

**City of Hollywood**

# ANALYSIS OF INVESTMENT PERFORMANCE

**Employees' Retirement Fund**

*Fourth Quarter 2018*

**Keith Reynolds**

*Vice President & Senior Consultant*

# Table of Contents

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## ANALYSIS OF INVESTMENT PERFORMANCE

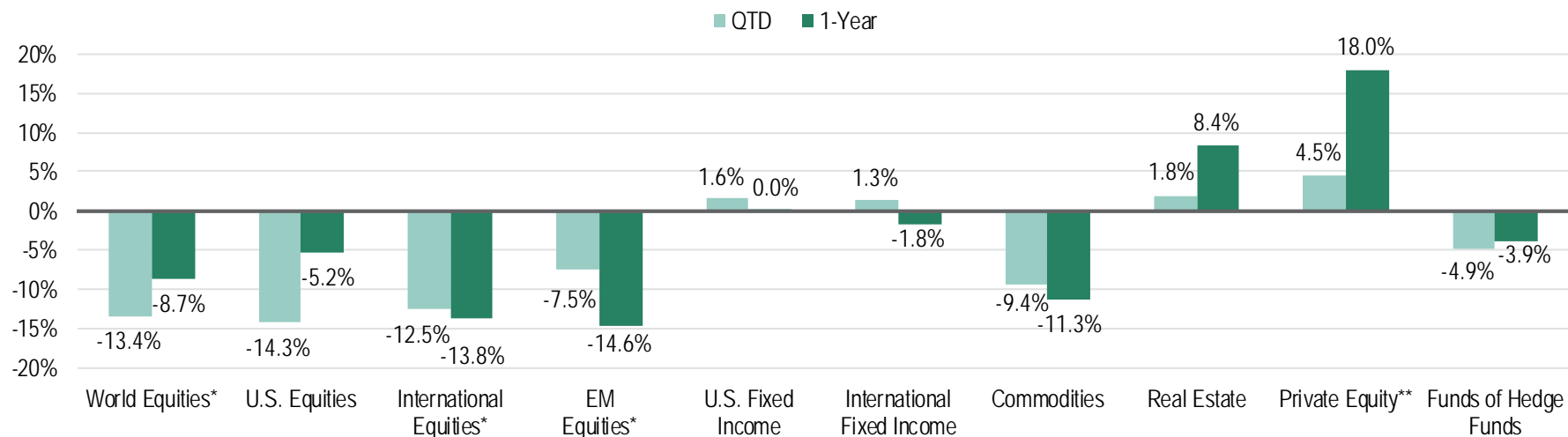
	<b>Section</b>
Financial Market Conditions.....	1
Total Fund.....	2
Investment Manager Performance.....	3

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# **Financial Market Conditions**

# Q4 2018 In Review

## Summary of Investment Returns



## Quarterly Synopsis

- World equity markets fell in Q4. Concerns about slowing global economic growth and trade tension stung markets.
- U.S. equity declined in the quarter. Fears about weaker economic growth and future corporate earnings hurt stocks.
- International equities were lower due to nervousness about decelerating growth, trade disagreements and Brexit.
- Emerging market equity declined in Q4 with worries over slowing growth in China and global trade.
- U.S. fixed income rose in the quarter. Investors flocked to safe assets like U.S. Treasuries in a period of high market volatility.
- Non-U.S. fixed income also gained in Q4, reflecting investors' risk aversion.
- Hedge funds fell during the quarter. Equity hedge and macro strategies posted declines.

\* Net of Dividends

\*\* Performance as of Q2 2018 because Q3 2018 and Q4 2018 performance data is not yet available.

Sources: Investment Metrics, Thomson One, FactSet

# Q4 2018 Index Returns

Asset Class	Indices	QTD	YTD	1-Year	3-Year	5-Year	10-Year
World Equity	MSCI World <sup>1</sup>	-13.42	-8.71	-8.71	6.30	4.56	9.67
U.S. Equity	Russell 3000	-14.30	-5.24	-5.24	8.97	7.91	13.18
Non-U.S. Equity	MSCI EAFE <sup>1</sup>	-12.54	-13.79	-13.79	2.87	0.53	6.32
Emerging Market Equity	MSCI EM <sup>1</sup>	-7.47	-14.58	-14.58	9.25	1.65	8.02
U.S. Fixed Income	Bloomberg Barclays U.S. Aggregate	1.64	0.01	0.01	2.06	2.52	3.48
Non-U.S. Fixed Income	FTSE <sup>2</sup> Non-U.S. WGBI (Unhedged)	1.31	-1.82	-1.82	3.32	0.28	1.27
Commodities	Bloomberg Commodity Index	-9.41	-11.25	-11.25	0.30	-8.80	-3.78
Private Real Estate	NFI-ODCE <sup>3</sup>	1.76	8.35	8.35	8.24	10.41	7.00
Private Equity	Thomson Reuters Private Equity <sup>4</sup>	4.50	7.71	18.01	12.11	14.42	10.09
Hedge Funds	HFRI Fund of Funds Composite	-4.85	-3.92	-3.92	1.34	1.42	3.13

<sup>1</sup> Net of Dividends

<sup>2</sup> Formerly Citigroup Non-U.S. WGBI. Citigroup's fixed income indices were purchased by London Stock Exchange Group (LSEG) and were all rebranded to FTSE by July 31, 2018. FTSE Russell is a unit of LSEG's Information Services Division and a wholly owned subsidiary of LSEG.

<sup>3</sup> NCREIF Fund Index (NFI) – Open End Diversified Core Equity (ODCE)

<sup>4</sup> Performance as of Q2 2018 because Q3 2018 and Q4 2018 performance data is not yet available.

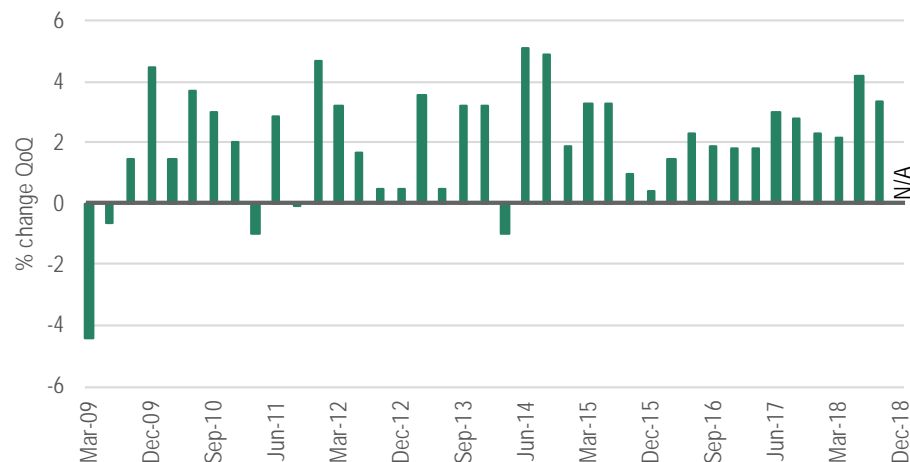
Sources: Investment Metrics, Thomson One, FactSet

# Q4 2018 In Review: U.S. Economy

## GDP Growth

- The release of Q4 2018 GDP data has been delayed due to the partial U.S. government shutdown. Although the government has reopened, the Bureau of Economic Analysis (BEA) is awaiting the underlying data it needs from other government agencies to assess GDP growth during the quarter.
- Real GDP grew at a rate of 3.4% in Q3 2018, which is 0.1% lower than previously reported, according to the BEA's third estimate of economic growth for that quarter.
- In the BEA's third revision to Q3 GDP, it noted that personal consumption expenditures and exports were revised down, and private inventory investment was revised up.

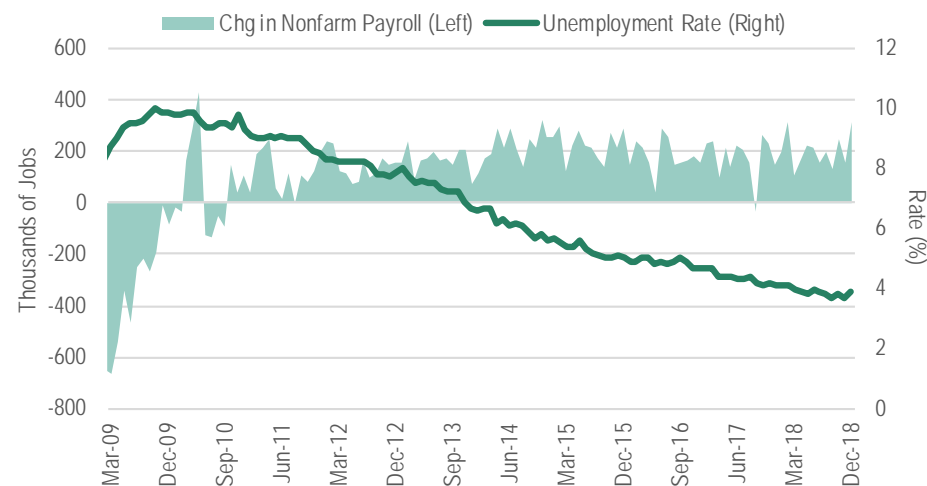
U.S. Real GDP Growth



## Employment Picture

- The unemployment rate rose to 3.9% in December. Nonfarm payrolls rose by 762,000 over the quarter.
- Employment gains were led by health care, food services and drinking places, construction, manufacturing and retail.
- Employment in industries such as mining, wholesale trade, transportation and warehousing, information, financial activities, and government, showed little change.

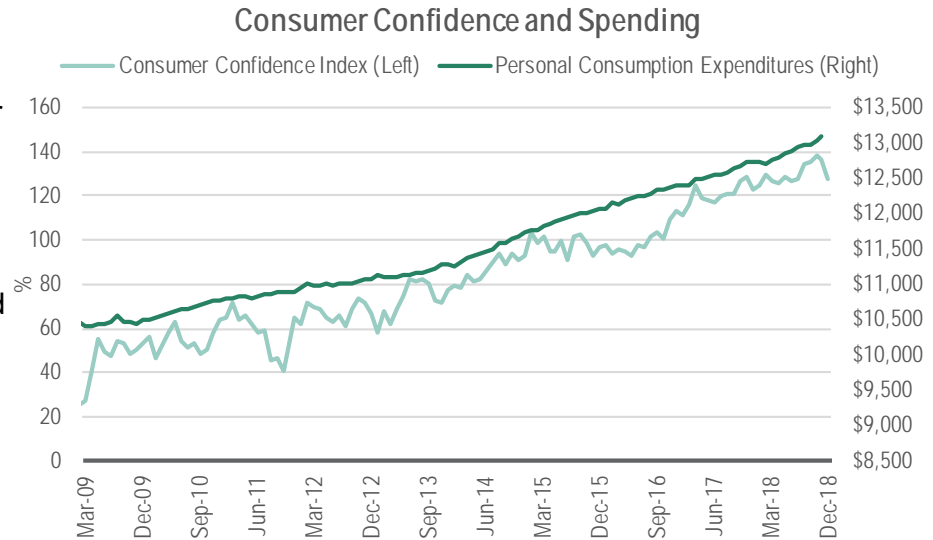
U.S. Nonfarm Payrolls and Unemployment Rate



# Q4 2018 In Review: U.S. Economy

## Consumer Confidence and Spending

- Sentiment declined in Q4, as the Conference Board's Consumer Confidence Index decreased from 135.3 at the end of September to 128.1 at the end of December.
- Personal consumption expenditures increased during the quarter.
- Consumer confidence fell as global trade tensions persisted and worries grew about the state of the global economy.



## Retail Sales

- Retail sales ended November\* up 4% from one year ago.
- Online retail sales, furniture and electronics sales gained most in November.
- November's relatively strong retail sales data followed a solid October, keeping expectations in place for strong results overall for Q4.

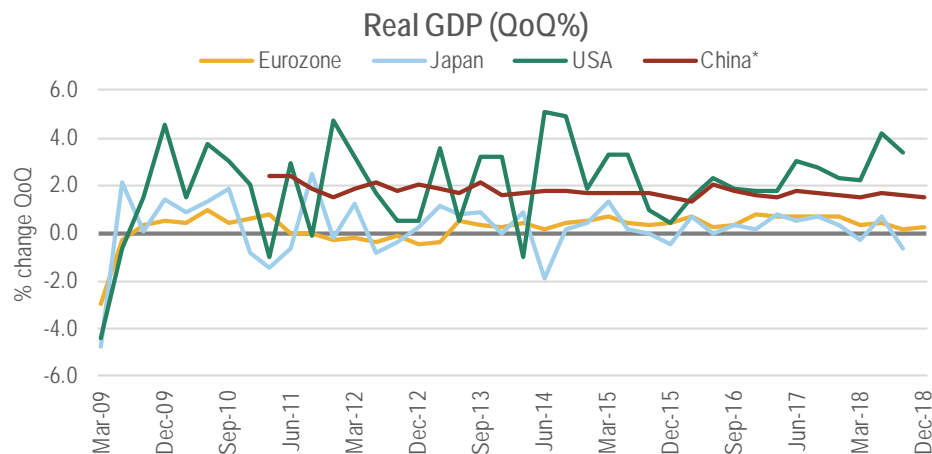


\*The most recent data available.  
Source this page: FactSet

# Q4 2018 In Review: Global Economy

## World GDP Growth

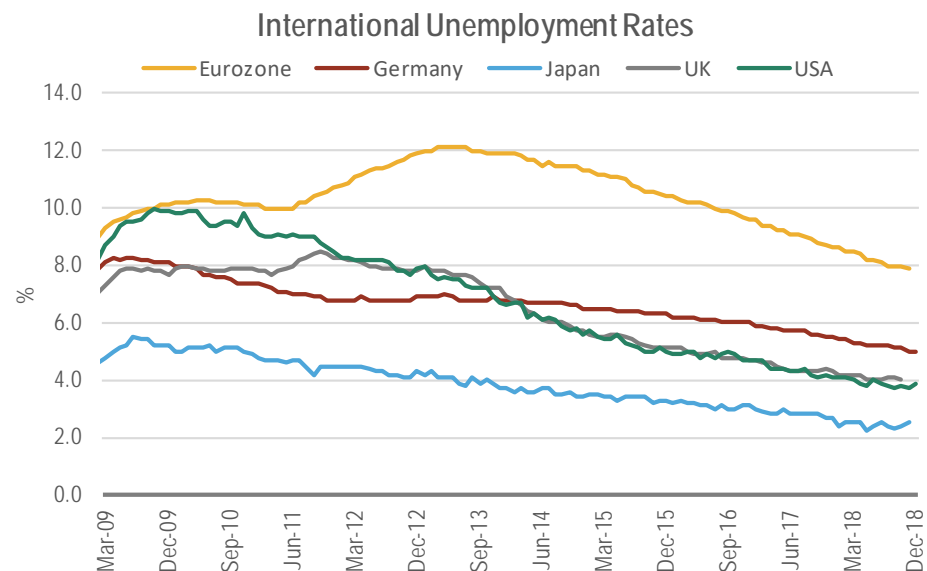
- Eurozone GDP growth remained weak in Q4, gaining 0.2% quarter over quarter (QoQ). The Eurozone's annual growth rate fell to 1.2% at the end of 2018.
- China's GDP growth declined by 0.1% QoQ to 1.5% in Q4. The country's annual growth rate slowed to 6.4%.
- Japan's GDP was negative QoQ in Q3\*\*, coming in at -0.6%. The Japanese economy's annual growth rate is now flat at 0%.
- The U.S. Q4 GDP report from the BEA is delayed in the wake of the partial government shutdown.



Note that the figures in the graph above represent the percent change in real GDP from the previous quarter, not the annual growth rate of these economies.

## Global Employment Picture

- Eurozone unemployment fell to 7.9% in November 2018\*\*, the region's lowest-recorded rate since October 2008. The Eurozone's recent economic strength has led to this reduction in unemployment, although economic momentum has slowed there this year.
- Japan's unemployment rate ticked up to 2.5% in November. While higher than its earlier historic low of 2.2%, unemployment remained quite modest in Japan.



\*Quarter over quarter data calculations began in 2011.

\*\*Most recent data available.

Source this page: FactSet



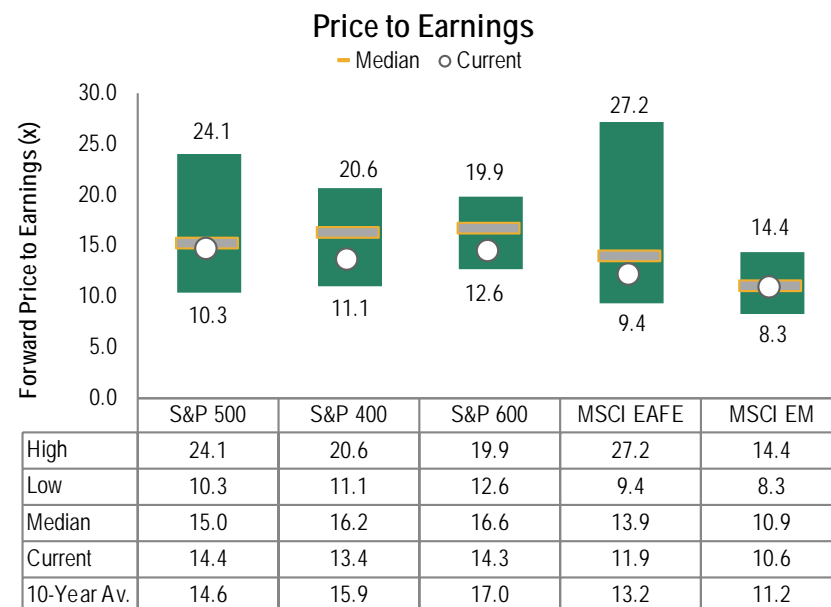
# Q4 2018 In Review: Global Equity Overview

Equity Indices	QTD	YTD	1-Year	3-Year	5-Year	10-Year
S&P 500	-13.52	-4.38	-4.38	9.26	8.49	13.12
MSCI Europe, Australasia and Far East (EAFE)*	-12.54	-13.79	-13.79	2.87	0.53	6.32
MSCI Emerging Markets (EM)*	-7.47	-14.58	-14.58	9.25	1.65	8.02

All data in the table are percentages.  
\* Net of dividends

## Global Equity Performance and Valuations

- Equity markets declined across the globe in Q4, but the U.S. fared the worst. Concerns about a slowing economy, weaker earnings growth and rising interest rates weighed heavily on returns. The strength of the U.S. dollar (USD) continued to be a headwind to international and emerging market (EM) equities, although USD appreciation moderated throughout the quarter.
- On a positive note, U.S., non-U.S. developed, and EM equities are all in positive territory over the 3-, 5-, and 10-year periods.
- The P/E multiple for U.S. large cap fell below median in Q4, indicating relative cheapness. U.S. small and mid caps now look very attractive versus their medians.
- The MSCI EAFE P/E multiple is 2x lower than its median. As such, international equities appear to be undervalued according to this measure.
- The MSCI EM P/E multiple ended Q4 just south of its median. EM equities appear close to fairly valued by this measure.



Data range is from 12/31/99-12/31/18. P/E ratios are forward 12 months.

# Q4 2018 In Review: U.S. Equity

U.S. Equity Indices	QTD	YTD	1-Year	3-Year	5-Year	10-Year
S&P 500	-13.52	-4.38	-4.38	9.26	8.49	13.12
Russell 1000	-13.82	-4.78	-4.78	9.09	8.21	13.28
Russell 1000 Growth	-15.89	-1.51	-1.51	11.15	10.40	15.29
Russell 1000 Value	-11.72	-8.27	-8.27	6.95	5.95	11.18
Russell 2000	-20.20	-11.01	-11.01	7.36	4.41	11.97
Russell 2000 Growth	-21.65	-9.31	-9.31	7.24	5.13	13.52
Russell 2000 Value	-18.67	-12.86	-12.86	7.37	3.61	10.40
Russell 3000	-14.30	-5.24	-5.24	8.97	7.91	13.18

All data in the tables are percentages.

## Performance

- U.S. equities fell sharply in Q4. The decline was largely driven by slowing economic growth and uncertainty surrounding Fed interest rate policy.
- Small cap stocks were more sensitive to weakening market sentiment and underperformed large cap stocks during Q4.
- The more defensive sectors of the S&P 500 offered some protection in Q4. Utilities posted the only positive return of the quarter. Consumer Staples and Healthcare experienced losses that were less steep than the more cyclical sectors of the index. Of those cyclical sectors, Energy, IT and Industrials fared the worst.
- In a reversal of the trend seen in previous quarters, value stocks performed better than growth stocks, as higher-priced growth companies sold off amid fears of a global slowdown in economic growth.

S&P 500 Sector Returns	QTD	1-Year
Consumer Discretionary	-16.50	0.43
Consumer Staples	-5.44	-9.22
Energy	-23.97	-18.82
Financials	-13.26	-13.52
Healthcare	-8.83	5.93
Industrials	-17.42	-13.81
Information Technology	-17.44	-0.69
Materials	-12.46	-15.23
Communications Services	-13.30	-13.72
Utilities	1.10	3.00

# Q4 2018 In Review: International Equity

MSCI International Equity Indices	QTD	YTD	1-Year	3-Year	5-Year	10-Year
World ex. U.S.	-12.78	-14.09	-14.09	3.11	0.34	6.24
EAFE	-12.54	-13.79	-13.79	2.87	0.53	6.32
EAFE Local Currency	-12.20	-10.99	-10.99	2.62	3.81	7.50
Europe	-12.72	-14.86	-14.86	2.10	-0.61	6.15
Europe ex U.K.	-13.08	-15.14	-15.14	2.29	-0.13	5.79
U.K.	-11.78	-14.15	-14.15	1.60	-1.71	6.84
Pacific ex Japan	-7.94	-10.30	-10.30	6.79	2.10	9.89
Japan	-14.23	-12.88	-12.88	3.41	3.06	5.33

All data in the tables are percentages and net of dividends.

## Performance

- Despite posting double-digit negative absolute returns in Q4, international equities fared better than the U.S. for the first time all year. The unresolved tariff dispute between the U.S. and China, the tightening Fed, Brexit concerns, Italian politics and the slowing global economy put pressure on developed markets.
- The ongoing uncertainty surrounding the Brexit negotiations weighed on UK market performance in addition to business and consumer confidence. Against this backdrop, the Bank of England maintained rates at 0.75%.
- Sector returns were all negative in Q4, with defensive stocks performing the best in a relative sense. Utilities, Telecom and Staples declined the least of all sectors as the market returned to a risk-off environment during the quarter. The best performers over the past 12-18 months (Tech and Energy) sold off despite solid earnings. Cyclical sectors such as Financials, Materials and Industrials struggled due to the impact of rising interest rates in the U.S. and tariffs.

MSCI EAFE Sector Returns	QTD	1-Year
Consumer Discretionary	-14.19	-16.11
Consumer Staples	-8.36	-10.83
Energy	-17.54	-7.18
Financials	-13.69	-20.10
Healthcare	-10.26	-4.32
Industrials	-14.63	-15.69
Information Technology	-16.72	-15.64
Materials	-15.22	-17.50
Telecommunications Services	-7.68	-12.08
Utilities	-0.08	1.10

# Q4 2018 In Review: Emerging Market Equity

MSCI EM Equity Indices	QTD	YTD	1-Year	3-Year	5-Year	10-Year
Emerging Markets	-7.47	-14.58	-14.58	9.25	1.65	8.02
EM Local Currency	-7.43	-10.08	-10.08	8.79	5.00	9.58
Asia	-9.29	-15.45	-15.45	8.63	3.94	9.81
EMEA	-4.14	-16.11	-16.11	7.81	-3.20	4.94
Latin America	0.36	-6.57	-6.57	14.85	-1.73	4.98

All data in the tables are percentages and net of dividends.

## Performance

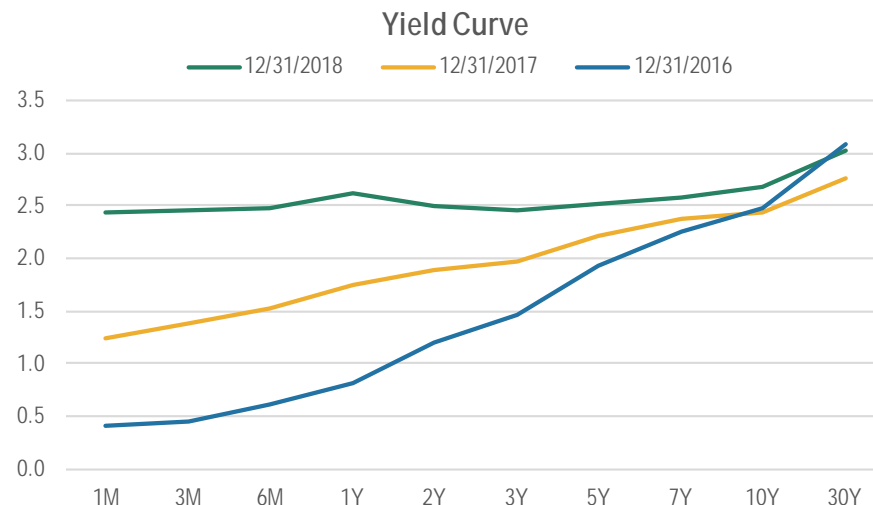
- Emerging markets, which suffered for much of 2018, dropped 7.5% in Q4. EM fell less than the U.S. and developed markets during the quarter.
- Fears of a slowdown in global growth and uncertainty around continuing trade tensions contributed to EM's Q4 decline.
- The standout performer in EM in Q4 was Brazil, which climbed nearly 14% on prospects for a more business-friendly government from newly elected president Jair Bolsonaro.
- Sector returns were primarily negative in Q4. Utilities posted the only gain while Healthcare, Consumer Discretionary, Tech, Energy and Materials fell sharply.

MSCI EM Sector Returns	QTD	1-Year
Consumer Discretionary	-13.52	-32.50
Consumer Staples	-4.59	-13.65
Energy	-10.60	4.67
Financials	-0.88	-8.68
Healthcare	-16.17	-20.89
Industrials	-3.78	-12.58
Information Technology	-12.71	-19.29
Materials	-10.75	-11.58
Telecommunications Services	-3.72	-14.93
Utilities	3.62	-3.79

# Q4 2018 In Review: Fixed Income Overview

## Yield Curve

- Treasury yields rose across the short end of the curve in Q4 with the Fed continuing to tighten its monetary policy. Yields compressed across maturities greater than 1 year.
- Global demand accentuated the yield curve's flattening trajectory, as long-term Treasury yields fell and the very front end of the curve moved up modestly.
- The 30-year Treasury ended the quarter yielding 3.02%, which was 17 basis points (bps) lower than it was at the end of Q3. The 2-year Treasury ended the quarter at 2.48%, which was 42 bps lower than the prior quarter.

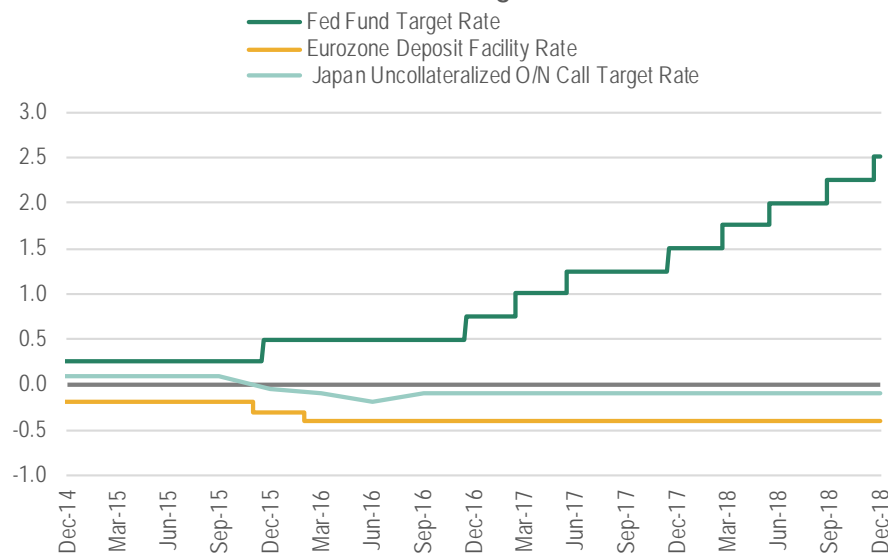


## Monetary Policies/Global Interest Rates

- Central bank deposit rates remained negative in the Eurozone and Japan.
- The U.S. is the exception—the Federal Reserve (Fed) raised rates again in December, the fourth hike of 2018.
- The Fed indicated that its plans for future rate increases are less clear now than previously stated due to concerns about market volatility and economic growth.

Interest Rates	Fed Funds Rate	EZ Deposit Facility Rate
Average	5.69% (1971-2018)	1.28% (1999-2018)
Max	20.0% (Mar. 1980)	3.75% (Oct. 2000)
Min	0.25% (Dec. 2008)	-0.40% (Mar. 2016)

## Central Bank Target Rates



# Q4 2018 In Review: U.S. Fixed Income

U.S. Fixed Income Indices*	QTD	YTD	1-Year	3-Year	5-Year	10-Year
U.S. Aggregate	1.64	0.01	0.01	2.06	2.52	3.48
Government/Credit	1.46	-0.42	-0.42	2.19	2.53	3.46
Government	2.54	0.88	0.88	1.41	1.99	2.12
Investment Grade Corporate	-0.18	-2.51	-2.51	3.26	3.28	5.92
Investment Grade CMBS	1.66	1.01	1.01	2.67	2.63	7.54
U.S. Corporate High Yield	-4.53	-2.08	-2.08	7.23	3.83	11.12
FTSE** 3-Month T-Bill	0.57	1.86	1.86	0.99	0.60	0.35
Hueler Stable Value	0.59	2.23	2.23	1.99	1.89	2.24

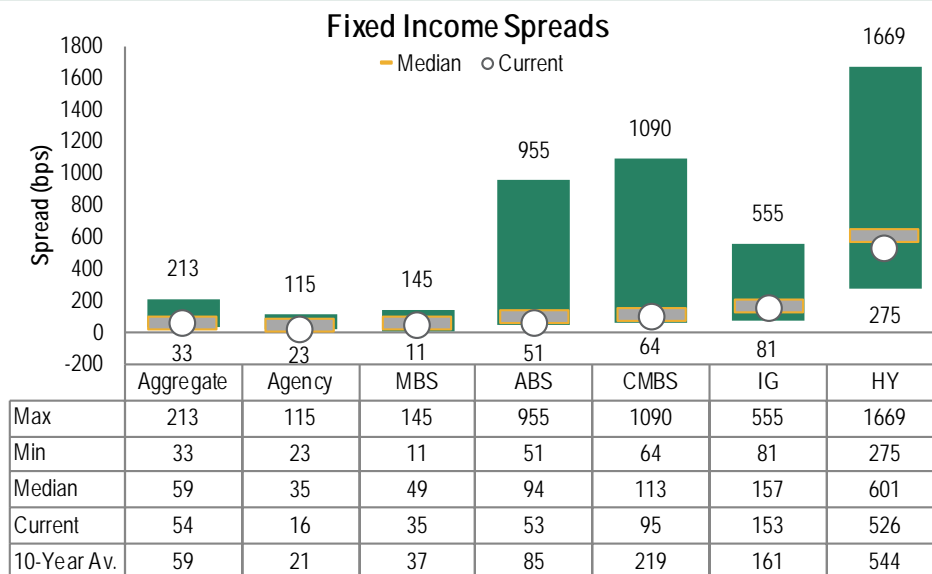
\* Bloomberg Barclays Indices, unless otherwise noted.

\*\* Formerly Citigroup. Citigroup's fixed income indices were purchased by London Stock Exchange Group (LSEG) and were rebranded to FTSE by July 31, 2018. FTSE Russell is a unit of LSEG's Information Services Division and a wholly owned subsidiary of LSEG.

All data in the table are percentages.

## Performance and Spreads

- The U.S. Aggregate Index was positive in Q4. Performance was driven by Treasuries and Agency MBS, which both returned over 2.0%.
- High yield experienced a -4.50% return in Q4 as market stress impacted higher yielding credits.
- Several domestic fixed income spreads are back near historical medians due to the broad credit market selloff.



# Q4 2018 In Review: International Fixed Income

Global Fixed Income Indices	QTD	YTD	1-Year	3-Year	5-Year	10-Year
Bloomberg Barclays Global Aggregate	1.20	-1.19	-1.19	2.70	1.08	2.49
Bloomberg Barclays Global Aggregate (Hgd)	1.74	1.77	1.77	2.91	3.45	3.78
FTSE Non-U.S. WGBI*	1.31	-1.82	-1.82	3.32	0.28	1.27
FTSE Non-U.S. WGBI (Hgd)	2.29	3.49	3.49	3.55	4.36	3.76
JPM EMBI Global Diversified**	-1.26	-4.26	-4.26	5.15	4.80	8.20
JPM GBI-EM Global Diversified***	2.11	-6.21	-6.21	5.91	-0.96	3.45

All data in the table are percentages.

\* Formerly Citigroup. The FTSE Non-U.S. World Government Bond Index (WGBI) measures the performance of fixed-rate, local currency, investment grade sovereign bonds excluding the U.S.

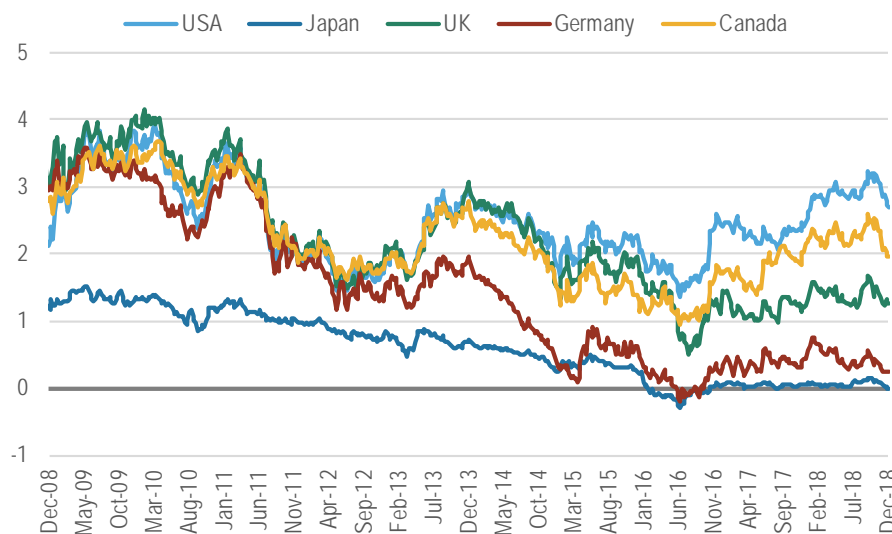
\*\* The JP Morgan Emerging Market Bond Index (EMBI) Global Diversified index measures government bonds in hard currencies.

