diversified Inflation Strategies (DIS)</b>	<b>2.4</b>	<b>17.2</b>	<b>10.8</b>	<b>-23.9</b>	<b>0.0</b>	<b>04/01/2014</b>
DIS Custom Index	1.0	14.9	11.3	-18.9	-0.3	
Difference	1.3	2.3	-0.5	-5.0	0.3	

- DIS provided strong performance with relatively narrow divergence for the second consecutive quarter. Most strategies significantly outperformed major world equity and fixed income indices, in addition to TIPS. Commodities, especially energy, provided strong performance over the quarter in a welcome reprieve from the longer-term trend of negative performance.
- The DIS composite gained 2.4% for the quarter and was up 17.2% since the start of 2016. The composite outperformed its benchmark since its inception in the portfolio.
- Van Eck Natural Resources led the way for absolute and relative performance with a third quarter return of 7.9%, 191 basis points ahead of its benchmark. Year-to-date, the fund has gained 38.8% compared to a return of 14.8% from its benchmark.
- Harvest MLP also contributed to the composite's relative performance with a third quarter return of 4.2%. The fund beat its benchmark by 126 basis points for the quarter and is now up 17.4% for the year.
- While Gresham Commodities fell 2.7% during the third quarter, the fund outperformed its benchmark by 137 basis points.
- Historical performance includes the Land Board's prior allocation to Delaware REITs, which has since been liquidated.

## Real Estate

	QTD	CYTD	1 Year	Since Incep.	Inception Date
<b>Real Estate</b>	<b>2.5</b>	<b>6.9</b>	<b>10.5</b>	<b>11.6</b>	<b>07/01/2015</b>
NCREIF ODCE Index (Gross) (AWA)	2.1	6.5	10.1	11.2	
Difference	0.4	0.4	0.4	0.4	

- Core real estate continued a trend of delivering modest, positive returns, with the third quarter seeing a nearly equal mix of income and appreciation driving a 2.1% return for the NCREIF ODCE Index. In general, increasing property valuations coupled with strong fundamentals, such as rental growth and occupancy, fueled solid returns in core real estate.
- The Land Board has committed approximately \$562.5 million to private real estate, representing 15% of the Total Fund's assets. Real estate allocations are split among two core real estate managers (\$300 million) and three core-plus real estate managers (\$262.5 million).
- The Land Board's real estate composite returned 2.5% for the quarter, 38 basis points above the NCREIF-ODCE Index.
- Morgan Stanley Prime Property Fund (core) returned 2.3% during the third quarter, outperforming the NCREIF-ODCE Index by 43 basis points.
- UBS Trumbull Property Fund (core) returned 1.4% during the quarter, underperforming the Index by 39 basis points.
- Jamestown Premier Property Fund (core-plus) returned 2.8% for the quarter, beating the benchmark by 1.0%.

- In their first full quarter after being funded, Prologis USLF and JP Morgan U.S. Real Estate Income and Growth returned 2.9% and 1.9%, respectively, outperforming the benchmark by 104 and 3 basis points.
- As of September 30, 2016, the Land Board's real estate assets approximated \$573 million after JP Morgan U.S. Real Estate Income and Growth was partially funded in July. The remaining \$28.5 million to JP Morgan settled on October 1<sup>st</sup> and the real estate composite was fully funded at \$601 million as of October 31<sup>st</sup>.

Real Estate Manager	Real Estate Mandate	Capital Committed	Approximate Capital Called (as of 9/30)
Morgan Stanley Prime Property	Core	\$150 M	\$150 M
UBS Trumbull Property	Core	\$150 M	\$150 M
Jamestown Premier Property	Core-plus	\$75 M	\$75 M
Prologis U.S. Targeted Logistics	Core-plus	\$75 M	\$75 M
JP Morgan Income and Growth	Core-plus	\$113 M	\$113 M <sup>3</sup>

<sup>3</sup> Approximate Capital Called for JP Morgan Income and Growth includes \$28.5 million which settled on October 1, 2016.

Asset Allocation							
Asset Class	Market Value	Within Target Range?		Current (%)	Targets		
		Yes	No		Min.	Target	Max.
Broad US Equity	\$ 644,848,478	✓		16.81%	12%	17%	22%
Broad International Equity	\$ 569,701,575	✓		14.85%	10%	15%	20%
Fixed Income	\$ 901,096,250	✓		23.49%	18%	23%	28%
Absolute Return	\$ 762,014,254	✓		19.87%	15%	20%	25%
Diversified Inflation Strategies (DIS)	\$ 385,067,448	✓		10.04%	5%	10%	15%
Real Estate	\$ 572,809,553	✓		14.93%	10%	15%	20%
Total Fund	\$ 3,835,537,558			100.00%			

Monitoring Guideline (Over a Full Market Cycle of 5 Years)				Explanation
<b>Total Fund (Gross)</b>				
	Yes	No		
Total Fund returns exceed the Target Allocation Index (Gross) over a 5-year period.		✓		The Total Fund Composite returned 7.89% vs. 8.91% for the index.
Rank above the All Public Plans > \$1B-Total Fund Median.		✓		The Total Fund Composite has a ranking of 91 (gross of fees).
<b>Broad US Equity Composite</b>				
	Yes	No		
The composite returns exceed the Russell 3000 Index over a 5 year period.		✓		The composite returned 14.65% vs. 16.36% for the index. Includes managers which are no longer in the portfolio.
Rank above the IM U.S. Equity Median.		✓		The composite has a ranking of 74 (gross of fees). Includes managers which are no longer in the portfolio.
<b>State Street S&amp;P 500 Index (CF)</b>				
	Yes	No		
The fund returns are in line with the S&P 500 Index (Cap Wtd) over a 5 year period.	✓			The fund returned 16.36% vs. 16.37% for the index.
Rank above the IM U.S. Large Cap Equity Median.	✓			The fund has a ranking of 44 (gross of fees).
<b>NT Small/Smid Composite</b>				
	Yes	No		
The fund returns exceed the Small/Smid Blended Index over a 5 year period.		✓		The fund returned 13.95% vs. 16.32% for the index. Mandate was altered June 2014 to a more concentrated small cap strategy; continue to monitor.
Rank above the IM US SMID Cap Core Equity Median.		✓		The fund has a ranking of 85 (gross of fees). Mandate was altered June 2014 to a more concentrated small cap strategy; continue to monitor.
<b>Broad International Equity Composite</b>				
	Yes	No		
The composite returns exceed the MSCI ACW Ex US Index (USD) (Net) over a 5 year period.	✓			The composite returned 7.71% vs. 6.04% for the index. Includes managers which are no longer in the portfolio. Current managers added July 2014.
Rank above the IM International Large Cap Equity Median.		✓		The composite has a ranking of 64 (gross of fees). Includes managers which are no longer in the portfolio. Current managers added July 2014.
<b>State Street World Ex US Index (CF)</b>				
	Yes	No		
The fund returns are in line with the MSCI Wrld Ex US Index (USD) (Net) over a 5 year period.				5 year data is unavailable.
Rank above the IM International Large Cap Equity Median.				5 year data is unavailable.
<b>DFA Emg Mkts Core Eq;I (DFCEX)</b>				
	Yes	No		
The fund returns exceed the MSCI Emg Mkts Index (USD) (Net) over a 5 year period.				5 year data is unavailable.
Rank above the IM Emerging Markets Equity Median.				5 year data is unavailable.
<b>Harding Loevner:IEM;II (HLEEX)</b>				
	Yes	No		
The fund returns exceed the MSCI Emg Mkts Index (USD) (Net) over a 5 year period.				5 year data is unavailable.
Rank above the IM Emerging Markets Equity Median.				5 year data is unavailable.
<b>Fixed Income Composite</b>				
	Yes	No		
The composite returns exceed the Global Fixed Income Custom Index over a 5 year period.	✓			The composite returned 3.91% vs. 3.22% for the index.
Rank above the IM Global Fixed Income Median.	✓			The composite has a ranking of 48 (gross of fees).
<b>Payden &amp; Rygel Long Term (SA)</b>				
	Yes	No		
The fund returns exceed the Bloomberg US Agg Bond Index over a 5 year period.	✓			The fund returned 4.16% vs. 3.08% for the index.
Rank above the IM U.S. Broad Market Core Fixed Income Median.	✓			The fund has a ranking of 14 (gross of fees).
<b>JP Morgan FI Intermediate Bond (SA)</b>				
	Yes	No		
The fund returns exceed the Bloomberg US Gov't/Credit: Int Trm Bond Index over a 5 year period.				5 year data is unavailable.
Rank above the IM U.S. Intermediate Duration Fixed Income Median.				5 year data is unavailable.
<b>FIA International Fixed Income (SA)</b>				
	Yes	No		
The fund returns exceed the Bloomberg Gbl Agg Ex USD Index (Hedged) over a 5 year period.	✓			The fund returned 5.16% vs. 5.04% for the index.
Rank above the IM International Fixed Income Median.	✓			The fund has a ranking of 27 (gross of fees).
<b>Brandywine Gbl Opp FI (CF)</b>				
	Yes	No		
The fund returns exceed the Citi Wrld Gov't Bond Index over a 5 year period.				5 year data is unavailable.
Rank above the IM Global Fixed Income Median.				5 year data is unavailable.
<b>Lazard High Yield (SA)</b>				
	Yes	No		
The fund returns exceed the BofA ML US Hi Yld BB-B Rated Index over a 5 year period.		✓		The fund returned 6.97% vs. 8.01% for the index.
Rank above the IM U.S. High Yield Bonds Median.		✓		The fund has a ranking of 74 (gross of fees).

Performance shown is net of fees except where noted.

North Dakota Board of University and School Lands  
Long-Term Monitoring Tool

As of September 30, 2016

<b>Payden:Low Dur;Inv (PYSBX)</b>	<b>Yes</b>	<b>No</b>	
The fund returns exceed the Bloomberg US Trsy: 1-3 Yr Index over a 5 year period.	✓		The fund returned 1.86% vs. 0.70% for the index.
Rank above the IM U.S. Short Duration Fixed Income Median.	✓		The fund has a ranking of 13 (gross of fees).
<b>Payden &amp; Rygel Cash (SA)</b>	<b>Yes</b>	<b>No</b>	
The fund returns exceed the BofA ML 3 Mo US T-Bill Index over a 5 year period.		✓	The fund returned 0.03% vs. 0.10% for the index.
<b>Absolute Return Composite</b>	<b>Yes</b>	<b>No</b>	
The composite returns exceed the Absolute Return Custom Index over a 5 year period.			5 year data is unavailable.
<b>GMO:Bchmk-Fr All;IV (GBMBX)</b>	<b>Yes</b>	<b>No</b>	
The fund returns exceed the 60% MSCI ACW Idx (Net)/40% B Gbl Agg Bnd Idx over a 5 year period.			5 year data is unavailable.
<b>PIMCO:All Ast Ath;Inst (PAUIX)</b>	<b>Yes</b>	<b>No</b>	
The fund returns exceed the All Asset Custom Index (Eq Wtd) over a 5 year period.			5 year data is unavailable.
<b>Westwood Income Opportunity (SA)</b>	<b>Yes</b>	<b>No</b>	
The fund returns exceed the Westwood Custom Index over a 5 year period.			5 year data is unavailable.
<b>Diversified Inflation Strategies (DIS) Composite</b>	<b>Yes</b>	<b>No</b>	
The composite returns exceed the DIS Custom Index over a 5 year period.			5 year data is unavailable.
<b>NT Common TIPS Index (CF)</b>	<b>Yes</b>	<b>No</b>	
The fund returns are in line with the Bloomberg US Trsy: US TIPS Index over a 5 year period.	✓		The fund returned 1.91% vs. 1.93% for the index.
Rank above the IM U.S. TIPS Median.	✓		The fund has a ranking of 49 (gross of fees).
<b>Gresham Commodities (SA)</b>	<b>Yes</b>	<b>No</b>	
The fund returns exceed the Bloomberg Cmnty Ex-Energy Index (TR) over a 5 year period.			5 year data is unavailable.
<b>Harvest MLP (SA)</b>	<b>Yes</b>	<b>No</b>	
The fund returns exceed the S&P MLP Index Index (TR) over a 5 year period.			5 year data is unavailable.
<b>Van Eck NR Equities (SA)</b>	<b>Yes</b>	<b>No</b>	
The fund returns exceed the S&P Gbl Natural Res Sect Index (TR) Index over a 5 year period.			5 year data is unavailable.
<b>Real Estate Composite</b>	<b>Yes</b>	<b>No</b>	
The composite returns exceed the NCREIF ODCE Index (AWA) (Net) over a 5 year period.			5 year data is unavailable.
<b>Morgan Stanley Prime Property Fund (CF)</b>	<b>Yes</b>	<b>No</b>	
The fund returns exceed the NCREIF ODCE Index (AWA) (Net) over a 5 year period.			5 year data is unavailable.
<b>UBS Trumbull Property Fund, L.P. (CF)</b>	<b>Yes</b>	<b>No</b>	
The fund returns exceed the NCREIF ODCE Index (AWA) (Net) over a 5 year period.			5 year data is unavailable.
<b>Jamestown Premier Property Fund (CF)</b>	<b>Yes</b>	<b>No</b>	
The fund returns exceed the NCREIF ODCE Index (AWA) (Net) over a 5 year period.			5 year data is unavailable.
<b>Prologis USLF (CF)</b>	<b>Yes</b>	<b>No</b>	
The fund returns exceed the NCREIF ODCE Index (AWA) (Net) over a 5 year period.			5 year data is unavailable.
<b>JP Morgan US Real Estate Income and Growth, LP (CF)</b>	<b>Yes</b>	<b>No</b>	
The fund returns exceed the NCREIF ODCE Index (AWA) (Net) over a 5 year period.			5 year data is unavailable.

JP Morgan US Real Estate Income and Growth, LP (CF) was funded July 1, 2016.

Color Key
Performance:
Green: Manager outperformed benchmark.
Yellow: Manager underperformed benchmark by 100 basis points or less.
Red: Manager underperformed benchmark by more than 100 basis points.
Peer Group Ranks:
Green: Manager ranks in the top 50th percentile compared to its peers.
Yellow: Manager ranks between the 51st and 64th percentile compared to its peers.
Red: Manager ranks in the 65th percentile or lower compared to its peers.

Performance shown is net of fees except where noted.

# Capital Markets Review

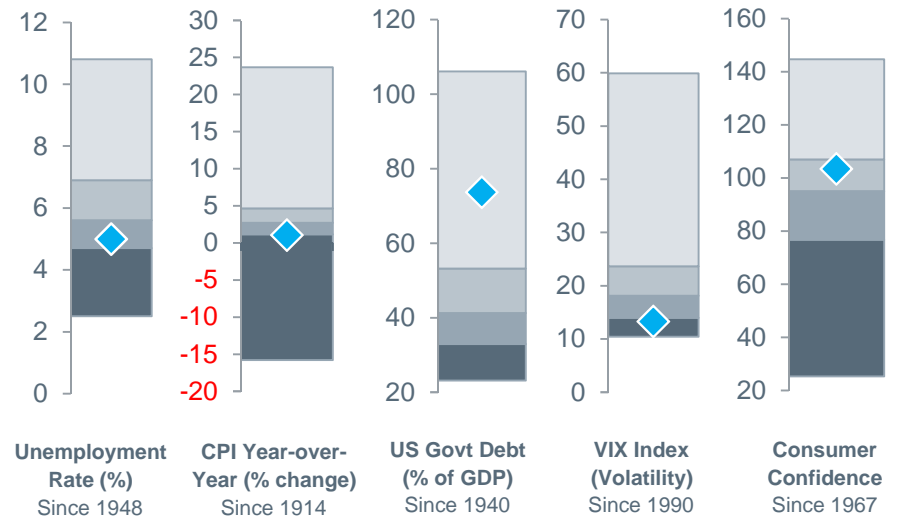


Third Quarter Economic Environment

Key Economic Indicators

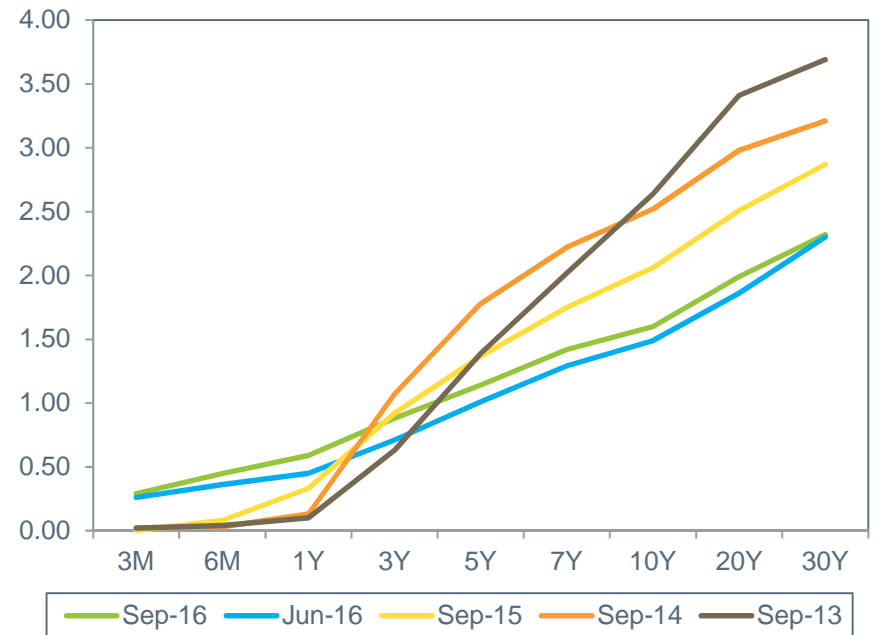
The third quarter of 2016 was generally positive for risk assets. Global equity and credit markets rallied, with both developed and emerging markets adding to gains realized earlier in the year. July was a particularly strong month for equities as volatility sparked by the UK referendum vote in June subsided. Government bond returns were mainly flat during the third quarter, though long duration assets in the US underperformed other global developed markets as the market began to price in a Federal Reserve interest rate hike. Commodity returns were mixed during the quarter, with energy and agricultural commodities giving back prior gains while precious metals performed well.