\*\*\* The JP Morgan Government Bond Index – Emerging Markets (GBI-EM) Global Diversified index measures government bonds in local currencies.

## Global Performance and Yields

- Government yields fell in Q4 across developed markets.
- The euro and British pound depreciated relative to the U.S. dollar, while the Japanese yen appreciated. In emerging markets, currency depreciation was particularly pronounced in commodity exporting countries like Russia, as well as select Latin American countries such as Mexico and Colombia.
- In Q4, central banks continued to adjust policy away from accommodation. The ECB ended its bond purchase program in Q4 and the BoJ continued to reduce its bond buying as well. However, extreme market conditions caused the Fed to have a slightly more dovish tone at the end of the quarter.

## Global 10-Year Treasury Yields



# Q4 2018 In Review: Absolute Return Strategies

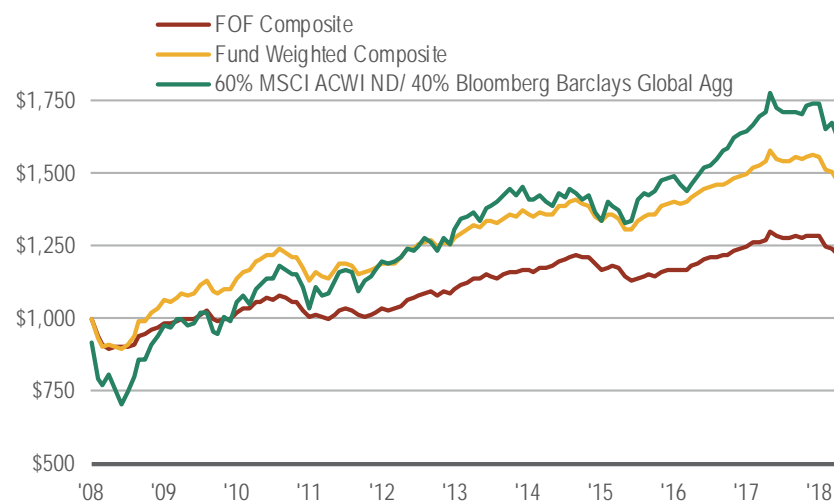
HFRI Indices	QTD	YTD	1-Year	3-Year	5-Year	10-Year
Fund of Funds Composite	-4.85	-3.92	-3.92	1.34	1.42	3.13
Fund Weighted Composite	-5.76	-4.49	-4.49	3.03	2.17	4.94
Event Driven	-5.03	-2.35	-2.35	5.12	2.52	6.50
Equity Hedge	-8.31	-6.94	-6.94	3.60	2.31	5.66
Macro	-1.86	-3.63	-3.63	-0.16	0.74	1.10
Emerging Markets	-4.28	-11.14	-11.14	4.32	1.36	5.29
Relative Value	-3.22	-0.24	-0.24	4.14	3.21	6.89

All data in the table are percentages.  
Returns for periods greater than one year are annualized.

## Hedge Fund Performance

- The HFRI Fund Weighted Composite declined 5.8% during Q4. All of the major hedge fund strategies fell during the quarter. Macro lost the least due to contributions from currency and discretionary thematic managers that were defensively positioned.
- Equity Hedge declined the most in Q4. Volatility spiked early in the quarter following sharp declines in crude oil. Managers with exposure to energy and basic materials were the most adversely affected, followed not too distantly by managers with significant positioning in the technology sector.
- The Fund Weighted Composite and Fund of Funds Composite indices also experienced losses in Q4, but they outperformed the 60/40 Balanced MSCI ACWI/Bloomberg Barclays Global Aggregate index, which decreased 7.2% during the quarter.

HFR Hedge Fund and Fund of Fund Weighted Composite Growth of \$1000



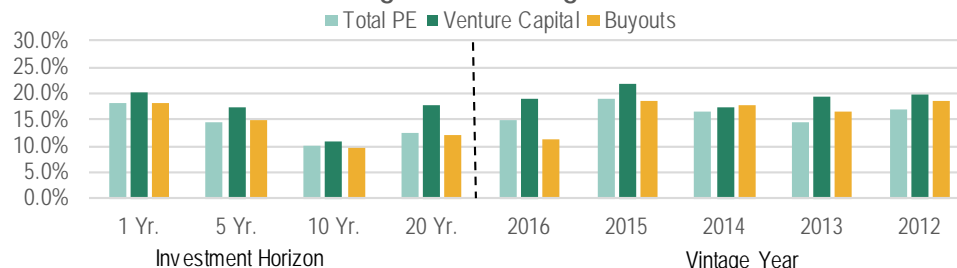


# Q4 2018 In Review: Private Equity

## Performance

- The total return for private equity funds, comprising performance across all regions and strategies, was 4.5% in Q2 2018\* and 18.0% over the 1-year period ending Q2.
- The 5-, 10-, and 20-year returns for private equity funds were 14.4%, 10.1% and 12.7%, respectively, at the end of Q2.
- Fund performance has been strong across all recent vintage years.

Private Equity Performance by Investment Horizon and Vintage Year: All Regions

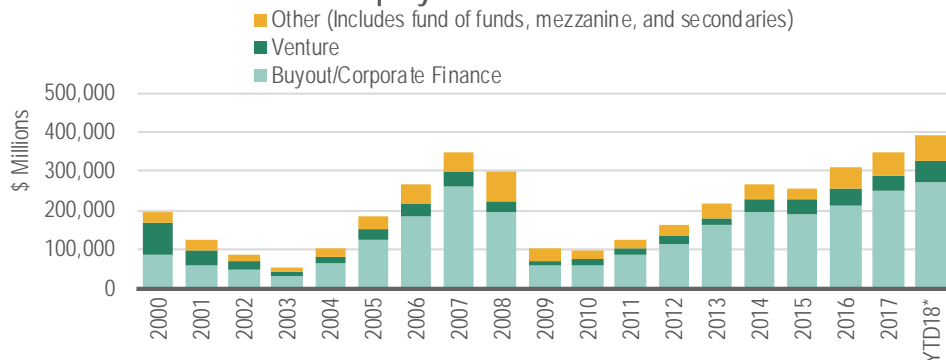


\*Vintage year refers to the first year that capital was committed in a particular fund. Vintage-year performance is calculated as the median percentile returns of all funds reporting as pooled IRRs.

## Fundraising

- U.S. private equity funds raised approximately \$392.1 billion across 1,136 funds through December 17, 2018\*, which is on par with 2017's annual fundraising data.
- On a global basis, private equity fundraising dropped \$140 billion from 2017 to 2018. The 10 largest funds accounted for nearly one-quarter of the total capital raised in 2018 as many investors consolidated their investments with managers with proven track records.

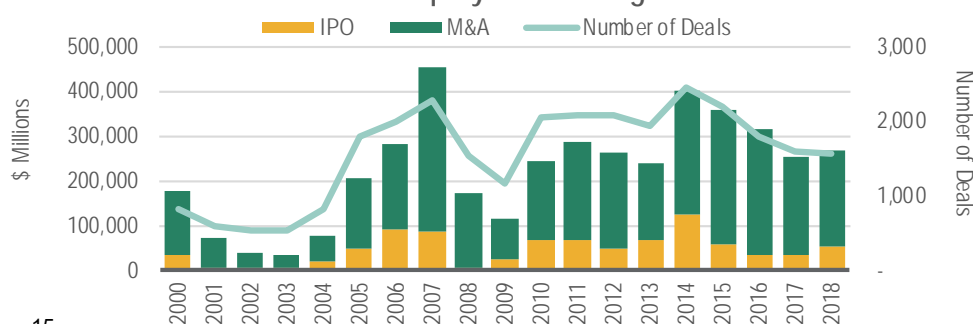
Private Equity Commitments: United States



## Exit Activity

- There were 1,582 private equity-backed exit deals completed in 2018, roughly the same number as in 2017. Due to the active IPO windows in major markets globally, aggregate IPO deal value increased from \$33.8 billion in 2017 to \$52.9 billion in 2018.
- The largest private equity-backed exits in 2018 included Flipkart (\$16.0 billion), AveXis (\$8.7 billion), BMC Software (\$8.3 billion), Qualtrics (\$8.0 billion), Blue Buffalo (\$7.9 billion), and GitHub (\$7.5 billion).

Private Equity Exit: All Regions



\*The most recent data available.

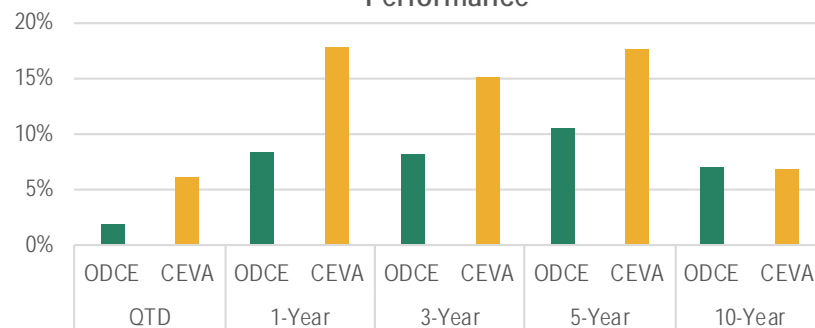
Sources this page: Thomson Reuters, Private Equity Analyst, Preqin

# Q4 2018 In Review: Real Estate

## Real Estate Performance

- Comparing the most recent performance of core real estate, as measured by the NFI-ODCE index (Q4 2018), and value add real estate, as measured by the CEVA index (Q3 2018), the CEVA outperformed the ODCE by 436 bps.
- With the exception of the 10-year rolling period, the CEVA has outperformed the ODCE by an average of 692 bps.
- Over the QTD, 1, 3, 5, and 10-year periods, the ODCE has had a gross rolling return standard deviation of 2.9% compared to the CEVA's at 5.1%.
- Public real estate, as measured by the FTSE EPRA/NAREIT Developed Real Estate Index\*, returned -5.5% in Q4.

NCREIF Fund Index (NFI) Open-End Diversified Core (ODCE) and Closed End Value-Add (CEVA) Real Estate Performance



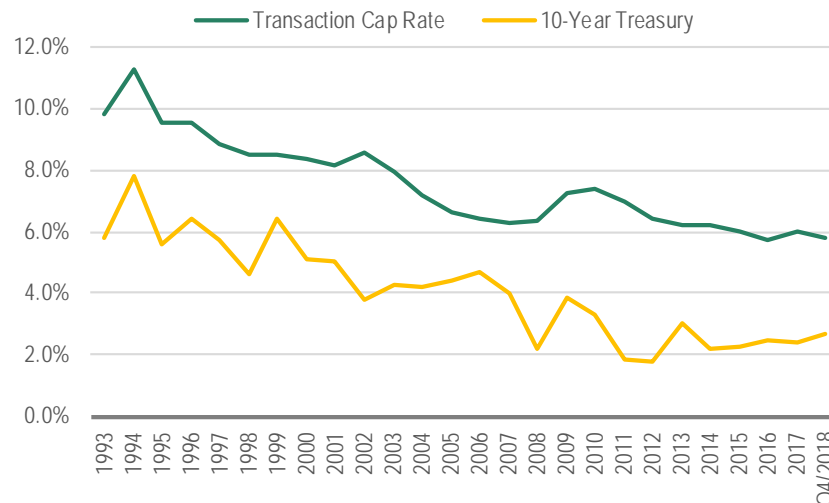
The NFI-ODCE (Open-end Diversified Core Equity) is defined by NCREIF as a fund-level cap-weighted, gross of fee, time-weighted return index with an inception date of December 31, 1977.

The NFI-CEVA Index, which is a quarter lagged in performance reporting, is defined by NCREIF as a capitalization-weighted, gross of fees, time-weighted return index. Funds included in the index must be closed-end with a value-add strategy operated for U.S. institutional investors and must comply with NCREIF's data collection and reporting standards.

## Real Estate Capitalization Rates\* vs. Treasuries

- Prime assets have seen strong capital flow, which has kept investment values generally stable. However, there are concerns that values may have peaked or are even poised to fall due to significant appreciation and higher interest rates. Lower quality assets are at the greatest risk of price declines.
- Prevailing cap rates have been buoyed by historically wide spreads versus financing costs and persistent demand for real estate.
- Further compounding the cap rate spread issue, there is a record level of capital available to invest in real estate.

Capitalization Rates & 10-Year U.S. Treasury



\* The FTSE EPRA Nareit Developed Index is designed to track the performance of listed real estate companies and REITs worldwide.

\*\* A cap rate is the potential rate of return on a real estate investment. Assuming no change in net operating income, real estate valuations rise when cap rates fall. Comparing cap rates to the 10-year U.S. Treasury provides investors with an estimated spread for expected returns from real estate (higher risk) vs. fixed rate bond (lower risk) investments.

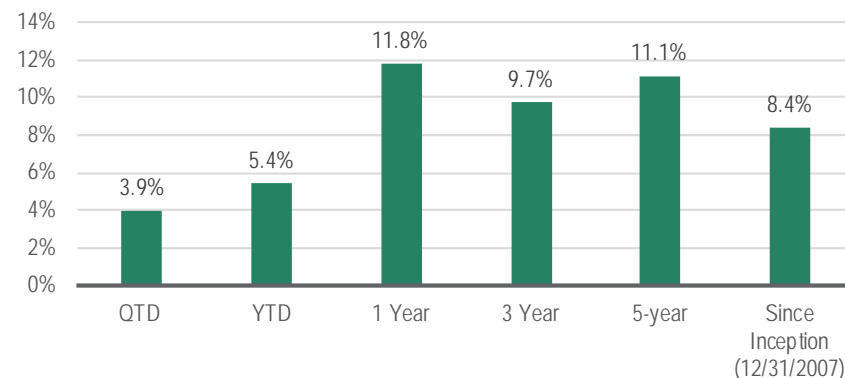
Sources this page: NCREIF, Bloomberg

# Q4 2018 In Review: Infrastructure

## Infrastructure Performance

- Private infrastructure gained 3.9% in Q2 2018\* and 11.8% over the 1-year period ending June 30, 2018.
- The 1-, 3-, and 5-year results exceeded the since-inception return, indicating the asset class has recovered well from the global financial crisis. The strong Q2 2018 return is a good sign for investors after a weak Q1(1.4%).
- The average deal size in 2018 (\$412.7 million) was significantly higher relative to history (\$329.3 million), which could be a sign of elevated valuations.
- Public infrastructure registered a -2.4% return in Q4 2018, as per the FTSE Global Infrastructure 50/50 Index.

Preqin Infrastructure Annualized Return as of 6/30/2018\*

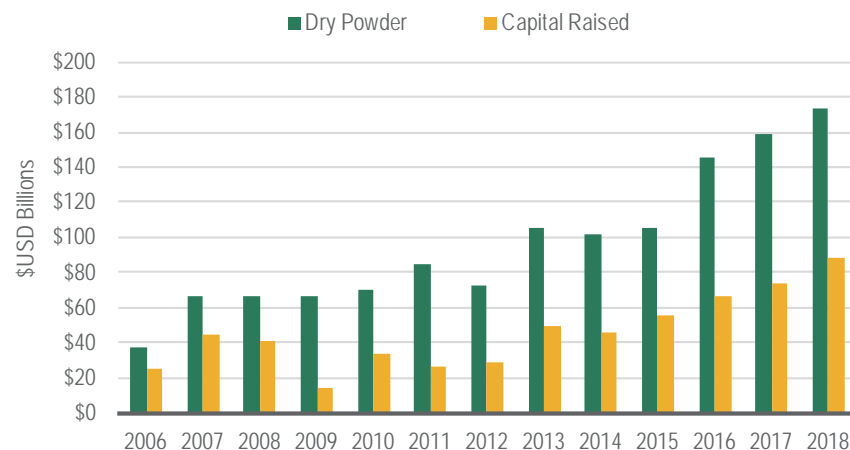


According to Preqin, the Preqin Infrastructure Index captures the average returns earned by investors in their infrastructure portfolios, based on the actual amount of money invested. The Preqin Infrastructure index is calculated on a quarterly basis using data from Preqin's Infrastructure Online services.

## Dry Powder and Fundraising

- Infrastructure fundraising fell from a record high of \$43.9 billion in Q3 to \$13.2 billion in Q4. The average fund size on a quarterly basis was \$1.1 billion in Q4, which is greater than the historical average quarterly fund size of \$883.8 million.
- Dry powder\*\* decreased slightly in Q4 as fundraising declined. Funds raised \$13.2 billion during the quarter and dry powder fell by \$3 billion.
- The average deal size increased from \$334.9 million in 2017 to \$412.7 million in 2018, which helped managers deploy more capital and offload dry powder. Despite this fact, dry powder stood at \$173 billion at the end of 2018.

Dry Powder and Fundraising



\*The most recent data available.

\*\*Dry powder is capital raised that hasn't yet been invested.

Sources this page: Preqin

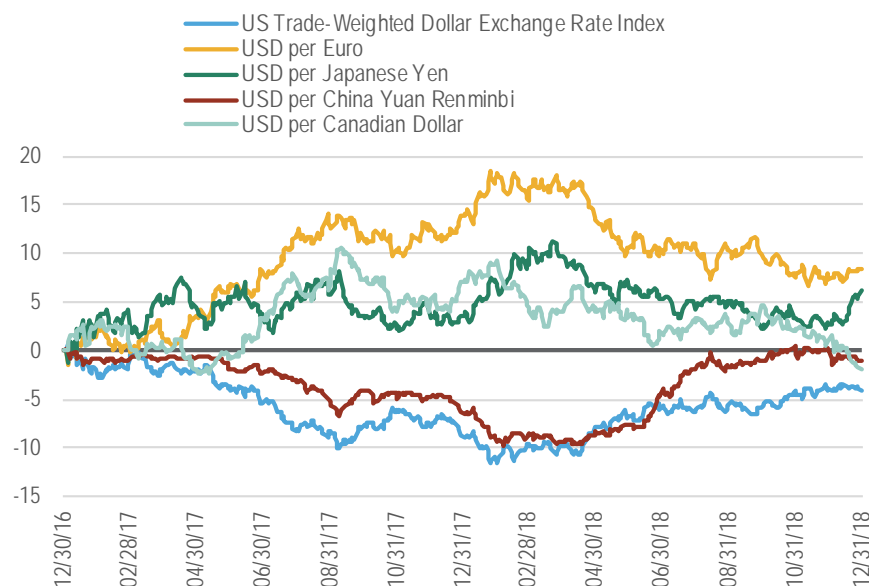
# Q4 2018 In Review: Commodities and Currencies

BCOM Indices	QTD	YTD	1-Year	3-Year	5-Year	10-Year
Bloomberg Commodity Index (BCOM)	-9.41	-11.25	-11.25	0.30	-8.80	-3.78
Energy	-25.78	-12.70	-12.70	-0.97	-18.47	-13.14
Agriculture	0.15	-10.79	-10.79	-6.78	-9.10	-2.88
Industrial Metals	-8.69	-19.48	-19.48	7.69	-3.19	1.60
Precious Metals	6.82	-4.57	-4.57	5.05	-0.86	3.10
Livestock	0.69	-1.71	-1.71	-0.45	-2.23	-2.79

## Commodity and Currency Highlights

- The Bloomberg Commodity Index fell during Q4. Performance across the underlying sectors varied significantly.
- Energy fell 25.8% in Q4, erasing a 17.6% YTD gain through Q3. West Texas Intermediate crude oil, gasoline, and Brent crude oil prices all declined more than 30% during the quarter. Concerns about oversupply entered the market with stronger-than-expected oil exports from Saudi Arabia and OPEC, coupled with decreased demand expectations amid a weakening global economy.
- Precious metals gained in Q4. Gold and silver rose amid worries of continuing global trade tensions and slowing growth in China, a major consumer of gold.
- The USD continued to rise against most major currencies in Q4, though its strength moderated.
- The euro decreased slightly versus the USD, while the yen appreciated.
- The yen's appreciation may hurt exports, which could continue to drag on Japan's GDP growth.

## Major World Currencies Indexed to Zero

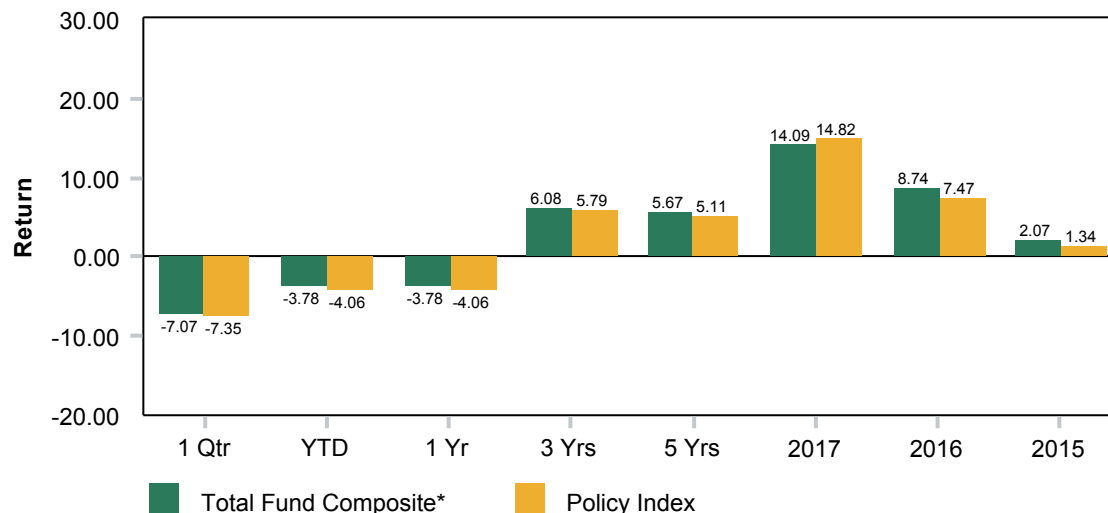


## **Total Fund Composite**

Asset Allocation by Segment

Segments	Market Value (\$)	Allocation (%)
Domestic Equity	93,879,952	29.42
Domestic Fixed Income	88,052,198	27.60
International Equity	55,463,155	17.38
Real Estate	33,818,780	10.60
Private Equity	33,406,297	10.47
Alternative Investment	12,593,895	3.95
Cash	1,865,602	0.58

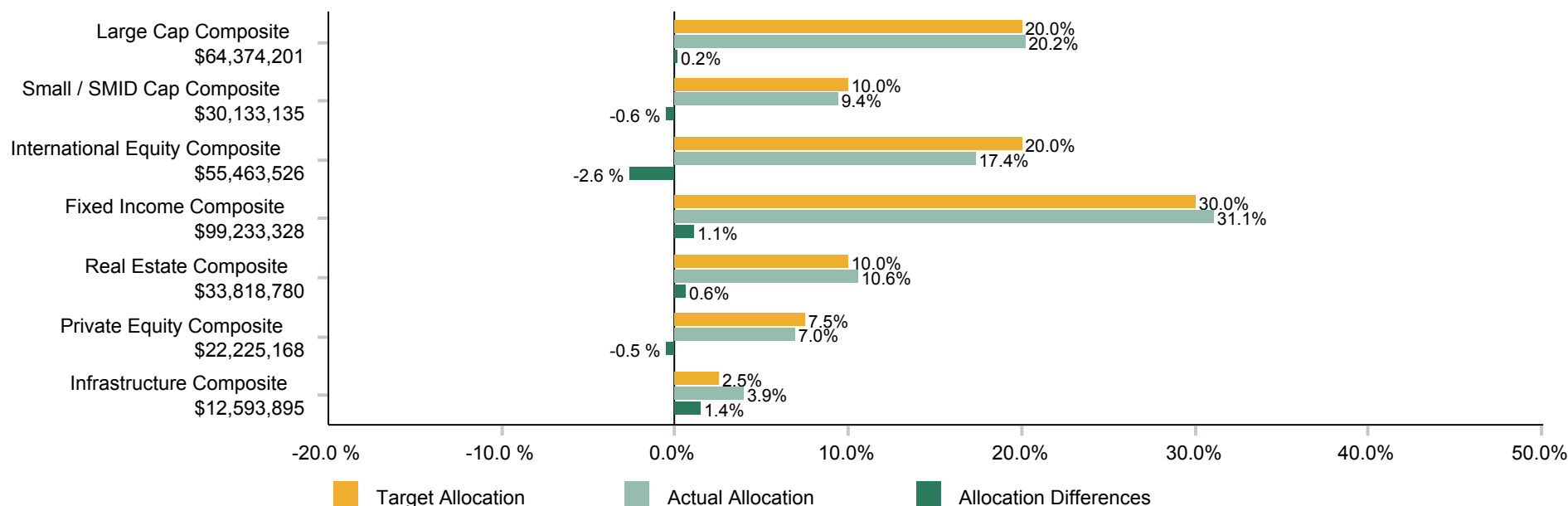
Performance Bar Chart



Gain / Loss

	1 Qtr	YTD	1 Yr	3 Yrs	5 Yrs
<b>Total Fund Composite*</b>					
Beginning Market Value	328,355,358	339,527,131	339,527,131	298,216,198	269,527,938
Net Cash Flows	14,483,211	24,496,523	24,496,523	-2,249,827	722,492
Income	828,475	3,799,430	3,799,430	12,994,245	21,480,923
Gain/Loss	-24,587,164	-48,743,203	-48,743,203	10,119,264	27,348,527
Ending Market Value	319,079,880	319,079,880	319,079,880	319,079,880	319,079,880

\*Total does not include non-investment cash account



	Asset Allocation (\$)	Asset Allocation (%)	Target Allocation (%)	Differences (%)	Minimum Allocation (%)	Maximum Allocation (%)
Total Fund Composite*	319,079,880	100.00	100.00	0.00	N/A	N/A
Large Cap Composite	64,374,201	20.17	20.00	0.17	15.00	30.00
Small / SMID Cap Composite	30,133,135	9.44	10.00	-0.56	7.00	15.50
International Equity Composite	55,463,526	17.38	20.00	-2.62	15.00	25.00
Fixed Income Composite	99,233,328	31.10	30.00	1.10	25.00	37.50
Real Estate Composite	33,818,780	10.60	10.00	0.60	7.00	14.00
Private Equity Composite	22,225,168	6.97	7.50	-0.53	0.00	15.00
Infrastructure Composite	12,593,895	3.95	2.50	1.45	0.00	5.00

\*Total does not include non-investment cash account

As of December 31, 2018

	Total Fund	
	(\$)	%
<b>Total Fund Composite*</b>	<b>319,079,880</b>	<b>100.00</b>
<b>Domestic Equity Composite</b>	<b>94,507,336</b>	<b>29.62</b>
<b>Large Cap Composite</b>	<b>64,374,201</b>	<b>20.17</b>
Northern Trust S&P 500	64,374,201	20.17
<b>Small / SMID Cap Composite</b>	<b>30,133,135</b>	<b>9.44</b>
TSW - SMID Value	12,540,861	3.93
Northern Trust Extended Equity Market Index	17,592,274	5.51
<b>International Equity Composite</b>	<b>55,463,526</b>	<b>17.38</b>
Brandes International Small Cap	13,109,582	4.11
Wellington International	42,353,943	13.27
<b>Fixed Income Composite</b>	<b>99,233,328</b>	<b>31.10</b>
Baird Core Plus Bond	36,682,605	11.50
Neuberger & Berman Short Duration	36,382,154	11.40
AG Direct Lending Fund II, L.P.	11,181,129	3.50
GoldenTree Multi-Sector LP	14,987,440	4.70
<b>Real Estate Composite</b>	<b>33,818,780</b>	<b>10.60</b>
Morgan Stanley	22,803,628	7.15
Principal Enhanced Property Fund	11,015,152	3.45
<b>Private Equity Composite</b>	<b>22,225,168</b>	<b>6.97</b>
NB Crossroads Fund XXI	13,635,405	4.27
HarbourVest Dover Fund IX	5,427,104	1.70
GoldPoint Co-Investment VI	3,162,659	0.99
<b>Infrastructure Composite</b>	<b>12,593,895</b>	<b>3.95</b>
IFM Global Infrastructure	12,593,895	3.95
<b>Investment Cash Account</b>	<b>1,237,847</b>	<b>0.39</b>

\*Total does not include non-investment cash account.



As of December 31, 2018

	Performance (%)									
	1 Quarter	Year To Date	Oct-2018 To Dec-2018	1 Year	3 Years	5 Years	7 Years	10 Years	Since Inception	Inception Date
<b>Total Fund Composite</b>	<b>-7.07</b>	<b>-3.78</b>	<b>-7.07</b>	<b>-3.78</b>	<b>6.08</b>	<b>5.67</b>	<b>8.49</b>	<b>8.86</b>	<b>7.57</b>	<b>02/01/1991</b>
Policy Index	-7.35	-4.06	-7.35	-4.06	5.79	5.11	7.76	8.66	7.67	
<b>Large Cap Composite</b>	<b>-13.61</b>	<b>-4.44</b>	<b>-13.61</b>	<b>-4.44</b>	<b>9.22</b>	<b>8.47</b>	<b>12.82</b>	<b>13.00</b>	<b>8.27</b>	<b>09/01/2002</b>
S&P 500	-13.52	-4.38	-13.52	-4.38	9.26	8.49	12.70	13.12	8.55	
<b>Small / SMID Cap Composite</b>	<b>-17.83</b>	<b>-12.96</b>	<b>-17.83</b>	<b>-12.96</b>	<b>5.95</b>	<b>4.98</b>	<b>10.08</b>	<b>10.75</b>	<b>9.36</b>	<b>09/01/2002</b>
Small / SMID Policy	-18.49	-10.00	-18.49	-10.00	7.32	5.15	10.88	12.28	9.51	
<b>International Equity Composite</b>	<b>-13.98</b>	<b>-18.12</b>	<b>-13.98</b>	<b>-18.12</b>	<b>1.28</b>	<b>0.84</b>	<b>N/A</b>	<b>N/A</b>	<b>2.59</b>	<b>05/01/2013</b>
MSCI AC World ex USA (Net)	-11.46	-14.20	-11.46	-14.20	4.48	0.68	4.85	6.57	1.93	
<b>Fixed Income Composite</b>	<b>0.10</b>	<b>0.26</b>	<b>0.10</b>	<b>0.26</b>	<b>2.51</b>	<b>2.56</b>	<b>2.19</b>	<b>3.40</b>	<b>7.16</b>	<b>02/01/1991</b>
Bond Index	1.64	0.01	1.64	0.01	1.54	1.98	1.77	3.08	5.17	
<b>Real Estate Composite</b>	<b>1.82</b>	<b>8.34</b>	<b>1.82</b>	<b>8.34</b>	<b>9.16</b>	<b>11.44</b>	<b>12.12</b>	<b>7.17</b>	<b>5.94</b>	<b>04/01/2008</b>
Real Estate Policy	1.56	7.87	1.56	7.87	8.13	10.24	10.69	7.02	5.40	

As of December 31, 2018

	Performance (%)									
	1 Quarter	Year To Date	Oct-2018 To Dec-2018	1 Year	3 Years	5 Years	7 Years	10 Years	Since Inception	Inception Date
<b>Large Cap Composite</b>	<b>-13.61</b>	<b>-4.44</b>	<b>-13.61</b>	<b>-4.44</b>	<b>9.22</b>	<b>8.47</b>	<b>12.82</b>	<b>13.00</b>	<b>8.27</b>	<b>09/01/2002</b>
S&P 500	-13.52	-4.38	-13.52	-4.38	9.26	8.49	12.70	13.12	8.55	
Northern Trust S&P 500	-13.61	-4.48	-13.61	-4.48	9.20	8.46	N/A	N/A	12.04	11/01/2012
S&P 500	-13.52	-4.38	-13.52	-4.38	9.26	8.49	12.70	13.12	12.08	
IM U.S. Large Cap Core Equity (SA+CF) Median	-13.83	-5.20	-13.83	-5.20	8.47	8.15	12.63	13.05	12.07	
Northern Trust S&P 500 Rank	46	40	46	40	34	40	N/A	N/A	52	
<b>Small / SMID Cap Composite</b>	<b>-17.83</b>	<b>-12.96</b>	<b>-17.83</b>	<b>-12.96</b>	<b>5.95</b>	<b>4.98</b>	<b>10.08</b>	<b>10.75</b>	<b>9.36</b>	<b>09/01/2002</b>
Small / SMID Policy	-18.49	-10.00	-18.49	-10.00	7.32	5.15	10.88	12.28	9.51	
TSW - SMID Value	-17.59	-11.96	-17.59	-11.96	4.10	3.90	N/A	N/A	4.80	11/01/2013
Russell 2500 Value Index	-17.12	-12.36	-17.12	-12.36	6.59	4.16	10.00	11.62	4.92	
IM U.S. SMID Cap Value Equity (SA+CF) Median	-17.55	-12.98	-17.55	-12.98	5.69	4.61	10.70	13.03	5.40	
TSW - SMID Value Rank	52	37	52	37	80	65	N/A	N/A	64	
Northern Trust Extended Equity Market Index	-18.22	N/A	-18.22	N/A	N/A	N/A	N/A	N/A	-19.65	09/01/2018
Dow Jones U.S. Completion Total Stock Market Indx	-18.28	-9.57	-18.28	-9.57	7.33	5.15	11.12	13.53	-19.71	
IM U.S. SMID Cap Core Equity (SA+CF) Median	-18.23	-9.85	-18.23	-9.85	7.54	6.14	11.71	14.07	-19.35	
Northern Trust Extended Equity Market Index Rank	49	N/A	49	N/A	N/A	N/A	N/A	N/A	61	
<b>International Equity Composite</b>	<b>-13.98</b>	<b>-18.12</b>	<b>-13.98</b>	<b>-18.12</b>	<b>1.28</b>	<b>0.84</b>	<b>N/A</b>	<b>N/A</b>	<b>2.59</b>	<b>05/01/2013</b>
MSCI AC World ex USA (Net)	-11.46	-14.20	-11.46	-14.20	4.48	0.68	4.85	6.57	1.93	
Brandes International Small Cap	-10.08	-16.82	-10.08	-16.82	1.25	N/A	N/A	N/A	0.91	05/01/2015
MSCI EAFE Small Cap (Net)	-16.05	-17.89	-16.05	-17.89	3.73	3.06	8.79	10.51	2.83	
IM International Small Cap Equity (SA+CF) Median	-16.65	-18.62	-16.65	-18.62	3.62	3.04	9.42	12.00	2.72	
Brandes International Small Cap Rank	4	35	4	35	84	N/A	N/A	N/A	74	
Wellington International	-15.21	-18.50	-15.21	-18.50	1.32	0.57	N/A	N/A	1.32	11/01/2013
MSCI AC World ex USA (Net)	-11.46	-14.20	-11.46	-14.20	4.48	0.68	4.85	6.57	0.86	
IM International Core Equity (SA+CF) Median	-13.54	-15.12	-13.54	-15.12	3.35	1.70	6.88	7.89	2.22	
Wellington International Rank	74	81	74	81	89	84	N/A	N/A	75	