Key Economic Indicators



Economic Indicators	Sep-16	Jun-16	Sep-15	Sep-13	20 Yr
Federal Funds Rate (%)	0.29 ▼	0.30	0.07	0.06	2.41
Breakeven Infl. - 1 Yr (%)	0.95 ▼	1.17	-1.75	0.41	N/A
Breakeven Infl. - 10 Yr (%)	1.61 ▲	1.44	1.43	2.19	N/A
CPI YoY (Headline) (%)	1.5 ▲	1.0	0.0	1.2	2.2
Unemployment Rate (%)	5.0 ▲	4.9	5.1	7.3	6.0
Real GDP YoY (%)	1.5 ▲	1.3	2.2	1.7	2.4
PMI - Manufacturing	51.50 ▼	53.20	50.00	55.40	52.18
USD Total Wtd Idx	90.01 ▼	90.65	92.10	75.20	86.79
WTI Crude Oil per Barrel (\$)	48.2 ▼	48.3	45.1	102.3	55.7
Gold Spot per Oz (\$)	1,315.8 ▼	1,322.2	1,115.1	1,328.9	773.8

Treasury Yield Curve (%)



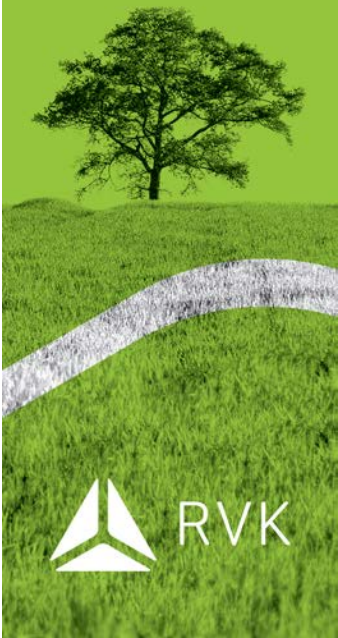
Market Performance (%)	QTD	CYTD	1 Yr	5 Yr	10 Yr
S&P 500 (Cap Wtd)	3.85	7.84	15.43	16.37	7.24
Russell 2000	9.05	11.46	15.47	15.82	7.07
MSCI EAFE (Net)	6.43	1.73	6.52	7.39	1.82
MSCI EAFE SC (Net)	8.64	5.19	12.33	11.07	4.39
MSCI Emg Mkts (Net)	9.03	16.02	16.78	3.03	3.94
Bloomberg US Agg Bond	0.46	5.80	5.19	3.08	4.79
BofA ML 3 Mo US T-Bill	0.10	0.24	0.27	0.10	0.92
NCREIF ODCE (Gross)	2.07	6.52	10.08	12.40	6.02
Wilshire US REIT	-1.21	9.75	17.94	15.82	5.93
HFRI FOF Comp	2.44	-0.20	0.52	3.17	1.78
Bloomberg Cmddy (TR)	-3.86	8.85	-2.59	-9.37	-5.33

Treasury data courtesy of the US Department of the Treasury. Economic data courtesy of Bloomberg Professional Service. Breakeven Inflation does not have 20 years of history; therefore, its 20-year average is shown as N/A.





# Total Fund

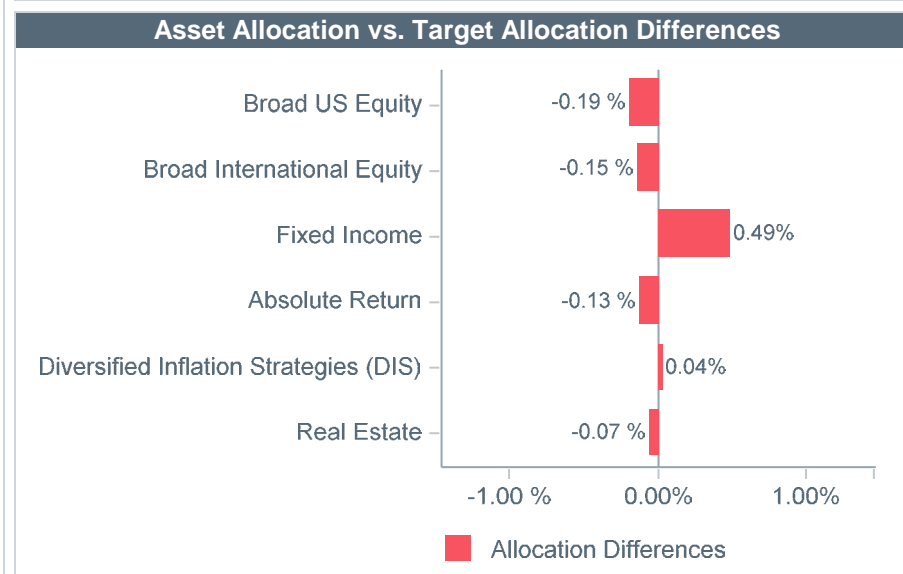


North Dakota Board of University and School Lands  
AA by Manager, AA vs. Target, and Schedule of Investable Assets

As of September 30, 2016

Asset Allocation by Manager		
	Market Value (\$)	Allocation (%)
<b>Broad US Equity</b>		
State Street S&P 500 Index (US Large Cap)	513,585,919	13.39
NT Small Cap Core (US Small Cap)	131,262,559	3.42
<b>Broad International Equity</b>		
State Street World Ex US Index (International Equity)	456,136,500	11.89
DFA Emg Mkts Core Eq:I (Emerging Markets Equity)	56,672,474	1.48
Harding Loevner:IEM;II (Emerging Markets Equity)	56,892,602	1.48
<b>Fixed Income</b>		
Payden & Rygel Long Term (Investment Grade US FI)	256,011,373	6.67
JP Morgan FI Intermediate Bond (Investment Grade US FI)	251,698,595	6.56
FIA International Fixed Income (International FI)	134,525,571	3.51
Brandywine Gbl Opp FI (Global FI)	88,255,648	2.30
Lazard High Yield (High Yield FI)	113,668,359	2.96
Payden:Low Dur;Inv (Low Duration FI)	192,741	0.01
Payden & Rygel Cash (Cash)	45,754,435	1.19
FLP (Loans)	9,668,890	0.25
ECLP (Loans)	1,320,637	0.03
<b>Absolute Return</b>		
GMO:Bchmk-Fr All;IV (GTAA)	255,033,112	6.65
PIMCO:All Ast Ath;Inst (GTAA)	256,347,871	6.68
Westwood Income Opportunity (GTAA)	250,633,271	6.53
<b>Diversified Inflation Strategies (DIS)</b>		
NT Common TIPS Index (TIPS)	74,726,380	1.95
Gresham Commodities (Commodities)	113,860,186	2.97
Harvest MLP (MLPs)	115,967,463	3.02
Van Eck NR Equities (Natural Resources)	80,513,418	2.10
<b>Real Estate</b>		
Morgan Stanley Prime Property Fund (Core Real Estate)	169,371,947	4.42
UBS Trumbull Property Fund, L.P. (Core Real Estate)	162,486,883	4.24
Jamestown Premier Property Fund (Core Plus Real Estate)	75,046,101	1.96
Prologis USLH (CF) (Core Plus Real Estate)	79,575,132	2.07
JP Morgan US RE Inc and Grth, LP (CF) (Core Plus Real Estate)	86,329,490	2.25

Asset Allocation vs. Target Allocation			
	Market Value (\$)	Allocation (%)	Target (%)
Broad US Equity	644,848,478	16.81	17.00
Broad International Equity	569,701,575	14.85	15.00
Fixed Income	901,096,250	23.49	23.00
Absolute Return	762,014,254	19.87	20.00
Diversified Inflation Strategies (DIS)	385,067,448	10.04	10.00
Real Estate	572,809,553	14.93	15.00
Total Fund	3,835,537,558	100.00	100.00



Schedule of Investable Assets						
Periods Ending	Beginning Market Value (\$)	Net Cash Flow (\$)	Gain/Loss (\$)	Ending Market Value (\$)	% Return	Unit Value
QTD	3,696,210,763	20,236,166	119,090,629	3,835,537,558	3.21	103.21

Allocations shown may not sum up to 100% exactly due to rounding. Performance shown is gross of fees. JP Morgan US Real Estate Income and Growth, LP (CF) was funded in July 2016.



North Dakota Board of University and School Lands  
Comparative Performance - Gross

As of September 30, 2016

	QTD	CYTD	1 Year	3 Years	5 Years	7 Years	10 Years	2015	2014	2013	Since Incep.	Inception Date
<b>Total Fund (Net)</b>	<b>3.08</b>	<b>8.12</b>	<b>9.71</b>	<b>4.07</b>	<b>7.55</b>	<b>7.14</b>	<b>4.92</b>	<b>-4.55</b>	<b>4.78</b>	<b>13.15</b>	<b>6.68</b>	<b>08/01/1995</b>
Target Allocation Index (Net)	3.09	7.82	10.13	5.75	8.84	8.16	N/A	-0.93	6.50	13.12	N/A	
Difference	-0.01	0.30	-0.42	-1.68	-1.29	-1.02	N/A	-3.62	-1.72	0.03	N/A	
<b>Total Fund</b>	<b>3.21</b>	<b>8.50</b>	<b>10.22</b>	<b>4.45</b>	<b>7.89</b>	<b>7.44</b>	<b>N/A</b>	<b>-4.19</b>	<b>5.10</b>	<b>13.44</b>	<b>8.69</b>	<b>07/01/2009</b>
Target Allocation Index (Gross)	3.13	7.93	10.29	5.86	8.91	8.21	N/A	-0.78	6.58	13.12	9.72	
Difference	0.08	0.57	-0.07	-1.41	-1.02	-0.77	N/A	-3.41	-1.48	0.32	-1.03	
All Public Plans > \$1B-Total Fund Median	3.82	6.76	9.71	6.12	9.29	8.47	5.78	0.20	6.59	15.61	9.82	
Rank	75	8	30	98	91	89	N/A	99	88	68	88	
<b>Broad US Equity</b>	<b>4.51</b>	<b>8.57</b>	<b>15.59</b>	<b>9.74</b>	<b>14.79</b>	<b>12.47</b>	<b>N/A</b>	<b>0.22</b>	<b>12.43</b>	<b>28.28</b>	<b>14.53</b>	<b>07/01/2009</b>
Russell 3000 Index	4.40	8.18	14.96	10.44	16.36	13.18	7.37	0.48	12.56	33.55	15.08	
Difference	0.11	0.39	0.63	-0.70	-1.57	-0.71	N/A	-0.26	-0.13	-5.27	-0.55	
IM U.S. Equity (SA+CF) Median	5.20	7.83	13.25	9.15	16.24	13.32	8.02	-0.52	10.00	35.82	15.26	
Rank	62	43	28	42	74	69	N/A	44	34	91	67	
<b>Broad International Equity</b>	<b>6.64</b>	<b>6.34</b>	<b>9.76</b>	<b>0.95</b>	<b>8.20</b>	<b>4.32</b>	<b>N/A</b>	<b>-5.06</b>	<b>-4.94</b>	<b>26.50</b>	<b>6.70</b>	<b>07/01/2009</b>
MSCI ACW Ex US Index (USD) (Net)	6.91	5.82	9.26	0.18	6.04	3.66	2.16	-5.66	-3.87	15.29	6.13	
Difference	-0.27	0.52	0.50	0.77	2.16	0.66	N/A	0.60	-1.07	11.21	0.57	
IM International Large Cap Equity (SA+CF) Median	6.66	3.32	8.34	2.08	8.68	5.93	3.36	0.35	-3.75	22.55	8.33	
Rank	51	23	32	70	64	86	N/A	89	64	24	86	
<b>Fixed Income</b>	<b>1.30</b>	<b>6.55</b>	<b>6.26</b>	<b>4.06</b>	<b>4.14</b>	<b>5.02</b>	<b>N/A</b>	<b>0.07</b>	<b>4.97</b>	<b>-0.36</b>	<b>5.51</b>	<b>07/01/2009</b>
Global Fixed Income Custom Index	0.98	7.57	6.89	3.76	3.22	4.12	4.86	-0.50	4.27	-1.55	4.68	
Difference	0.32	-1.02	-0.63	0.30	0.92	0.90	N/A	0.57	0.70	1.19	0.83	
Bloomberg US Agg Bond Index	0.46	5.80	5.19	4.03	3.08	4.10	4.79	0.55	5.97	-2.02	4.49	
Difference	0.84	0.75	1.07	0.03	1.06	0.92	N/A	-0.48	-1.00	1.66	1.02	
IM Global Fixed Income (SA+CF) Median	2.25	9.85	8.86	3.31	3.67	4.55	5.33	-2.50	2.48	-0.15	5.30	
Rank	71	78	77	41	48	46	N/A	25	27	53	48	
<b>Absolute Return</b>	<b>2.82</b>	<b>8.70</b>	<b>10.05</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>-5.52</b>	<b>N/A</b>	<b>N/A</b>	<b>-0.12</b>	<b>07/01/2014</b>
Absolute Return Custom Index	3.51	6.68	9.61	4.92	7.89	6.74	5.08	-0.88	4.77	12.74	2.25	
Difference	-0.69	2.02	0.44	N/A	N/A	N/A	N/A	-4.64	N/A	N/A	-2.37	
Consumer Price Index+5%	1.40	5.88	6.54	6.08	6.31	6.68	6.84	5.77	5.79	6.58	5.60	
Difference	1.42	2.82	3.51	N/A	N/A	N/A	N/A	-11.29	N/A	N/A	-5.72	

Performance shown is gross of fees except where noted. Performance for plan sponsor peer groups are shown gross of fees. Composite inception dates are based on availability of data for each asset class. Please see the Addendum for custom index definitions. RVK began monitoring the assets of North Dakota Board of University and School Lands in Q3 2014. RVK endorses GIPS and calculates performance for composites and investment managers using different methodologies. For additional information, please see the Glossary.

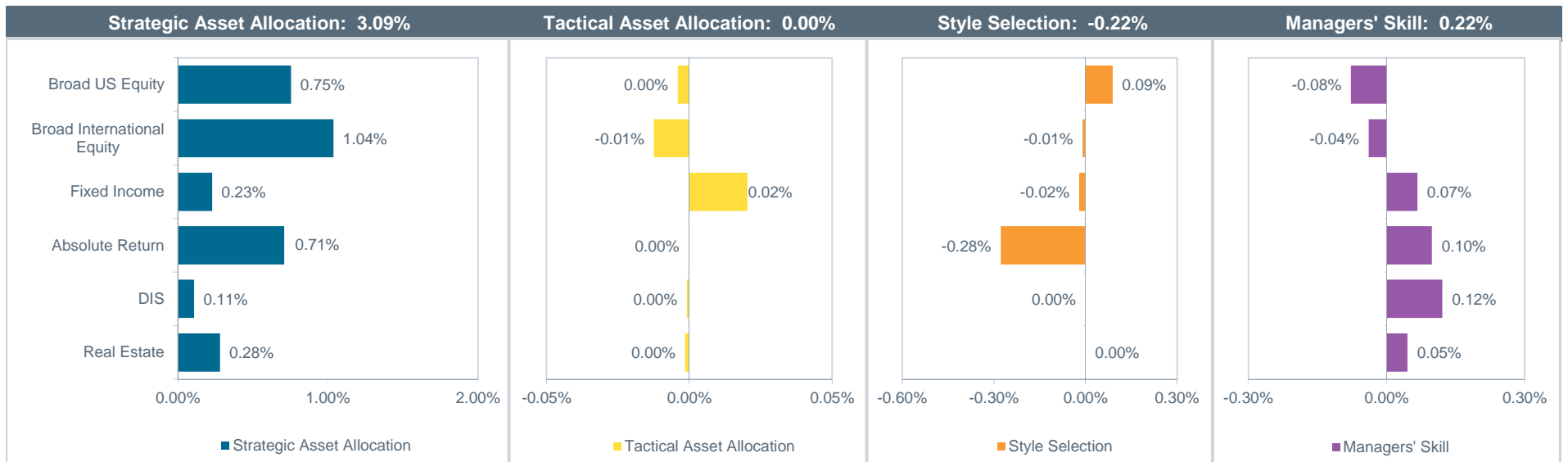
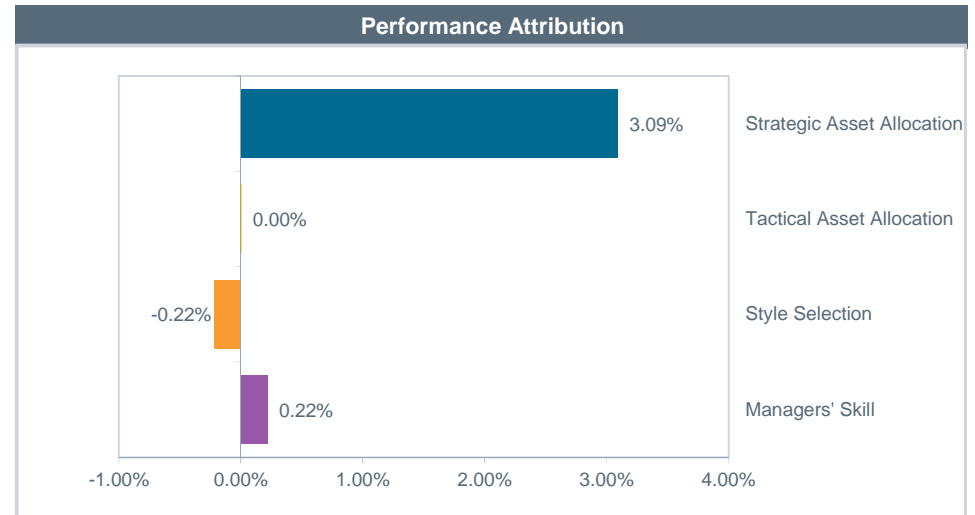
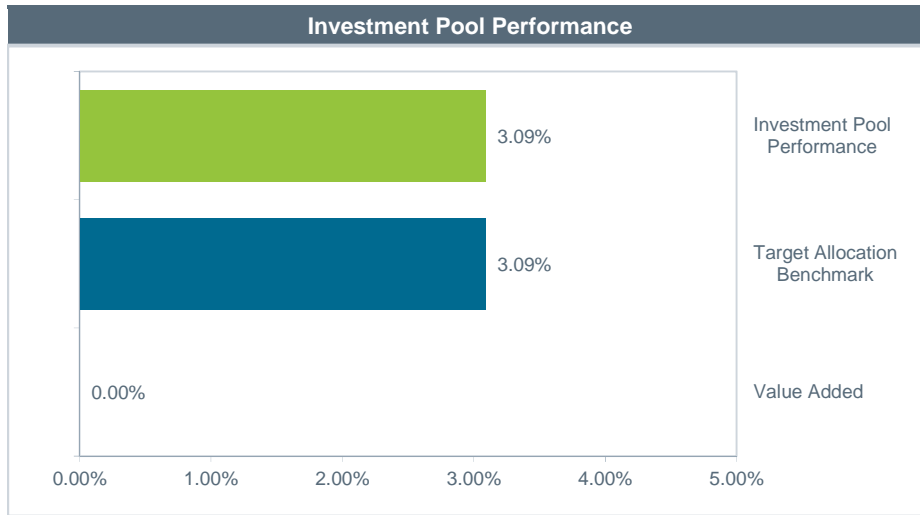


North Dakota Board of University and School Lands  
Comparative Performance - Gross