As of December 31, 2018

	Performance (%)									
	1 Quarter	Year To Date	Oct-2018 To Dec-2018	1 Year	3 Years	5 Years	7 Years	10 Years	Since Inception	Inception Date
<b>Fixed Income Composite</b>	<b>0.10</b>	<b>0.26</b>	<b>0.10</b>	<b>0.26</b>	<b>2.51</b>	<b>2.56</b>	<b>2.19</b>	<b>3.40</b>	<b>7.16</b>	<b>02/01/1991</b>
Bond Index	1.64	0.01	1.64	0.01	1.54	1.98	1.77	3.08	5.17	
Baird Core Plus Bond	0.91	-0.51	0.91	-0.51	N/A	N/A	N/A	N/A	0.66	06/01/2017
Blmbg. Barc. U.S. Aggregate	1.64	0.01	1.64	0.01	2.06	2.52	2.10	3.48	0.72	
IM U.S. Broad Market Core+ Fixed Income (MF) Median	0.59	-0.95	0.59	-0.95	2.57	2.40	2.76	4.96	0.35	
Baird Core Plus Bond Rank	40	32	40	32	N/A	N/A	N/A	N/A	34	
<b>NB Fixed Income Composite</b>	<b>-0.10</b>	<b>-0.73</b>	<b>-0.10</b>	<b>-0.73</b>	<b>0.99</b>	<b>1.28</b>	<b>N/A</b>	<b>N/A</b>	<b>0.85</b>	<b>01/01/2013</b>
Neuberger & Berman Short Duration	-0.10	N/A	-0.10	N/A	N/A	N/A	N/A	N/A	-0.06	02/01/2018
NB Blended Benchmark*	0.81	1.77	0.81	1.77	1.11	0.79	0.69	0.83	1.80	
IM U.S. Short Duration Fixed Income (MF) Median	0.46	1.20	0.46	1.20	1.33	1.00	1.08	1.89	1.37	
Neuberger & Berman Short Duration Rank	90	N/A	90	N/A	N/A	N/A	N/A	N/A	98	
GoldenTree Multi-Sector LP	-3.69	-0.65	-3.69	-0.65	N/A	N/A	N/A	N/A	0.53	10/01/2017
GT Blended Index**	-3.45	-0.50	-3.45	-0.50	5.53	3.29	N/A	N/A	0.24	
Blmbg. Barc. U.S. Aggregate	1.64	0.01	1.64	0.01	2.06	2.52	2.10	3.48	0.32	
IM U.S. Broad Market Core+ Fixed Income (MF) Median	0.59	-0.95	0.59	-0.95	2.57	2.40	2.76	4.96	-0.57	
GoldenTree Multi-Sector LP Rank	100	39	100	39	N/A	N/A	N/A	N/A	10	
<b>Real Estate Composite</b>	<b>1.82</b>	<b>8.34</b>	<b>1.82</b>	<b>8.34</b>	<b>9.16</b>	<b>11.44</b>	<b>12.12</b>	<b>7.17</b>	<b>5.94</b>	<b>04/01/2008</b>
Real Estate Policy	1.56	7.87	1.56	7.87	8.13	10.24	10.69	7.02	5.40	
Morgan Stanley	1.97	7.96	1.97	7.96	8.65	10.90	11.75	6.93	5.72	04/01/2008
NCREIF ODCE Equal Weighted	1.62	8.25	1.62	8.25	8.44	10.54	11.01	6.85	5.14	
Principal Enhanced Property Fund	1.53	9.36	1.53	9.36	10.62	13.09	N/A	N/A	13.23	11/01/2013
NCREIF Property Index	1.37	6.72	1.37	6.72	7.21	9.33	9.74	7.49	9.38	
<b>Infrastructure Composite</b>	<b>2.84</b>	<b>18.12</b>	<b>2.84</b>	<b>18.12</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>18.92</b>	<b>09/01/2017</b>
IFM Global Infrastructure	2.84	18.12	2.84	18.12	N/A	N/A	N/A	N/A	18.92	

As of December 31, 2018

	Market Value (\$)	%	1 Quarter	Oct-2018 To Dec-2018	1 Year	3 Years	5 Years	7 Years	Since Inception	Inception Date
<b>Private Equity</b>										
<b>Private Equity Composite</b>	<b>22,225,168</b>	<b>6.97</b>	<b>-0.73</b>	<b>-0.73</b>	<b>9.48</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>12.54</b>	<b>06/23/2016</b>
NB Crossroads Fund XXI	13,635,405	4.27	0.00	0.00	9.97	N/A	N/A	N/A	9.97	06/23/2016
HarbourVest Dover Fund IX	5,427,104	1.70	-3.11	-3.11	19.21	N/A	N/A	N/A	37.03	12/16/2016
GoldPoint Co-Investment VI	3,162,659	0.99	0.00	0.00	N/A	N/A	N/A	N/A	-8.66	04/23/2018
<b>Private Debt</b>										
AG Direct Lending Fund II, L.P.	11,181,129	3.50	3.09	3.09	10.61	N/A	N/A	N/A	11.27	05/31/2017

As of December 31, 2018

	Performance (%)											
	2018	2017	2016	2015	2014	2013	2012	2011	2010	2009	2008	2006
<b>Total Fund Composite</b>	<b>-3.78</b>	<b>14.09</b>	<b>8.74</b>	<b>2.07</b>	<b>8.14</b>	<b>19.47</b>	<b>12.40</b>	<b>0.74</b>	<b>13.24</b>	<b>15.81</b>	<b>-23.72</b>	<b>11.23</b>
Policy Index	-4.06	14.82	7.47	1.34	6.92	17.92	11.54	2.70	13.36	16.85	-22.38	11.61
<b>Large Cap Composite</b>	<b>-4.44</b>	<b>21.83</b>	<b>11.89</b>	<b>1.41</b>	<b>13.67</b>	<b>32.30</b>	<b>17.06</b>	<b>-3.31</b>	<b>16.46</b>	<b>29.59</b>	<b>-40.76</b>	<b>15.25</b>
S&P 500	-4.38	21.83	11.96	1.38	13.69	32.39	16.00	2.11	15.06	26.46	-37.00	15.79
<b>Small / SMID Cap Composite</b>	<b>-12.96</b>	<b>13.57</b>	<b>20.32</b>	<b>-3.16</b>	<b>10.71</b>	<b>36.00</b>	<b>12.94</b>	<b>1.91</b>	<b>21.00</b>	<b>14.96</b>	<b>-36.71</b>	<b>15.33</b>
Small / SMID Policy	-10.00	16.81	17.59	-2.90	7.07	37.79	16.35	-4.18	26.85	27.17	-33.79	18.37
<b>International Equity Composite</b>	<b>-18.12</b>	<b>21.90</b>	<b>4.08</b>	<b>3.39</b>	<b>-2.90</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>
MSCI AC World ex USA (Net)	-14.20	27.19	4.50	-5.66	-3.87	15.29	16.83	-13.71	11.15	41.45	-45.53	26.65
<b>Fixed Income Composite</b>	<b>0.26</b>	<b>4.16</b>	<b>3.14</b>	<b>0.76</b>	<b>4.57</b>	<b>-1.85</b>	<b>4.44</b>	<b>6.64</b>	<b>6.20</b>	<b>6.02</b>	<b>3.36</b>	<b>4.52</b>
Bond Index	0.01	2.65	1.97	1.21	4.12	-1.02	3.56	5.97	6.15	6.46	4.86	4.57
<b>Real Estate Composite</b>	<b>8.34</b>	<b>8.88</b>	<b>10.28</b>	<b>15.88</b>	<b>14.03</b>	<b>16.03</b>	<b>11.68</b>	<b>16.33</b>	<b>15.15</b>	<b>-33.00</b>	<b>N/A</b>	<b>N/A</b>
Real Estate Policy	7.87	7.59	8.94	14.71	12.24	12.76	10.91	15.53	15.38	-27.37	-9.40	16.26

As of December 31, 2018

	Performance (%)											
	2018	2017	2016	2015	2014	2013	2012	2011	2010	2009	2008	2006
<b>Large Cap Composite</b>	<b>-4.44</b>	<b>21.83</b>	<b>11.89</b>	<b>1.41</b>	<b>13.67</b>	<b>32.30</b>	<b>17.06</b>	<b>-3.31</b>	<b>16.46</b>	<b>29.59</b>	<b>-40.76</b>	<b>15.25</b>
S&P 500	-4.38	21.83	11.96	1.38	13.69	32.39	16.00	2.11	15.06	26.46	-37.00	15.79
Northern Trust S&P 500	-4.48	21.83	11.89	1.41	13.67	32.30	N/A	N/A	N/A	N/A	N/A	N/A
S&P 500	-4.38	21.83	11.96	1.38	13.69	32.39	16.00	2.11	15.06	26.46	-37.00	15.79
IM U.S. Large Cap Core Equity (SA+CF) Median	-5.20	21.83	10.52	1.43	13.42	32.98	15.66	2.03	14.82	26.50	-35.96	15.56
Northern Trust S&P 500 Rank	40	50	34	51	44	61	N/A	N/A	N/A	N/A	N/A	N/A
<b>Small / SMID Cap Composite</b>	<b>-12.96</b>	<b>13.57</b>	<b>20.32</b>	<b>-3.16</b>	<b>10.71</b>	<b>36.00</b>	<b>12.94</b>	<b>1.91</b>	<b>21.00</b>	<b>14.96</b>	<b>-36.71</b>	<b>15.33</b>
Small / SMID Policy	-10.00	16.81	17.59	-2.90	7.07	37.79	16.35	-4.18	26.85	27.17	-33.79	18.37
TSW - SMID Value	-11.96	7.51	19.19	-1.03	8.43	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Russell 2500 Value Index	-12.36	10.36	25.20	-5.49	7.11	33.32	19.21	-3.36	24.82	27.68	-31.99	20.18
IM U.S. SMID Cap Value Equity (SA+CF) Median	-12.98	14.60	19.40	-3.06	7.00	35.71	16.99	-2.09	25.50	35.44	-35.68	17.88
TSW - SMID Value Rank	37	91	52	28	38	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Northern Trust Extended Equity Market Index	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Dow Jones U.S. Completion Total Stock Market Indx	-9.57	18.12	15.75	-3.42	7.63	38.05	17.89	-3.76	28.62	37.45	-39.02	15.29
IM U.S. SMID Cap Core Equity (SA+CF) Median	-9.85	17.97	16.93	0.10	7.84	37.82	17.88	-1.00	26.61	34.91	-37.17	14.01
Northern Trust Extended Equity Market Index Rank	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
<b>International Equity Composite</b>	<b>-18.12</b>	<b>21.90</b>	<b>4.08</b>	<b>3.39</b>	<b>-2.90</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>
MSCI AC World ex USA (Net)	-14.20	27.19	4.50	-5.66	-3.87	15.29	16.83	-13.71	11.15	41.45	-45.53	26.65
Brandes International Small Cap	-16.82	12.81	10.63	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
MSCI EAFE Small Cap (Net)	-17.89	33.01	2.18	9.59	-4.95	29.30	20.00	-15.94	22.04	46.78	-47.01	19.31
IM International Small Cap Equity (SA+CF) Median	-18.62	34.97	1.13	10.04	-3.38	31.13	23.53	-13.55	23.68	46.07	-47.08	29.39
Brandes International Small Cap Rank	35	100	6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Wellington International	-18.50	25.40	1.76	1.86	-2.90	N/A	N/A	N/A	N/A	N/A	N/A	N/A
MSCI AC World ex USA (Net)	-14.20	27.19	4.50	-5.66	-3.87	15.29	16.83	-13.71	11.15	41.45	-45.53	26.65
IM International Core Equity (SA+CF) Median	-15.12	28.54	1.54	1.09	-3.44	24.05	19.74	-12.43	12.05	34.41	-44.15	27.77
Wellington International Rank	81	75	48	45	41	N/A	N/A	N/A	N/A	N/A	N/A	N/A

As of December 31, 2018

	Performance (%)											
	2018	2017	2016	2015	2014	2013	2012	2011	2010	2009	2008	2006
<b>Fixed Income Composite</b>	<b>0.26</b>	<b>4.16</b>	<b>3.14</b>	<b>0.76</b>	<b>4.57</b>	<b>-1.85</b>	<b>4.44</b>	<b>6.64</b>	<b>6.20</b>	<b>6.02</b>	<b>3.36</b>	<b>4.52</b>
Bond Index	0.01	2.65	1.97	1.21	4.12	-1.02	3.56	5.97	6.15	6.46	4.86	4.57
Baird Core Plus Bond	-0.51	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Blmbg. Barc. U.S. Aggregate	0.01	3.54	2.65	0.55	5.97	-2.02	4.21	7.84	6.54	5.93	5.24	4.34
IM U.S. Broad Market Core+ Fixed Income (MF) Median	-0.95	4.48	4.19	-0.26	5.23	-1.06	8.18	5.98	8.28	15.06	-3.49	4.31
Baird Core Plus Bond Rank	32	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
<b>NB Fixed Income Composite</b>	<b>-0.73</b>	<b>2.06</b>	<b>1.65</b>	<b>0.99</b>	<b>2.43</b>	<b>-1.24</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>
Neuberger & Berman Short Duration	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
NB Blended Benchmark*	1.77	0.85	0.71	0.29	0.33	0.30	0.57	0.70	1.19	1.64	3.22	4.61
IM U.S. Short Duration Fixed Income (MF) Median	1.20	1.33	1.46	0.27	0.64	0.24	2.38	1.14	3.17	5.94	-1.08	4.06
Neuberger & Berman Short Duration Rank	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
GoldenTree Multi-Sector LP	-0.65	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
GT Blended Index**	-0.50	5.45	12.01	-1.94	2.01	5.70	N/A	N/A	N/A	N/A	N/A	N/A
Blmbg. Barc. U.S. Aggregate	0.01	3.54	2.65	0.55	5.97	-2.02	4.21	7.84	6.54	5.93	5.24	4.34
IM U.S. Broad Market Core+ Fixed Income (MF) Median	-0.95	4.48	4.19	-0.26	5.23	-1.06	8.18	5.98	8.28	15.06	-3.49	4.31
GoldenTree Multi-Sector LP Rank	39	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
<b>Real Estate Composite</b>	<b>8.34</b>	<b>8.88</b>	<b>10.28</b>	<b>15.88</b>	<b>14.03</b>	<b>16.03</b>	<b>11.68</b>	<b>16.33</b>	<b>15.15</b>	<b>-33.00</b>	<b>N/A</b>	<b>N/A</b>
Real Estate Policy	7.87	7.59	8.94	14.71	12.24	12.76	10.91	15.53	15.38	-27.37	-9.40	16.26
Morgan Stanley	7.96	8.75	9.23	14.59	14.15	16.20	11.68	16.33	15.15	-33.00	N/A	N/A
NCREIF ODCE Equal Weighted	8.25	7.80	9.27	15.17	12.38	13.36	11.03	15.96	16.14	-30.65	-10.37	16.15
Principal Enhanced Property Fund	9.36	9.21	13.34	20.25	13.64	N/A	N/A	N/A	N/A	N/A	N/A	N/A
NCREIF Property Index	6.72	6.96	7.97	13.33	11.82	10.98	10.54	14.26	13.11	-16.85	-6.46	16.60
<b>Infrastructure Composite</b>	<b>18.12</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>N/A</b>
IFM Global Infrastructure	18.12	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

\*NB Blended Benchmark consists of 40% Bloomberg Barclays 1-3 Year Gov/Credit and 60% BofA Merrill Lynch 3 Month T-Bill.

\*\*GT Blended Index consists of 33.34% BofA Merrill Lynch High Yield Master II, 33.33% HFRI RV: Fixed Income-Corporate Index, and 33.33% S&P/LSTA Leveraged Loan Index.

As of December 31, 2018

	Allocation	Performance (%)														
	Market Value (\$000)	Oct-2004 To Sep-2005	Oct-2005 To Sep-2006	Oct-2006 To Sep-2007	Oct-2007 To Sep-2008	Oct-2008 To Sep-2009	Oct-2009 To Sep-2010	Oct-2010 To Sep-2011	Oct-2011 To Sep-2012	Oct-2012 To Sep-2013	Oct-2013 To Sep-2014	Oct-2014 To Sep-2015	Oct-2015 To Sep-2016	Oct-2016 To Sep-2017	Oct-2017 To Sep-2018	Oct-2018 To Dec-2018
<b>Total Fund Composite</b>	<b>319,080</b>	<b>9.78</b>	<b>7.74</b>	<b>12.55</b>	<b>-12.76</b>	<b>-2.12</b>	<b>8.82</b>	<b>0.36</b>	<b>20.29</b>	<b>13.62</b>	<b>11.04</b>	<b>1.80</b>	<b>11.33</b>	<b>11.64</b>	<b>6.95</b>	<b>-7.07</b>
Policy Index		8.25	7.64	11.79	-11.28	-1.82	9.29	2.00	19.44	12.76	9.80	0.64	9.85	11.66	7.46	-7.35



As of December 31, 2018

	Performance (%)					
	1 Quarter	Year To Date	Oct-2018 To Dec-2018	1 Year	3 Years	5 Years
<b>Total Fund Composite</b>	<b>-7.11</b>	<b>-3.99</b>	<b>-7.11</b>	<b>-3.99</b>	<b>5.77</b>	<b>5.35</b>
Policy Index	-7.35	-4.06	-7.35	-4.06	5.79	5.11
Northern Trust S&P 500	-13.61	-4.48	-13.61	-4.48	9.20	8.45
S&P 500	-13.52	-4.38	-13.52	-4.38	9.26	8.49
TSW - SMID Value	-17.78	-12.76	-17.78	-12.76	3.22	3.03
Russell 2500 Value Index	-17.12	-12.36	-17.12	-12.36	6.59	4.16
Northern Trust Extended Equity Market Index	-18.22	N/A	-18.22	N/A	N/A	N/A
Dow Jones U.S. Completion Total Stock Market Indx	-18.28	-9.57	-18.28	-9.57	7.33	5.15
Brandes International Small Cap	-10.28	-17.59	-10.28	-17.59	0.29	N/A
MSCI EAFE Small Cap (Net)	-16.05	-17.89	-16.05	-17.89	3.73	3.06
Wellington International	-15.38	-19.15	-15.38	-19.15	0.58	-0.15
MSCI AC World ex USA (Net)	-11.46	-14.20	-11.46	-14.20	4.48	0.68
Baird Core Plus Bond	0.91	-0.51	0.91	-0.51	N/A	N/A
Blmbg. Barc. U.S. Aggregate	1.64	0.01	1.64	0.01	2.06	2.52
Neuberger & Berman Short Duration	-0.10	N/A	-0.10	N/A	N/A	N/A
NB Blended Benchmark*	0.81	1.77	0.81	1.77	1.11	0.79
GoldenTree Multi-Sector LP	-3.69	-0.65	-3.69	-0.65	N/A	N/A
GT Blended Index**	-3.45	-0.50	-3.45	-0.50	5.53	3.29
Blmbg. Barc. U.S. Aggregate	1.64	0.01	1.64	0.01	2.06	2.52
Morgan Stanley	1.97	7.96	1.97	7.96	8.65	10.90
NCREIF ODCE Equal Weighted	1.62	8.25	1.62	8.25	8.44	10.54
Principal Enhanced Property Fund	1.53	9.36	1.53	9.36	10.62	13.09
NCREIF Property Index	1.37	6.72	1.37	6.72	7.21	9.33
IFM Global Infrastructure	2.84	18.12	2.84	18.12	N/A	N/A

\*NB Blended Benchmark consists of 40% Bloomberg Barclays 1-3 Year Gov/Credit and 60% BofA Merrill Lynch 3 Month T-Bill.

\*\*GT Blended Index consists of 33.34% BofA Merrill Lynch High Yield Master II, 33.33% HFRI RV: Fixed Income-Corporate Index, and 33.33% S&P/LSTA Leveraged Loan Index.

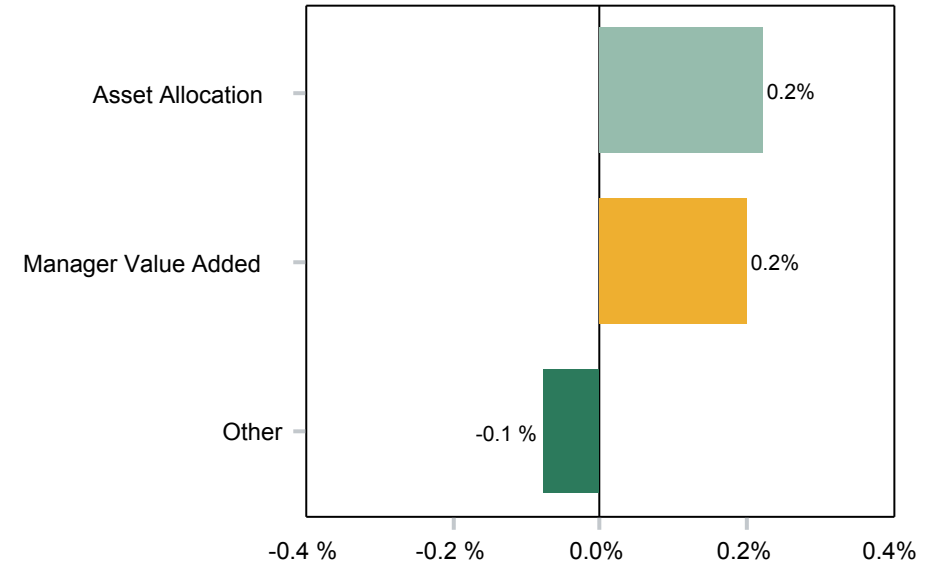
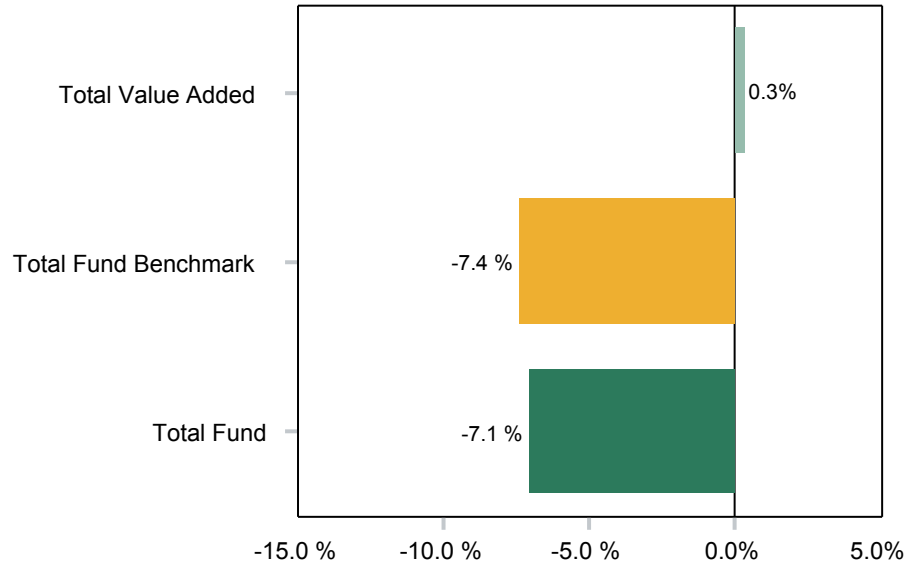
# Watch List – December 31, 2018

Equity Managers	Strategy	Rating	Performance Criteria										Exceed Peer Median	Comments
			Benchmark Criteria											
			3-Yr	Manager Returns %	Benchmark Returns %	5-Yr	Manager Returns %	Benchmark Returns %	Inception*	Manager Returns %	Benchmark Returns %	3-Yr		
Brandes	Intl Small Cap Equity	Recommended	No	0.3	3.7	NA	NA	NA	No	0.0	2.8	N/A	N/A	Performance

\* Brandes placed on "Watch List" August 23, 2018.  
 Performance is Net of Fees.  
 Inception Date - Brandes: 5/1/2015

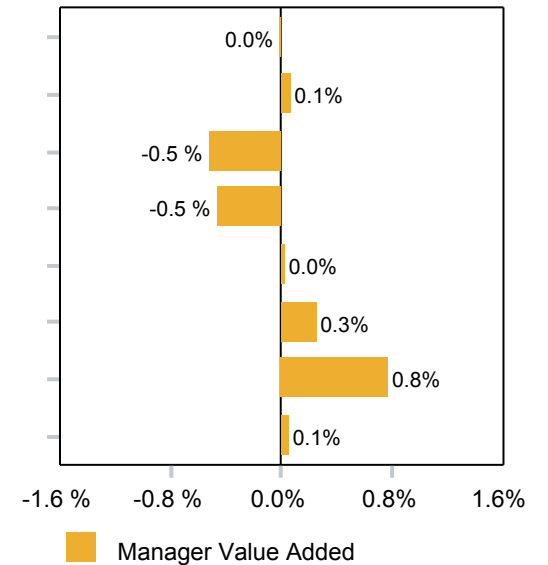
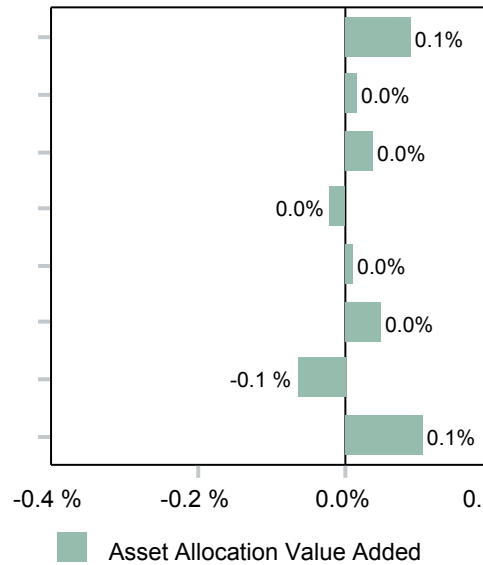
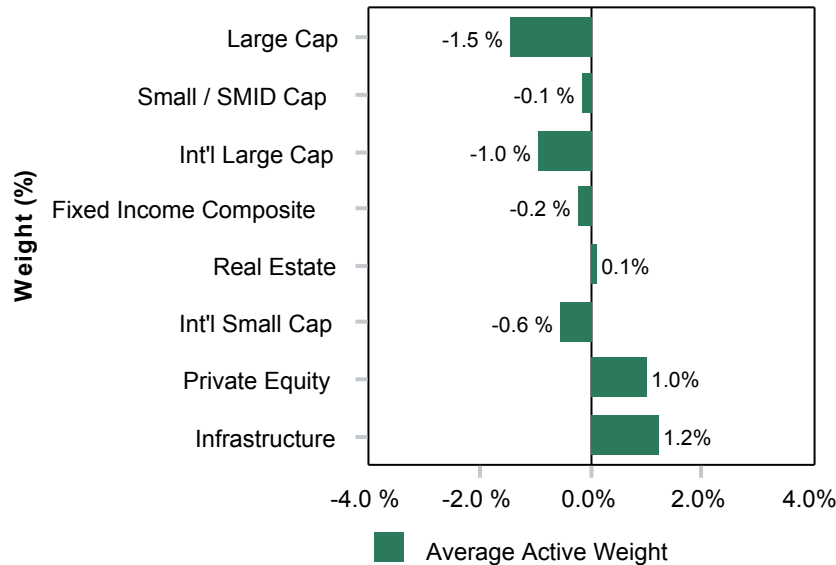
Total Fund Performance

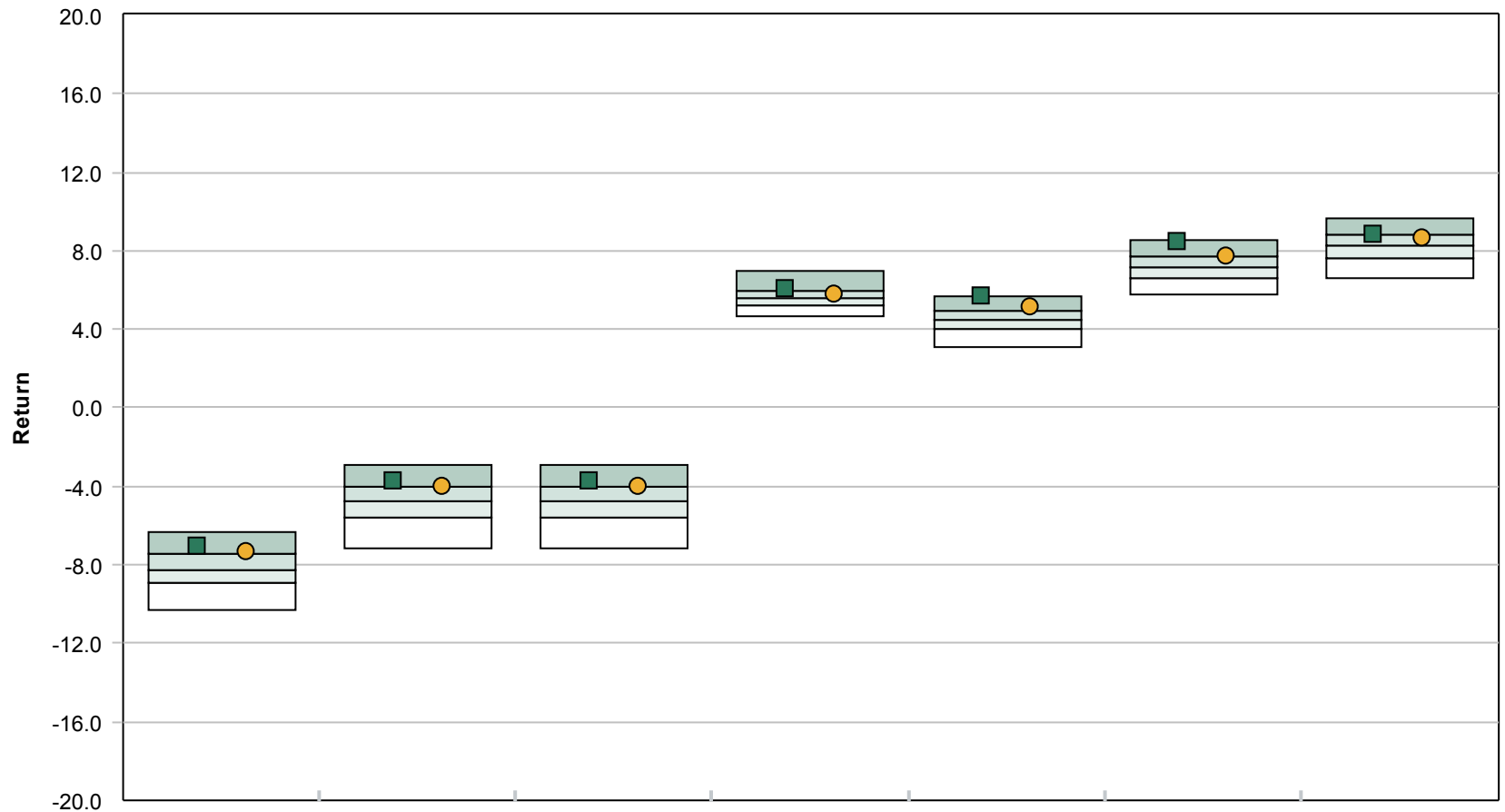
Total Value Added:0.3%



Total Asset Allocation:0.2%

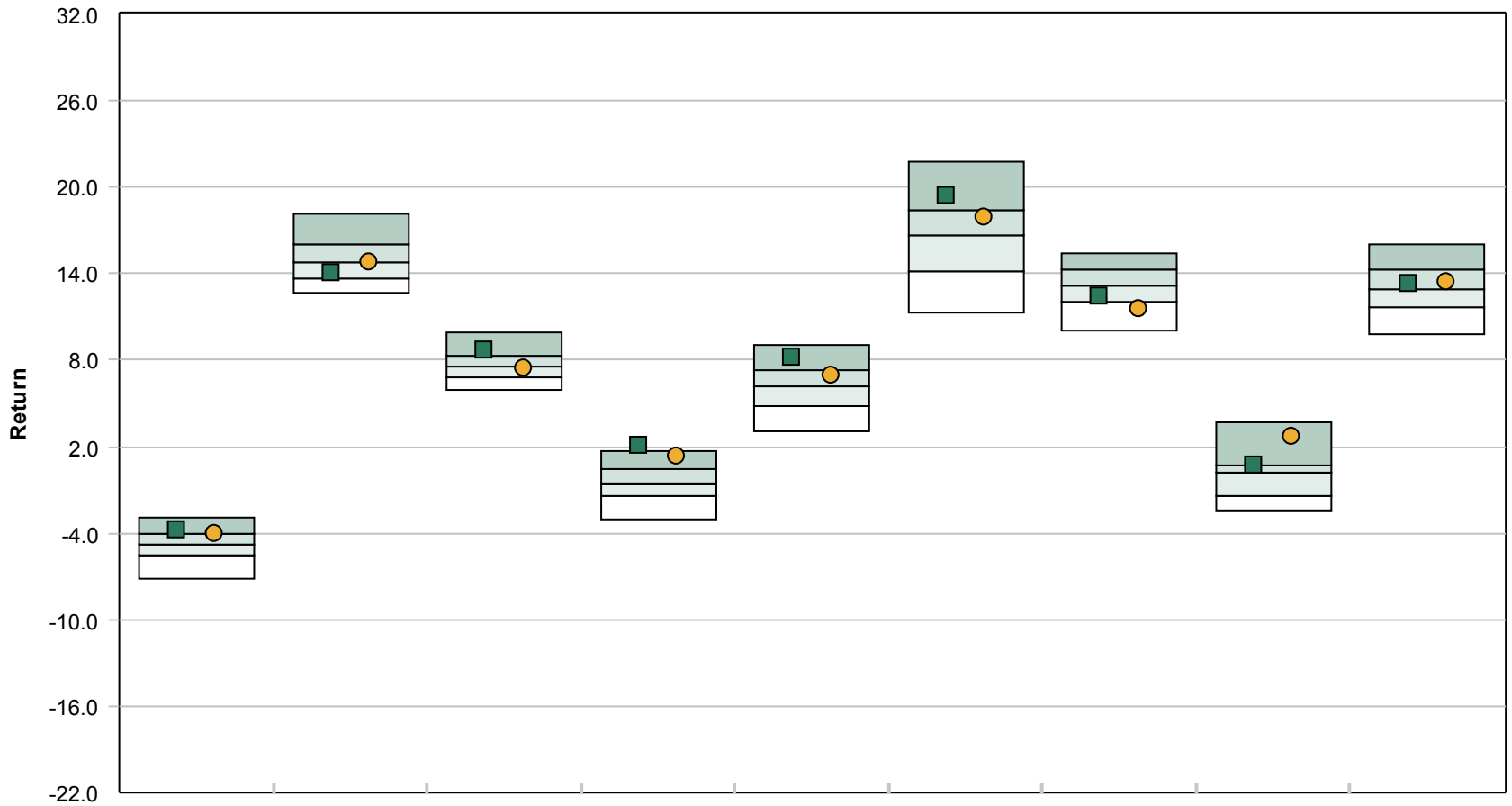
Total Manager Value Added:0.2%





	1 Qtr	YTD	1 Yr	3 Yrs	5 Yrs	7 Yrs	10 Yrs
■ Total Fund Composite	-7.07 (21)	-3.78 (23)	-3.78 (23)	6.08 (21)	5.67 (6)	8.49 (6)	8.86 (25)
● Policy Index	-7.35 (25)	-4.06 (28)	-4.06 (28)	5.79 (40)	5.11 (19)	7.76 (25)	8.66 (33)
5th Percentile	-6.35	-2.94	-2.94	6.95	5.68	8.54	9.70
1st Quartile	-7.43	-3.99	-3.99	5.99	4.96	7.75	8.86
Median	-8.22	-4.79	-4.79	5.59	4.47	7.17	8.24
3rd Quartile	-8.93	-5.57	-5.57	5.24	3.98	6.56	7.65
95th Percentile	-10.31	-7.19	-7.19	4.62	3.13	5.81	6.58
Population	186	183	183	179	175	170	155

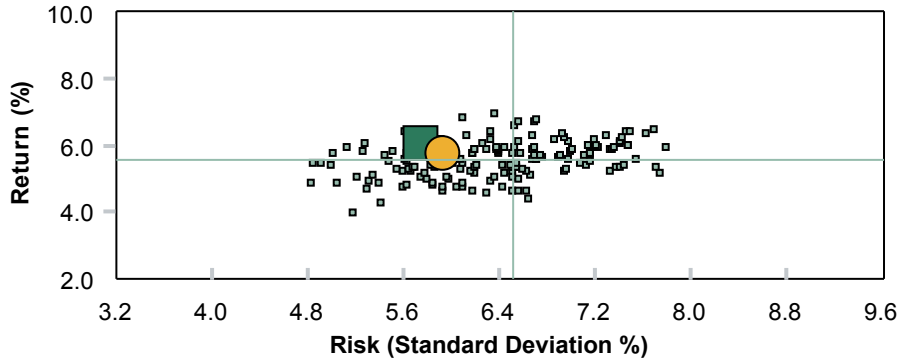
Parentheses contain percentile rankings.  
Calculation based on quarterly periodicity.



	2018	2017	2016	2015	2014	2013	2012	2011	2010
■ Total Fund Composite	-3.78 (23)	14.09 (67)	8.74 (17)	2.07 (3)	8.14 (11)	19.47 (12)	12.40 (70)	0.74 (25)	13.24 (41)
● Policy Index	-4.06 (28)	14.82 (51)	7.47 (51)	1.34 (8)	6.92 (32)	17.92 (29)	11.54 (85)	2.70 (10)	13.36 (38)
5th Percentile	-2.94	18.15	9.94	1.66	9.10	21.75	15.44	3.70	16.01
1st Quartile	-3.99	16.08	8.25	0.44	7.27	18.41	14.25	0.73	14.26
Median	-4.79	14.82	7.50	-0.58	6.14	16.66	13.17	0.14	12.88
3rd Quartile	-5.57	13.69	6.75	-1.47	4.87	14.16	12.00	-1.39	11.64
95th Percentile	-7.19	12.69	5.90	-3.07	3.08	11.27	9.99	-2.37	9.84
Population	183	131	133	127	79	76	80	67	62

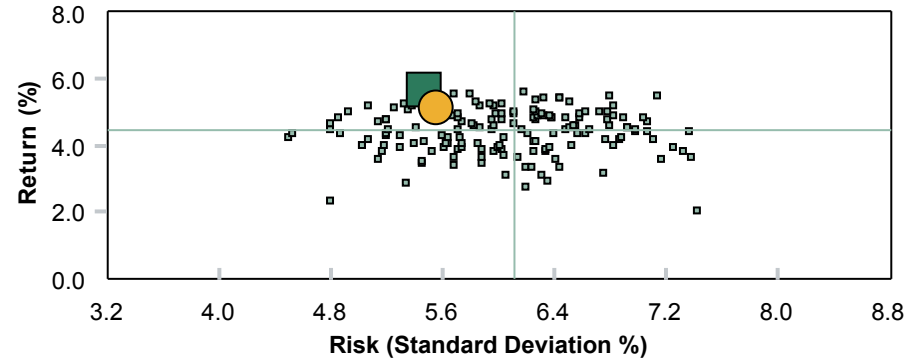
Parentheses contain percentile rankings.  
Calculation based on quarterly periodicity.

Risk & Return Plan Sponsor — 3 Years



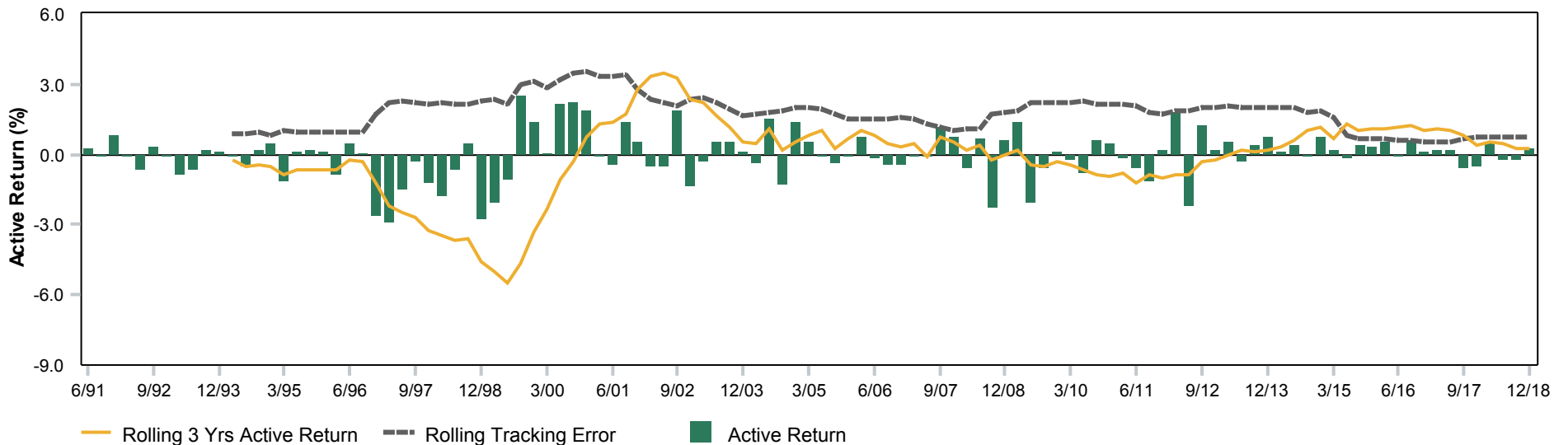
	Return	Standard Deviation
Total Fund Composite	6.08	5.75
Policy Index	5.79	5.94
Median	5.59	6.51

Risk & Return Plan Sponsor — 5 Years



	Return	Standard Deviation
Total Fund Composite	5.67	5.48
Policy Index	5.11	5.55
Median	4.47	6.11

Rolling Return and Tracking Error



As of December 31, 2018

Policy Index	Weight (%)	Policy Index	Weight (%)
Jan-1973		Apr-2008	
Blmbg. Barc. Intermed. U.S. Government/Credit	45.00	S&P 500	40.00
Blmbg. Barc. U.S. Government: Intermediate	25.00	Blmbg. Barc. U.S. Intermediate Aggregate	35.00
S&P 500	25.00	Russell 2000 Index	15.00
90 Day U.S. Treasury Bill	5.00	MSCI EAFE (Net)	5.00
		NCREIF ODCE Equal Weighted	5.00
Jan-1995		Sep-2010	
Blmbg. Barc. Intermed. U.S. Government/Credit	26.00	S&P 500	40.00
Blmbg. Barc. U.S. Government: Intermediate	14.00	Blmbg. Barc. U.S. Intermediate Aggregate	35.00
S&P 500	55.00	Russell 2000 Index	15.00
Russell 2000 Index	5.00	90 Day U.S. Treasury Bill	5.00
		NCREIF ODCE Equal Weighted	5.00
Jan-2003		Oct-2010	
Blmbg. Barc. Intermed. U.S. Government/Credit	29.00	S&P 500	40.00
Blmbg. Barc. U.S. Government: Intermediate	16.00	Blmbg. Barc. U.S. Intermediate Aggregate	35.00
S&P 500	40.00	Russell 2000 Index	15.00
Russell 2000 Index	15.00	MSCI AC World ex USA (Net)	5.00
		NCREIF ODCE Equal Weighted	5.00
Oct-2004		May-2013	
Blmbg. Barc. Intermed. U.S. Government/Credit	30.00	S&P 500	32.50
Blmbg. Barc. U.S. Government: Intermediate	15.00	Blmbg. Barc. U.S. Intermediate Aggregate	32.50
S&P 500	40.00	Russell 2000 Index	12.50
Russell 2000 Index	15.00	MSCI AC World ex USA (Net)	15.00
		NCREIF ODCE Equal Weighted	7.50
Oct-2005		Nov-2013	
S&P 500	40.00	S&P 500	30.00
Russell 2000 Index	15.00	Blmbg. Barc. U.S. Intermediate Aggregate	32.50
Blmbg. Barc. U.S. Intermediate Aggregate	45.00	Russell 2500 Index	12.50
		MSCI AC World ex USA (Net)	15.00
Jul-2006		NCREIF ODCE Equal Weighted	7.50
S&P 500	40.00	NCREIF Property Index	2.50
Russell 2000 Index	15.00		
Blmbg. Barc. U.S. Intermediate Aggregate	40.00		
MSCI EAFE (Net)	5.00		

## The City of Hollywood

## Policy Index

As of December 31, 2018

Policy Index	Weight (%)
May-2015	
S&P 500	25.00
Blmbg. Barc. U.S. Intermediate Aggregate	32.50
Russell 2500 Index	12.50
MSCI AC World ex USA (Net)	15.00
MSCI EAFE Small Cap (Net)	5.00
NCREIF ODCE Equal Weighted	7.50
NCREIF Property Index	2.50
Sep-2017	
S&P 500	22.50
Blmbg. Barc. U.S. Aggregate	30.00
Russell 2500 Index	10.00
MSCI AC World ex USA (Net)	15.00
MSCI EAFE Small Cap (Net)	5.00
NCREIF ODCE Equal Weighted	7.50
NCREIF Property Index	2.50
Russell 3000 + 300 bps	5.00
CPI + 350 bps	2.50
Aug-2018	
S&P 500	22.50
Blmbg. Barc. U.S. Aggregate	30.00
Russell 2500 Value Index	5.00
MSCI AC World ex USA (Net)	15.00
MSCI EAFE Small Cap (Net)	5.00
NCREIF ODCE Equal Weighted	7.50
NCREIF Property Index	2.50
Russell 3000 + 300 bps	5.00
CPI + 350 bps	2.50
Dow Jones U.S. Completion Total Stock Market Indx	5.00

Policy Index	Weight (%)
Oct-2018	
S&P 500	20.00
Blmbg. Barc. U.S. Aggregate	30.00
Russell 2500 Value Index	5.00
MSCI AC World ex USA (Net)	15.00
MSCI EAFE Small Cap (Net)	5.00
NCREIF ODCE Equal Weighted	7.50
NCREIF Property Index	2.50
Russell 3000 + 300 bps	7.50
CPI + 350 bps	2.50
Dow Jones U.S. Completion Total Stock Market Indx	5.00



Since Inception Ending December 31, 2018

Periods Ending	Beginning Market Value (\$)	Net Cash Flow (\$)	Gain/Loss (\$)	Ending Market Value (\$)	%Return
From 02/1991	70,755,814	-989,948	12,022,401	81,788,267	17.12
1992	81,788,267	-1,336,854	5,335,405	85,786,818	6.61
1993	85,786,818	-1,701,361	6,296,512	90,381,969	7.40
1994	90,381,969	-2,167,186	-604,142	87,610,641	-0.65
1995	87,610,641	-7,369,636	28,373,068	108,614,073	26.80
1996	108,614,073	-3,018,593	12,427,929	118,023,409	11.61
1997	118,023,409	-3,547,921	18,037,393	132,512,881	15.53
1998	132,512,881	-3,098,858	18,542,125	147,956,148	14.15
1999	147,956,148	-3,767,247	19,605,945	163,794,846	13.48
2000	163,794,846	-3,956,267	8,750,636	168,589,215	5.40
2001	168,589,215	-4,286,260	-2,541,460	161,761,495	-1.45
2002	161,761,495	-3,046,457	-16,516,527	142,198,511	-10.18
2003	142,198,511	-2,782,412	28,678,451	168,094,550	20.38
2004	168,094,550	-3,400,914	15,868,038	180,561,674	9.61
2005	180,561,674	-2,378,899	6,433,750	184,616,525	3.61
2006	184,616,525	-1,930,035	20,325,723	203,012,213	11.23
2007	203,012,213	-1,809,758	15,134,283	216,336,738	7.47
2008	216,336,738	-518,994	-51,672,638	164,145,106	-23.72
2009	164,145,106	12,591,369	25,994,218	202,730,693	15.81
2010	202,730,693	-1,203,962	25,533,405	227,060,136	13.24
2011	227,060,136	-17,100,000	1,847,245	211,807,381	0.74
2012	211,807,381	5,708,540	26,036,403	243,552,324	12.40
2013	243,552,324	-19,856,941	45,832,555	269,527,938	19.47
2014	269,527,938	14,261,469	19,462,684	303,252,091	8.14
2015	303,252,091	-11,289,150	6,253,257	298,216,198	2.07
2016	298,216,198	-18,200,974	24,105,719	304,120,942	8.74
2017	304,120,942	-8,545,375	43,951,564	339,527,131	14.09
2018	339,527,131	24,496,523	-44,943,774	319,079,880	-3.78

Gain/Loss includes income received and change in accrued income for the period.

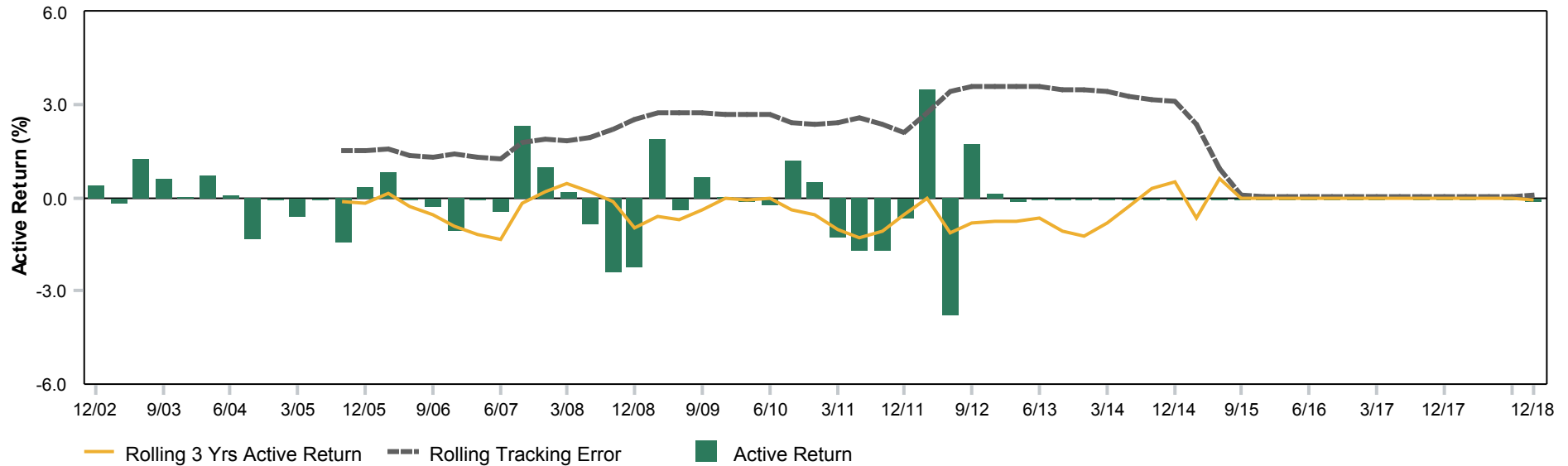
# **Investment Manager Performance**

## **Domestic Equity**

Gain / Loss

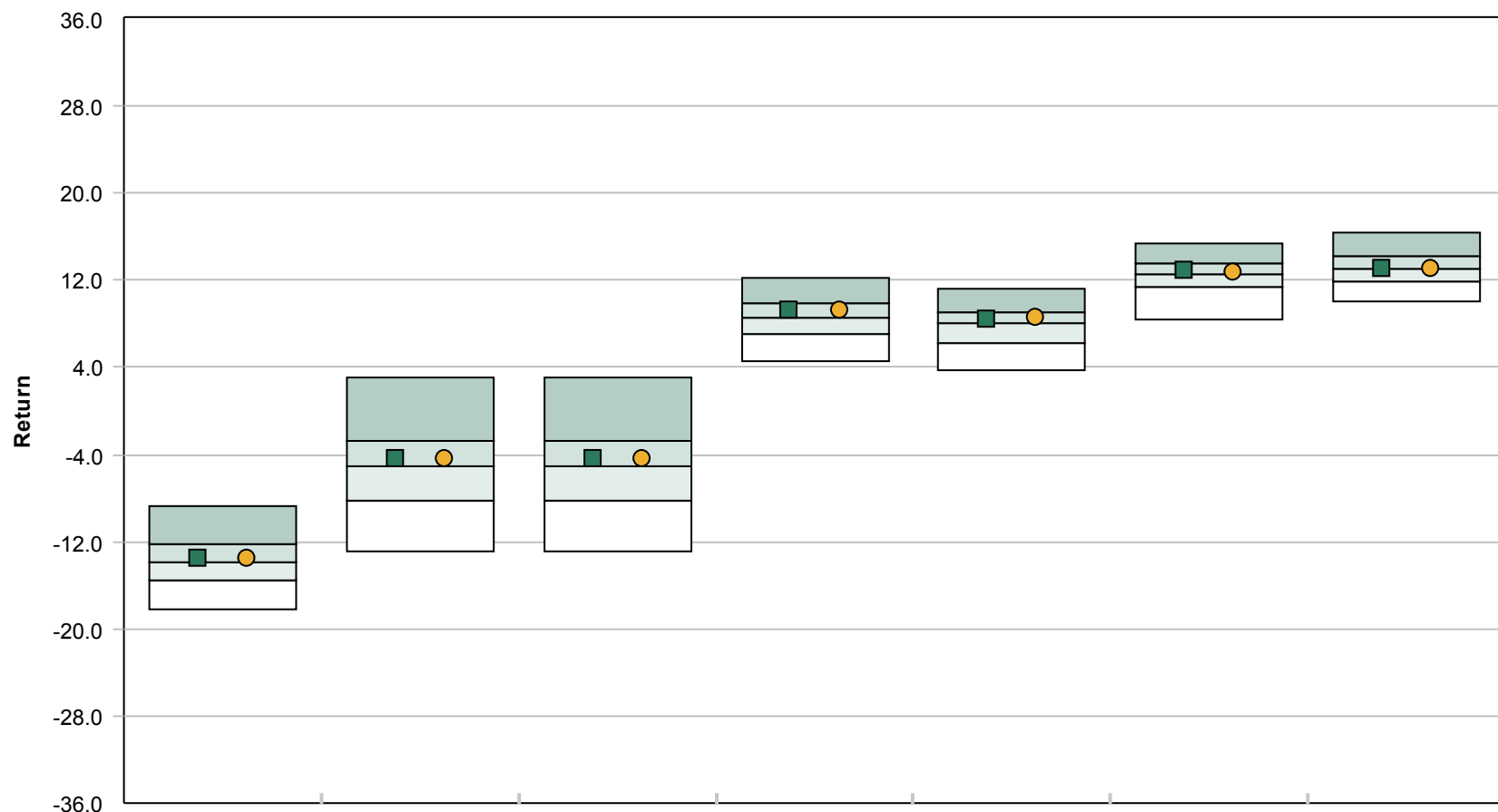
	1 Qtr	YTD	1 Yr	3 Yrs	5 Yrs
<b>Large Cap Composite</b>					
Beginning Market Value	69,110,909	75,917,694	75,917,694	73,413,297	90,803,296
Net Cash Flows	5,249,874	-8,951,948	-8,951,948	-29,702,909	-60,802,910
Income	5	31	31	580	582
Gain/Loss	-9,986,587	-2,591,576	-2,591,576	20,663,233	34,373,232
Ending Market Value	64,374,201	64,374,201	64,374,201	64,374,201	64,374,201

Rolling Return and Tracking Error



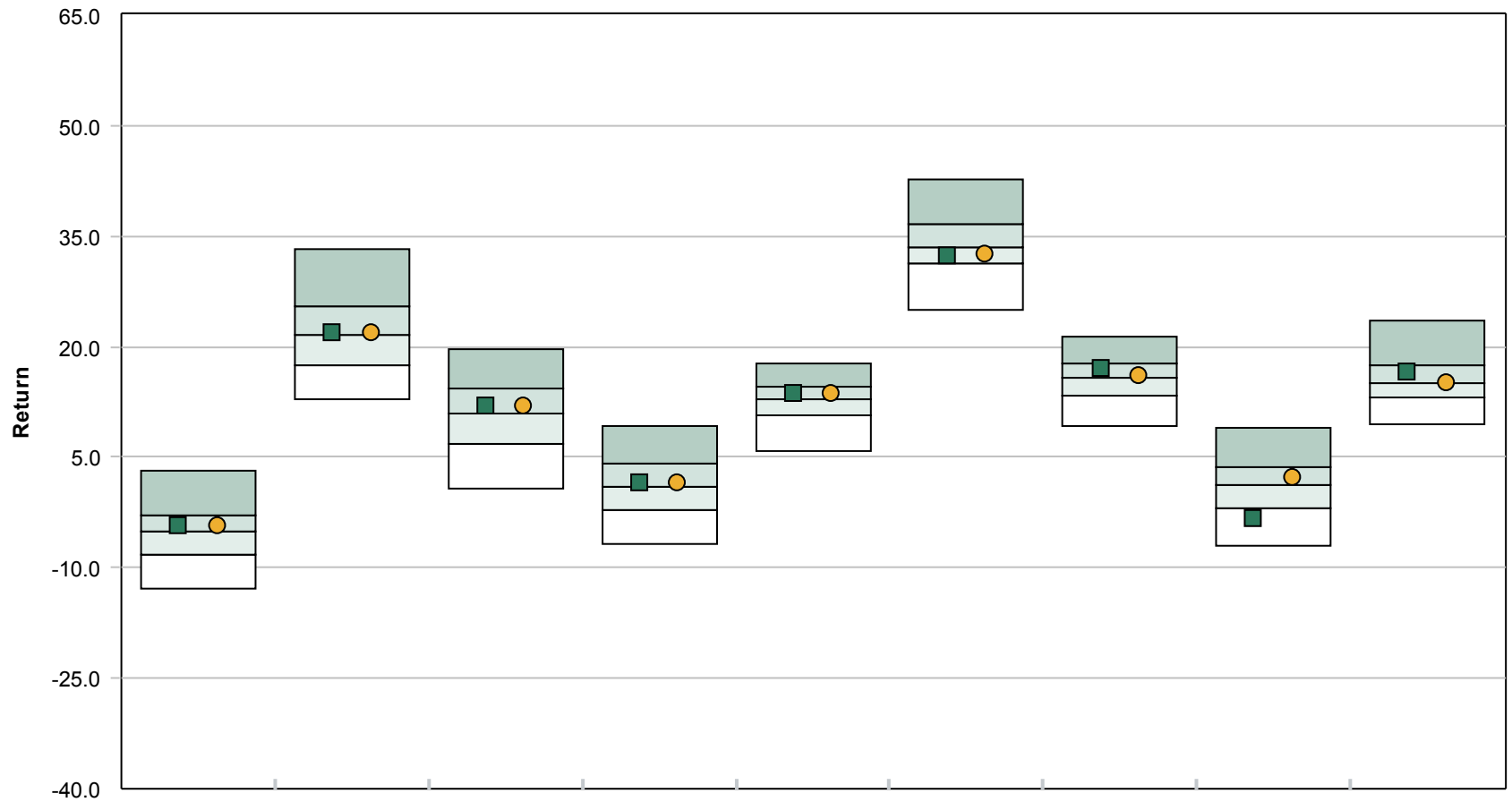
Performance

	1 Qtr	YTD	1 Yr	3 Yrs	5 Yrs	7 Yrs	10 Yrs
Large Cap Composite	-13.61	-4.44	-4.44	9.22	8.47	12.82	13.00
S&P 500	-13.52	-4.38	-4.38	9.26	8.49	12.70	13.12
Difference	-0.09	-0.06	-0.06	-0.04	-0.02	0.12	-0.12



	1 Qtr	YTD	1 Yr	3 Yrs	5 Yrs	7 Yrs	10 Yrs
■ Large Cap Composite	-13.61 (44)	-4.44 (43)	-4.44 (43)	9.22 (37)	8.47 (40)	12.82 (39)	13.00 (55)
● S&P 500	-13.52 (41)	-4.38 (42)	-4.38 (42)	9.26 (35)	8.49 (38)	12.70 (44)	13.12 (50)
5th Percentile	-8.67	3.12	3.12	12.27	11.26	15.44	16.45
1st Quartile	-12.22	-2.78	-2.78	9.83	9.13	13.49	14.28
Median	-13.94	-5.15	-5.15	8.62	7.99	12.51	13.12
3rd Quartile	-15.55	-8.17	-8.17	7.14	6.30	11.31	11.94
95th Percentile	-18.15	-12.90	-12.90	4.59	3.71	8.48	10.07
Population	948	947	947	922	897	846	780

Parentheses contain percentile rankings.  
Calculation based on monthly periodicity.



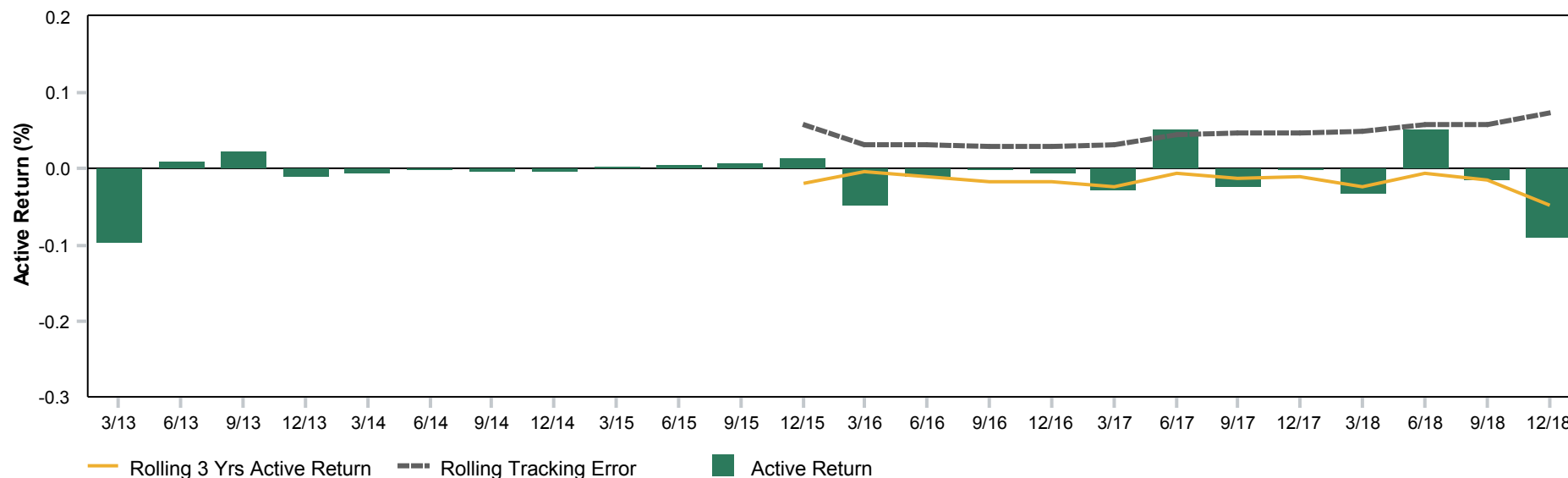
	2018	2017	2016	2015	2014	2013	2012	2011	2010
■ Large Cap Composite	-4.44 (43)	21.83 (48)	11.89 (43)	1.41 (45)	13.67 (37)	32.30 (66)	17.06 (32)	-3.31 (83)	16.46 (34)
● S&P 500	-4.38 (42)	21.83 (48)	11.96 (41)	1.38 (46)	13.69 (37)	32.39 (64)	16.00 (47)	2.11 (41)	15.06 (52)
5th Percentile	3.12	33.14	19.76	9.34	17.61	42.59	21.40	9.06	23.46
1st Quartile	-2.78	25.58	14.22	4.02	14.51	36.62	17.65	3.77	17.41
Median	-5.15	21.68	10.98	0.94	12.92	33.50	15.79	1.26	15.12
3rd Quartile	-8.17	17.48	6.85	-2.17	10.71	31.21	13.39	-1.84	13.07
95th Percentile	-12.90	12.87	0.79	-6.78	5.92	24.87	9.18	-7.07	9.58
Population	947	1,063	1,152	1,226	1,283	1,311	1,350	1,408	1,470

Parentheses contain percentile rankings.  
Calculation based on monthly periodicity.

Gain / Loss

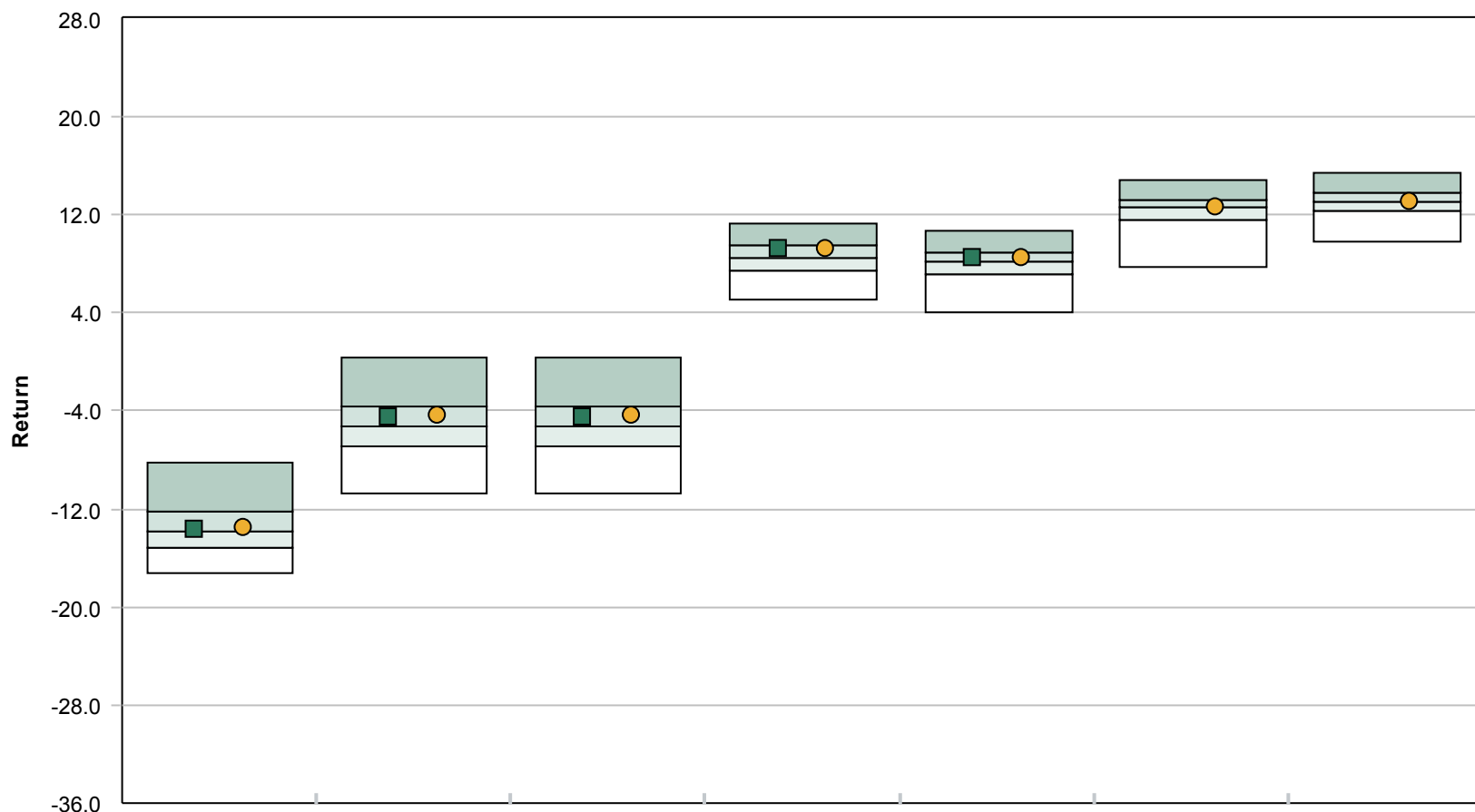
	1 Qtr	YTD	1 Yr	3 Yrs	5 Yrs
<b>Northern Trust S&amp;P 500</b>					
Beginning Market Value	69,110,909	75,917,694	75,917,694	73,413,297	90,803,296
Net Cash Flows	5,249,874	-8,951,948	-8,951,948	-29,702,909	-60,802,910
Income	5	31	31	580	582
Gain/Loss	-9,986,587	-2,591,576	-2,591,576	20,663,233	34,373,232
Ending Market Value	64,374,201	64,374,201	64,374,201	64,374,201	64,374,201

Rolling Return and Tracking Error



Performance

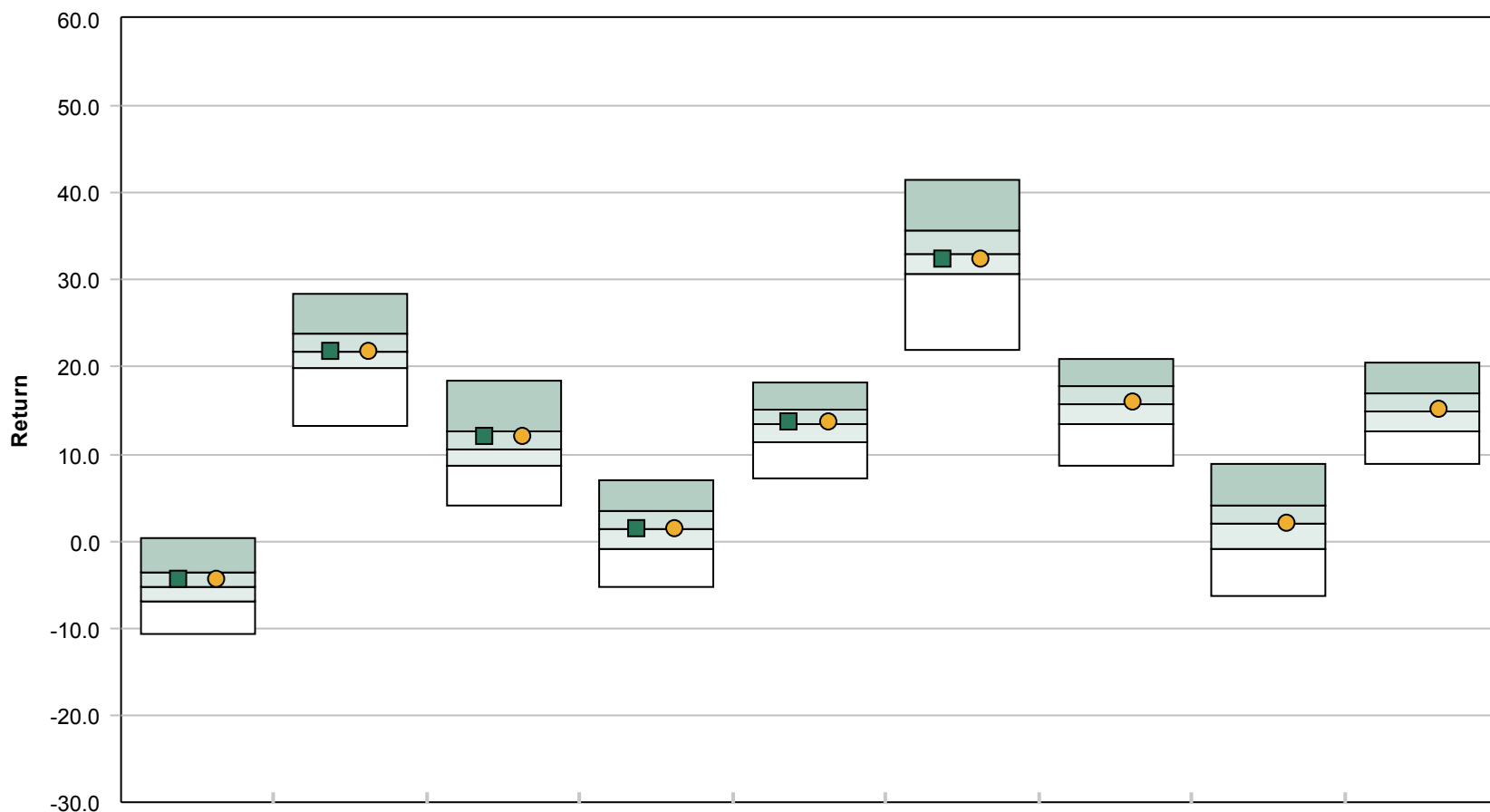
	1 Qtr	YTD	1 Yr	3 Yrs	5 Yrs	7 Yrs	10 Yrs
Northern Trust S&P 500	-13.61	-4.48	-4.48	9.20	8.46	N/A	N/A
S&P 500	-13.52	-4.38	-4.38	9.26	8.49	12.70	13.12
Difference	-0.09	-0.10	-0.10	-0.06	-0.03	N/A	N/A



	1 Qtr	YTD	1 Yr	3 Yrs	5 Yrs	7 Yrs	10 Yrs
■ Northern Trust S&P 500	-13.61 (46)	-4.48 (40)	-4.48 (40)	9.20 (34)	8.46 (40)	N/A	N/A
● S&P 500	-13.52 (44)	-4.38 (38)	-4.38 (38)	9.26 (31)	8.49 (37)	12.70 (47)	13.12 (47)
5th Percentile	-8.28	0.38	0.38	11.32	10.76	14.81	15.38
1st Quartile	-12.20	-3.57	-3.57	9.50	8.87	13.22	13.83
Median	-13.83	-5.20	-5.20	8.47	8.15	12.63	13.05
3rd Quartile	-15.13	-6.90	-6.90	7.49	7.14	11.52	12.29
95th Percentile	-17.21	-10.77	-10.77	5.04	3.98	7.74	9.80
Population	242	242	242	236	229	214	192

Parentheses contain percentile rankings.  
Calculation based on quarterly periodicity.