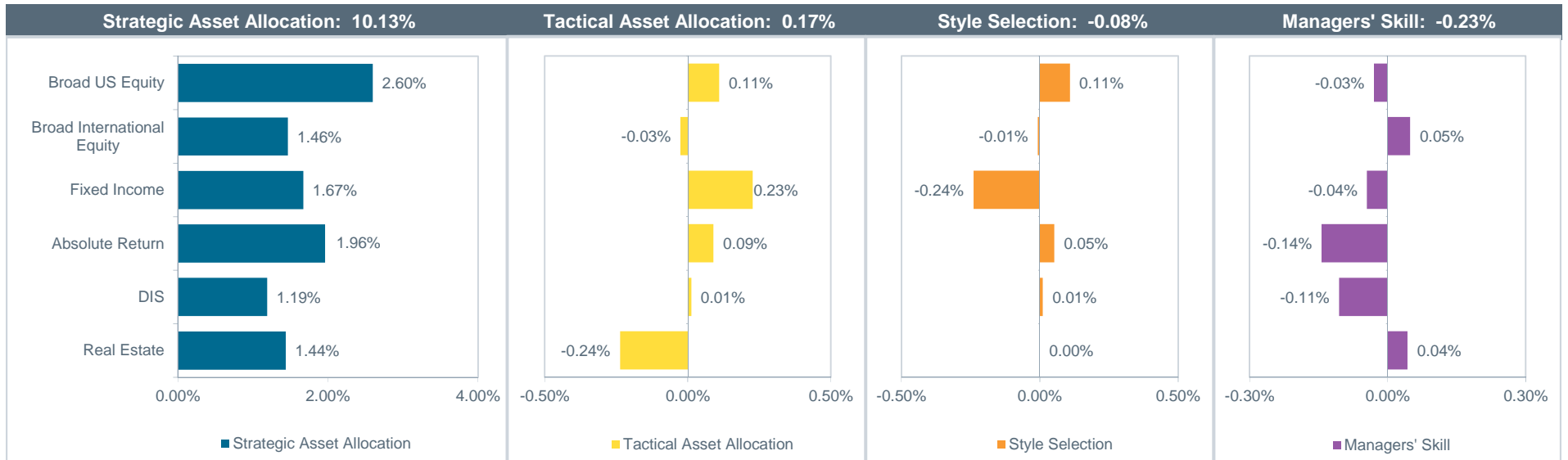
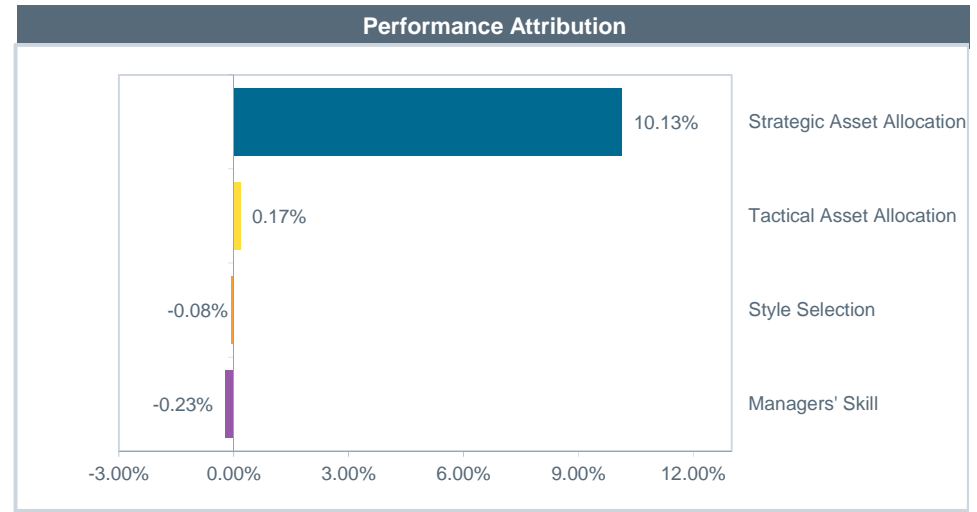
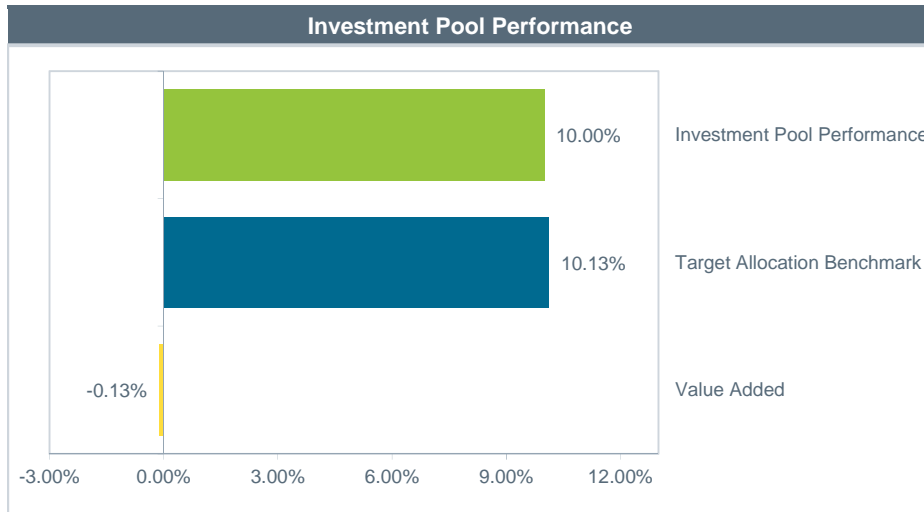
As of September 30, 2016

	QTD	CYTD	1 Year	3 Years	5 Years	7 Years	10 Years	2015	2014	2013	Since Incep.	Inception Date
<b>Diversified Inflation Strategies (DIS)</b>	<b>2.36</b>	<b>17.21</b>	<b>10.76</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>-23.87</b>	<b>N/A</b>	<b>N/A</b>	<b>0.03</b>	<b>04/01/2014</b>
DIS Custom Index	1.04	14.95	11.27	0.34	4.35	5.29	3.29	-18.88	9.69	-2.19	-0.28	
Difference	1.32	2.26	-0.51	N/A	N/A	N/A	N/A	-4.99	N/A	N/A	0.31	
<b>Real Estate</b>	<b>2.45</b>	<b>6.91</b>	<b>10.54</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>11.61</b>	<b>07/01/2015</b>
NCREIF ODCE Index (AWA) (Gross)	2.07	6.52	10.08	12.45	12.40	12.42	6.02	15.02	12.50	13.94	11.16	
Difference	0.38	0.39	0.46	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.45	

Performance shown is gross of fees except where noted. Performance for plan sponsor peer groups are shown gross of fees. Composite inception dates are based on availability of data for each asset class. Please see the Addendum for custom index definitions. RVK began monitoring the assets of North Dakota Board of University and School Lands in Q3 2014. RVK endorses GIPS and calculates performance for composites and investment managers using different methodologies. For additional information, please see the Glossary.



Attribution shown is calculated using the Investment Decision Process (IDP) method. Performance shown is net of fees. Calculation is based on monthly periodicity. The benchmark utilized in this analysis is a passive target allocation index rather than an active actual allocation index. Actual Allocation Index = Target Allocation Benchmark + Tactical Asset Allocation. The underlying parts may not exactly sum to the category totals due to rounding.



Attribution shown is calculated using the Investment Decision Process (IDP) method. Performance shown is net of fees. Calculation is based on monthly periodicity. The benchmark utilized in this analysis is a passive target allocation index rather than an active actual allocation index.  
 Actual Allocation Index = Target Allocation Benchmark + Tactical Asset Allocation. The underlying parts may not exactly sum to the category totals due to rounding.



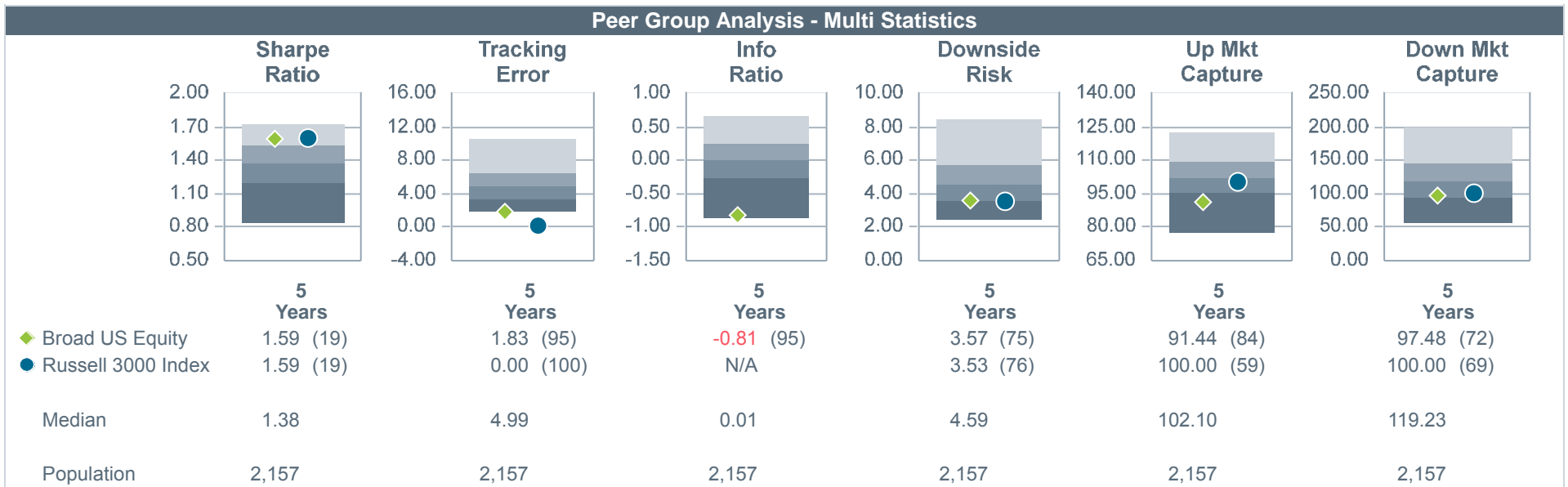
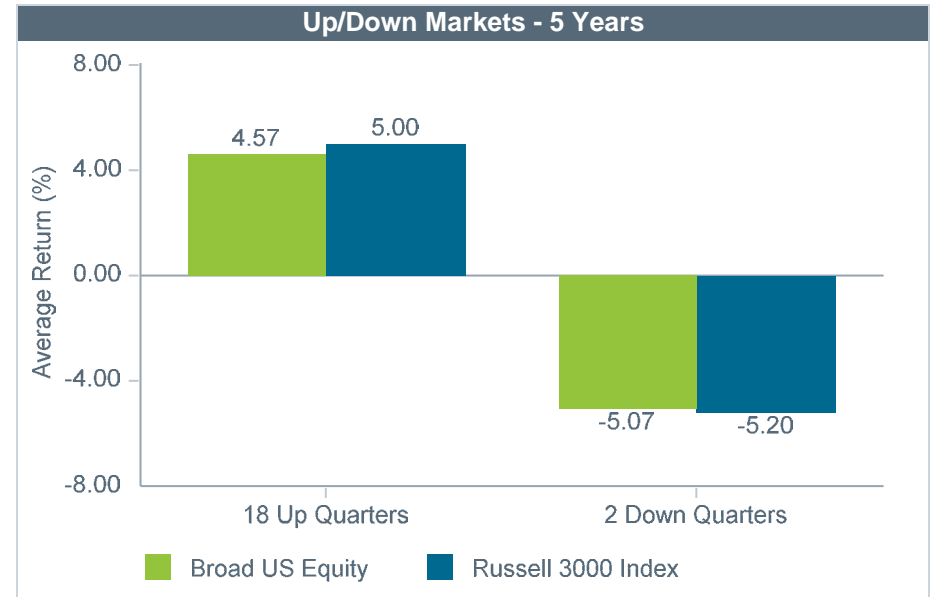
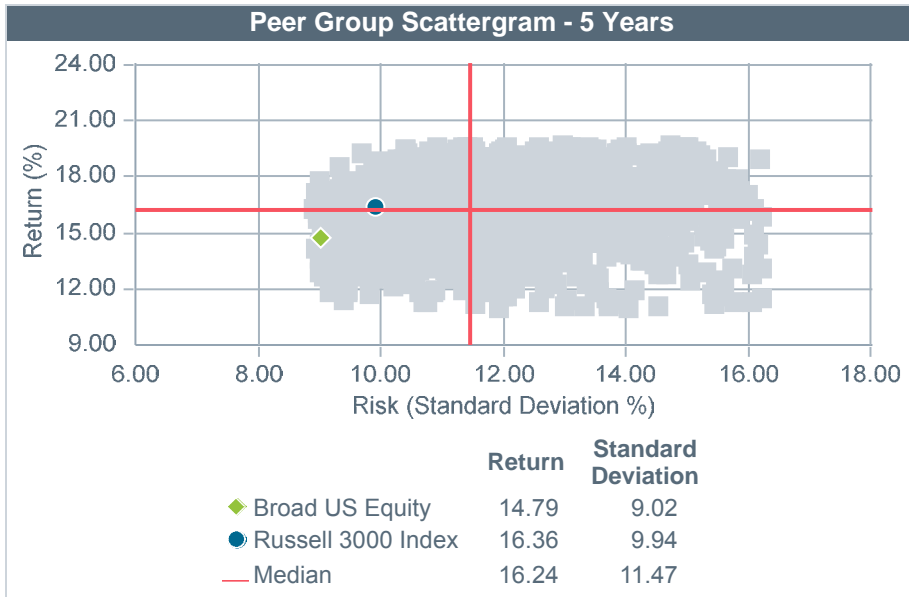
Comparative Performance													
	QTD	CYTD	1 Year	3 Years	5 Years	10 Years	2015	2014	2013	2012	2011	Since Incep.	Inception Date
<b>Broad US Equity</b>	<b>4.51</b>	<b>8.57</b>	<b>15.59</b>	<b>9.74</b>	<b>14.79</b>	<b>N/A</b>	<b>0.22</b>	<b>12.43</b>	<b>28.28</b>	<b>14.66</b>	<b>0.22</b>	<b>14.53</b>	<b>07/01/2009</b>
Russell 3000 Index	4.40	8.18	14.96	10.44	16.36	7.37	0.48	12.56	33.55	16.42	1.03	15.08	
Difference	0.11	0.39	0.63	-0.70	-1.57	N/A	-0.26	-0.13	-5.27	-1.76	-0.81	-0.55	
<b>State Street S&amp;P 500 Index (CF)</b>	<b>3.85</b>	<b>7.85</b>	<b>15.51</b>	<b>11.18</b>	<b>16.38</b>	<b>N/A</b>	<b>1.41</b>	<b>13.69</b>	<b>32.38</b>	<b>15.98</b>	<b>2.12</b>	<b>8.34</b>	<b>04/01/2008</b>
S&P 500 Index (Cap Wtd)	3.85	7.84	15.43	11.16	16.37	7.24	1.38	13.69	32.39	16.00	2.11	8.32	
Difference	0.00	0.01	0.08	0.02	0.01	N/A	0.03	0.00	-0.01	-0.02	0.01	0.02	
IM U.S. Large Cap Equity (SA+CF) Median	4.33	6.61	13.19	10.36	16.19	7.49	0.95	12.91	33.53	15.87	1.21	8.46	
Rank	63	33	21	31	44	N/A	45	36	65	49	40	55	
<b>NT Small Cap Core (CF)</b>	<b>7.02</b>	<b>11.13</b>	<b>15.58</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>-5.35</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>1.99</b>	<b>07/01/2014</b>
Russell 2000 Index	9.05	11.46	15.47	6.71	15.82	7.07	-4.41	4.89	38.82	16.35	-4.18	3.61	
Difference	-2.03	-0.33	0.11	N/A	N/A	N/A	-0.94	N/A	N/A	N/A	N/A	-1.62	
IM U.S. Small Cap Core Equity (SA+CF) Median	7.54	10.53	14.65	8.54	17.18	8.26	-1.39	6.52	41.26	16.88	-1.39	5.02	
Rank	65	45	42	N/A	N/A	N/A	87	N/A	N/A	N/A	N/A	89	
<b>NT Small/Smid Composite</b>	<b>7.02</b>	<b>11.13</b>	<b>15.58</b>	<b>5.76</b>	<b>14.76</b>	<b>7.28</b>	<b>-5.35</b>	<b>3.37</b>	<b>37.57</b>	<b>18.30</b>	<b>-4.56</b>	<b>10.10</b>	<b>03/01/1996</b>
Small/Smid Blended Index	9.05	11.46	15.47	7.82	16.32	7.96	-4.41	8.25	36.80	17.88	-2.51	9.60	
Difference	-2.03	-0.33	0.11	-2.06	-1.56	-0.68	-0.94	-4.88	0.77	0.42	-2.05	0.50	
IM U.S. SMID Cap Core Equity (SA+CF) Median	5.94	9.24	12.61	9.08	16.90	8.98	0.10	7.81	37.62	17.91	-0.97	N/A	
Rank	20	21	23	95	85	94	95	88	51	43	81	N/A	

Asset Allocation by Manager

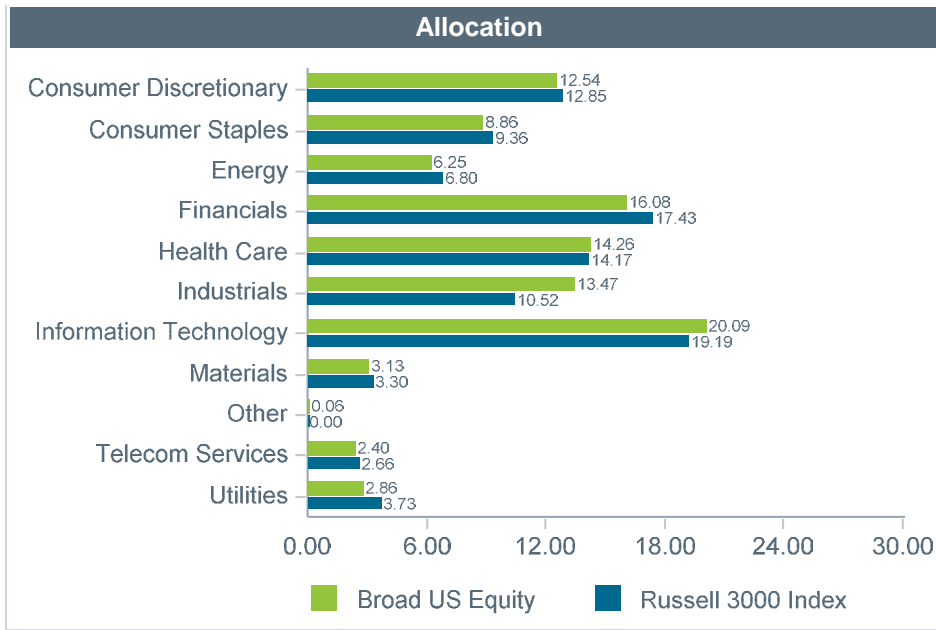


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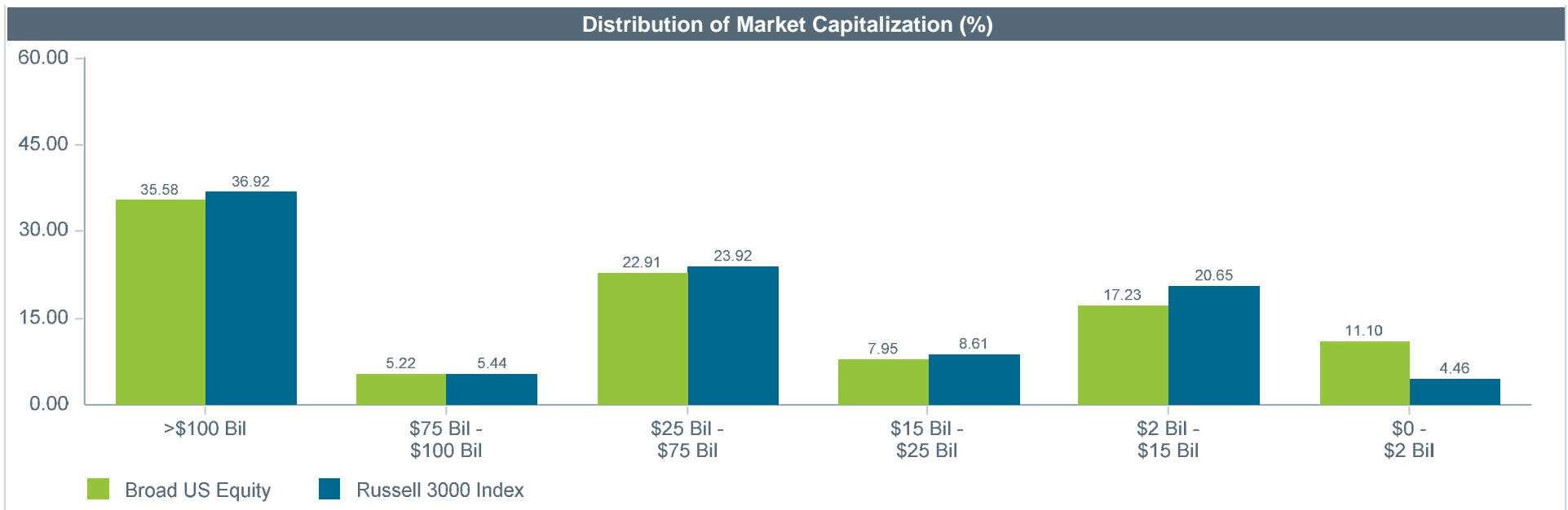


Performance shown is gross of fees. Calculation is based on quarterly periodicity. Parentheses contain percentile ranks.