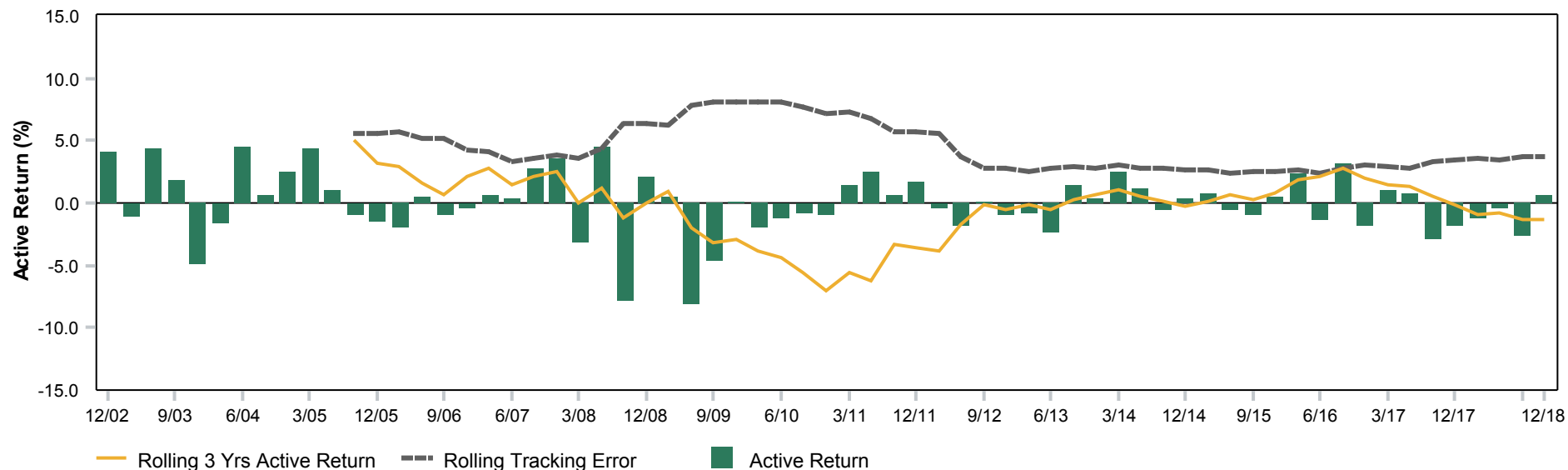
	2018	2017	2016	2015	2014	2013	2012	2011	2010
■ Northern Trust S&P 500	-4.48 (40)	21.83 (50)	11.89 (34)	1.41 (51)	13.67 (44)	32.30 (61)	N/A	N/A	N/A
● S&P 500	-4.38 (38)	21.83 (50)	11.96 (34)	1.38 (52)	13.69 (44)	32.39 (60)	16.00 (46)	2.11 (50)	15.06 (45)
5th Percentile	0.38	28.34	18.40	6.98	18.32	41.42	21.00	8.86	20.57
1st Quartile	-3.57	23.87	12.67	3.42	15.17	35.69	17.71	4.17	16.89
Median	-5.20	21.83	10.52	1.43	13.42	32.98	15.66	2.03	14.82
3rd Quartile	-6.90	19.79	8.73	-0.88	11.32	30.64	13.44	-0.85	12.58
95th Percentile	-10.77	13.24	4.14	-5.28	7.31	21.96	8.64	-6.35	8.83
Population	242	284	308	326	345	363	368	373	392

Parentheses contain percentile rankings.  
Calculation based on quarterly periodicity.

Gain / Loss

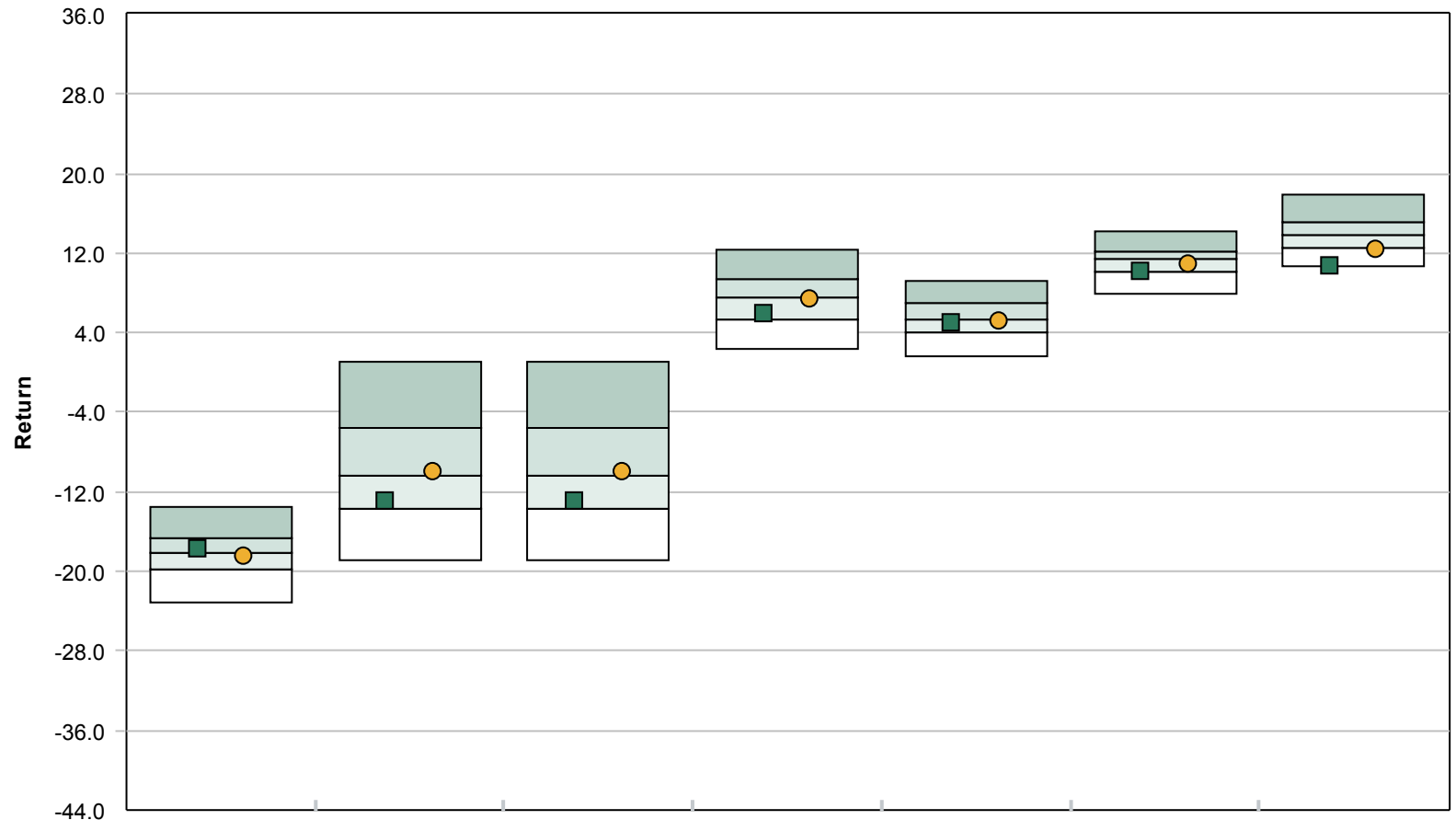
	1 Qtr	YTD	1 Yr	3 Yrs	5 Yrs
<b>Small / SMID Cap Composite</b>					
Beginning Market Value	32,355,739	36,344,261	36,344,261	37,742,437	38,333,320
Net Cash Flows	4,005,359	-1,877,992	-1,877,992	-15,377,936	-18,532,189
Income	95,261	380,322	380,322	1,252,410	1,767,384
Gain/Loss	-6,323,224	-4,713,456	-4,713,456	6,516,224	8,564,620
Ending Market Value	30,133,135	30,133,135	30,133,135	30,133,135	30,133,135

Rolling Return and Tracking Error



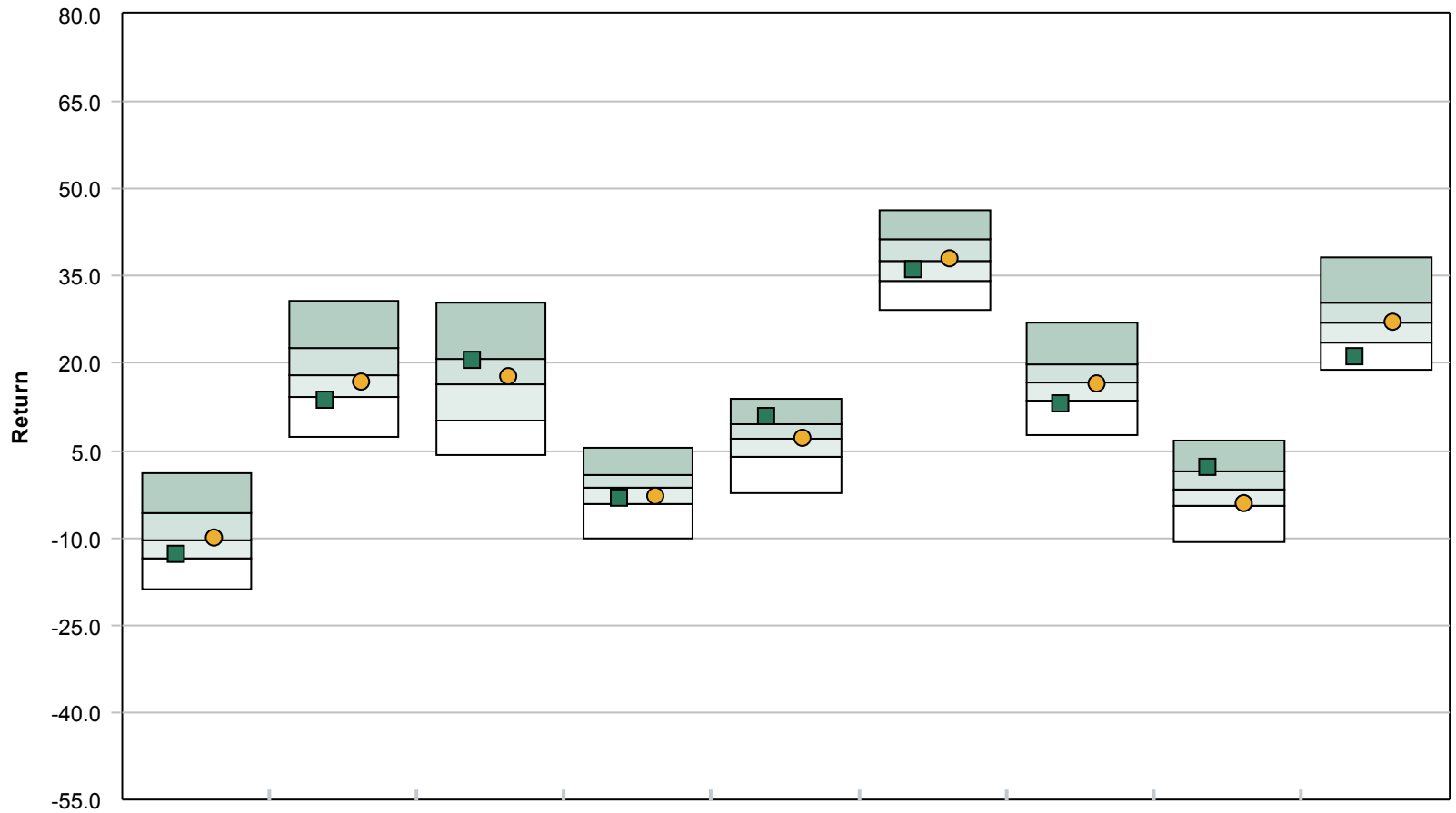
Performance

	1 Qtr	YTD	1 Yr	3 Yrs	5 Yrs	7 Yrs	10 Yrs
Small / SMID Cap Composite	-17.83	-12.96	-12.96	5.95	4.98	10.08	10.75
Small / SMID Policy	-18.49	-10.00	-10.00	7.32	5.15	10.88	12.28
Difference	0.66	-2.96	-2.96	-1.37	-0.17	-0.80	-1.53



	1 Qtr	YTD	1 Yr	3 Yrs	5 Yrs	7 Yrs	10 Yrs
■ Small / SMID Cap Composite	-17.83 (46)	-12.96 (71)	-12.96 (71)	5.95 (68)	4.98 (61)	10.08 (78)	10.75 (96)
● Small / SMID Policy	-18.49 (58)	-10.00 (49)	-10.00 (49)	7.32 (52)	5.15 (59)	10.88 (60)	12.28 (81)
5th Percentile	-13.49	1.11	1.11	12.43	9.26	14.12	17.98
1st Quartile	-16.65	-5.60	-5.60	9.32	6.96	12.19	15.08
Median	-18.17	-10.32	-10.32	7.50	5.40	11.39	13.85
3rd Quartile	-19.72	-13.63	-13.63	5.26	3.97	10.19	12.52
95th Percentile	-23.05	-18.89	-18.89	2.29	1.64	7.90	10.78
Population	197	196	196	186	173	163	141

Parentheses contain percentile rankings.  
Calculation based on monthly periodicity.



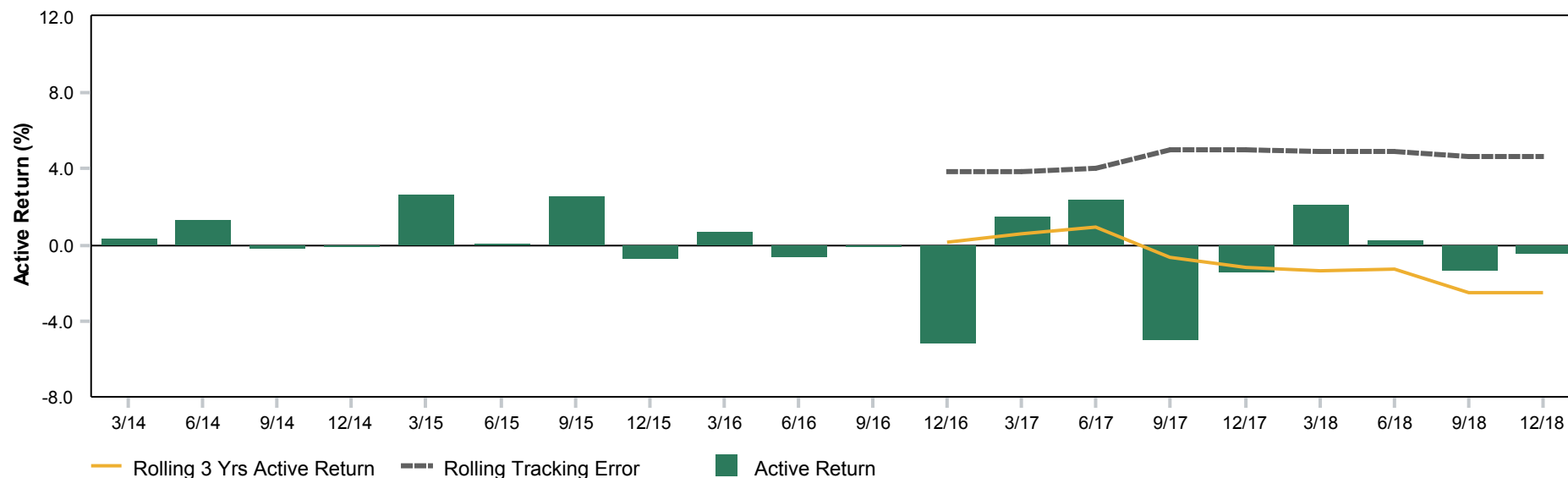
	2018	2017	2016	2015	2014	2013	2012	2011	2010
■ Small / SMID Cap Composite	-12.96 (71)	13.57 (78)	20.32 (27)	-3.16 (69)	10.71 (19)	36.00 (63)	12.94 (79)	1.91 (22)	21.00 (91)
● Small / SMID Policy	-10.00 (49)	16.81 (59)	17.59 (37)	-2.90 (67)	7.07 (50)	37.79 (49)	16.35 (53)	-4.18 (72)	26.85 (51)
5th Percentile	1.11	30.66	30.27	5.37	13.94	46.32	27.00	6.67	38.26
1st Quartile	-5.60	22.58	20.81	0.89	9.69	41.48	19.83	1.51	30.46
Median	-10.32	17.83	16.37	-1.42	6.97	37.56	16.69	-1.74	26.93
3rd Quartile	-13.63	14.15	10.25	-4.14	3.82	34.28	13.57	-4.60	23.52
95th Percentile	-18.89	7.49	4.24	-10.04	-2.23	29.23	7.64	-10.75	18.76
Population	196	213	220	227	238	242	256	265	266

Parentheses contain percentile rankings.  
Calculation based on monthly periodicity.

**Gain / Loss**

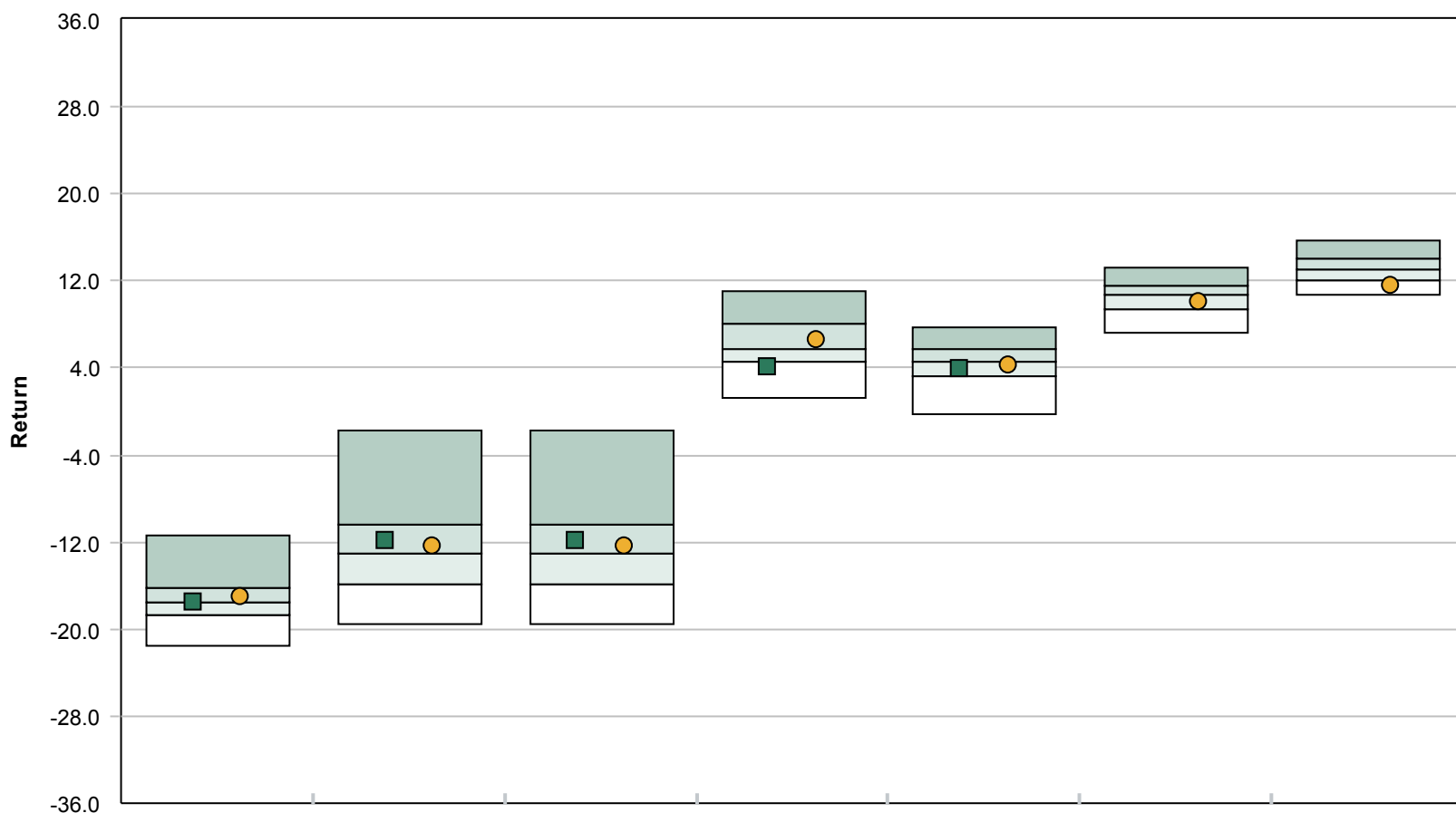
	1 Qtr	YTD	1 Yr	3 Yrs	5 Yrs
<b>TSW - SMID Value</b>					
Beginning Market Value	15,211,877	16,848,133	16,848,133	18,508,530	20,032,774
Net Cash Flows	5,427	-2,792,011	-2,792,011	-9,289,957	-12,291,031
Income	95,261	380,205	380,205	1,239,505	1,752,880
Gain/Loss	-2,771,704	-1,895,466	-1,895,466	2,082,783	3,046,238
Ending Market Value	12,540,861	12,540,861	12,540,861	12,540,861	12,540,861

**Rolling Return and Tracking Error**



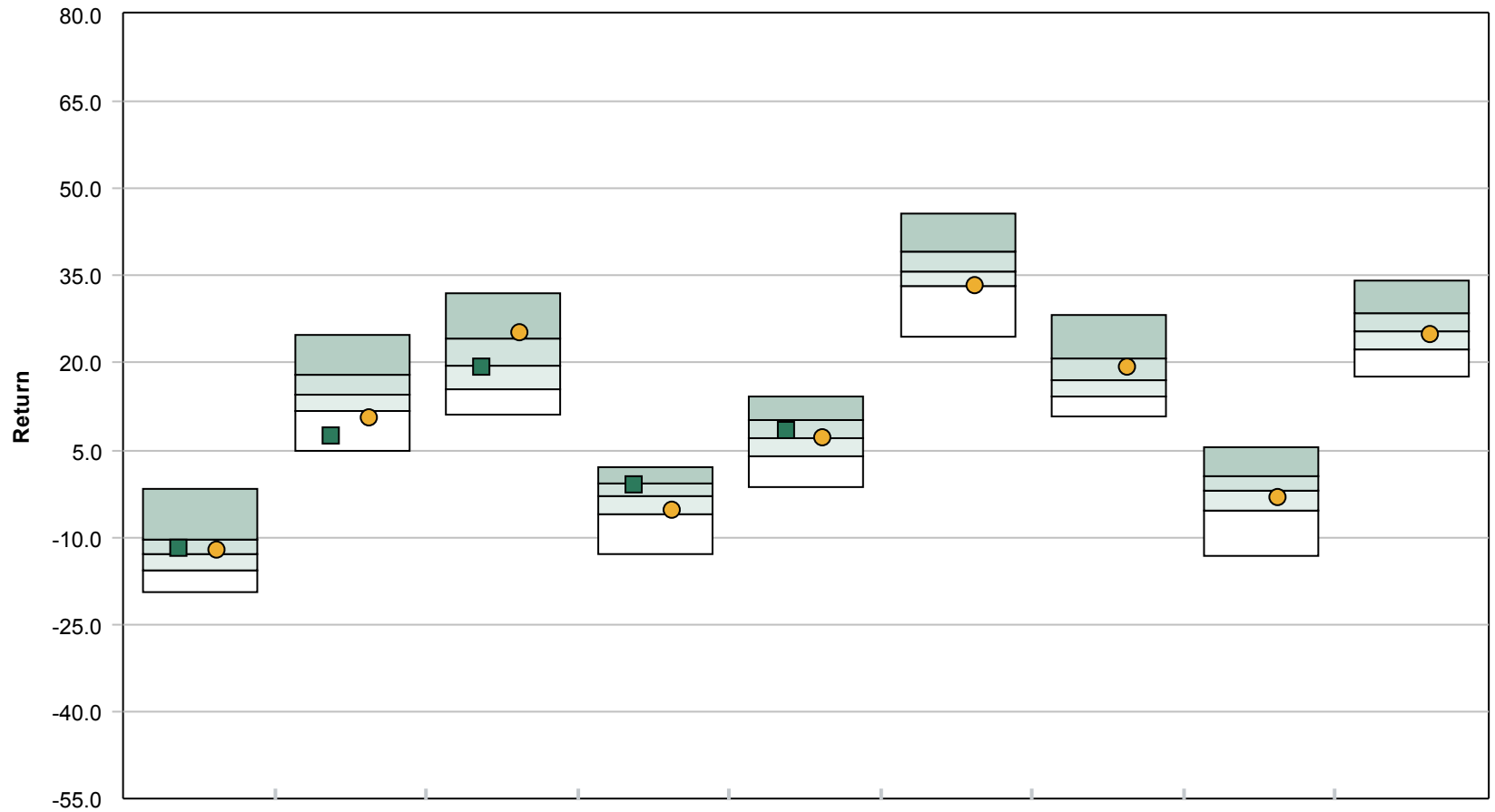
**Performance**

	1 Qtr	YTD	1 Yr	3 Yrs	5 Yrs	7 Yrs	10 Yrs
TSW - SMID Value	-17.59	-11.96	-11.96	4.10	3.90	N/A	N/A
Russell 2500 Value Index	-17.12	-12.36	-12.36	6.59	4.16	10.00	11.62
Difference	-0.47	0.40	0.40	-2.49	-0.26	N/A	N/A



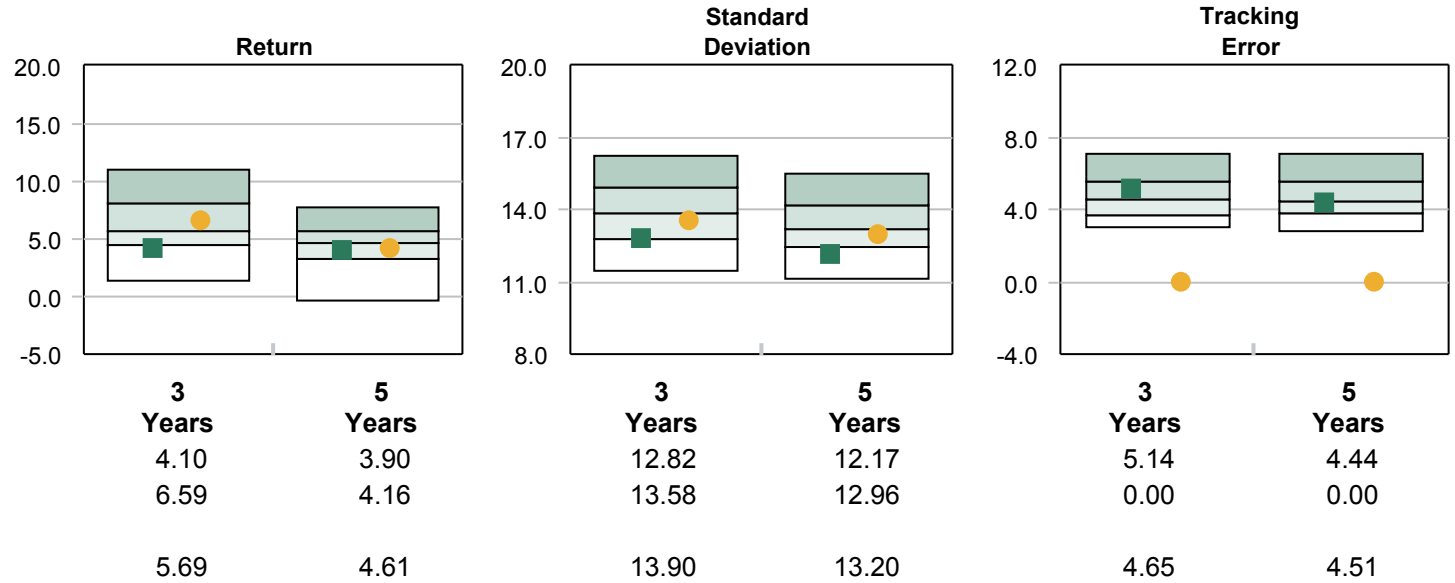
	1 Qtr	YTD	1 Yr	3 Yrs	5 Yrs	7 Yrs	10 Yrs
■ TSW - SMID Value	-17.59 (52)	-11.96 (37)	-11.96 (37)	4.10 (80)	3.90 (65)	N/A	N/A
● Russell 2500 Value Index	-17.12 (39)	-12.36 (41)	-12.36 (41)	6.59 (42)	4.16 (58)	10.00 (67)	11.62 (85)
5th Percentile	-11.44	-1.71	-1.71	11.08	7.76	13.26	15.79
1st Quartile	-16.22	-10.40	-10.40	8.09	5.69	11.55	13.98
Median	-17.55	-12.98	-12.98	5.69	4.61	10.70	13.03
3rd Quartile	-18.77	-15.80	-15.80	4.53	3.21	9.45	12.07
95th Percentile	-21.54	-19.46	-19.46	1.29	-0.33	7.30	10.65
Population	95	95	95	91	88	85	71

Parentheses contain percentile rankings.  
Calculation based on quarterly periodicity.