### Portfolio Characteristics

	Portfolio	Benchmark
Wtd. Avg. Mkt. Cap (\$M)	115,489	120,113
Median Mkt. Cap (\$M)	13,314	1,503
Price/Earnings Ratio	20.33	19.87
Price/Book Ratio	3.04	3.04
5 Yr. EPS Growth Rate (%)	8.45	8.12
Current Yield (%)	1.96	2.02
Beta (5 Years, Monthly)	0.97	1.00
Number of Securities	667	2,955



Allocation to "Other" consists of ETFs.

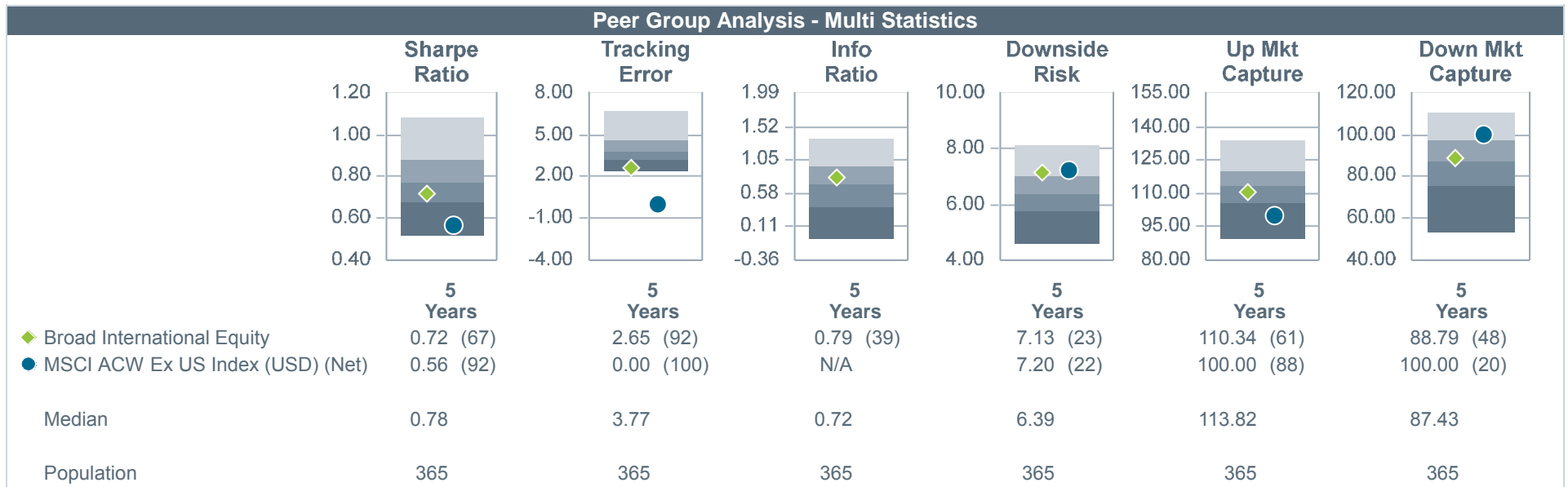
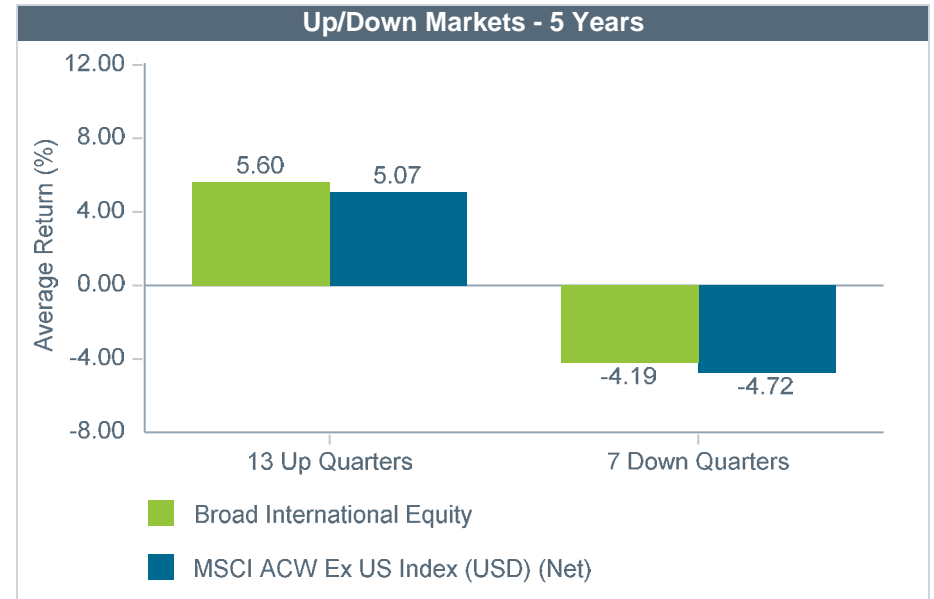
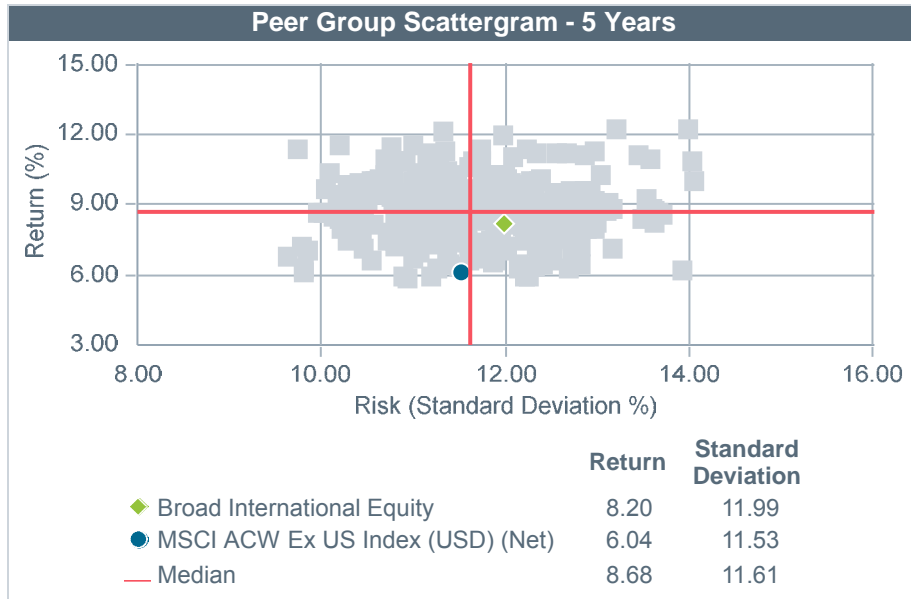
Comparative Performance													
	QTD	CYTD	1 Year	3 Years	5 Years	10 Years	2015	2014	2013	2012	2011	Since Incep.	Inception Date
<b>Broad International Equity</b>	6.64	6.34	9.76	0.95	8.20	N/A	-5.06	-4.94	26.50	17.72	-14.73	6.70	07/01/2009
MSCI ACW Ex US Index (USD) (Net)	6.91	5.82	9.26	0.18	6.04	2.16	-5.66	-3.87	15.29	16.83	-13.71	6.13	
Difference	-0.27	0.52	0.50	0.77	2.16	N/A	0.60	-1.07	11.21	0.89	-1.02	0.57	
<b>State Street World Ex US Index (CF)</b>	6.25	3.06	7.07	N/A	N/A	N/A	-3.10	N/A	N/A	N/A	N/A	-4.27	07/01/2014
MSCI Wrld Ex US Index (USD) (Net)	6.29	3.12	7.16	0.33	6.89	1.88	-3.04	-4.32	21.02	16.41	-12.21	-4.21	
Difference	-0.04	-0.06	-0.09	N/A	N/A	N/A	-0.06	N/A	N/A	N/A	N/A	-0.06	
IM International Large Cap Equity (SA+CF) Median	6.66	3.32	8.34	2.08	8.68	3.36	0.35	-3.75	22.55	19.07	-11.60	-2.18	
Rank	63	55	61	N/A	N/A	N/A	77	N/A	N/A	N/A	N/A	82	
<b>DFA Emg Mkts Core Eq;I (DFCEX)</b>	8.14	18.93	18.87	N/A	N/A	N/A	-14.33	N/A	N/A	N/A	N/A	-2.57	07/01/2014
MSCI Emg Mkts Index (USD) (Net)	9.03	16.02	16.78	-0.56	3.03	3.94	-14.92	-2.19	-2.60	18.23	-18.42	-4.12	
Difference	-0.89	2.91	2.09	N/A	N/A	N/A	0.59	N/A	N/A	N/A	N/A	1.55	
IM Emerging Markets Equity (SA+CF) Median	8.63	15.46	17.15	0.84	4.99	5.22	-12.80	-0.10	0.83	20.52	-18.25	-2.90	
Rank	58	21	37	N/A	N/A	N/A	62	N/A	N/A	N/A	N/A	47	
<b>Harding Loevner:IEM;II (HLEEX)</b>	8.16	20.14	21.40	N/A	N/A	N/A	-12.30	N/A	N/A	N/A	N/A	-1.33	07/01/2014
MSCI Emg Mkts Index (USD) (Net)	9.03	16.02	16.78	-0.56	3.03	3.94	-14.92	-2.19	-2.60	18.23	-18.42	-4.12	
Difference	-0.87	4.12	4.62	N/A	N/A	N/A	2.62	N/A	N/A	N/A	N/A	2.79	
IM Emerging Markets Equity (SA+CF) Median	8.63	15.46	17.15	0.84	4.99	5.22	-12.80	-0.10	0.83	20.52	-18.25	-2.90	
Rank	58	16	23	N/A	N/A	N/A	47	N/A	N/A	N/A	N/A	27	

Asset Allocation by Manager

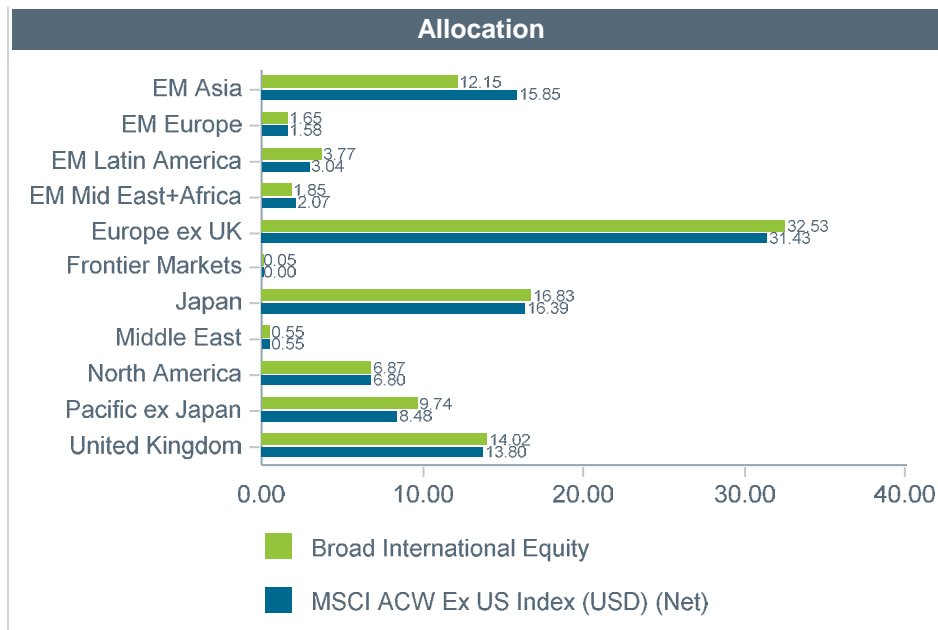


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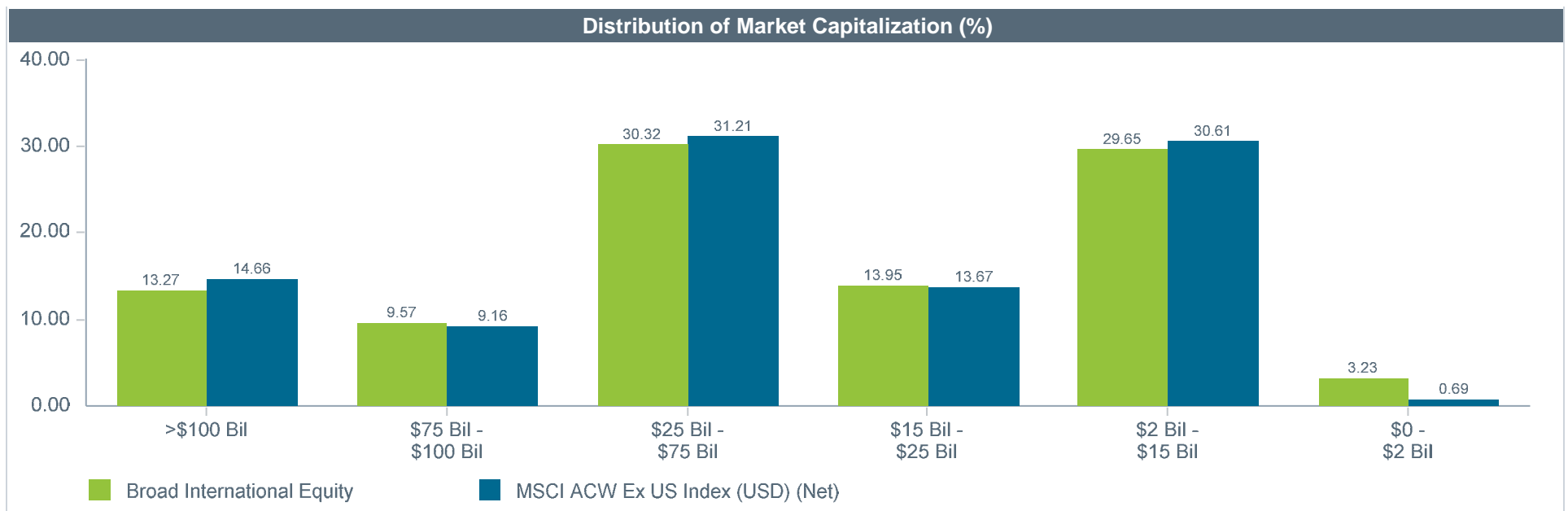


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### Portfolio Characteristics

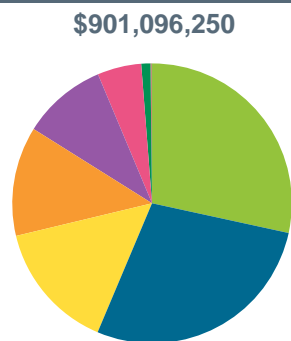
	Portfolio	Benchmark
Wtd. Avg. Mkt. Cap (\$M)	49,212	53,164
Median Mkt. Cap (\$M)	786	6,997
Price/Earnings Ratio	16.52	15.91
Price/Book Ratio	2.29	2.26
5 Yr. EPS Growth Rate (%)	3.84	4.31
Current Yield (%)	3.14	3.15
Beta (5 Years, Monthly)	1.02	1.00
Number of Securities	5,474	1,853





Comparative Performance													
	QTD	CYTD	1 Year	3 Years	5 Years	10 Years	2015	2014	2013	2012	2011	Since Incep.	Inception Date
<b>Fixed Income</b>	<b>1.30</b>	<b>6.55</b>	<b>6.26</b>	<b>4.06</b>	<b>4.14</b>	<b>N/A</b>	<b>0.07</b>	<b>4.97</b>	<b>-0.36</b>	<b>7.36</b>	<b>7.07</b>	<b>5.51</b>	<b>07/01/2009</b>
Global Fixed Income Custom Index	0.98	7.57	6.89	3.76	3.22	4.86	-0.50	4.27	-1.55	5.37	6.95	4.68	
Difference	0.32	-1.02	-0.63	0.30	0.92	N/A	0.57	0.70	1.19	1.99	0.12	0.83	
Bloomberg US Agg Bond Index	0.46	5.80	5.19	4.03	3.08	4.79	0.55	5.97	-2.02	4.21	7.84	4.49	
Difference	0.84	0.75	1.07	0.03	1.06	N/A	-0.48	-1.00	1.66	3.15	-0.77	1.02	
<b>Payden &amp; Rygel Long Term (SA)</b>	<b>1.29</b>	<b>6.52</b>	<b>6.19</b>	<b>4.63</b>	<b>4.35</b>	<b>5.46</b>	<b>0.82</b>	<b>6.01</b>	<b>-1.25</b>	<b>9.04</b>	<b>5.48</b>	<b>6.34</b>	<b>08/01/1995</b>
Bloomberg US Agg Bond Index	0.46	5.80	5.19	4.03	3.08	4.79	0.55	5.97	-2.02	4.21	7.84	5.63	
Difference	0.83	0.72	1.00	0.60	1.27	0.67	0.27	0.04	0.77	4.83	-2.36	0.71	
IM U.S. Broad Market Core Fixed Income (SA+CF) Median	0.68	6.13	5.62	4.31	3.66	5.22	0.81	6.14	-1.56	5.84	7.83	5.97	
Rank	8	31	26	30	14	33	48	63	33	4	97	14	
<b>JP Morgan FI Intermediate Bond (SA)</b>	<b>0.30</b>	<b>4.13</b>	<b>3.57</b>	<b>3.22</b>	<b>N/A</b>	<b>N/A</b>	<b>1.53</b>	<b>3.97</b>	<b>-0.91</b>	<b>N/A</b>	<b>N/A</b>	<b>2.33</b>	<b>08/01/2012</b>
Bloomberg US Gov't/Credit: Int Trm Bond Index	0.16	4.24	3.52	2.80	2.45	4.17	1.07	3.13	-0.86	3.89	5.80	1.99	
Difference	0.14	-0.11	0.05	0.42	N/A	N/A	0.46	0.84	-0.05	N/A	N/A	0.34	
IM U.S. Intermediate Duration (SA+CF) Median	0.36	4.34	3.88	3.12	2.85	4.60	1.30	3.55	-0.53	4.92	5.87	2.32	
Rank	57	65	71	44	N/A	N/A	30	35	74	N/A	N/A	50	
<b>FIA International Fixed Income (SA)</b>	<b>1.43</b>	<b>7.22</b>	<b>7.01</b>	<b>6.77</b>	<b>5.41</b>	<b>5.55</b>	<b>-0.22</b>	<b>13.10</b>	<b>-0.80</b>	<b>7.81</b>	<b>5.11</b>	<b>5.50</b>	<b>05/01/2004</b>
Bloomberg Gbl Agg Ex USD Index (Hedged)	0.53	6.89	7.53	5.78	5.04	4.68	1.36	8.79	1.18	6.46	3.94	4.76	
Difference	0.90	0.33	-0.52	0.99	0.37	0.87	-1.58	4.31	-1.98	1.35	1.17	0.74	
IM International Fixed Income (SA+CF) Median	1.78	8.33	9.14	2.56	3.09	5.07	-1.37	2.80	-0.15	7.58	4.97	5.60	
Rank	66	61	66	15	27	43	49	5	54	50	45	53	