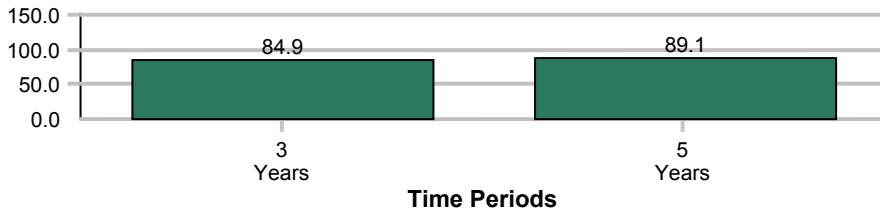


	2018	2017	2016	2015	2014	2013	2012	2011	2010
■ TSW - SMID Value	-11.96 (37)	7.51 (91)	19.19 (52)	-1.03 (28)	8.43 (38)	N/A	N/A	N/A	N/A
● Russell 2500 Value Index	-12.36 (41)	10.36 (84)	25.20 (24)	-5.49 (68)	7.11 (49)	33.32 (73)	19.21 (36)	-3.36 (63)	24.82 (57)
5th Percentile	-1.71	24.90	32.11	2.04	14.17	45.73	28.14	5.41	34.02
1st Quartile	-10.40	17.84	24.34	-0.89	10.01	39.12	20.79	0.61	28.46
Median	-12.98	14.60	19.40	-3.06	7.00	35.71	16.99	-2.09	25.50
3rd Quartile	-15.80	11.78	15.35	-6.01	3.81	33.13	14.24	-5.43	22.34
95th Percentile	-19.46	4.92	11.19	-13.01	-1.46	24.54	10.82	-13.21	17.76
Population	95	105	104	110	116	119	125	125	123

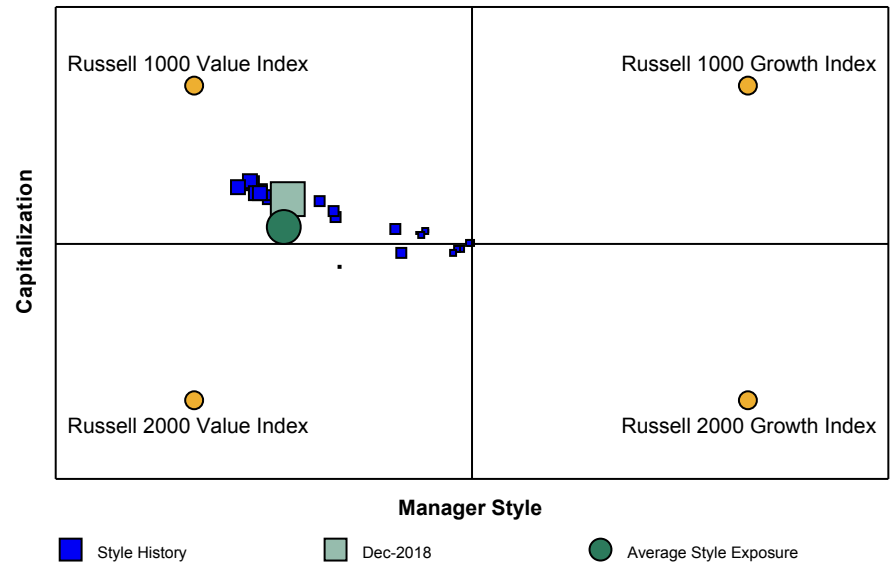
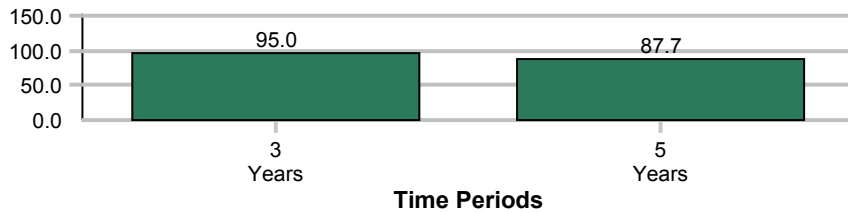
Parentheses contain percentile rankings.  
Calculation based on monthly periodicity.



**Up Market Capture**



**Down Market Capture**



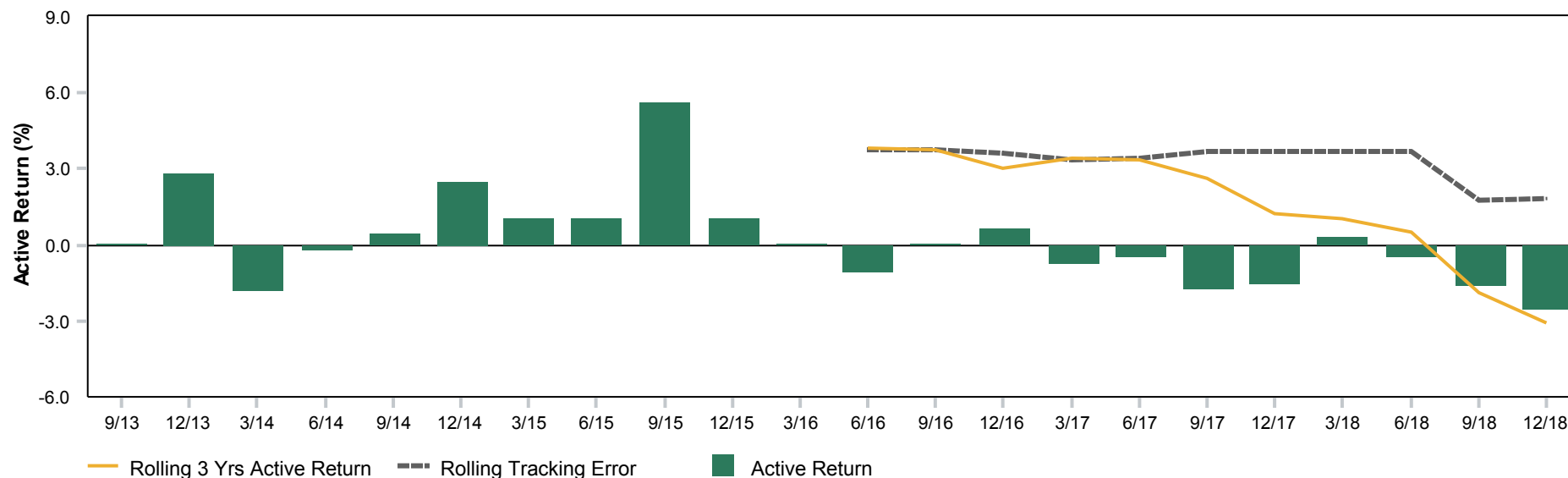


## **International Equity**

Gain / Loss

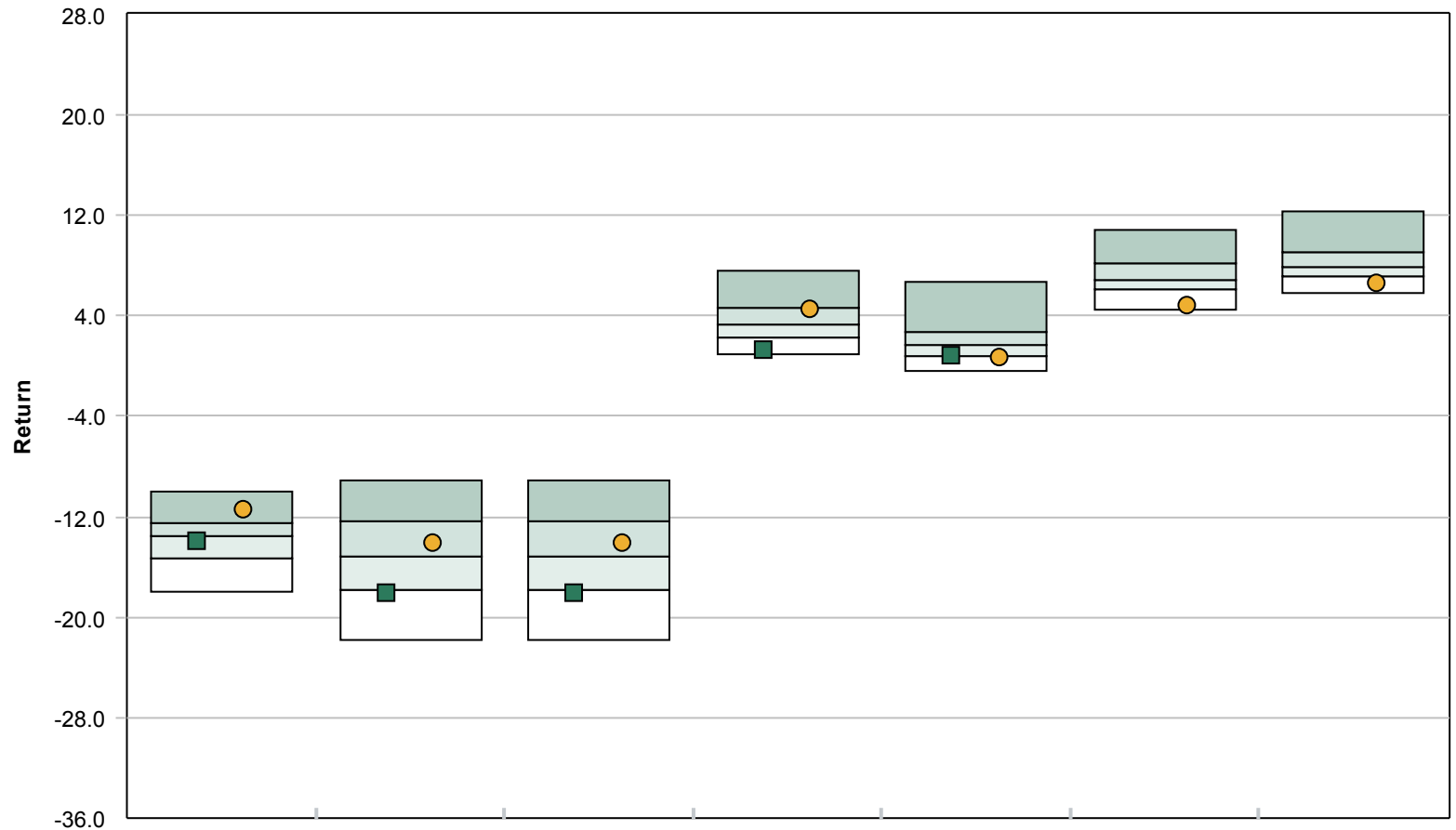
	1 Qtr	YTD	1 Yr	3 Yrs	5 Yrs
<b>International Equity Composite</b>					
Beginning Market Value	60,661,258	72,894,196	72,894,196	57,386,293	44,197,974
Net Cash Flows	3,479,250	-5,681,063	-5,681,063	-5,604,180	10,595,777
Income	139,203	1,000,418	1,000,418	2,924,108	4,504,575
Gain/Loss	-8,816,185	-12,750,026	-12,750,026	757,304	-3,834,799
Ending Market Value	55,463,526	55,463,526	55,463,526	55,463,526	55,463,526

Rolling Return and Tracking Error



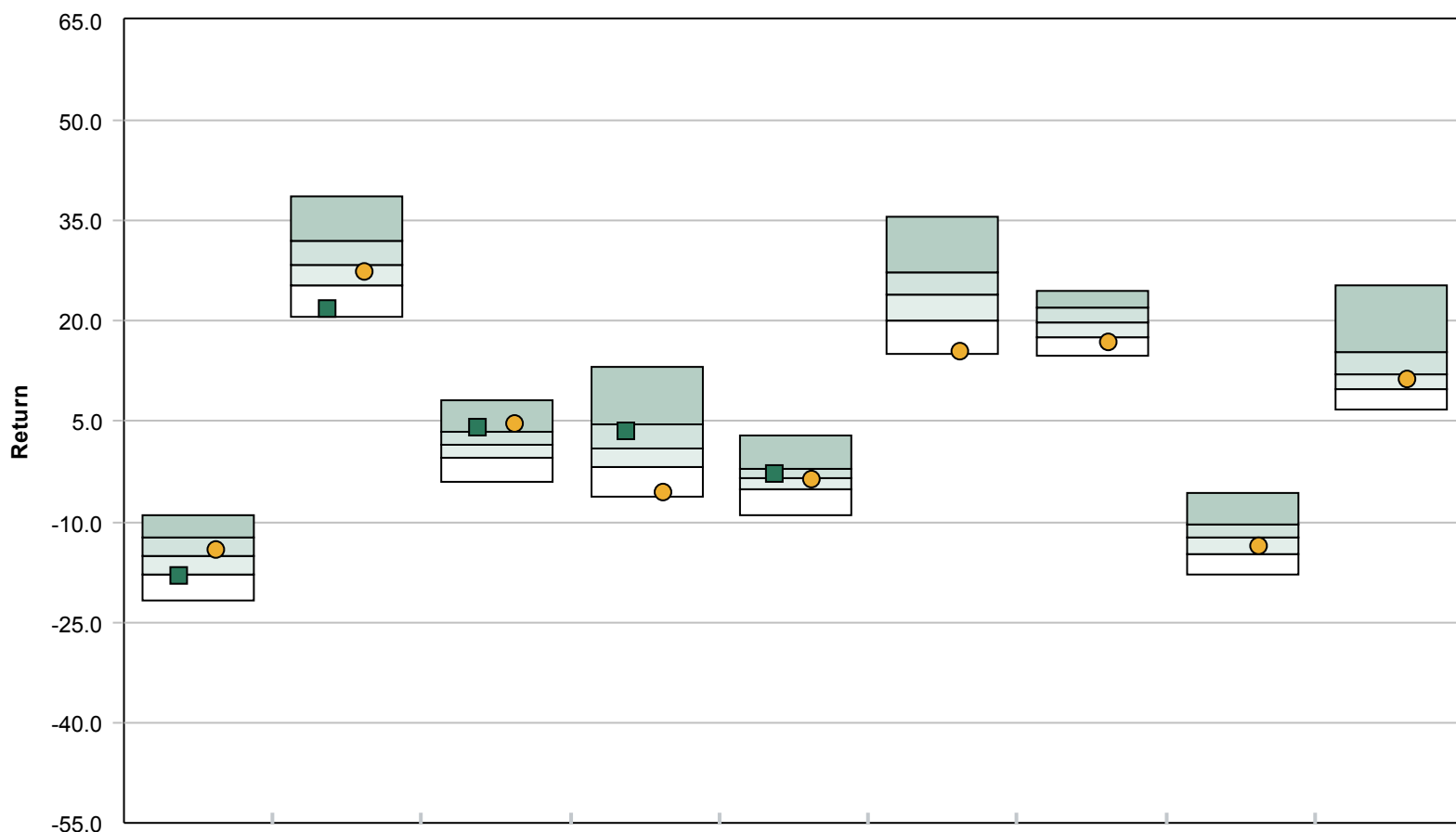
Performance

	1 Qtr	YTD	1 Yr	3 Yrs	5 Yrs	7 Yrs	10 Yrs
International Equity Composite	-13.98	-18.12	-18.12	1.28	0.84	N/A	N/A
MSCI AC World ex USA (Net)	-11.46	-14.20	-14.20	4.48	0.68	4.85	6.57
Difference	-2.52	-3.92	-3.92	-3.20	0.16	N/A	N/A



	1 Qtr	YTD	1 Yr	3 Yrs	5 Yrs	7 Yrs	10 Yrs
■ International Equity Composite	-13.98 (58)	-18.12 (78)	-18.12 (78)	1.28 (90)	0.84 (75)	N/A	N/A
● MSCI AC World ex USA (Net)	-11.46 (17)	-14.20 (41)	-14.20 (41)	4.48 (27)	0.68 (78)	4.85 (95)	6.57 (86)
5th Percentile	-10.00	-9.05	-9.05	7.67	6.77	10.92	12.39
1st Quartile	-12.50	-12.39	-12.39	4.62	2.70	8.19	9.07
Median	-13.54	-15.12	-15.12	3.35	1.70	6.88	7.89
3rd Quartile	-15.36	-17.76	-17.76	2.32	0.76	6.18	7.12
95th Percentile	-17.98	-21.86	-21.86	0.95	-0.41	4.48	5.90
Population	163	163	163	158	141	124	109

Parentheses contain percentile rankings.  
Calculation based on monthly periodicity.



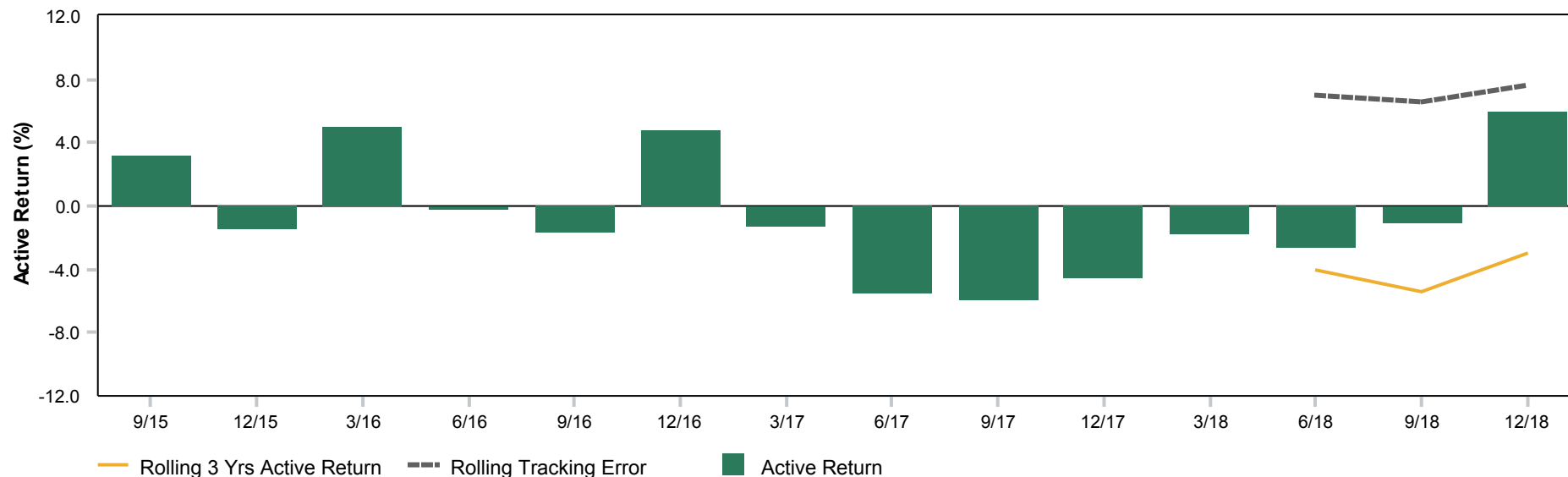
	2018	2017	2016	2015	2014	2013	2012	2011	2010
■ International Equity Composite	-18.12 (78)	21.90 (94)	4.08 (23)	3.39 (31)	-2.90 (41)	N/A	N/A	N/A	N/A
● MSCI AC World ex USA (Net)	-14.20 (41)	27.19 (57)	4.50 (22)	-5.66 (94)	-3.87 (56)	15.29 (95)	16.83 (84)	-13.71 (63)	11.15 (58)
5th Percentile	-9.05	38.76	8.11	13.29	2.94	35.67	24.57	-5.64	25.44
1st Quartile	-12.39	32.14	3.59	4.52	-1.95	27.25	22.00	-10.42	15.27
Median	-15.12	28.54	1.54	1.09	-3.44	24.05	19.74	-12.43	12.05
3rd Quartile	-17.76	25.37	-0.30	-1.86	-5.23	20.00	17.70	-14.82	9.72
95th Percentile	-21.86	20.65	-3.91	-6.15	-8.99	15.24	14.94	-17.87	6.73
Population	163	185	192	192	184	186	188	193	201

Parentheses contain percentile rankings.  
Calculation based on monthly periodicity.

Gain / Loss

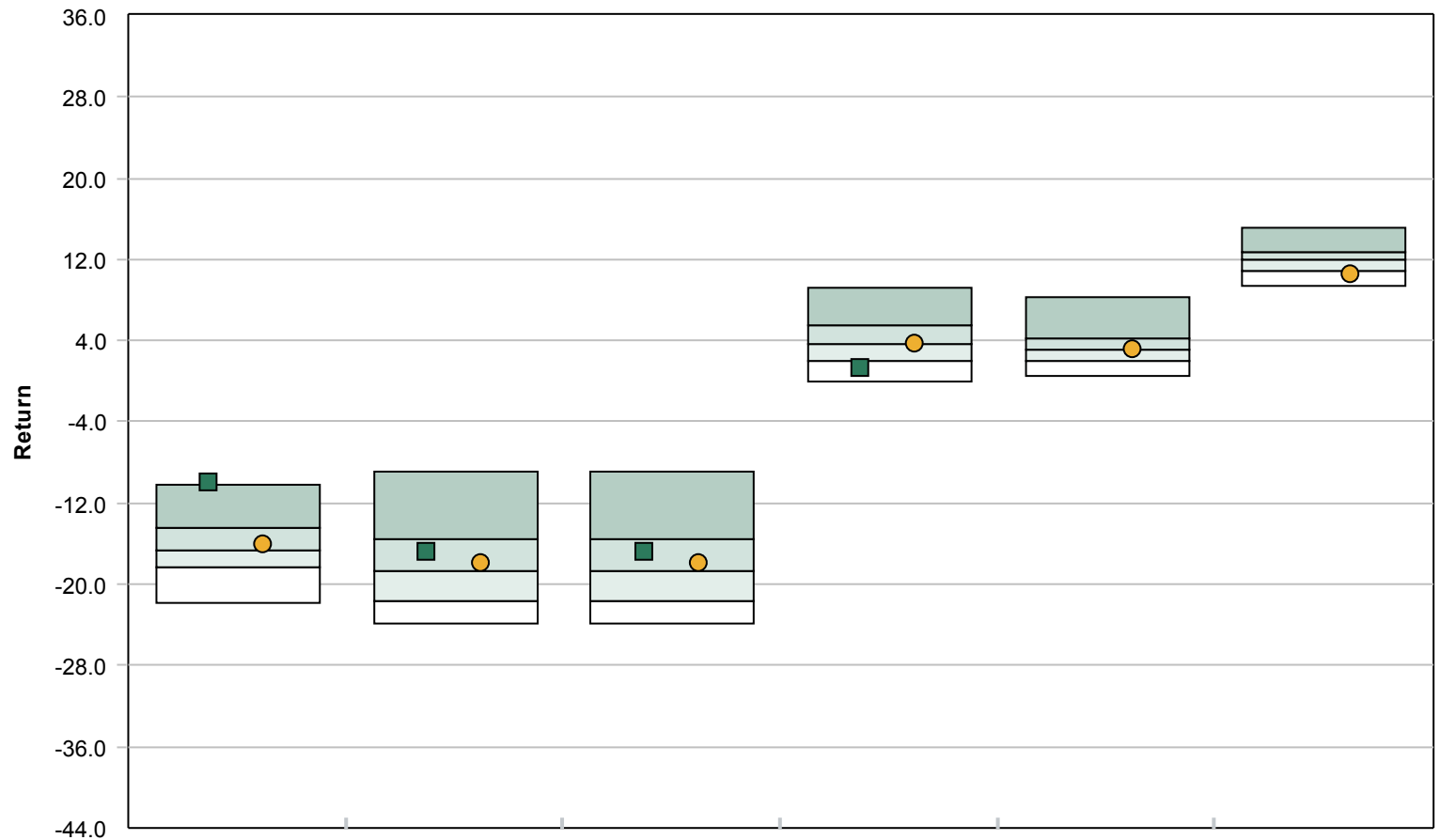
	1 Qtr	YTD	1 Yr	3 Yrs	5 Yrs
<b>Brandes International Small Cap</b>					
Beginning Market Value	14,578,584	18,754,540	18,754,540	15,028,186	-
Net Cash Flows	-	-3,000,032	-3,000,032	-3,000,032	-
Income	-	-	-	1	-
Gain/Loss	-1,469,002	-2,644,927	-2,644,927	1,081,427	-
Ending Market Value	13,109,582	13,109,582	13,109,582	13,109,582	-

Rolling Return and Tracking Error



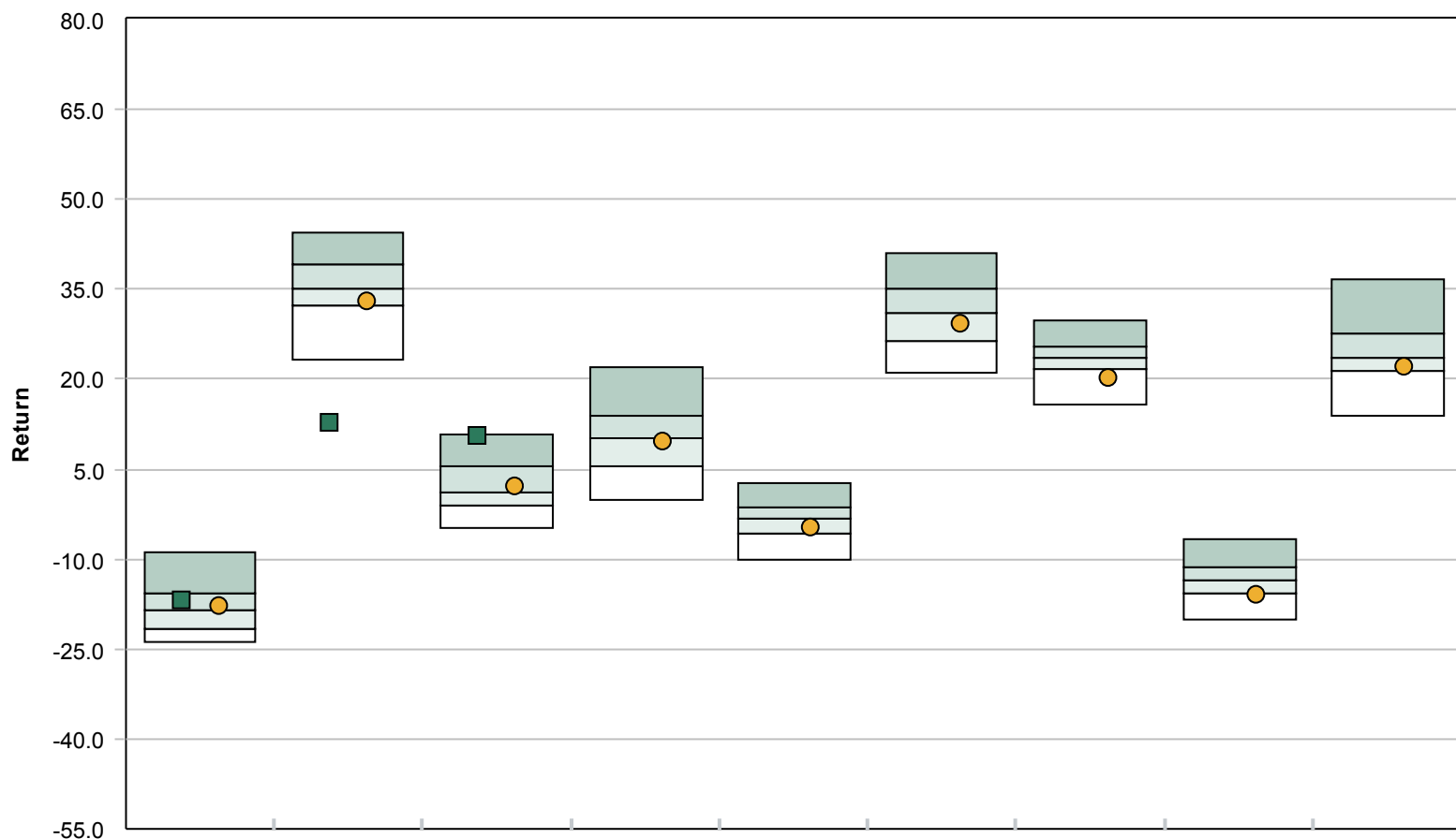
Performance

	1 Qtr	YTD	1 Yr	3 Yrs	5 Yrs	7 Yrs	10 Yrs
Brandes International Small Cap	-10.08	-16.82	-16.82	1.25	N/A	N/A	N/A
MSCI EAFE Small Cap (Net)	-16.05	-17.89	-17.89	3.73	3.06	8.79	10.51
Difference	5.97	1.07	1.07	-2.48	N/A	N/A	N/A



	1 Qtr	YTD	1 Yr	3 Yrs	5 Yrs	10 Yrs
■ Brandes International Small Cap	-10.08 (4)	-16.82 (35)	-16.82 (35)	1.25 (84)	N/A	N/A
● MSCI EAFE Small Cap (Net)	-16.05 (43)	-17.89 (44)	-17.89 (44)	3.73 (48)	3.06 (50)	10.51 (86)
5th Percentile	-10.25	-8.98	-8.98	9.24	8.36	15.15
1st Quartile	-14.50	-15.60	-15.60	5.43	4.28	12.65
Median	-16.65	-18.62	-18.62	3.62	3.04	12.00
3rd Quartile	-18.39	-21.56	-21.56	1.92	1.97	10.83
95th Percentile	-21.80	-23.83	-23.83	-0.04	0.49	9.42
Population	109	107	107	101	86	62

Parentheses contain percentile rankings.  
Calculation based on monthly periodicity.



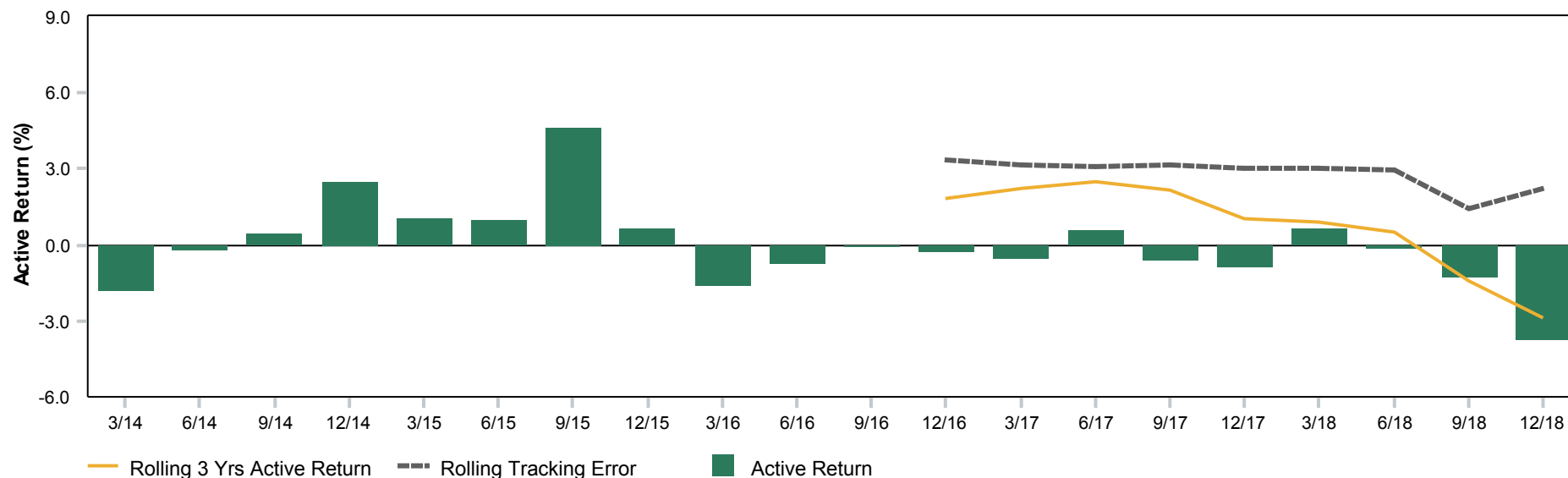
	2018	2017	2016	2015	2014	2013	2012	2011	2010
■ Brandes International Small Cap	-16.82 (35)	12.81 (100)	10.63 (6)	N/A	N/A	N/A	N/A	N/A	N/A
● MSCI EAFE Small Cap (Net)	-17.89 (44)	33.01 (69)	2.18 (42)	9.59 (54)	-4.95 (69)	29.30 (62)	20.00 (84)	-15.94 (78)	22.04 (70)
5th Percentile	-8.98	44.42	10.83	22.11	2.79	41.15	29.92	-6.53	36.69
1st Quartile	-15.60	39.22	5.45	13.75	-1.36	35.10	25.36	-11.31	27.55
Median	-18.62	34.97	1.13	10.04	-3.38	31.13	23.53	-13.55	23.68
3rd Quartile	-21.56	32.30	-1.15	5.52	-5.80	26.24	21.75	-15.82	21.27
95th Percentile	-23.83	23.15	-4.69	-0.28	-10.22	21.21	15.84	-20.18	13.81
Population	107	117	115	118	110	107	98	96	94

Parentheses contain percentile rankings.  
Calculation based on monthly periodicity.

Gain / Loss

	1 Qtr	YTD	1 Yr	3 Yrs	5 Yrs
<b>Wellington International</b>					
Beginning Market Value	46,082,674	54,139,656	54,139,656	42,358,107	41,616,749
Net Cash Flows	3,479,250	-2,681,031	-2,681,031	-2,604,148	-1,404,148
Income	139,203	1,000,418	1,000,418	2,924,108	4,504,504
Gain/Loss	-7,347,183	-10,105,099	-10,105,099	-324,123	-2,363,161
Ending Market Value	42,353,943	42,353,943	42,353,943	42,353,943	42,353,943

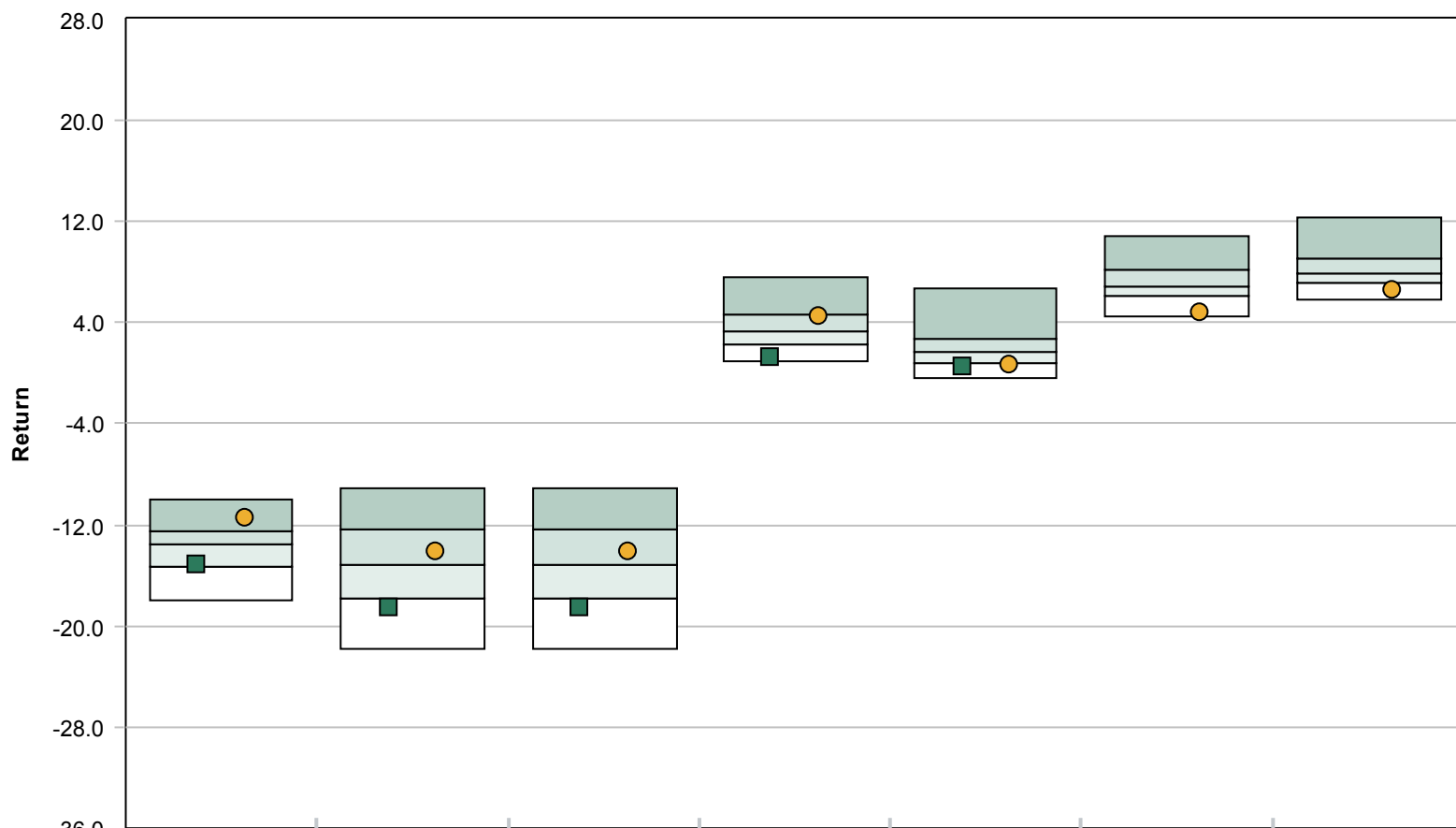
Rolling Return and Tracking Error



Performance

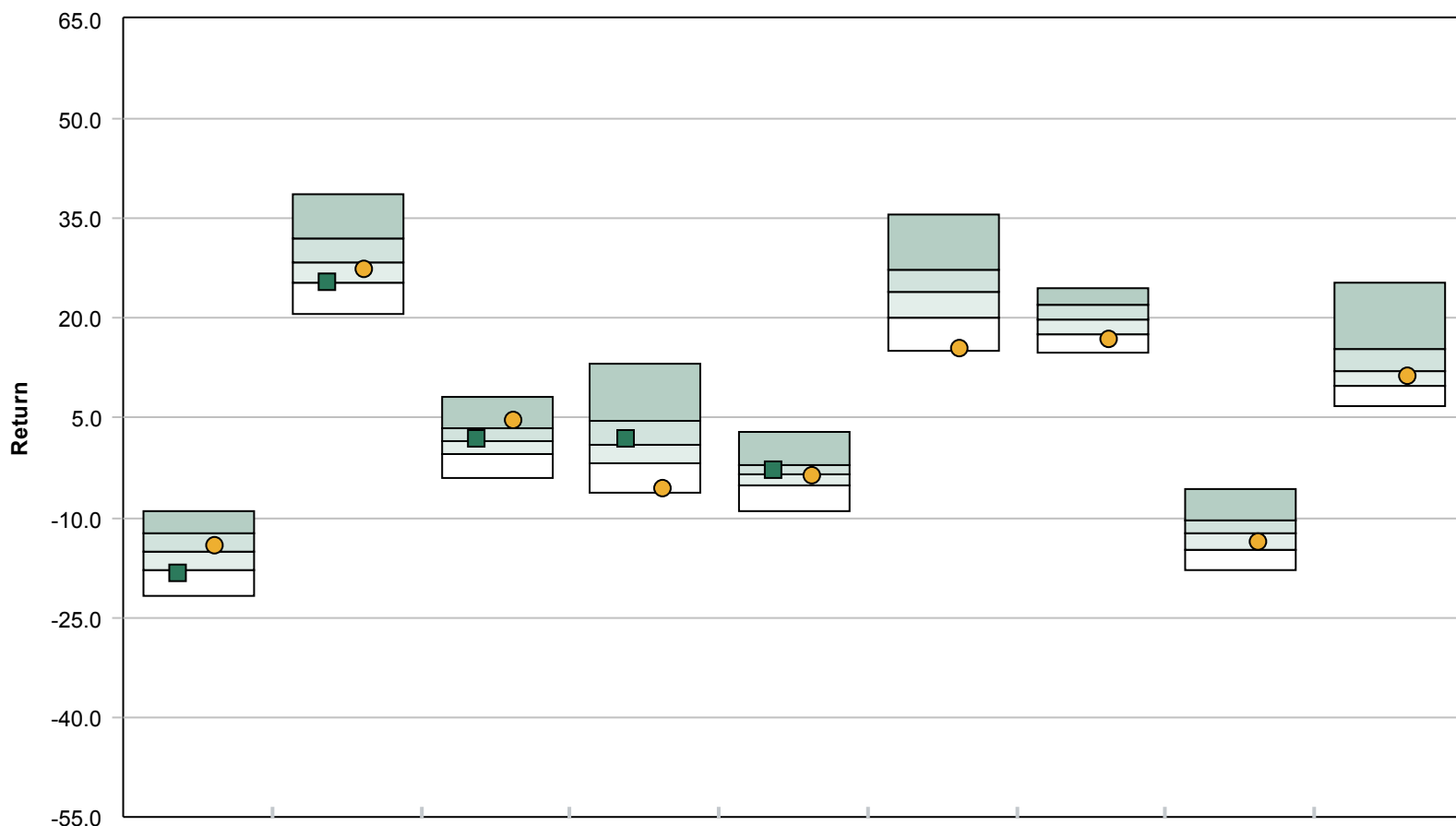
	1 Qtr	YTD	1 Yr	3 Yrs	5 Yrs	7 Yrs	10 Yrs
Wellington International	-15.21	-18.50	-18.50	1.32	0.57	N/A	N/A
MSCI AC World ex USA (Net)	-11.46	-14.20	-14.20	4.48	0.68	4.85	6.57
Difference	-3.75	-4.30	-4.30	-3.16	-0.11	N/A	N/A





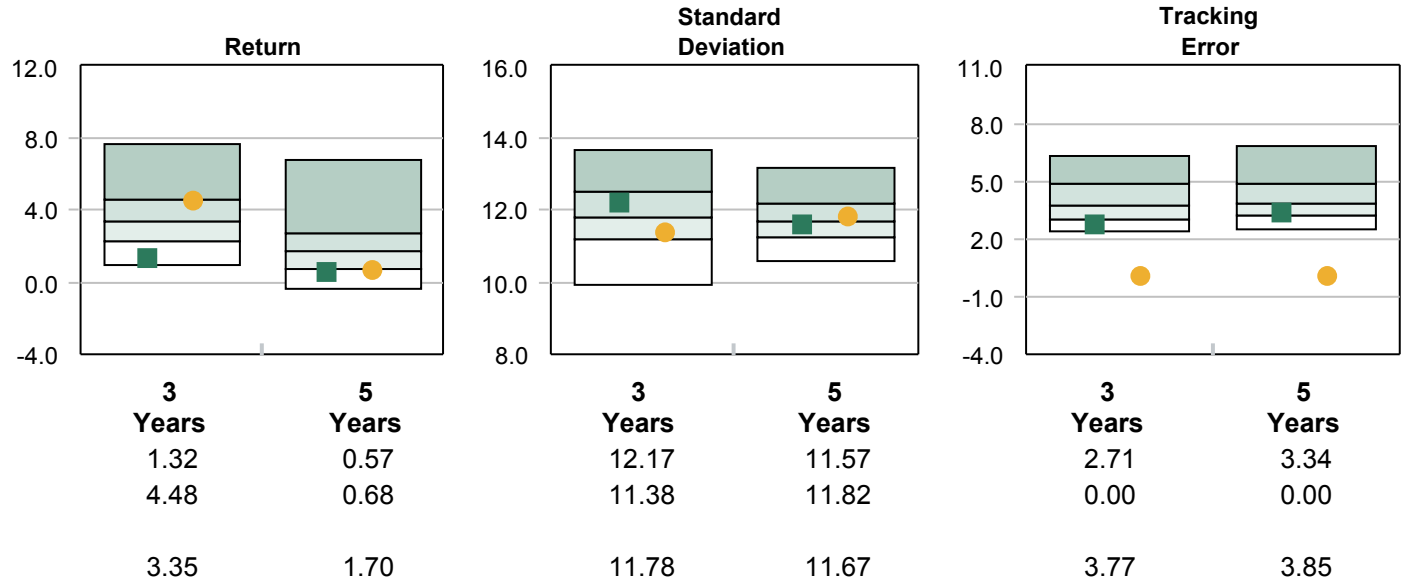
	1 Qtr	YTD	1 Yr	3 Yrs	5 Yrs	7 Yrs	10 Yrs
■ Wellington International	-15.21 (74)	-18.50 (81)	-18.50 (81)	1.32 (89)	0.57 (84)	N/A	N/A
● MSCI AC World ex USA (Net)	-11.46 (17)	-14.20 (41)	-14.20 (41)	4.48 (27)	0.68 (78)	4.85 (95)	6.57 (86)
5th Percentile	-10.00	-9.05	-9.05	7.67	6.77	10.92	12.39
1st Quartile	-12.50	-12.39	-12.39	4.62	2.70	8.19	9.07
Median	-13.54	-15.12	-15.12	3.35	1.70	6.88	7.89
3rd Quartile	-15.36	-17.76	-17.76	2.32	0.76	6.18	7.12
95th Percentile	-17.98	-21.86	-21.86	0.95	-0.41	4.48	5.90
Population	163	163	163	158	141	124	109

Parentheses contain percentile rankings.  
Calculation based on monthly periodicity.

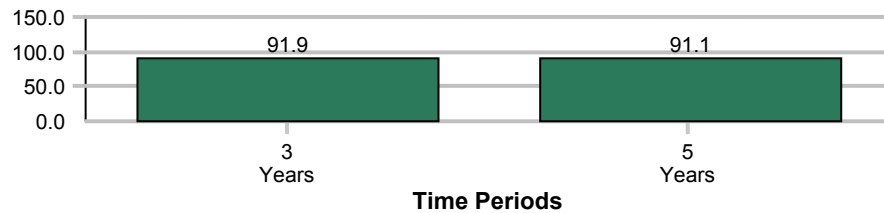


	2018	2017	2016	2015	2014	2013	2012	2011	2010
Wellington International	-18.50 (81)	25.40 (75)	1.76 (48)	1.86 (45)	-2.90 (41)	N/A	N/A	N/A	N/A
MSCI AC World ex USA (Net)	-14.20 (41)	27.19 (57)	4.50 (22)	-5.66 (94)	-3.87 (56)	15.29 (95)	16.83 (84)	-13.71 (63)	11.15 (58)
5th Percentile	-9.05	38.76	8.11	13.29	2.94	35.67	24.57	-5.64	25.44
1st Quartile	-12.39	32.14	3.59	4.52	-1.95	27.25	22.00	-10.42	15.27
Median	-15.12	28.54	1.54	1.09	-3.44	24.05	19.74	-12.43	12.05
3rd Quartile	-17.76	25.37	-0.30	-1.86	-5.23	20.00	17.70	-14.82	9.72
95th Percentile	-21.86	20.65	-3.91	-6.15	-8.99	15.24	14.94	-17.87	6.73
Population	163	185	192	192	184	186	188	193	201

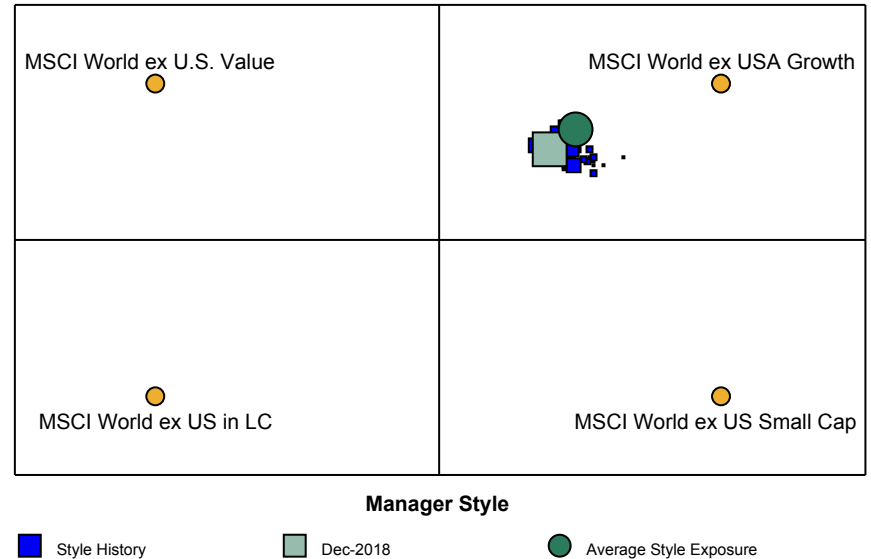
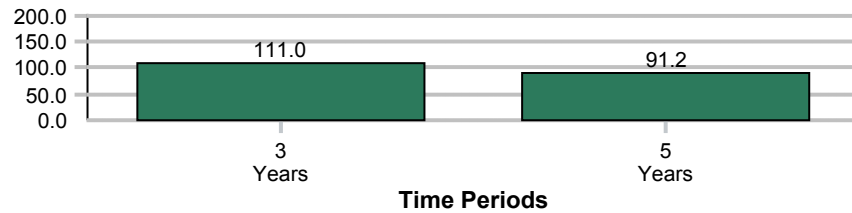
Parentheses contain percentile rankings.  
Calculation based on monthly periodicity.



Up Market Capture



Down Market Capture

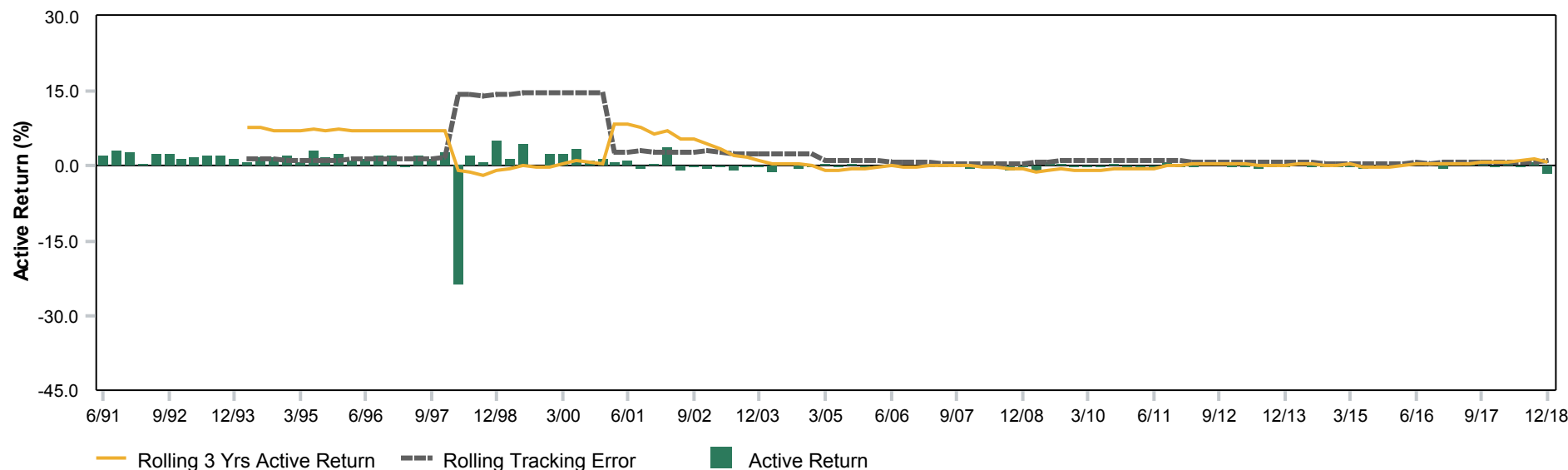


## **Fixed Income**

Gain / Loss

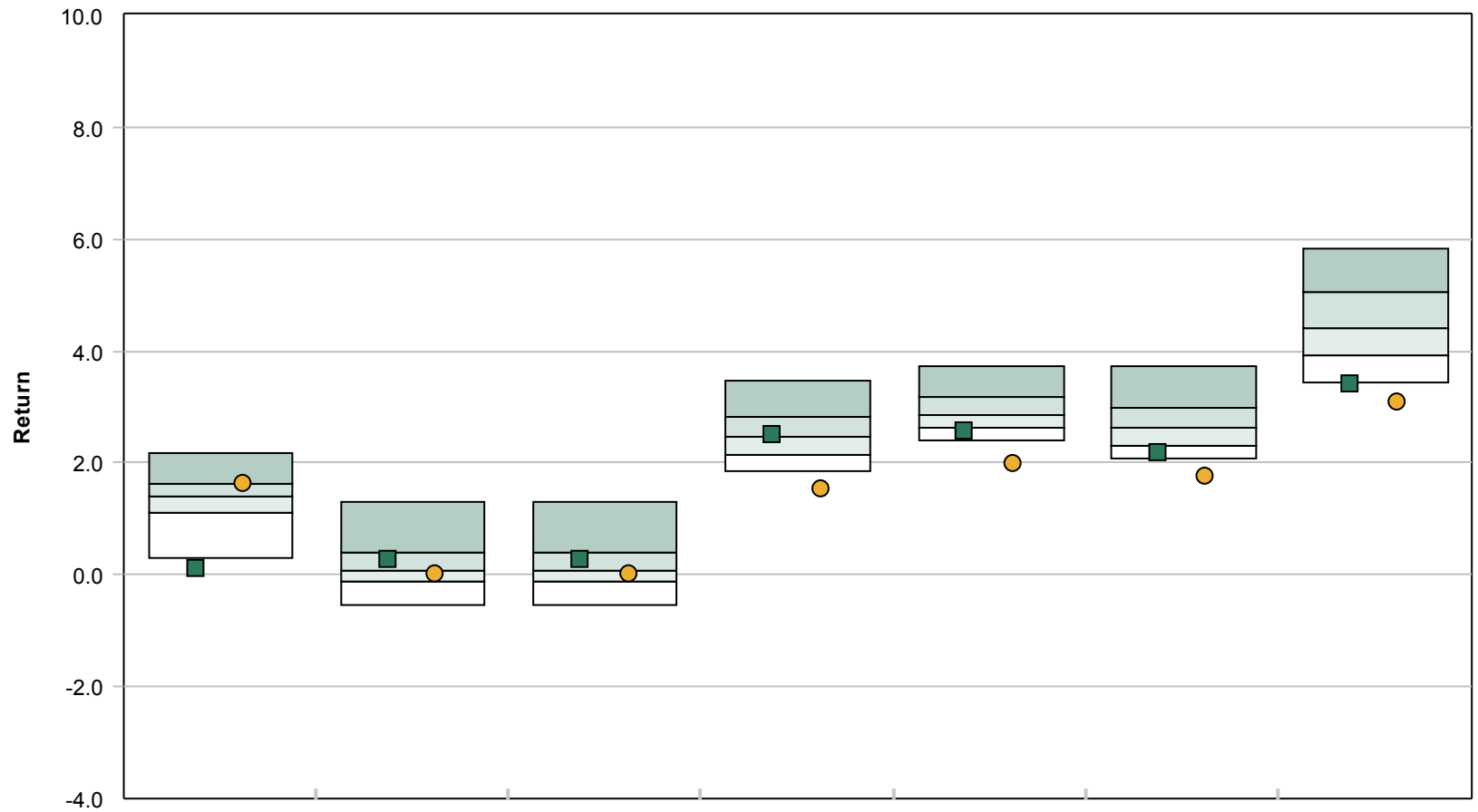
	1 Qtr	YTD	1 Yr	3 Yrs	5 Yrs
<b>Fixed Income Composite</b>					
Beginning Market Value	97,739,783	95,777,709	95,777,709	91,784,239	66,899,591
Net Cash Flows	1,208,076	36,206,699	36,206,699	31,828,230	52,941,344
Income	365,829	1,398,392	1,398,392	5,778,094	10,184,312
Gain/Loss	-80,360	-34,149,472	-34,149,472	-30,157,235	-30,791,919
Ending Market Value	99,233,328	99,233,328	99,233,328	99,233,328	99,233,328

Rolling Return and Tracking Error



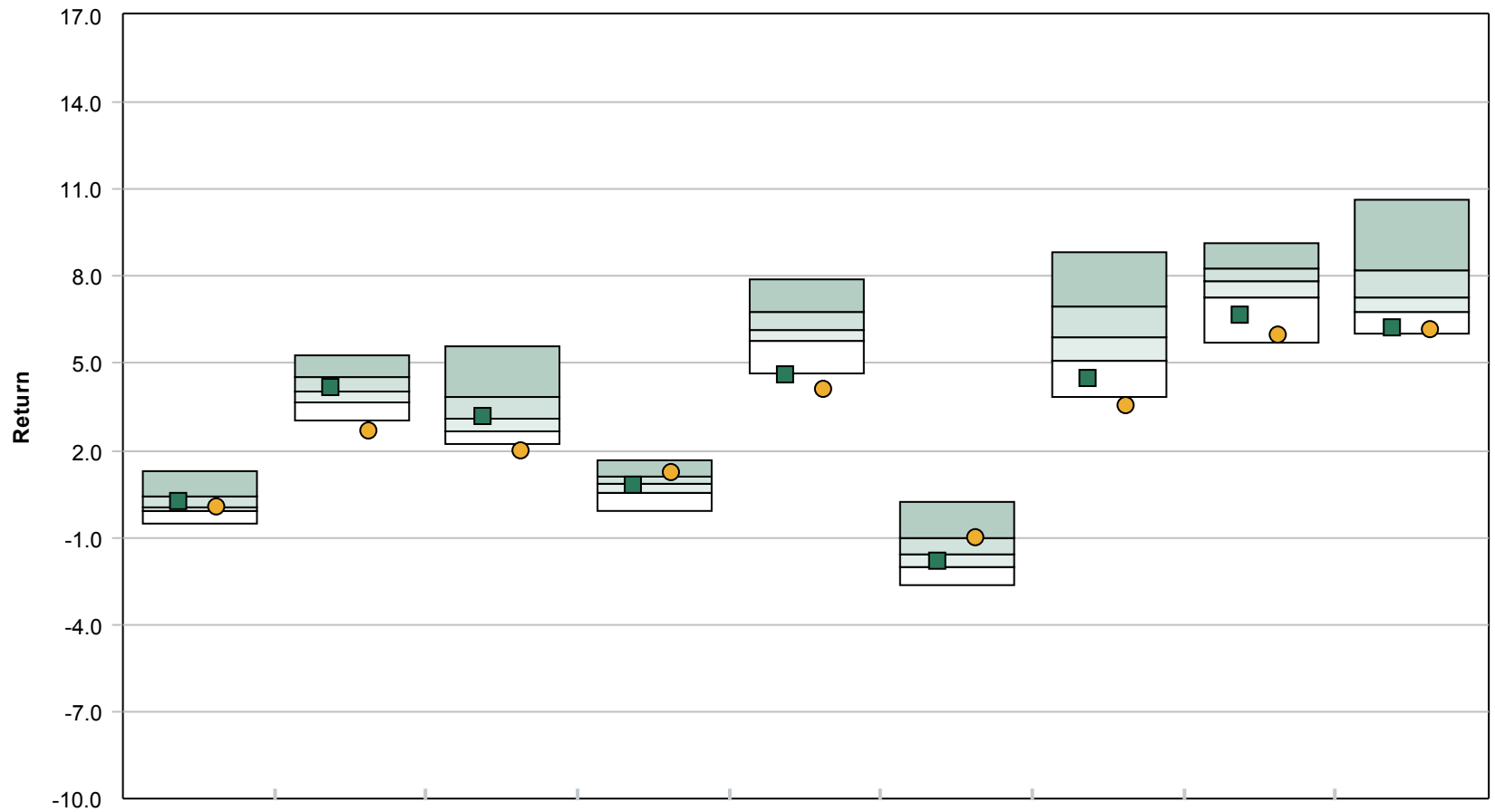
Performance

	1 Qtr	YTD	1 Yr	3 Yrs	5 Yrs	7 Yrs	10 Yrs
Fixed Income Composite	0.10	0.26	0.26	2.51	2.56	2.19	3.40
Bond Index	1.64	0.01	0.01	1.54	1.98	1.77	3.08
Difference	-1.54	0.25	0.25	0.97	0.58	0.42	0.32



	1 Qtr	YTD	1 Yr	3 Yrs	5 Yrs	7 Yrs	10 Yrs
■ Fixed Income Composite	0.10 (97)	0.26 (33)	0.26 (33)	2.51 (48)	2.56 (77)	2.19 (88)	3.40 (96)
● Bond Index	1.64 (24)	0.01 (62)	0.01 (62)	1.54 (100)	1.98 (100)	1.77 (100)	3.08 (100)
5th Percentile	2.17	1.31	1.31	3.47	3.74	3.72	5.82
1st Quartile	1.63	0.39	0.39	2.81	3.18	2.98	5.04
Median	1.40	0.07	0.07	2.48	2.86	2.63	4.41
3rd Quartile	1.12	-0.10	-0.10	2.15	2.63	2.31	3.92
95th Percentile	0.30	-0.53	-0.53	1.85	2.39	2.07	3.44
Population	138	137	137	136	130	126	121

Parentheses contain percentile rankings.  
Calculation based on quarterly periodicity.



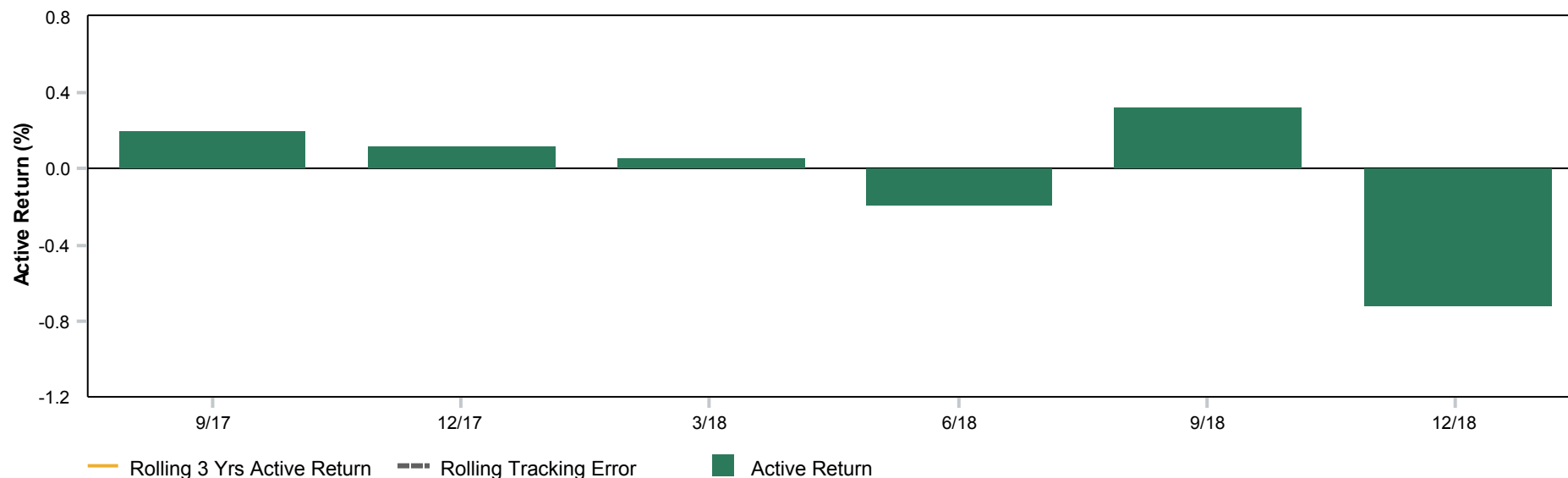
	2018	2017	2016	2015	2014	2013	2012	2011	2010
■ Fixed Income Composite	0.26 (33)	4.16 (41)	3.14 (50)	0.76 (57)	4.57 (96)	-1.85 (66)	4.44 (84)	6.64 (87)	6.20 (92)
● Bond Index	0.01 (62)	2.65 (98)	1.97 (97)	1.21 (17)	4.12 (98)	-1.02 (26)	3.56 (98)	5.97 (95)	6.15 (93)
5th Percentile	1.31	5.30	5.62	1.68	7.91	0.21	8.85	9.13	10.61
1st Quartile	0.39	4.52	3.83	1.09	6.79	-1.01	6.96	8.26	8.18
Median	0.07	4.05	3.11	0.82	6.17	-1.56	5.92	7.84	7.24
3rd Quartile	-0.10	3.64	2.65	0.53	5.79	-2.04	5.09	7.25	6.75
95th Percentile	-0.53	3.06	2.23	-0.07	4.63	-2.62	3.85	5.74	6.03
Population	137	152	162	167	180	191	200	204	214

Parentheses contain percentile rankings.  
Calculation based on monthly periodicity.

Gain / Loss

	1 Qtr	YTD	1 Yr	3 Yrs	5 Yrs
<b>Baird Core Plus Bond</b>					
Beginning Market Value	41,857,513	44,363,445	44,363,445	-	-
Net Cash Flows	-5,500,008	-7,552,184	-7,552,184	-	-
Income	365,160	1,289,744	1,289,744	-	-
Gain/Loss	-40,060	-1,418,400	-1,418,400	-	-
Ending Market Value	36,682,605	36,682,605	36,682,605	-	-

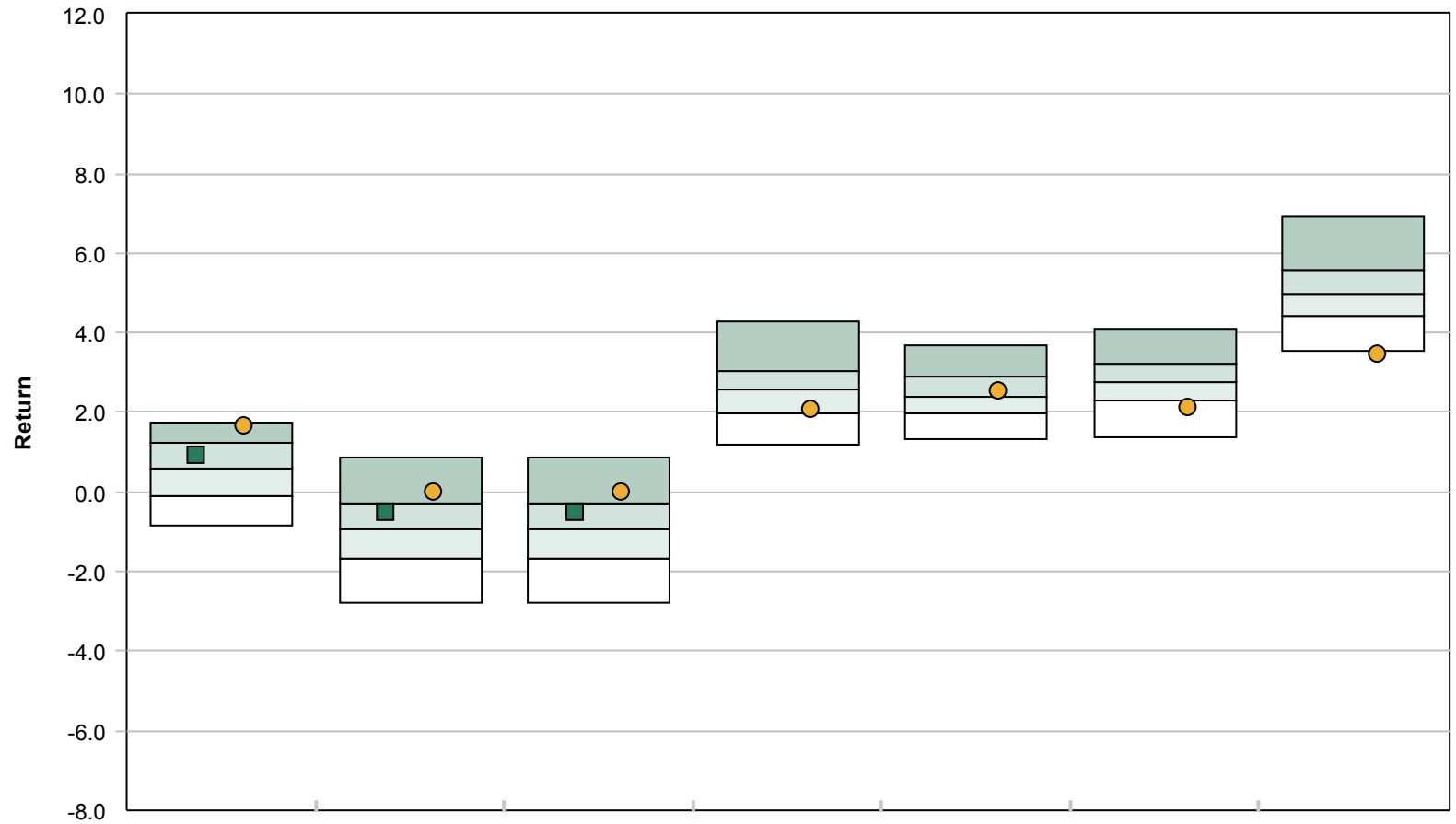
Rolling Return and Tracking Error



Performance

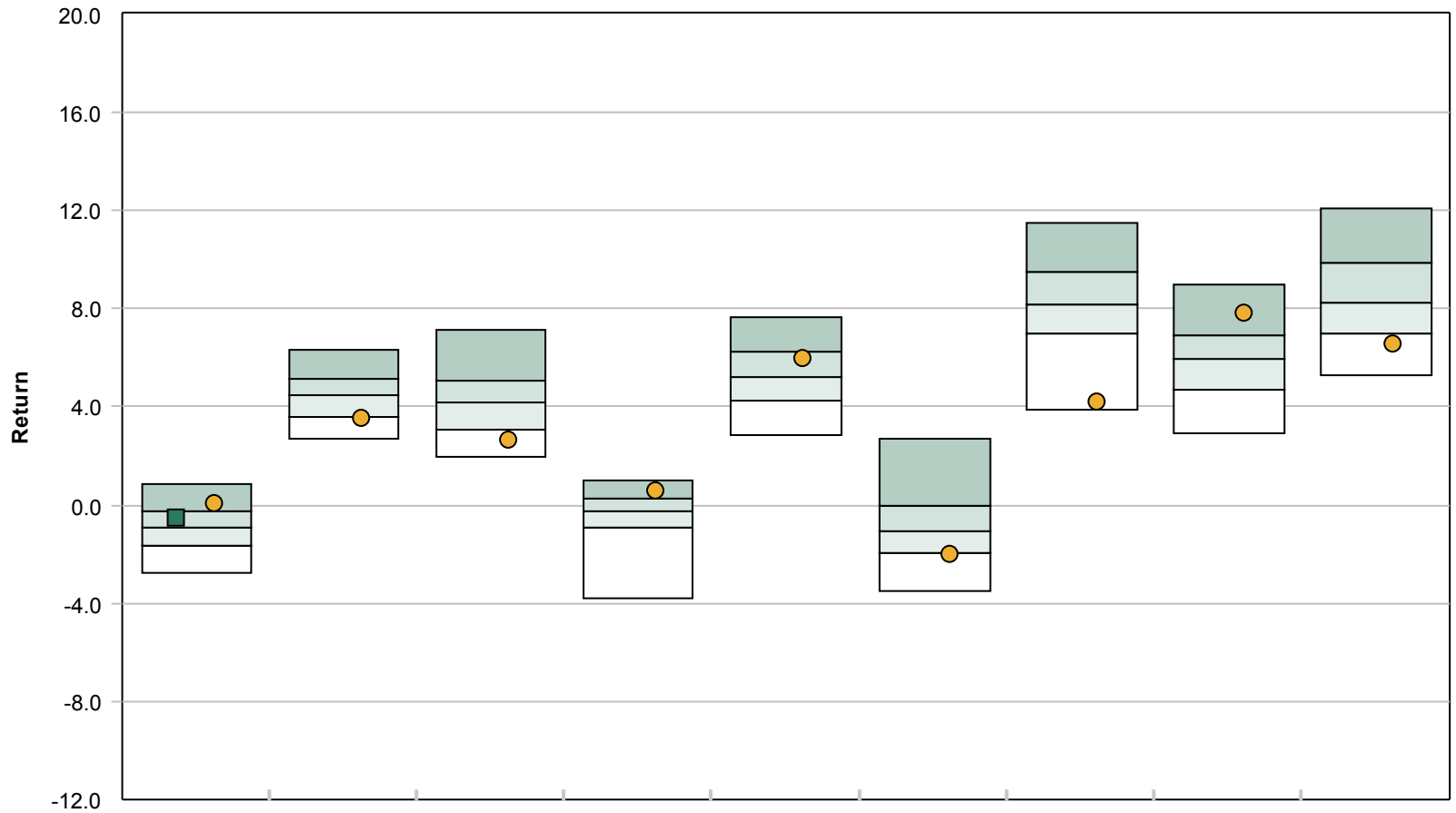
	1 Qtr	YTD	1 Yr	3 Yrs	5 Yrs	7 Yrs	10 Yrs
Baird Core Plus Bond	0.91	-0.51	-0.51	N/A	N/A	N/A	N/A
Blmbg. Barc. U.S. Aggregate	1.64	0.01	0.01	2.06	2.52	2.10	3.48
Difference	-0.73	-0.52	-0.52	N/A	N/A	N/A	N/A





	1 Qtr	YTD	1 Yr	3 Yrs	5 Yrs	7 Yrs	10 Yrs
■ Baird Core Plus Bond	0.91 (40)	-0.51 (32)	-0.51 (32)	N/A	N/A	N/A	N/A
● Blmbg. Barc. U.S. Aggregate	1.64 (9)	0.01 (19)	0.01 (19)	2.06 (73)	2.52 (46)	2.10 (84)	3.48 (96)
5th Percentile	1.75	0.85	0.85	4.28	3.68	4.09	6.92
1st Quartile	1.24	-0.28	-0.28	3.02	2.90	3.22	5.59
Median	0.59	-0.95	-0.95	2.57	2.40	2.76	4.96
3rd Quartile	-0.10	-1.67	-1.67	1.95	1.96	2.29	4.41
95th Percentile	-0.86	-2.76	-2.76	1.20	1.34	1.37	3.54
Population	312	282	282	227	197	168	125

Parentheses contain percentile rankings.  
Calculation based on monthly periodicity.