Asset Allocation by Manager



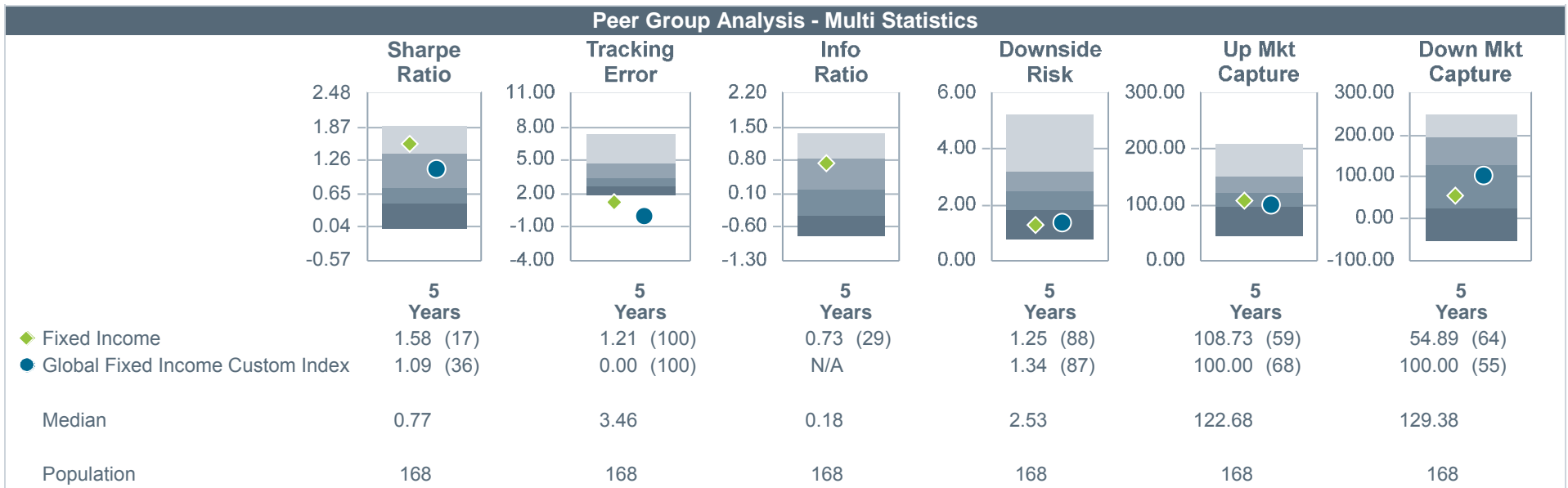
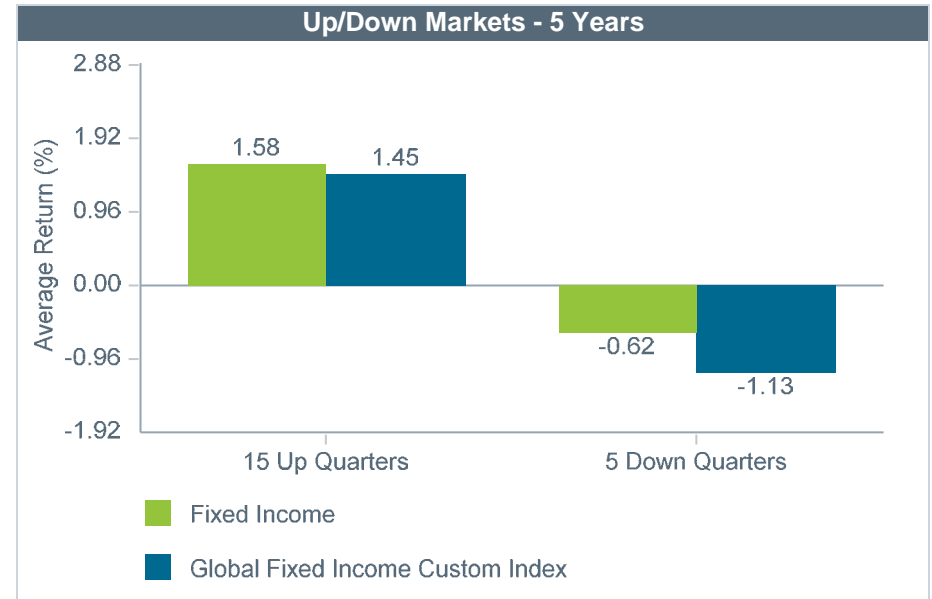
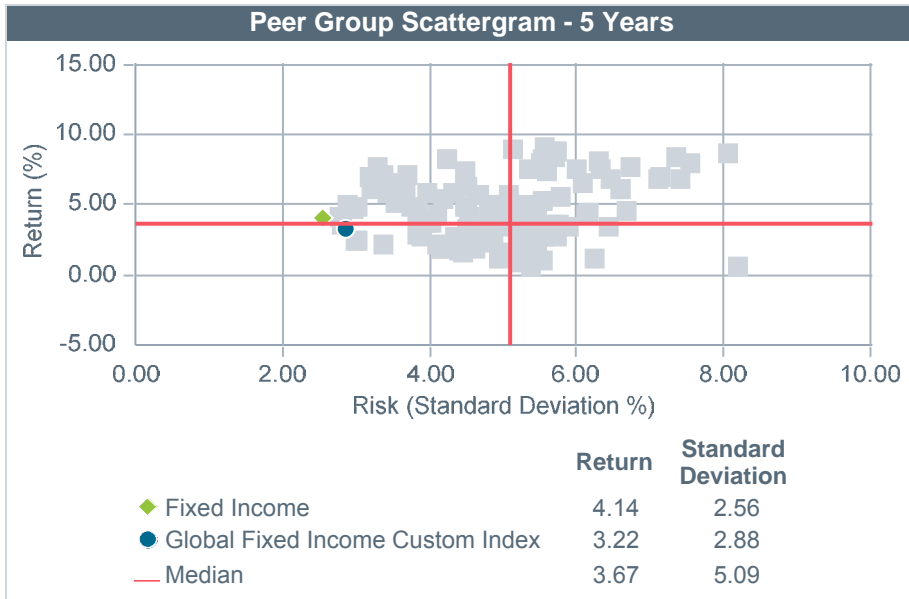
	Market Value (\$)	Allocation (%)
Payden & Rygel Long Term (SA)	256,011,373	28.41
JP Morgan FI Intermediate Bond (SA)	251,698,595	27.93
FIA International Fixed Income (SA)	134,525,571	14.93
Lazard High Yield (SA)	113,668,359	12.61
Brandywine Gbl Opp FI (CF)	88,255,648	9.79
Payden & Rygel Cash (SA)	45,754,435	5.08
FLP (Loans)	9,668,890	1.07
ECLP (Loans)	1,320,637	0.15
Payden:Low Dur;Inv (PYSBX)	192,741	0.02

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Comparative Performance													
	QTD	CYTD	1 Year	3 Years	5 Years	10 Years	2015	2014	2013	2012	2011	Since Incep.	Inception Date
<b>Brandywine Gbl Opp FI (CF)</b>	<b>1.78</b>	<b>12.49</b>	<b>11.93</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>-7.98</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>1.21</b>	<b>11/01/2014</b>
Citi Wrld Gov't Bond Index	0.30	11.07	9.71	1.78	0.77	4.10	-3.57	-0.48	-4.00	1.65	6.35	2.97	
Difference	1.48	1.42	2.22	N/A	N/A	N/A	-4.41	N/A	N/A	N/A	N/A	-1.76	
IM Global Fixed Income (SA+CF) Median	2.25	9.85	8.86	3.31	3.67	5.33	-2.50	2.48	-0.15	9.51	4.82	2.83	
Rank	60	22	13	N/A	N/A	N/A	94	N/A	N/A	N/A	N/A	80	
<b>Lazard High Yield (SA)</b>	<b>3.29</b>	<b>8.90</b>	<b>8.98</b>	<b>5.27</b>	<b>7.30</b>	<b>6.88</b>	<b>-0.10</b>	<b>4.00</b>	<b>6.15</b>	<b>11.94</b>	<b>6.30</b>	<b>6.82</b>	<b>01/01/2004</b>
BofA ML US Hi Yld BB-B Rated Index	5.01	13.30	12.01	5.58	8.01	7.14	-2.86	3.47	6.31	14.71	5.43	7.16	
Difference	-1.72	-4.40	-3.03	-0.31	-0.71	-0.26	2.76	0.53	-0.16	-2.77	0.87	-0.34	
IM U.S. High Yield Bonds (SA+CF) Median	4.90	12.20	10.42	5.09	8.13	7.53	-2.23	2.70	7.57	15.35	5.26	7.51	
Rank	85	83	72	43	74	75	20	21	82	86	30	84	
<b>Payden:Low Dur;Inv (PYSBX)</b>	<b>0.62</b>	<b>2.33</b>	<b>2.23</b>	<b>1.68</b>	<b>2.37</b>	<b>4.14</b>	<b>0.91</b>	<b>1.21</b>	<b>0.99</b>	<b>5.03</b>	<b>5.86</b>	<b>4.26</b>	<b>04/01/2002</b>
Bloomberg US Trsy: 1-3 Yr Index	-0.11	1.33	0.88	0.86	0.70	2.27	0.56	0.63	0.36	0.43	1.55	2.48	
Difference	0.73	1.00	1.35	0.82	1.67	1.87	0.35	0.58	0.63	4.60	4.31	1.78	
IM U.S. Short Duration Fixed Income (SA+CF) Median	0.19	2.05	1.84	1.57	1.59	2.97	0.93	1.25	0.67	2.43	2.09	3.08	
Rank	13	35	33	40	13	5	57	55	24	8	1	1	
<b>Payden &amp; Rygel Cash (SA)</b>	<b>0.09</b>	<b>0.28</b>	<b>0.31</b>	<b>0.14</b>	<b>0.13</b>	<b>1.03</b>	<b>0.08</b>	<b>0.05</b>	<b>0.06</b>	<b>0.14</b>	<b>0.13</b>	<b>2.78</b>	<b>08/01/1995</b>
BofA ML 3 Mo US T-Bill Index	0.10	0.24	0.27	0.12	0.10	0.92	0.05	0.04	0.07	0.11	0.10	2.52	
Difference	-0.01	0.04	0.04	0.02	0.03	0.11	0.03	0.01	-0.01	0.03	0.03	0.26	
<b>FLP (Loans)</b>	<b>1.51</b>	<b>4.51</b>	<b>6.00</b>	<b>6.04</b>	<b>5.90</b>	<b>6.46</b>	<b>6.09</b>	<b>5.85</b>	<b>5.52</b>	<b>5.89</b>	<b>6.36</b>	<b>7.36</b>	<b>08/01/1995</b>
<b>ECLP (Loans)</b>	<b>1.16</b>	<b>3.72</b>	<b>5.04</b>	<b>5.07</b>	<b>5.22</b>	<b>N/A</b>	<b>5.13</b>	<b>5.03</b>	<b>5.16</b>	<b>5.58</b>	<b>5.97</b>	<b>5.35</b>	<b>11/01/2010</b>

Performance shown is gross of fees, except for FLP & ECLP Bank Loans which are shown net of fees. RVK began monitoring the assets of North Dakota Board of University and School Lands in Q3 2014. RVK endorses GIPS and calculates performance for composites and investment managers using different methodologies.

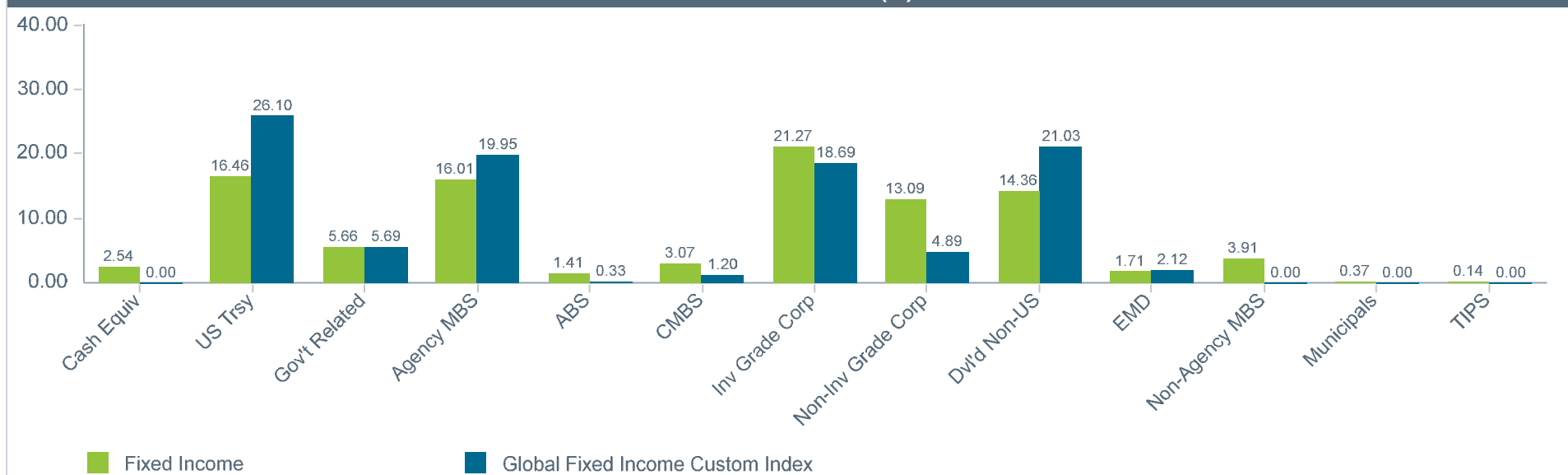


Performance shown is gross of fees. Calculation is based on quarterly periodicity. Parentheses contain percentile ranks.

Portfolio Characteristics

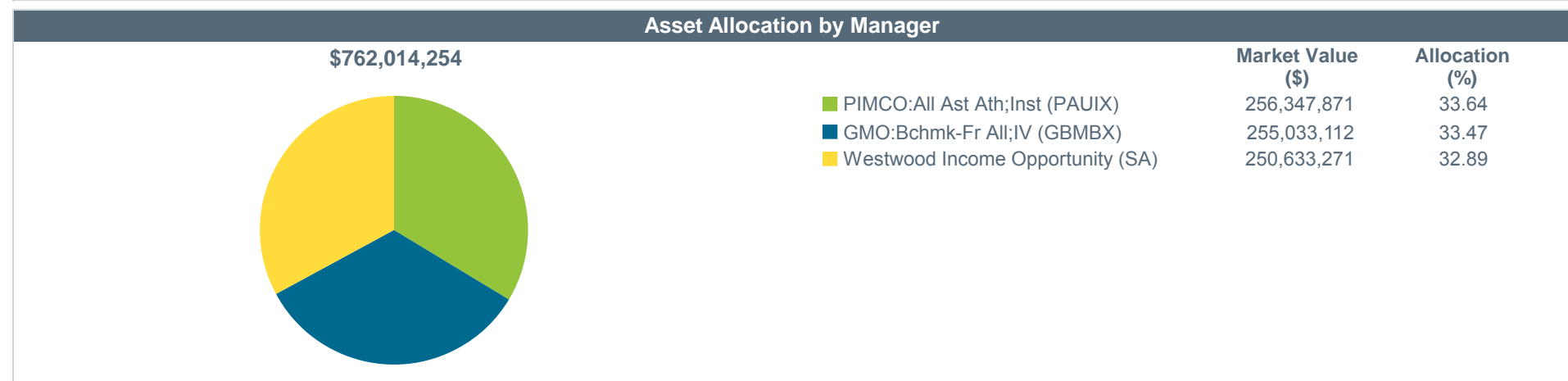
	Portfolio	Benchmark
Effective Duration	4.55	5.73
Modified Duration	4.73	5.63
Avg. Maturity	6.54	7.91
Avg. Quality	A2	N/A
Coupon Rate (%)	3.65	3.34
Yield To Worst (%)	2.34	1.68
Current Yield (%)	3.40	N/A

Sector Distribution (%)



FLP & ECLP Bank Loans are excluded from portfolio characteristics and sector distribution. Negative sector allocation reflects manager's use of derivatives, short selling, or interest rate swaps.

Comparative Performance													
	QTD	CYTD	1 Year	3 Years	5 Years	10 Years	2015	2014	2013	2012	2011	Since Incep.	Inception Date
<b>Absolute Return</b>	<b>2.82</b>	<b>8.70</b>	<b>10.05</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>-5.52</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>-0.12</b>	<b>07/01/2014</b>
Absolute Return Custom Index	3.51	6.68	9.61	4.92	7.89	5.08	-0.88	4.77	12.74	11.63	-1.47	2.25	
Difference	-0.69	2.02	0.44	N/A	N/A	N/A	-4.64	N/A	N/A	N/A	N/A	-2.37	
<b>GMO:Bchmk-Fr All;IV (GBMBX)</b>	<b>3.79</b>	<b>5.30</b>	<b>7.10</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>-3.43</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>-0.55</b>	<b>07/01/2014</b>
60% MSCI ACWI (Net)/40% B Gbl Agg Idx	3.50	8.02	10.92	4.09	7.15	4.62	-2.47	2.78	12.05	11.45	-2.07	1.07	
Difference	0.29	-2.72	-3.82	N/A	N/A	N/A	-0.96	N/A	N/A	N/A	N/A	-1.62	
<b>PIMCO:All Ast Ath;Inst (PAUIX)</b>	<b>4.19</b>	<b>15.51</b>	<b>14.21</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>-10.89</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>-2.25</b>	<b>07/01/2014</b>
All Asset Custom Index (EqI Wtd)	2.38	6.92	8.01	3.96	5.65	5.03	-1.07	3.73	6.10	8.92	3.48	2.23	
Difference	1.81	8.59	6.20	N/A	N/A	N/A	-9.82	N/A	N/A	N/A	N/A	-4.48	
<b>Westwood Income Opportunity (SA)</b>	<b>0.51</b>	<b>5.57</b>	<b>8.88</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>-2.07</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>2.39</b>	<b>07/01/2014</b>
Westwood Custom Index	0.50	7.02	10.58	7.76	8.95	5.80	1.61	12.88	6.15	9.98	7.31	6.16	
Difference	0.01	-1.45	-1.70	N/A	N/A	N/A	-3.68	N/A	N/A	N/A	N/A	-3.77	



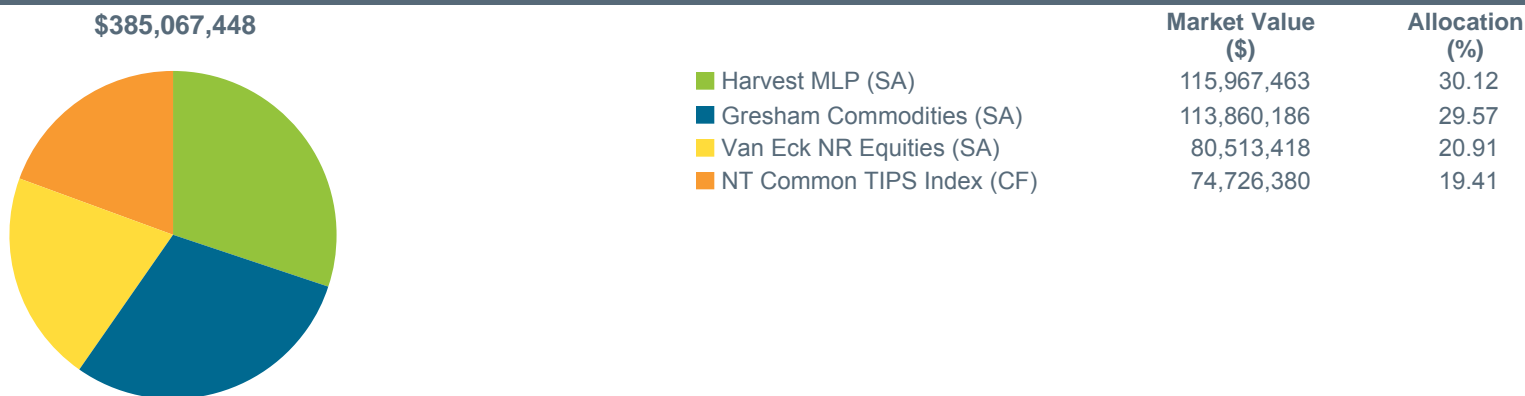
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Comparative Performance

	QTD	CYTD	1 Year	3 Years	5 Years	10 Years	2015	2014	2013	2012	2011	Since Incep.	Inception Date
<b>Diversified Inflation Strategies (DIS)</b>	<b>2.36</b>	<b>17.21</b>	<b>10.76</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>-23.87</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>0.03</b>	<b>04/01/2014</b>
DIS Custom Index	1.04	14.95	11.27	0.34	4.35	3.29	-18.88	9.69	-2.19	17.59	3.94	-0.28	
Difference	1.32	2.26	-0.51	N/A	N/A	N/A	-4.99	N/A	N/A	N/A	N/A	0.31	
<b>NT Common TIPS Index (CF)</b>	<b>1.00</b>	<b>7.45</b>	<b>6.75</b>	<b>2.45</b>	<b>1.95</b>	<b>4.60</b>	<b>-1.48</b>	<b>3.69</b>	<b>-8.58</b>	<b>6.94</b>	<b>13.91</b>	<b>4.65</b>	<b>06/01/2004</b>
Bloomberg US Trsy: US TIPS Index	0.96	7.27	6.58	2.40	1.93	4.48	-1.44	3.64	-8.61	6.98	13.56	4.54	
Difference	0.04	0.18	0.17	0.05	0.02	0.12	-0.04	0.05	0.03	-0.04	0.35	0.11	
IM U.S. TIPS (SA+CF) Median	0.99	7.18	6.56	2.40	1.94	4.58	-1.40	3.57	-8.24	7.02	13.50	4.59	
Rank	43	28	28	39	49	38	64	37	64	59	25	38	
<b>Gresham Commodities (SA)</b>	<b>-2.53</b>	<b>8.21</b>	<b>-3.60</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>-14.47</b>	<b>07/01/2015</b>
Bloomberg Cmdty Ex-Energy Index (TR)	-4.05	9.63	4.85	-6.87	-6.41	-0.31	-17.74	-6.47	-16.76	2.85	-11.93	-4.60	
Difference	1.52	-1.42	-8.45	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	-9.87	
<b>Harvest MLP (SA)</b>	<b>4.37</b>	<b>18.06</b>	<b>14.59</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>-9.47</b>	<b>07/01/2015</b>
S&P MLP Index (TR)	2.92	18.03	10.12	-4.38	5.51	8.99	-35.07	7.66	29.75	4.95	14.47	-13.49	
Difference	1.45	0.03	4.47	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	4.02	
<b>Van Eck NR Equities (SA)</b>	<b>8.11</b>	<b>39.45</b>	<b>30.64</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>-3.75</b>	<b>07/01/2015</b>
S&P Gbl Natural Res Sect Index (TR)	6.03	23.99	24.71	-3.81	-0.03	1.66	-24.00	-9.66	1.55	7.15	-14.86	-2.70	
Difference	2.08	15.46	5.93	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	-1.05	

Asset Allocation by Manager



Performance shown is gross of fees. RVK began monitoring the assets of North Dakota Board of University and School Lands in Q3 2014. RVK endorses GIPS and calculates performance for composites and investment managers using different methodologies.





Comparative Performance													
	QTD	CYTD	1 Year	3 Years	5 Years	10 Years	2015	2014	2013	2012	2011	Since Incep.	Inception Date
<b>Real Estate</b>	<b>2.45</b>	<b>6.91</b>	<b>10.54</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>11.61</b>	<b>07/01/2015</b>
NCREIF ODCE Index (AWA) (Gross)	2.07	6.52	10.08	12.45	12.40	6.02	15.02	12.50	13.94	10.94	15.99	11.16	
Difference	0.38	0.39	0.46	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.45	
<b>Morgan Stanley Prime Property Fund (CF)</b>	<b>2.53</b>	<b>7.54</b>	<b>11.19</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>12.25</b>	<b>07/01/2015</b>
NCREIF ODCE Index (AWA) (Gross)	2.07	6.52	10.08	12.45	12.40	6.02	15.02	12.50	13.94	10.94	15.99	11.16	
Difference	0.46	1.02	1.11	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	1.09	
<b>UBS Trumbull Property Fund, L.P. (CF)</b>	<b>1.70</b>	<b>5.66</b>	<b>8.85</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>9.95</b>	<b>07/01/2015</b>
NCREIF ODCE Index (AWA) (Gross)	2.07	6.52	10.08	12.45	12.40	6.02	15.02	12.50	13.94	10.94	15.99	11.16	
Difference	-0.37	-0.86	-1.23	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	-1.21	
<b>Jamestown Premier Property Fund (CF)</b>	<b>3.40</b>	<b>6.61</b>	<b>11.96</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>12.39</b>	<b>07/01/2015</b>
NCREIF ODCE Index (AWA) (Gross)	2.07	6.52	10.08	12.45	12.40	6.02	15.02	12.50	13.94	10.94	15.99	11.16	
Difference	1.33	0.09	1.88	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	1.23	
<b>Prologis USLF (CF)</b>	<b>3.15</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>6.73</b>	<b>04/01/2016</b>
NCREIF ODCE Index (AWA) (Gross)	2.07	6.52	10.08	12.45	12.40	6.02	15.02	12.50	13.94	10.94	15.99	4.24	
Difference	1.08	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	2.49	
<b>JP Morgan US Real Estate Income and Growth, LP (CF)</b>	<b>2.18</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>2.18</b>	<b>07/01/2016</b>
NCREIF ODCE Index (AWA) (Gross)	2.07	6.52	10.08	12.45	12.40	6.02	15.02	12.50	13.94	10.94	15.99	2.07	
Difference	0.11	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.11	

Asset Allocation by Manager



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North Dakota Board of University and School Lands  
Comparative Performance - Net

As of September 30, 2016

	QTD	CYTD	1 Year	3 Years	5 Years	7 Years	10 Years	2015	2014	2013	Since Incep.	Inception Date
<b>Total Fund</b>	<b>3.08</b>	<b>8.12</b>	<b>9.71</b>	<b>4.07</b>	<b>7.55</b>	<b>7.14</b>	<b>4.92</b>	<b>-4.55</b>	<b>4.78</b>	<b>13.15</b>	<b>6.68</b>	<b>08/01/1995</b>
Target Allocation Index (Net)	3.09	7.82	10.13	5.75	8.84	8.16	N/A	-0.93	6.50	13.12	N/A	
Difference	-0.01	0.30	-0.42	-1.68	-1.29	-1.02	N/A	-3.62	-1.72	0.03	N/A	
<b>Broad US Equity</b>	<b>4.47</b>	<b>8.45</b>	<b>15.41</b>	<b>9.59</b>	<b>14.65</b>	<b>12.33</b>	<b>N/A</b>	<b>0.08</b>	<b>12.29</b>	<b>28.14</b>	<b>14.39</b>	<b>07/01/2009</b>
Russell 3000 Index	4.40	8.18	14.96	10.44	16.36	13.18	7.37	0.48	12.56	33.55	15.08	
Difference	0.07	0.27	0.45	-0.85	-1.71	-0.85	N/A	-0.40	-0.27	-5.41	-0.69	
<b>State Street S&amp;P 500 Index (CF)</b>	<b>3.85</b>	<b>7.84</b>	<b>15.50</b>	<b>11.16</b>	<b>16.36</b>	<b>13.17</b>	<b>N/A</b>	<b>1.40</b>	<b>13.67</b>	<b>32.36</b>	<b>8.32</b>	<b>04/01/2008</b>
S&P 500 Index (Cap Wtd)	3.85	7.84	15.43	11.16	16.37	13.17	7.24	1.38	13.69	32.39	8.32	
Difference	0.00	0.00	0.07	0.00	-0.01	0.00	N/A	0.02	-0.02	-0.03	0.00	
<b>NT Small Cap Core (CF)</b>	<b>6.83</b>	<b>10.55</b>	<b>14.79</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>-6.01</b>	<b>N/A</b>	<b>N/A</b>	<b>1.28</b>	<b>07/01/2014</b>
Russell 2000 Index	9.05	11.46	15.47	6.71	15.82	12.49	7.07	-4.41	4.89	38.82	3.61	
Difference	-2.22	-0.91	-0.68	N/A	N/A	N/A	N/A	-1.60	N/A	N/A	-2.33	
<b>NT Small/Smid Composite</b>	<b>6.83</b>	<b>10.55</b>	<b>14.79</b>	<b>5.02</b>	<b>13.95</b>	<b>11.33</b>	<b>6.52</b>	<b>-6.01</b>	<b>2.65</b>	<b>36.61</b>	<b>9.31</b>	<b>03/01/1996</b>
Small/Smid Blended Index	9.05	11.46	15.47	7.82	16.32	13.42	7.96	-4.41	8.25	36.80	9.60	
Difference	-2.22	-0.91	-0.68	-2.80	-2.37	-2.09	-1.44	-1.60	-5.60	-0.19	-0.29	
<b>Broad International Equity</b>	<b>6.58</b>	<b>6.19</b>	<b>9.54</b>	<b>0.64</b>	<b>7.71</b>	<b>3.81</b>	<b>N/A</b>	<b>-5.25</b>	<b>-5.28</b>	<b>25.44</b>	<b>6.18</b>	<b>07/01/2009</b>
MSCI ACW Ex US Index (USD) (Net)	6.91	5.82	9.26	0.18	6.04	3.66	2.16	-5.66	-3.87	15.29	6.13	
Difference	-0.33	0.37	0.28	0.46	1.67	0.15	N/A	0.41	-1.41	10.15	0.05	
<b>State Street World Ex US Index (CF)</b>	<b>6.25</b>	<b>3.04</b>	<b>7.04</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>-3.12</b>	<b>N/A</b>	<b>N/A</b>	<b>-4.30</b>	<b>07/01/2014</b>
MSCI Wrld Ex US Index (USD) (Net)	6.29	3.12	7.16	0.33	6.89	4.05	1.88	-3.04	-4.32	21.02	-4.21	
Difference	-0.04	-0.08	-0.12	N/A	N/A	N/A	N/A	-0.08	N/A	N/A	-0.09	
<b>DFA Emg Mkts Core Eq;l (DFCEX)</b>	<b>7.97</b>	<b>18.39</b>	<b>18.15</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>-14.86</b>	<b>N/A</b>	<b>N/A</b>	<b>-3.17</b>	<b>07/01/2014</b>
MSCI Emg Mkts Index (USD) (Net)	9.03	16.02	16.78	-0.56	3.03	2.27	3.94	-14.92	-2.19	-2.60	-4.12	
Difference	-1.06	2.37	1.37	N/A	N/A	N/A	N/A	0.06	N/A	N/A	0.95	
<b>Harding Loevner:IEM;II (HLEEX)</b>	<b>7.86</b>	<b>19.13</b>	<b>20.05</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>-13.31</b>	<b>N/A</b>	<b>N/A</b>	<b>-2.45</b>	<b>07/01/2014</b>
MSCI Emg Mkts Index (USD) (Net)	9.03	16.02	16.78	-0.56	3.03	2.27	3.94	-14.92	-2.19	-2.60	-4.12	
Difference	-1.17	3.11	3.27	N/A	N/A	N/A	N/A	1.61	N/A	N/A	1.67	

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North Dakota Board of University and School Lands  
Comparative Performance - Net

As of September 30, 2016

	QTD	CYTD	1 Year	3 Years	5 Years	7 Years	10 Years	2015	2014	2013	Since Incep.	Inception Date
<b>Fixed Income</b>	<b>1.25</b>	<b>6.38</b>	<b>6.03</b>	<b>3.82</b>	<b>3.91</b>	<b>4.78</b>	<b>5.11</b>	<b>-0.15</b>	<b>4.72</b>	<b>-0.57</b>	<b>5.99</b>	<b>08/01/1995</b>
Global Fixed Income Custom Index	0.98	7.57	6.89	3.76	3.22	4.12	4.86	-0.50	4.27	-1.55	N/A	
Difference	0.27	-1.19	-0.86	0.06	0.69	0.66	0.25	0.35	0.45	0.98	N/A	
Bloomberg US Agg Bond Index	0.46	5.80	5.19	4.03	3.08	4.10	4.79	0.55	5.97	-2.02	5.63	
Difference	0.79	0.58	0.84	-0.21	0.83	0.68	0.32	-0.70	-1.25	1.45	0.36	
<b>Payden &amp; Rygel Long Term (SA)</b>	<b>1.24</b>	<b>6.37</b>	<b>5.98</b>	<b>4.42</b>	<b>4.16</b>	<b>5.10</b>	<b>5.31</b>	<b>0.62</b>	<b>5.80</b>	<b>-1.45</b>	<b>6.21</b>	<b>08/01/1995</b>
Bloomberg US Agg Bond Index	0.46	5.80	5.19	4.03	3.08	4.10	4.79	0.55	5.97	-2.02	5.63	
Difference	0.78	0.57	0.79	0.39	1.08	1.00	0.52	0.07	-0.17	0.57	0.58	
<b>JP Morgan FI Intermediate Bond (SA)</b>	<b>0.28</b>	<b>4.05</b>	<b>3.46</b>	<b>3.11</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>1.42</b>	<b>3.86</b>	<b>-1.01</b>	<b>2.22</b>	<b>08/01/2012</b>
Bloomberg US Gov't/Credit: Int Trm Bond Index	0.16	4.24	3.52	2.80	2.45	3.33	4.17	1.07	3.13	-0.86	1.99	
Difference	0.12	-0.19	-0.06	0.31	N/A	N/A	N/A	0.35	0.73	-0.15	0.23	
<b>FIA International Fixed Income (SA)</b>	<b>1.37</b>	<b>7.03</b>	<b>6.76</b>	<b>6.52</b>	<b>5.16</b>	<b>5.25</b>	<b>5.26</b>	<b>-0.46</b>	<b>12.84</b>	<b>-1.04</b>	<b>5.20</b>	<b>05/01/2004</b>
Bloomberg Gbl Agg Ex USD Index (Hedged)	0.53	6.89	7.53	5.78	5.04	4.57	4.68	1.36	8.79	1.18	4.76	
Difference	0.84	0.14	-0.77	0.74	0.12	0.68	0.58	-1.82	4.05	-2.22	0.44	
<b>Brandywine Gbl Opp FI (CF)</b>	<b>1.68</b>	<b>12.16</b>	<b>11.50</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>-8.31</b>	<b>N/A</b>	<b>N/A</b>	<b>0.87</b>	<b>11/01/2014</b>
Citi Wrld Gov't Bond Index	0.30	11.07	9.71	1.78	0.77	1.90	4.10	-3.57	-0.48	-4.00	2.97	
Difference	1.38	1.09	1.79	N/A	N/A	N/A	N/A	-4.74	N/A	N/A	-2.10	
<b>Lazard High Yield (SA)</b>	<b>3.22</b>	<b>8.66</b>	<b>8.65</b>	<b>4.95</b>	<b>6.97</b>	<b>7.20</b>	<b>6.56</b>	<b>-0.41</b>	<b>3.69</b>	<b>5.83</b>	<b>6.50</b>	<b>01/01/2004</b>
BofA ML US Hi Yld BB-B Rated Index	5.01	13.30	12.01	5.58	8.01	8.37	7.14	-2.86	3.47	6.31	7.16	
Difference	-1.79	-4.64	-3.36	-0.63	-1.04	-1.17	-0.58	2.45	0.22	-0.48	-0.66	
<b>Payden:Low Dur;Inv (PYSBX)</b>	<b>0.51</b>	<b>1.93</b>	<b>1.71</b>	<b>1.18</b>	<b>1.86</b>	<b>2.69</b>	<b>3.62</b>	<b>0.44</b>	<b>0.70</b>	<b>0.48</b>	<b>3.74</b>	<b>04/01/2002</b>
Bloomberg US Trsy: 1-3 Yr Index	-0.11	1.33	0.88	0.86	0.70	1.04	2.27	0.56	0.63	0.36	2.48	
Difference	0.62	0.60	0.83	0.32	1.16	1.65	1.35	-0.12	0.07	0.12	1.26	
<b>Payden &amp; Rygel Cash (SA)</b>	<b>0.06</b>	<b>0.19</b>	<b>0.20</b>	<b>0.03</b>	<b>0.03</b>	<b>0.04</b>	<b>0.93</b>	<b>-0.02</b>	<b>-0.04</b>	<b>-0.04</b>	<b>2.68</b>	<b>08/01/1995</b>
BofA ML 3 Mo US T-Bill Index	0.10	0.24	0.27	0.12	0.10	0.11	0.92	0.05	0.04	0.07	2.52	
Difference	-0.04	-0.05	-0.07	-0.09	-0.07	-0.07	0.01	-0.07	-0.08	-0.11	0.16	
<b>FLP (Loans)</b>	<b>1.51</b>	<b>4.51</b>	<b>6.00</b>	<b>6.04</b>	<b>5.90</b>	<b>6.06</b>	<b>6.46</b>	<b>6.09</b>	<b>5.85</b>	<b>5.52</b>	<b>7.36</b>	<b>08/01/1995</b>
<b>ECLP (Loans)</b>	<b>1.16</b>	<b>3.72</b>	<b>5.04</b>	<b>5.07</b>	<b>5.22</b>	<b>N/A</b>	<b>N/A</b>	<b>5.13</b>	<b>5.03</b>	<b>5.16</b>	<b>5.35</b>	<b>11/01/2010</b>

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North Dakota Board of University and School Lands  
Comparative Performance - Net

As of September 30, 2016

	QTD	CYTD	1 Year	3 Years	5 Years	7 Years	10 Years	2015	2014	2013	Since Incep.	Inception Date
<b>Absolute Return</b>	<b>2.62</b>	<b>8.07</b>	<b>9.20</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>-6.25</b>	<b>N/A</b>	<b>N/A</b>	<b>-0.89</b>	<b>07/01/2014</b>
Absolute Return Custom Index	3.51	6.68	9.61	4.92	7.89	6.74	5.08	-0.88	4.77	12.74	2.25	
Difference	-0.89	1.39	-0.41	N/A	N/A	N/A	N/A	-5.37	N/A	N/A	-3.14	
<b>GMO:Bchmk-Fr All;IV (GBMBX)</b>	<b>3.56</b>	<b>4.62</b>	<b>6.19</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>-4.23</b>	<b>N/A</b>	<b>N/A</b>	<b>-1.38</b>	<b>07/01/2014</b>
60% MSCI ACWI (Net)/40% B Gbl Agg Idx	3.50	8.02	10.92	4.09	7.15	5.91	4.62	-2.47	2.78	12.05	1.07	
Difference	0.06	-3.40	-4.73	N/A	N/A	N/A	N/A	-1.76	N/A	N/A	-2.45	
Consumer Price Index+5%	1.40	5.88	6.54	6.08	6.31	6.68	6.84	5.77	5.79	6.58	5.60	
Difference	2.16	-1.26	-0.35	N/A	N/A	N/A	N/A	-10.00	N/A	N/A	-6.98	
<b>PIMCO:All Ast Ath;Inst (PAUIX)</b>	<b>3.94</b>	<b>14.71</b>	<b>13.15</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>-11.73</b>	<b>N/A</b>	<b>N/A</b>	<b>-3.17</b>	<b>07/01/2014</b>
All Asset Custom Index (EqI Wtd)	2.38	6.92	8.01	3.96	5.65	5.58	5.03	-1.07	3.73	6.10	2.23	
Difference	1.56	7.79	5.14	N/A	N/A	N/A	N/A	-10.66	N/A	N/A	-5.40	
Consumer Price Index+5%	1.40	5.88	6.54	6.08	6.31	6.68	6.84	5.77	5.79	6.58	5.60	
Difference	2.54	8.83	6.61	N/A	N/A	N/A	N/A	-17.50	N/A	N/A	-8.77	
<b>Westwood Income Opportunity (SA)</b>	<b>0.37</b>	<b>5.14</b>	<b>8.29</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>-2.61</b>	<b>N/A</b>	<b>N/A</b>	<b>1.84</b>	<b>07/01/2014</b>
Westwood Custom Index	0.50	7.02	10.58	7.76	8.95	8.68	5.80	1.61	12.88	6.15	6.16	
Difference	-0.13	-1.88	-2.29	N/A	N/A	N/A	N/A	-4.22	N/A	N/A	-4.32	
Consumer Price Index+5%	1.40	5.88	6.54	6.08	6.31	6.68	6.84	5.77	5.79	6.58	5.60	
Difference	-1.03	-0.74	1.75	N/A	N/A	N/A	N/A	-8.38	N/A	N/A	-3.76	
<b>Diversified Inflation Strategies (DIS)</b>	<b>2.22</b>	<b>16.74</b>	<b>10.16</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>-24.22</b>	<b>N/A</b>	<b>N/A</b>	<b>-0.42</b>	<b>04/01/2014</b>
DIS Custom Index	1.04	14.95	11.27	0.34	4.35	5.29	3.29	-18.88	9.69	-2.19	-0.28	
Difference	1.18	1.79	-1.11	N/A	N/A	N/A	N/A	-5.34	N/A	N/A	-0.14	
<b>NT Common TIPS Index (CF)</b>	<b>0.99</b>	<b>7.41</b>	<b>6.69</b>	<b>2.41</b>	<b>1.91</b>	<b>4.18</b>	<b>4.55</b>	<b>-1.53</b>	<b>3.66</b>	<b>-8.61</b>	<b>4.60</b>	<b>06/01/2004</b>
Bloomberg US Trsy: US TIPS Index	0.96	7.27	6.58	2.40	1.93	4.00	4.48	-1.44	3.64	-8.61	4.54	
Difference	0.03	0.14	0.11	0.01	-0.02	0.18	0.07	-0.09	0.02	0.00	0.06	
<b>Gresham Commodities (SA)</b>	<b>-2.68</b>	<b>7.73</b>	<b>-4.18</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>-14.99</b>	<b>07/01/2015</b>
Bloomberg Cmdty Ex-Energy Index (TR)	-4.05	9.63	4.85	-6.87	-6.41	-1.02	-0.31	-17.74	-6.47	-16.76	-4.60	
Difference	1.37	-1.90	-9.03	N/A	N/A	N/A	N/A	N/A	N/A	N/A	-10.39	
<b>Harvest MLP (SA)</b>	<b>4.18</b>	<b>17.43</b>	<b>13.75</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>-10.16</b>	<b>07/01/2015</b>
S&P MLP Index (TR)	2.92	18.03	10.12	-4.38	5.51	10.65	8.99	-35.07	7.66	29.75	-13.49	
Difference	1.26	-0.60	3.63	N/A	N/A	N/A	N/A	N/A	N/A	N/A	3.33	

Performance shown is net of fees. Manager inception dates shown represent the first full month following initial funding. Composite inception dates are based on availability of data for each asset class. Please see the Addendum for custom index definitions. RVK began monitoring the assets of North Dakota Board of University and School Lands in Q3 2014. RVK endorses GIPS and calculates performance for composites and investment managers using different methodologies. For additional information, please see the Addendum and Glossary.

North Dakota Board of University and School Lands  
Comparative Performance - Net

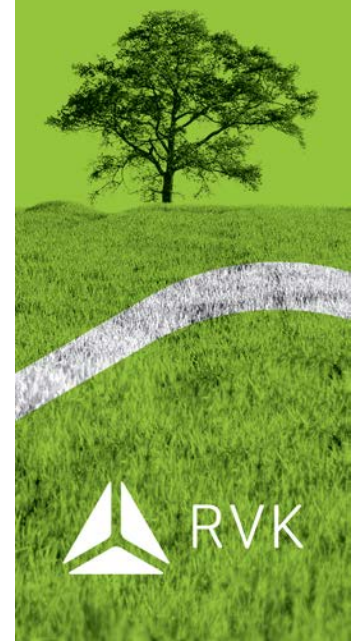
As of September 30, 2016

	QTD	CYTD	1 Year	3 Years	5 Years	7 Years	10 Years	2015	2014	2013	Since Incep.	Inception Date
<b>Van Eck NR Equities (SA)</b>	<b>7.94</b>	<b>38.81</b>	<b>29.79</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>-4.39</b>	<b>07/01/2015</b>
S&P Gbl Natural Res Sect Index (TR)	6.03	23.99	24.71	-3.81	-0.03	-0.45	1.66	-24.00	-9.66	1.55	-2.70	
Difference	1.91	14.82	5.08	N/A	N/A	N/A	N/A	N/A	N/A	N/A	-1.69	
<b>Real Estate</b>	<b>2.13</b>	<b>6.02</b>	<b>9.25</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>10.28</b>	<b>07/01/2015</b>
NCREIF ODCE Index (AWA) (Net)	1.83	5.80	9.08	11.42	11.34	11.37	5.05	13.95	11.46	12.90	10.14	
Difference	0.30	0.22	0.17	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.14	
<b>Morgan Stanley Prime Property Fund (CF)</b>	<b>2.26</b>	<b>6.67</b>	<b>9.96</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>10.97</b>	<b>07/01/2015</b>
NCREIF ODCE Index (AWA) (Net)	1.83	5.80	9.08	11.42	11.34	11.37	5.05	13.95	11.46	12.90	10.14	
Difference	0.43	0.87	0.88	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.83	
<b>UBS Trumbull Property Fund, L.P. (CF)</b>	<b>1.44</b>	<b>4.87</b>	<b>7.76</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>8.82</b>	<b>07/01/2015</b>
NCREIF ODCE Index (AWA) (Net)	1.83	5.80	9.08	11.42	11.34	11.37	5.05	13.95	11.46	12.90	10.14	
Difference	-0.39	-0.93	-1.32	N/A	N/A	N/A	N/A	N/A	N/A	N/A	-1.32	
<b>Jamestown Premier Property Fund (CF)</b>	<b>2.83</b>	<b>5.53</b>	<b>9.84</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>10.15</b>	<b>07/01/2015</b>
NCREIF ODCE Index (AWA) (Net)	1.83	5.80	9.08	11.42	11.34	11.37	5.05	13.95	11.46	12.90	10.14	
Difference	1.00	-0.27	0.76	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.01	
<b>Prologis USLF (CF)</b>	<b>2.87</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>6.10</b>	<b>04/01/2016</b>
NCREIF ODCE Index (AWA) (Net)	1.83	5.80	9.08	11.42	11.34	11.37	5.05	13.95	11.46	12.90	3.77	
Difference	1.04	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	2.33	
<b>JP Morgan US Real Estate Income and Growth, LP (CF)</b>	<b>1.86</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>1.86</b>	<b>07/01/2016</b>
NCREIF ODCE Index (AWA) (Net)	1.83	5.80	9.08	11.42	11.34	11.37	5.05	13.95	11.46	12.90	1.83	
Difference	0.03	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.03	

- Actual funding date for Prologis USLF (CF) was April 14, 2016.
- JP Morgan US Real Estate Income and Growth, LP (CF) was funded July 1, 2016.

Performance shown is net of fees. Manager inception dates shown represent the first full month following initial funding. Composite inception dates are based on availability of data for each asset class. Please see the Addendum for custom index definitions. RVK began monitoring the assets of North Dakota Board of University and School Lands in Q3 2014. RVK endorses GIPS and calculates performance for composites and investment managers using different methodologies. For additional information, please see the Addendum and Glossary.

# Addendum & Glossary



**Fee Schedules**

• State Street S&P 500 Index (CF):	0.012% on total market value
• NT Small Cap Core (CF):	0.70% on total market value
• State Street World Ex US Index (CF):	0.025% on total market value
• DFA Emg Mkts Core Eq;I (DFCEX):	0.62% on total market value
• Harding Loevner:IEM;II (HLEEX):	1.14% on total market value
• Payden & Rygel Long Term (SA):	0.20% on total market value
• JP Morgan FI Intermediate Bond (SA):	0.20% on the first \$75M, 0.18% thereafter
• FIA International Fixed Income (SA):	0.35% on the first \$30M, 0.25% on the next \$20M, 0.20% over \$50M
• Brandywine Gbl Opp FI (CF):	0.45% on the first \$50M, 0.40% on the next \$50M, 0.35% thereafter
• Lazard High Yield (SA):	0.30% on total market value
• Payden:Low Dur;Inv (PYSBX):	0.47% on total market value
• Payden & Rygel Cash (SA):	0.10% on total market value
• GMO:Bchmk-Fr All;IV (GBMBX):	0.89% on total market value
• PIMCO:All Ast Ath;Inst (PAUIX):	0.94% on total market value
• Westwood Income Opportunity (SA):	0.80% on the first \$25M, 0.65% on the next \$25M, 0.50% thereafter
• NT Common TIPS Index (CF):	0.06% on the first \$50M, 0.03% thereafter
• Gresham Commodities (SA):	0.67% on the first \$75M, 0.50% on the next \$75M, 0.40% thereafter
• Harvest MLP (SA):	0.75% on the first \$100M, and a 0.05% discount on each \$50M thereafter until \$300M, where it's 0.50%
• Van Eck NR Equities (SA):	0.75% on the first \$50M, 0.50% on the next \$200M, 0.475% thereafter
• Morgan Stanley Prime Property Fund (CF):	0.84% on total market value; Incentive fee: 5.0% * NAV * comparable property NOI growth (total capped at 0.35%)
• UBS Trumbull Property Fund, L.P. (CF):	0.955% on the first \$10M, 0.825% on the next \$15M, 0.805% on the next \$25M, 0.79% on the next \$50M, 0.67% on the next \$150M, and 0.6% thereafter, and a 0.15% incentive fee
• Jamestown Premier Property Fund (CF):	0.70% on total market value, plus 20% of returns greater than 7% and 25% of returns greater than 10%
• Prologis USLF (CF):	Priority Distribution: 7.5% of net operating income; Acquisition Fee: 0.90% of total acquisition cost on fund acquisitions; Renovation Fee: 0.70% per annum of the acquisition cost of the capital expenditures made with respect to renovation properties during the applicable renovation period * Fees are subject to a quarterly cap of 0.30% of the fund's NAV. Incentive fee of 15% over a 9% net IRR and 20% over a 12% net IRR is payable at the end of each three-year incentive period (next period ends June 30, 2017)
• JP Morgan US Real Estate Income and Growth, LP (CF)	1.25% on total market value * Beginning October 1st, 2016, a reduced fee schedule will be implemented as follows: 1.05% on the first \$50M, 0.90% on the next \$50M, 0.85% on the next \$50M, 0.80% on the next \$50M, and 0.75% thereafter

**Performance Related Comments**

- Manager inception dates shown represent the first full month following initial funding.
- RVK began monitoring the assets of North Dakota Board of University and School Lands in Q3 2014. Prior historical data was provided by North Dakota Board of University and School Lands.
- RVK endorses GIPS and calculates performance for composites and investment managers using differing methodologies. For additional information, please see the Glossary.
- Indices show N/A for since inception returns when the fund contains more history than the corresponding benchmark.
- Historical gross performance for composites was calculated by aggregating gross performance for each of the composites' underlying managers. Managers' gross performance was provided by North Dakota Board of University and School Lands. As of July 2014, composite and manager performance is provided and calculated by RVK.
- NT Small Cap Core (CF) changed mandate from small and mid cap to strictly small cap in June 2014. Performance for NT Small/Smid Composite consists of blended history from the previous mandate. From July 2014 through present, performance consists of only the small cap mandate.
- Payden:Low Dur;Inv (PYSBX) performance prior to August 2012 consists of blended Payden:Low Dur;Inv (PYSBX) and Payden:GNMA;Inv (PYGNX).

**Transitions**

- JP Morgan US Real Estate Income and Growth (CF) was funded July 1, 2016.



**Index Comments**

- The Target Allocation Index (Net) is a static custom index that is calculated monthly and consists of:
  - From July 2014 through present: 17% Russell 3000 Index, 15% MSCI ACW Ex US Index (USD) (Net), 23% Global Fixed Income Custom Index, 15% NCREIF ODCE Index (AWA) (Net), 20% Absolute Return Custom Index, and 10% DIS Custom Index.
  - From January 2013 through June 2014: 18.7% Russell 1000 Index, 12.4% Russell 2500 Index, 7.5% FTSE EPRA/NAREIT US Index, 12.4% MSCI EAFE Index (USD) (Net), 33.3% Bloomberg US Agg Bond Index, 0.70% Credit Suisse Leveraged Loan Index, 10% Bloomberg US Corporate: High Yield Index, and 5% Bloomberg Gbl Agg Ex USD Index (Hedged).
  - From July 2009 through December 2012: 15% Russell 1000 Index, 10% Russell 2500 Index, 6% FTSE EPRA/NAREIT US Index, 10% MSCI EAFE Index (USD) (Net), 32.3% Bloomberg US Aggregate Bond Index, 1.70% Credit Suisse Leveraged Loan Index, 10% Bloomberg US Corporate: High Yield Index, 5% Bloomberg Gbl Agg Ex USD Index (Hedged), and 10% BofA Merrill Lynch Convertible Bonds Index (All Qualities).
- The Target Allocation Index (Gross) is a static custom index that is calculated monthly and consists of:
  - From July 2014 through present: 17% Russell 3000 Index, 15% MSCI ACW Ex US Index (USD) (Net), 23% Global Fixed Income Custom Index, 15% NCREIF ODCE Index (AWA) (Gross), 20% Absolute Return Custom Index, and 10% DIS Custom Index.
  - From January 2013 through June 2014: 18.7% Russell 1000 Index, 12.4% Russell 2500 Index, 7.5% FTSE EPRA/NAREIT US Index, 12.4% MSCI EAFE Index (USD) (Net), 33.3% Bloomberg US Agg Bond Index, 0.70% Credit Suisse Leveraged Loan Index, 10% Bloomberg US Corporate: High Yield Index, and 5% Bloomberg Gbl Agg Ex USD Index (Hedged).
  - From July 2009 through December 2012: 15% Russell 1000 Index, 10% Russell 2500 Index, 6% FTSE EPRA/NAREIT US Index, 10% MSCI EAFE Index (USD) (Net), 32.3% Bloomberg US Aggregate Bond Index, 1.70% Credit Suisse Leveraged Loan Index, 10% Bloomberg US Corporate: High Yield Index, 5% Bloomberg Gbl Agg Ex USD Index (Hedged), and 10% BofA Merrill Lynch Convertible Bonds Index (All Qualities).
- The Global Fixed Income Custom Index consists of 75% Bloomberg US Unv Bond Index and 25% Bloomberg Multiverse Index.
- The Absolute Return Custom Index consists of 60% MSCI ACW Investable Mkt Index (USD) (Net) and 40% Bloomberg US Agg Bond Index.
- The DIS Custom Index consists of 50% Bloomberg US Trsy: US TIPS Index and 50% FTSE EPRA/NAREIT Developed Index (Gross) through June 2015. It consists of 20% Bloomberg US Trsy: US TIPS Index, 30% Bbrg Cmnty Ex-Energy Index (TR), 30% S&P MLP Index (TR), and 20% S&P Gbl Natural Res Index (TR) thereafter.
- The Small/Smid Blended Index consists of 100% Russell 2500 Index through May 2014 and 100% Russell 2000 Index thereafter.
- The Westwood Custom Index consists of 25% S&P 500 Index (Cap Weighted), 25% FTSE NAREIT All Eq REITs TR Index, 25% Citi 3 Mo T-Bill Index, and 25% Citi 10 Yr Trsy Index.
- The All Asset Custom Index (Eql Wtd) is an equal-weighted hybrid created independently by RVK specifically for PIMCO's All Asset strategies, and it consists of the following benchmarks:
  1. Short Term Strategies: BofA ML 1 Year T-Bill Index
  2. US Core and Long Maturity Bond Strategies: Bloomberg US Agg Bond Index
  3. EM and Global Bond Strategies: PIMCO GLADI Index\*
  4. Credit Strategies: BofA ML US Hi Yld Master II Index
  5. Inflation Related Strategies: Bloomberg US Trsy: US TIPS Index
  6. US Equity Strategies: Russell 3000 Index
  7. Global Equity Strategies: MSCI ACW Index (USD) (Net)
  8. Alternative Strategies: BofA ML 3 Mo US T-Bill Index + 3%

\* Performance for the PIMCO Gbl Advantage Bond Index (London Close) prior to January 2004 consists of the JPM EMBI Gbl Dvf'd TR Index.



## Glossary

**Alpha** - A measure of the difference between a portfolio's actual returns and its expected performance, given its level of risk as measured by beta. It is a measure of the portfolio's historical performance not explained by movements of the market or a portfolio's non-systematic return.

**Alpha Ratio** - A measure of a portfolio's non-systematic return per unit of downside risk. It is measured by dividing the alpha of a portfolio by the downside risk. The non-systematic return is a measure of a portfolio's historical performance not explained by movements of the market.

**Average Quality** - Bond quality ratings are reported using the investment managers' and the index providers' preferred rating agency. **Average Quality for managers unable to provide this statistic is instead provided by Morningstar; if unavailable on Morningstar, it has been estimated using a credit quality distribution provided by the manager.** There are two primary rating agencies in the US. *Moody's* assigns ratings on a system that employs up to four symbols (consisting of letters and numbers) such as, Aaa, Aa2, etc., with Aaa being the highest or safest rating. *Standard & Poor's (S&P)* employs a system that uses + and - along with letters such as AAA, AA+, etc. The two rating agencies' systems are summarized below:

<u>S&amp;P</u>	<u>Moody's</u>	<u>Explanation</u>	<u>S&amp;P</u>	<u>Moody's</u>	<u>Explanation</u>
<b>Higher Credit Quality – Investment Grade</b>			<b>Lower Credit Quality – Below Investment Grade</b>		
AAA	Aaa	Prime/Highest credit quality	BB+	Ba1	Speculative/Low credit quality
AA+	Aa1	High credit quality	BB	Ba2	
AA	Aa2		BB-	Ba3	
AA-	Aa3		B+	B1	Highly speculative
A+	A1	Upper-medium credit quality	B	B2	
A	A2		B-	B3	
A-	A3		CCC+	Caa1	Substantial credit/default risk
BBB+	Baa1	Lower-medium credit quality	CCC	Caa2	Extremely speculative
BBB	Baa2		CCC-	Caa3	
BBB-	Baa3		CC	Ca	Vulnerable to default
			C	Ca	
			D	C	In default

**Beta** - A measure of the sensitivity of a portfolio to the movements in the market. It is a measure of a portfolio's non-diversifiable or systematic risk.

**Box Plots** - A graphical representation of the distribution of observations. From top to bottom, the four boxes represent the spread between the maximum value and the minimum value in each quartile. A quartile represents the values that divide the observations into four quarters (i.e., 1<sup>st</sup> quartile, 2<sup>nd</sup> quartile, 3<sup>rd</sup> quartile, and 4<sup>th</sup> quartile). The median observation is where the 2<sup>nd</sup> quartile and 3<sup>rd</sup> quartile meet.

**Buy and Hold Attribution** - At the beginning of the time period under analysis, the manager and benchmark portfolios are broken down into segments (i.e., styles, sectors, countries, and regions) based on the desired type of attribution. The formula assumes zero turn-over to the manager and benchmark portfolios throughout the period and calculates the segment returns ("buy and hold returns") to arrive at performance attribution. Due to portfolio turnover, buy and hold attribution may not accurately represent quarterly performance relative to the benchmark. Country, region, sector, and style allocations are as of the date one quarter prior to the reporting date, and the returns shown are for those segments throughout the quarter reported. Due to disclosure guidelines set by each investment manager, equity characteristics shown are as of the most recent date available. The following is the methodology for segment classification:

**Sector** - Attribution is calculated using the Global Industry Classification Standard (GICS) which is a detailed and comprehensive structure for sector and industry analysis. Stocks are classified by their primary sector, as defined by S&P Capital IQ data.

**Country/Region** - Attribution is calculated using the Morgan Stanley Capital International (MSCI) region standards. Stocks are classified by their domicile country/region, as defined by S&P Capital IQ data.

**Style** - Stocks are classified into the following style boxes: large/mid/small vs. growth/neutral/value. Stocks are classified along large/mid/small categories at the time of the Russell index rebalancing, using the index market cap boundaries as cutoff points. Stocks are classified along growth/neutral/value categories at the time of the Russell index rebalancing, using the price/book ratio as supplied by S&P Capital IQ. Stocks in the Russell 3000 Index portfolio are sorted by price/book ratio; names with the highest price/book ratio that make up 1/3 of the total market capitalization are assigned to the growth category, names that make up the subsequent 1/3 of the total market capitalization are assigned to the neutral category, while the balance of the names are assigned to the value category.

Portfolio Characteristics and Buy and Hold Attribution reports utilize product-specific data for all mutual funds and commingled funds.

### Capital Markets Review -

**Breakeven Inflation** - Measures the expected inflation rate at each stated maturity by taking the difference between the real yield of the inflation-linked maturity curve and the yield of the closest nominal Treasury maturity.

**Consumer Confidence** - Measures domestic consumer confidence as defined by the degree of optimism on the state of the economy that consumers express through saving and spending.

**Consumer Price Index (CPI)** - Measures the change in the price level of consumer goods and services.

**Federal Funds Rate** - The interest rate at which a depository institution lends funds maintained at the Federal Reserve to another depository institution overnight. It is one of the most influential interest rates in the US economy, since it affects monetary and financial conditions, which in turn have a bearing on key aspects of the broad economy including employment, growth and inflation.

**Option-Adjusted Spread** - Measures the flat spread of an index or bond to the Treasury yield curve after removing the effect of any embedded options.

**Purchasing Managers Index (PMI)** - Measures economic activity by surveying purchasing managers on a monthly basis as to whether business conditions have improved, worsened, or stayed the same.



## Glossary

**Real Gross Domestic Product (Real GDP)** - An inflation-adjusted measure that reflects the value of all goods and services produced by an economy in a given year.

**US Dollar Total Weighted Index** - Measures the value of the US Dollar relative to a basket of other world currencies. It is calculated as the weighted geometric mean of the dollar's value versus the EUR, GBP, CAD, SEK, CHF, and JPY.

**Unemployment Rate** - The percentage of the total labor force that is unemployed but actively seeking employment.

**VIX** - Measures the implied volatility of S&P 500 Index options by looking at the market's expectation of the S&P 500 Index volatility over the next 30 day period. Commonly referred to as the "fear index" or the "fear gauge."

**Consistency** - The percentage of quarters that a product achieved a rate of return higher than that of its benchmark. The higher the consistency figure, the more value a manager has contributed to the product's performance.

**Convexity** - A measure of the shape of the curve that describes the relationship between bond prices and bond yields.

**Correlation** - A statistical measure of the relationship between asset class returns. A value of 1.00 is a perfect correlation; that is, the asset classes always move in the same direction. A value of -1.00 indicates a perfect negative correlation, in which the asset classes always move in opposite directions of each other. A value of 0 indicates there is no relationship between the direction of returns of the two asset classes. Correlation calculations only consider the direction of changes relative to two variables and not the magnitude of those changes.

**Coupon Rate** - The percentage rate of interest paid on a bond or fixed income security; it is typically paid twice per year.

**Current Yield** - The annual income of a security divided by the security's current price.

**Down Market Capture** - Down market by definition is negative benchmark return and down market capture represents the ratio in % terms of the average portfolios return over the benchmark during the down market period. The lower the value of the down market capture the better the product's performance.

**Downside Risk** - A measure similar to standard deviation, but focuses only on the negative movements of the return series. It is calculated by taking the standard deviation of the negative monthly returns. The higher the factor, the riskier the product.

**Earnings Per Share** - It is backward looking, calculated using the one year current EPS divided by the one year EPS five years ago.

**Effective Duration** - The approximate percentage change in a bond's price for a 100 basis point change in yield.

**Excess Return vs. Market** - Average of the monthly arithmetic difference between the manager's return and the benchmark return over a specified time period, shown on an annualized basis.

**Excess Return vs. Risk Free** - Average of the monthly arithmetic difference between the manager's return and the risk-free return (i.e., BofA ML 3 Mo US T-Bill Index unless specified otherwise) over a specified time period, shown on an annualized basis.

**Excess Risk** - A measure of the standard deviation of a portfolio's performance relative to the risk free return.

**Expense Ratios** - Morningstar is the source for mutual fund expense ratios.

**Gain/Loss** - The net increase or decrease in the market value of a portfolio excluding its Net Cash Flow for a given period.

**Indices** - All indices and related information are considered intellectual property and are licensed by each index provider. The indices may not be copied, used or distributed without the index provider's prior written approval. Index providers make no warranties and bear no liability with respect to the indices, any related data, their quality, accuracy, suitability and/or completeness.

**Information Ratio** - Measured by dividing the active rate of return by the tracking error. The higher the information ratio, the more value-added contribution by the manager.

**Liability Driven Investing (LDI)** - A method to optimally structure asset investments relative to liabilities. The change in liabilities is estimated by the Ryan Labs Generic PPA Index of appropriate duration for that Plan. This benchmark is based on generic data and is therefore an approximation. RVK is not an actuarial firm, and does not have actuarial expertise.

**Estimated Funded Status** - The estimated ratio of a Plan's assets relative to its future liabilities. This is calculated by dividing the Plan's asset market value by the estimated present value of its liabilities. The higher the estimated funded status, the better the Plan's ability to cover its projected benefit obligations. An estimated funded status of 100% indicates a Plan that is fully funded.

**Estimated PV of Liabilities** - An estimate of a Plan's future liabilities in present value terms. The beginning of the period liability is provided by the Plan's actuary. The period-end present value liability estimate provided in this report is derived by applying the estimated percentage change generated using the Ryan Labs Generic PPA Index with duration similar to that reported on the most recent actuarial valuation report.

**Duration of Liabilities** - The sensitivity of the value of a Plan's liabilities to changes in interest rates, as calculated by the Plan's actuary.

**Duration of Assets** - The dollar-weighted average duration of all the individual Plan assets.

**Estimated Plan Hedge Ratio** - The estimate of how well a Plan's investment portfolio is hedged against changes in interest rates - a primary driver of funded status movements. This is calculated by dividing the dollar-weighted values of both the Plan asset duration by the liability duration and multiplying by the estimated funded status. An estimated plan hedge ratio of zero indicates that the Plan's liabilities have not been hedged, whereas a value of one indicates fully hedged.



## Glossary

**Modified Duration** - The approximate percentage change in a bond's price for a 100 basis point change in yield, assuming the bonds' expected cash flows do not change.

**Mutual Fund Performance** - Whenever possible, manager performance is extended for any share class that does not have 10 years of history. Using Morningstar's methodology, a single ticker within the same fund family (often the oldest share class) is chosen to append historical performance.

**Net Cash Flow** - The sum, in dollars, of a portfolio's contributions and withdrawals. This includes all management fees and expenses only when performance shown is gross of fees.

### Peer Groups -

**Plan Sponsor Peer Groups** - RVK utilizes the Mellon Analytical Solutions Trust Universe along with the Investment Metrics Plan Sponsor Universe. The combined Mellon Analytical Solutions Trust Universe and Investment Metrics Plan Sponsor Universe is used for comparison of total fund composite results and utilizes actual client returns compiled from consultant and custodial data. The Plan Sponsor Peer Group database includes performance and other quantitative data for over 2,100 plans which include corporate, endowment, foundation, public, and Taft Hartley plans. Plan Sponsor Peer Groups are gross of fees.

**Institutional Peer Groups (Separate Account and Commingled Fund)** - RVK utilizes the Investment Metrics Separate Account and Commingled Fund Manager Peer Groups for peer comparison and rankings. The Separate Account and Commingled Fund Peer Group database includes performance and other quantitative data for over 1,000 investment management firms, 6,400 investment products, across 100 standard peer groups. Separate Account and Commingled Fund Peer Groups are gross of fees.

**Mutual Fund (MF) Peer Groups** - RVK utilizes the Lipper Mutual Fund Manager Peer Groups for peer comparison and rankings. The Lipper Manager Peer Group database includes performance and other quantitative data for over 700 investment management firms and 24,500 investment products, across more than 140 standard peer groups. Mutual Fund Peer Groups are net of fees.

**Percentile Rankings** - Percentile rank compares an individual fund's performance with those of other funds within a defined peer group of managers possessing a similar investment style. Percentile rank identifies the percentage of a fund's peer group that has a higher return (or other comparative measurement) than the fund being ranked. Conversely, 100 minus the individual fund's ranking will identify the percentage of funds within the peer group that have a lower return than the fund being ranked.

1 - Highest Statistical Value

100 - Lowest Statistical Value

*Example: American Funds AMCP;R-4 (RAFEX) is ranked in the 4<sup>th</sup> percentile within the IM US Equity Large-Cap Growth Funds (MF) Peer Group for the Sharpe Ratio. Within the IM US Equity Large-Cap Growth Funds peer group, 4% of the other funds performed better than American Funds AMCP;R-4 (RAFEX), while 96% of the funds performed worse.*

**Performance Methodology** - RVK endorses the Global Investment Performance Standards (GIPS) and calculates performance for investment managers and composites using different methodologies. Investment manager performance is calculated by revaluing the portfolio on the date of all large external cash flows while composite performance is calculated using the Modified Dietz calculation methodology. According to the CFA Institute, "Only investment management firms that actually manage assets can claim compliance with the Standards. Plan Sponsors and consultants cannot make a claim of compliance unless they actually manage assets for which they are making a claim of compliance. They can claim to endorse the Standards and/or require that their investment managers comply with the Standards."

**Investment Managers** - Performance is calculated for interim periods between all large external cash flows for a given month and geometrically linked to calculate period returns. An external cash flow is defined as cash, securities, or assets that enter or exit a portfolio. RVK defines a "large cash flow" as a net aggregate cash flow of  $\geq 10\%$  of the beginning-period portfolio market value or any cash flow that causes RVK calculated performance to deviate from manager/custodian reported performance in excess of 5 basis points for a given month.

**Composites** - The Modified Dietz methodology is utilized to calculate asset class, sub-asset class, and total fund composite performance. The Modified Dietz method calculates a time-weighted total rate of return that considers the timing of external cash flows; however, it does not utilize interim period performance to mitigate the impact of significant cash in- and outflows to the composite.

RVK calculates performance beginning with the first full month following inception. Since inception performance may vary from manager reported performance due to RVK using the first full month of returns as the inception date. Performance for both managers and composites is annualized for periods greater than one year.

**Portfolio Characteristics** - Due to disclosure guidelines set by each investment manager, portfolio characteristics shown are as of the most recent date available.

**Price to Earnings Ratio** - The ratio of a company's share price to its per-share earnings

**Private Equity Quartile Ranks** - Private Equity quartile ranks are generated using vintage year peer group data provided by Thomson Reuters, and are based on each fund's annualized, since inception internal rate of return (IRR). Three Private Equity peer groups are available via Thomson Reuters: Buyout, Venture, and All Private Equity. Ranks are available quarterly, at a one-quarter lag.

**Return** - Compounded rate of return for the period.

**% Return** - The time-weighted rate of return of a portfolio for a given period.

**R-Squared** - The percentage of a portfolio's performance explained by the behavior of the appropriate benchmark. High R-Squared means a higher correlation of the portfolio's performance to the appropriate benchmark.

**Risk Free Benchmark** - BofA ML 3 Mo US T-Bill Index unless specified otherwise.



## Glossary

**RVK Liquidity Rating** - A qualitative method for determining the relative amount of liquidity in a portfolio. The characteristics considered when determining relative liquidity include trading volume, gates for redemption, leverage, nature of transactions, and pricing mechanisms. The RVK Liquidity Rating is calculated using beginning of month investment weights applied to each corresponding asset class liquidity rating.

<u>Asset Class</u>	<u>RVK Liquidity Rating</u>	<u>Asset Class</u>	<u>RVK Liquidity Rating</u>
<u>Liquid Investments</u>		<u>Less Liquid Investments</u>	
T-Bills and Treasuries	100	Fixed Income Plus Sector	50
Cash Equivalents	98	Bank Loans	50
TIPS	95	Stable Value (Plan Sponsor Directed)	50
US Large Cap Equity	95	Absolute Return Strategies	35
Diversified Real Return	93		
Stable Value (Participant Directed)	91		
Non-US Large Cap Equity	90	<u>Not Liquid Investments</u>	
Global Tactical Asset Allocation	88	Core Real Estate	25
US Small Cap Equity	85	Core Plus Real Estate	15
REITS	85	Plus Only Real Estate	5
Non-US Small Cap Equity	85	Private Equity Funds of Funds	5
Emerging Markets Equity	85		
Core Fixed Income	85		
Core Plus Fixed Income	80		

**Sharpe Ratio** - Represents the excess rate of return over the risk-free return (i.e., BofA ML 3 Mo US T-Bill Index unless specified otherwise), divided by the standard deviation of the excess return. The result is the absolute rate of return per unit of risk. The higher the value, the better the product's historical risk-adjusted performance.

**Simple Alpha** - The difference between the manager's return and the benchmark's return.

**Spread Duration** - The approximate percentage change in a bond's price for a 100 basis point change in its spread over a Treasury of the same maturity.

**Standard Deviation** - A statistical measure of the range of a portfolio's performance. The variability of a return around its average return over a specified time period.

**Time Period Abbreviations** - **QTD** - Quarter-to-Date. **CYTD** - Calendar Year-to-Date. **FYTD** - Fiscal Year-to-Date. **YOY** - Year Over Year.

**Thematic Classification** - Represents dedicated manager allocations; as such, thematic allocations are approximations. RVK categorizes the following asset classes as Alpha, Capital Appreciation, Capital Preservation, and Inflation:

<u>Alpha</u>	<u>Capital Appreciation</u>	<u>Capital Preservation</u>	<u>Inflation</u>
Absolute Return Strategies	Public Equity	Core Fixed Income	TIPS
Currency Overlay	Private Equity	CMBS Fixed Income	Bank Loans
	Preferred Securities	Asset Backed Fixed Income	Core Real Estate
	High Yield	Domestic Core Plus Fixed Income	Real Return
	Convertible Fixed Income	Mortgage Backed Fixed Income	Inflation Hedges
	TALF Funds	International Developed Fixed Income	REITS
	Distressed Debt	Cash Equivalents	Commodities
	Emerging Market Fixed Income	Stable Value	
	Value Added Real Estate		
	Opportunistic Real Estate		

**Total Fund Attribution** - A method for identifying the sources of a total fund's over- or underperformance relative to its benchmark. The calculation identifies the contributions of positive or negative total fund excess return caused by allocation differences relative to the total fund's custom benchmark, and performance differences of the investment managers relative to the benchmark components that represent them.

### **Total Fund Performance** -

**Total Fund** - The percentage return of the total fund for the specified time period.

**Total Fund Benchmark** - The percentage return of the total fund benchmark for the specified time period; calculated using the target asset allocation and the corresponding benchmark returns.

**Total Value Added** - The percentage of over- or underperformance of the total fund as compared to the total fund benchmark.

### **Total Value Added** -

**Asset Allocation** - Shows how the variance of the total fund's actual allocation from its target allocation added to or subtracted from fund performance.

**Manager Value Added** - The portion of the total value added attributable to the outperformance or underperformance of the fund's investment managers, relative to the individual benchmarks that represent them in the total fund benchmark.

**Market Timing/Other** - The contribution of other residual factors, including estimation error and transaction timing.

**Total Fund Beta** - Total Fund Beta is calculated using the S&P 500 as the benchmark. It represents a measure of the sensitivity of the total fund to movements in the S&P 500 and is a measure of the Total Fund's non-diversifiable or systematic risk.

## Glossary

**Tracking Error** - A measure of the standard deviation of a portfolio's performance relative to the performance of an appropriate market benchmark.

**Treynor Ratio** - Similar to Sharpe ratio, but focuses on beta rather than excess risk (standard deviation). Treynor ratio represents the excess rate of return over the risk-free rate (i.e., BofA ML 3 Mo US T-Bill Index unless specified otherwise) divided by the beta. The result is the absolute rate of return per unit of risk. The higher the value, the better historical risk-adjusted performance.

**Unit Value** - The dollar value of a portfolio, assuming an initial nominal investment of \$100, growing at the compounded rate of %Return for a given period.

**Up Market Capture** - Up market by definition is positive benchmark return and up market capture represents the ratio in % terms of the average portfolios return over the benchmark during the up market period. The higher the value of the up market capture the better the product's performance.

**Yield to Maturity** - The rate of return achieved on a bond or other fixed income security assuming the security is bought and held to maturity and that the coupon interest paid over the life of the bond will be reinvested at the same rate of return. The 30-Day SEC Yield is similar to the Yield to Maturity and is reported for mutual funds.

**Yield to Worst** - The bond yield calculated by using the worst possible yield taking into consideration all call, put, and optional sink dates.



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