	2018	2017	2016	2015	2014	2013	2012	2011	2010
■ Baird Core Plus Bond	-0.51 (32)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
● Blmbg. Barc. U.S. Aggregate	0.01 (19)	3.54 (76)	2.65 (83)	0.55 (13)	5.97 (32)	-2.02 (76)	4.21 (95)	7.84 (13)	6.54 (85)
5th Percentile	0.85	6.33	7.16	0.98	7.68	2.70	11.54	8.96	12.10
1st Quartile	-0.28	5.13	5.06	0.25	6.28	-0.05	9.53	6.91	9.88
Median	-0.95	4.48	4.19	-0.26	5.23	-1.06	8.18	5.98	8.28
3rd Quartile	-1.67	3.57	3.04	-0.91	4.25	-1.98	7.00	4.71	6.99
95th Percentile	-2.76	2.71	1.94	-3.80	2.88	-3.50	3.92	2.93	5.31
Population	282	264	229	206	232	223	204	197	182

Parentheses contain percentile rankings.  
Calculation based on monthly periodicity.

Gain / Loss

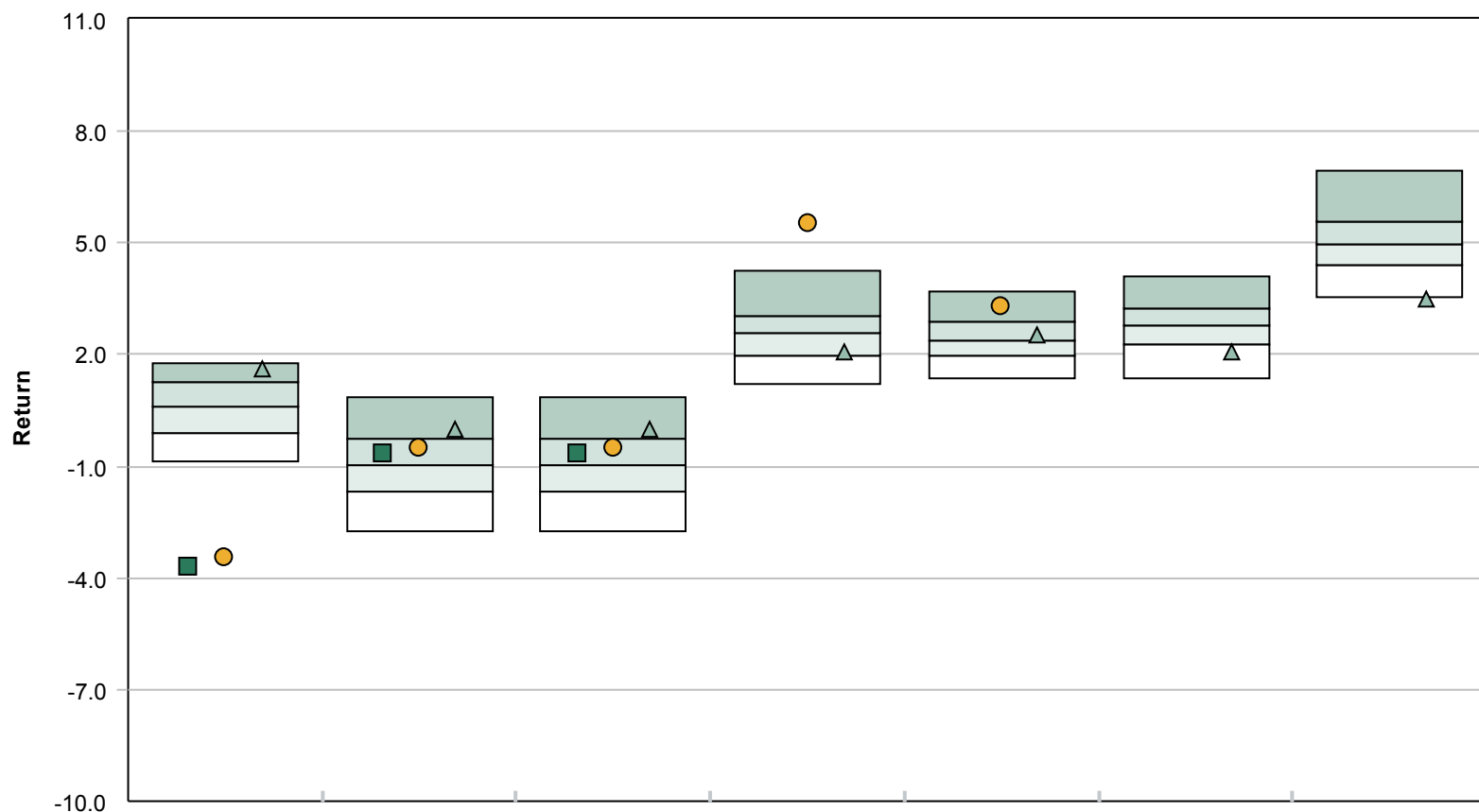
	1 Qtr	YTD	1 Yr	3 Yrs	5 Yrs
<b>GoldenTree Multi-Sector LP</b>					
Beginning Market Value	12,542,254	12,158,597	12,158,597	-	-
Net Cash Flows	3,000,000	3,000,000	3,000,000	-	-
Income	-	51,112	51,112	-	-
Gain/Loss	-554,814	-222,269	-222,269	-	-
Ending Market Value	14,987,440	14,987,440	14,987,440	-	-

Rolling Return and Tracking Error



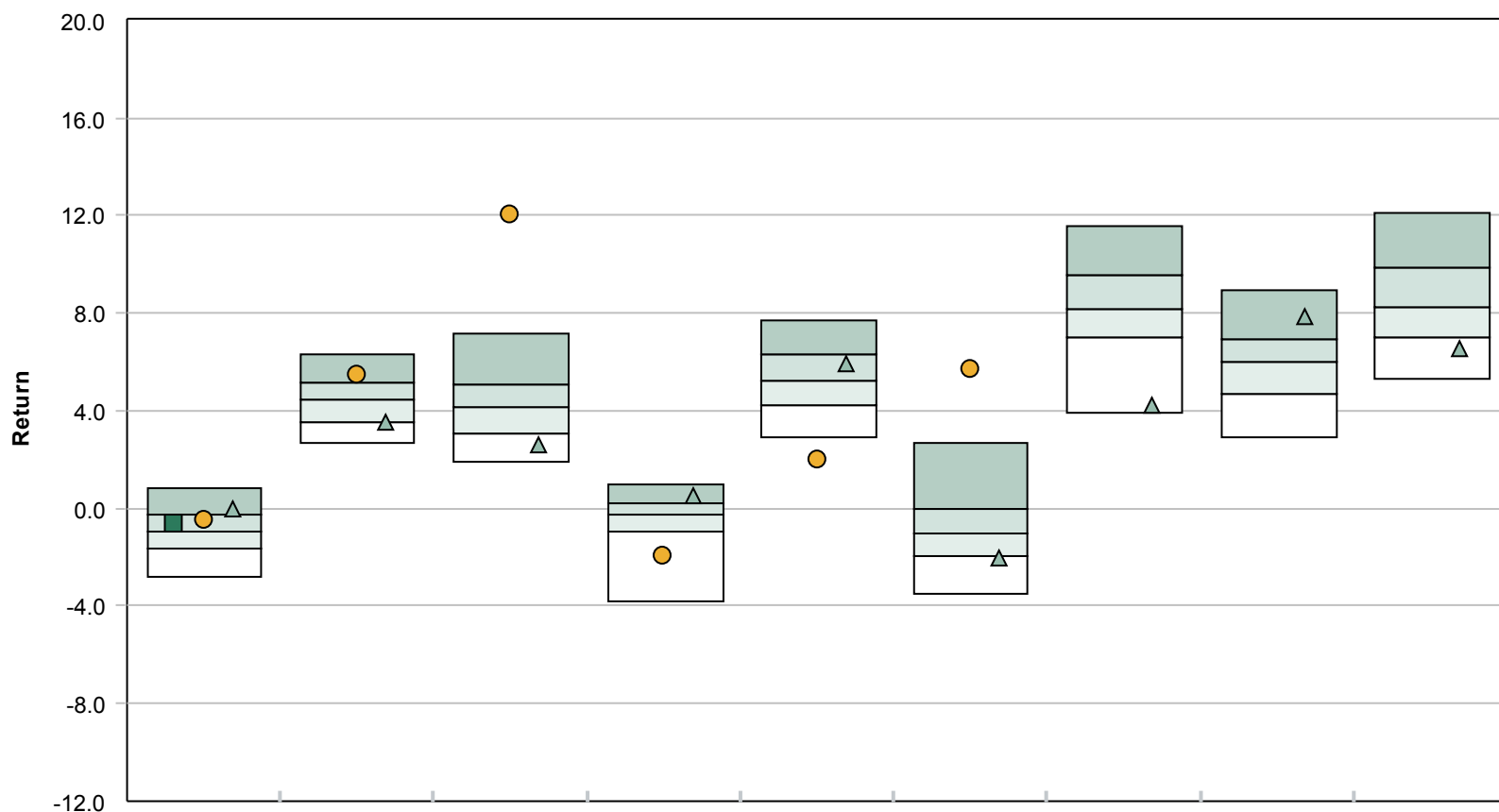
Performance

	1 Qtr	YTD	1 Yr	3 Yrs	5 Yrs	7 Yrs	10 Yrs
GoldenTree Multi-Sector LP	-3.69	-0.65	-0.65	N/A	N/A	N/A	N/A
GT Blended Index	-3.45	-0.50	-0.50	5.53	3.29	N/A	N/A
Difference	-0.24	-0.15	-0.15	N/A	N/A	N/A	N/A



	1 Qtr	YTD	1 Yr	3 Yrs	5 Yrs	7 Yrs	10 Yrs
■ GoldenTree Multi-Sector LP	-3.69 (100)	-0.65 (39)	-0.65 (39)	N/A	N/A	N/A	N/A
● GT Blended Index	-3.45 (100)	-0.50 (32)	-0.50 (32)	5.53 (2)	3.29 (11)	N/A	N/A
▲ Blmbg. Barc. U.S. Aggregate	1.64 (9)	0.01 (19)	0.01 (19)	2.06 (73)	2.52 (46)	2.10 (84)	3.48 (96)
5th Percentile	1.75	0.85	0.85	4.28	3.68	4.09	6.92
1st Quartile	1.24	-0.28	-0.28	3.02	2.90	3.22	5.59
Median	0.59	-0.95	-0.95	2.57	2.40	2.76	4.96
3rd Quartile	-0.10	-1.67	-1.67	1.95	1.96	2.29	4.41
95th Percentile	-0.86	-2.76	-2.76	1.20	1.34	1.37	3.54
Population	312	282	282	227	197	168	125

Parentheses contain percentile rankings.  
Calculation based on monthly periodicity.



	2018	2017	2016	2015	2014	2013	2012	2011	2010
GoldenTree Multi-Sector LP	-0.65 (39)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
GT Blended Index	-0.50 (32)	5.45 (18)	12.01 (1)	-1.94 (89)	2.01 (100)	5.70 (2)	N/A	N/A	N/A
Blmbg. Barc. U.S. Aggregate	0.01 (19)	3.54 (76)	2.65 (83)	0.55 (13)	5.97 (32)	-2.02 (76)	4.21 (95)	7.84 (13)	6.54 (85)
5th Percentile	0.85	6.33	7.16	0.98	7.68	2.70	11.54	8.96	12.10
1st Quartile	-0.28	5.13	5.06	0.25	6.28	-0.05	9.53	6.91	9.88
Median	-0.95	4.48	4.19	-0.26	5.23	-1.06	8.18	5.98	8.28
3rd Quartile	-1.67	3.57	3.04	-0.91	4.25	-1.98	7.00	4.71	6.99
95th Percentile	-2.76	2.71	1.94	-3.80	2.88	-3.50	3.92	2.93	5.31
Population	282	264	229	206	232	223	204	197	182

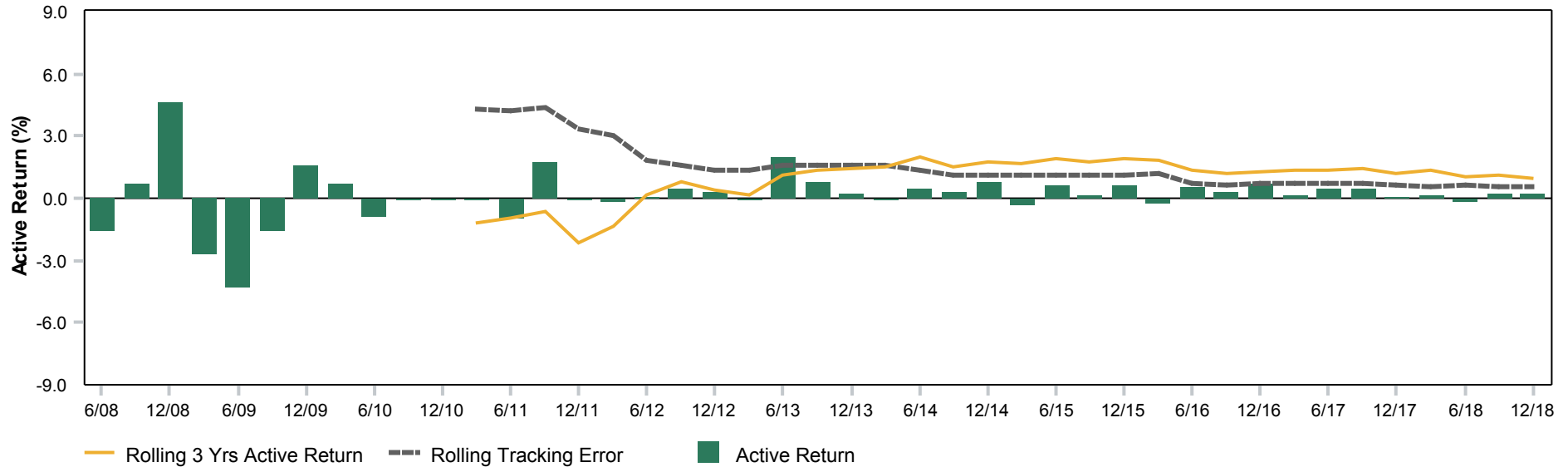
Parentheses contain percentile rankings.  
Calculation based on monthly periodicity.

## **Real Estate**

Gain / Loss

	1 Qtr	YTD	1 Yr	3 Yrs	5 Yrs
<b>Real Estate Composite</b>					
Beginning Market Value	33,214,005	35,903,467	35,903,467	37,889,931	28,665,417
Net Cash Flows	-37,668	-5,133,241	-5,133,241	-13,654,382	-13,740,879
Income	220,415	999,619	999,619	3,018,406	5,003,428
Gain/Loss	422,028	2,048,935	2,048,935	6,564,825	13,890,814
Ending Market Value	33,818,780	33,818,780	33,818,780	33,818,780	33,818,780

Rolling Return and Tracking Error



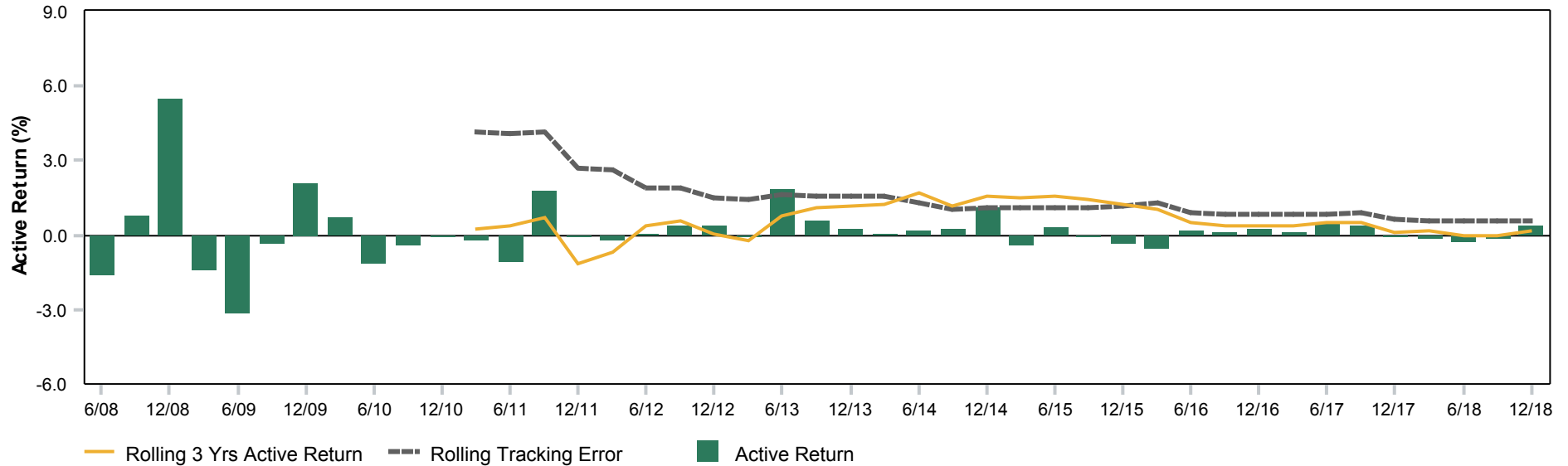
Performance

	1 Qtr	YTD	1 Yr	3 Yrs	5 Yrs	7 Yrs	10 Yrs
Real Estate Composite	1.82	8.34	8.34	9.16	11.44	12.12	7.17
Real Estate Policy	1.56	7.87	7.87	8.13	10.24	10.69	7.02
Difference	0.26	0.47	0.47	1.03	1.20	1.43	0.15

Gain / Loss

	1 Qtr	YTD	1 Yr	3 Yrs	5 Yrs
<b>Morgan Stanley</b>					
Beginning Market Value	22,363,991	25,843,858	25,843,858	28,896,115	22,092,004
Net Cash Flows	-	-5,000,152	-5,000,152	-12,500,153	-12,500,153
Income	220,415	999,619	999,619	3,018,406	5,003,428
Gain/Loss	219,222	960,303	960,303	3,389,260	8,208,349
Ending Market Value	22,803,628	22,803,628	22,803,628	22,803,628	22,803,628

Rolling Return and Tracking Error



Performance

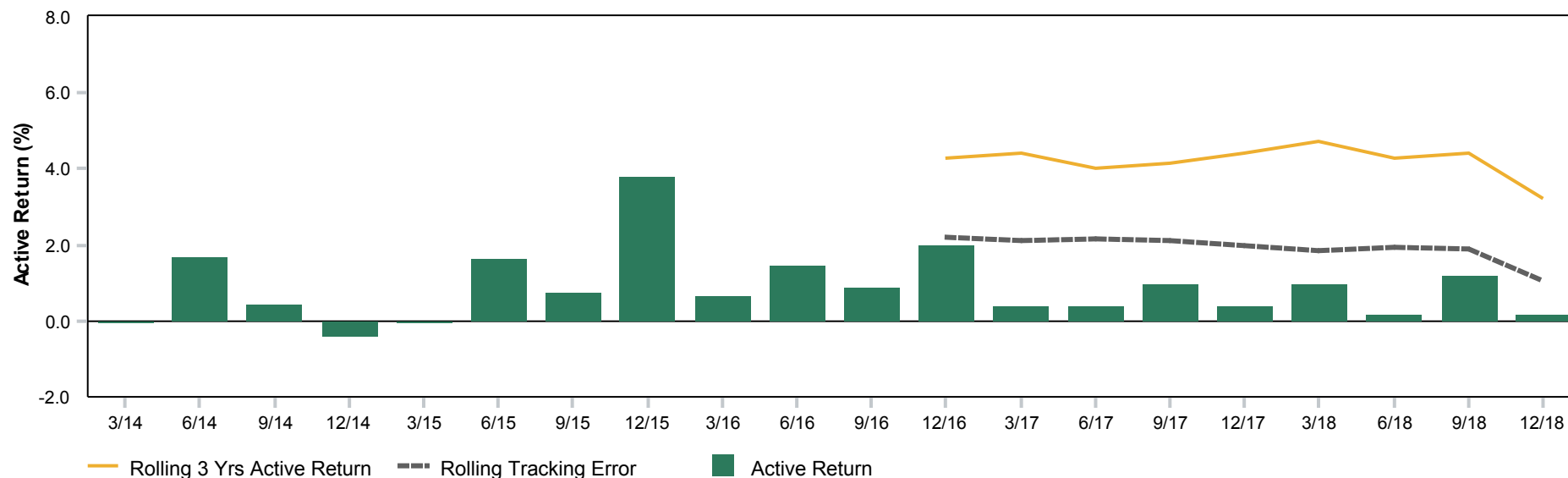
	1 Qtr	YTD	1 Yr	3 Yrs	5 Yrs	7 Yrs	10 Yrs
Morgan Stanley	1.97	7.96	7.96	8.65	10.90	11.75	6.93
NCREIF ODCE Equal Weighted	1.62	8.25	8.25	8.44	10.54	11.01	6.85
Difference	0.35	-0.29	-0.29	0.21	0.36	0.74	0.08



Gain / Loss

	1 Qtr	YTD	1 Yr	3 Yrs	5 Yrs
<b>Principal Enhanced Property Fund</b>					
Beginning Market Value	10,850,014	10,059,608	10,059,608	8,993,816	6,573,413
Net Cash Flows	-37,668	-133,089	-133,089	-1,154,229	-1,240,727
Income	-	-	-	-	-
Gain/Loss	202,806	1,088,633	1,088,633	3,175,565	5,682,466
Ending Market Value	11,015,152	11,015,152	11,015,152	11,015,152	11,015,152

Rolling Return and Tracking Error



Performance

	1 Qtr	YTD	1 Yr	3 Yrs	5 Yrs	7 Yrs	10 Yrs
Principal Enhanced Property Fund	1.53	9.36	9.36	10.62	13.09	N/A	N/A
NCREIF Property Index	1.37	6.72	6.72	7.21	9.33	9.74	7.49
Difference	0.16	2.64	2.64	3.41	3.76	N/A	N/A

## **Private Equity**

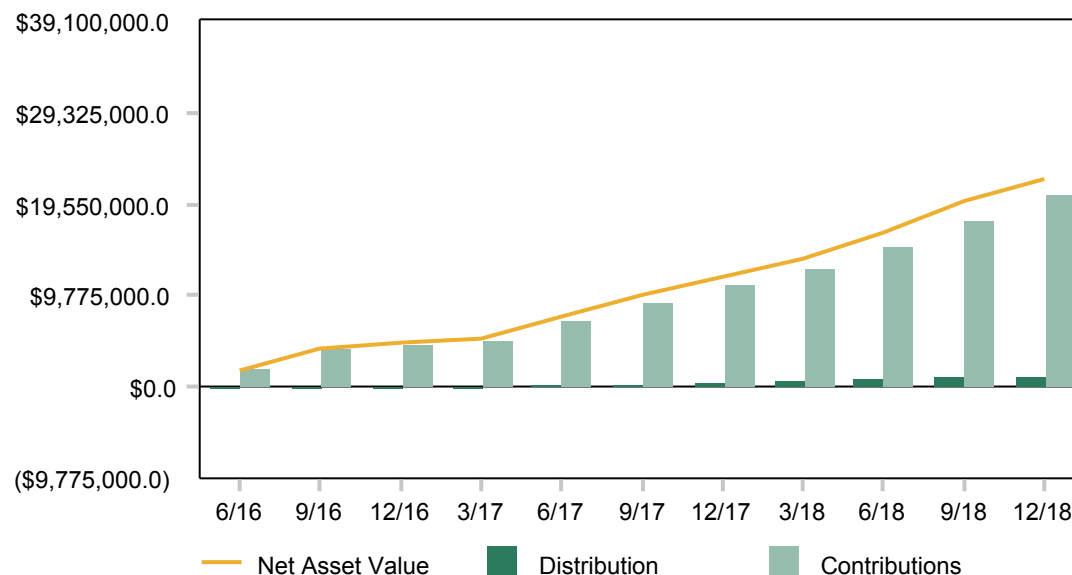
**Cash Flow Summary**

Capital Committed: \$40,000,000  
 Total Contributions: \$20,469,942  
 Remaining Capital Commitment: \$19,530,058

Total Distributions: \$1,213,671  
 Market Value: \$22,225,168

Inception Date: 06/23/2016  
 Inception IRR: 12.54  
 TVPI: 1.15

**Cash Flow Analysis**



**Private Equity Portfolio**

Partnerships	Investment Type	Investment Strategy	Capital Committed (\$)	Total Contribution (\$)	Total Distribution (\$)	Market Value (\$)	IRR (%)	TVPI Multiple
NB Crossroads Fund XXI	Fund Of Funds	Other	20,000,000	11,800,000	-	13,635,405	9.97	1.16
HarbourVest Dover Fund IX	Fund Of Funds	Secondaries	10,000,000	5,300,000	1,213,671	5,427,104	37.03	1.25
GoldPoint Co-Investment VI	Co-Investment	Other	10,000,000	3,369,942	-	3,162,659	-8.66	0.94
<b>Private Equity Composite</b>	<b>Total Fund</b>	<b>Hybrid</b>	<b>40,000,000</b>	<b>20,469,942</b>	<b>1,213,671</b>	<b>22,225,168</b>	<b>12.54</b>	<b>1.15</b>

**Fund Information**

**Type of Fund:** Fund Of Funds  
**Strategy Type:** Other

**Vintage Year:** 2015  
**Management Fee:** Based on Commitments: Year 1: 20bps, Years 2-4: 40 bps, Years 5-8: 40 bps, Years 9-10: 5 bps, Years 11-12: 0 bps

**Size of Fund:** 650,000,000  
**Inception:** 04/15/2015  
**Final Close:** 10/15/2016

**Preferred Return:** 8.0%  
**General Partner:** Neuberger Berman Group LLC

**Investment Strategy:** NB Crossroads Fund XXI (“Crossroads Fund XXI”) is an investment fund formed by affiliates of Neuberger Berman Group LLC (“Neuberger Berman” or the “Firm”) that seeks to achieve attractive risk-adjusted returns on capital (primarily through long-term capital gains) by investing in a diversified global portfolio of high-performing private equity funds. Crossroads Fund XXI will also seek to purchase limited partner interests in more mature private equity funds in the secondary market and to co-invest directly in transactions alongside high-performing private equity firms. Crossroads Fund XXI will be diversified across four strategic asset classes: (i) small and mid-cap buyout; (ii) large-cap buyout; (iii) special situations (primarily distressed debt, turnaround and restructuring strategies); and (iv) venture and growth capital. While each fund has a target allocation, clients are able to customize their commitment’s allocation between investment types, even at a <\$1m commitment level.

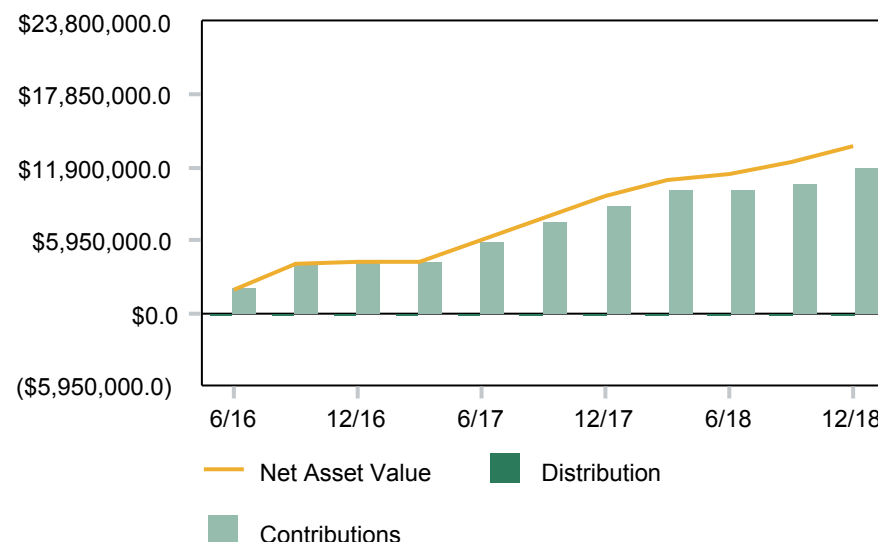
**Cash Flow Summary**

**Capital Committed:** \$20,000,000  
**Total Contributions:** \$11,800,000  
**Remaining Capital Commitment:** \$8,200,000

**Total Distributions:** -  
**Market Value:** \$13,635,405

**Inception Date:** 06/23/2016  
**Inception IRR:** 9.97  
**TVPI:** 1.16

**Cash Flow Analysis**



Due to the inconsistencies in reporting methodologies among managers, we do not report on Capital Invested, Management Fees, Expenses and Interest. However, the Market Value is net of all fees and expenses, and Total Contributions reflects interest paid.

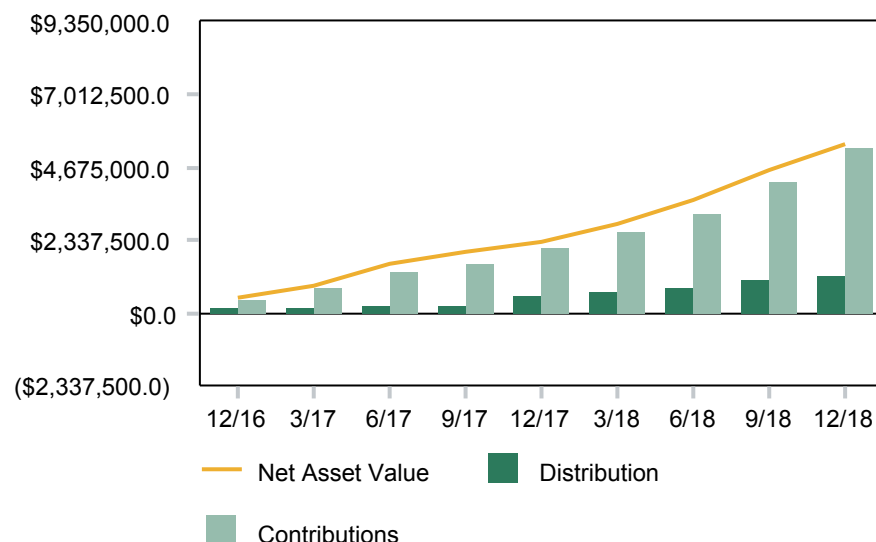
**Fund Information**

<b>Type of Fund:</b>	Fund Of Funds	<b>Vintage Year:</b>	2016
<b>Strategy Type:</b>	Secondaries	<b>Management Fee:</b>	The average annual management fee is 0.75% on committed capital. Year 1: 0.25%, Year 2: 0.50%, Year 3: 0.85%, Years 4-7: 1.25%, Year 8: 1.20%, Year 9: 1.15%, Year 10: 1.10%. (0.70% of capital commitments - average annual management fee)
<b>Preferred Return:</b>	8% compounded annually	<b>Inception:</b>	06/01/2016
<b>General Partner:</b>	HarbourVest Partners		
<b>Investment Strategy:</b>	The Dover Street Fund IX will seek to be diversified across transaction type, geography, stage, vintage year and industry and is expected to have approximately 25 - 40 transactions with an average size expected to be between \$100 - \$150 million. The team has the ability to commit 10% to primary funds, however this option has seldom been utilized in predecessor funds and the expectation is that it will not be used in Dover Street IX. HarbourVest anticipates that there will not be co-investment opportunities for Limited Partners. HarbourVest has the ability to commit up to 30% of proceeds received in new transactions, which may result in more than 100% of the limited partner's commitment being called over the life of the Fund. HarbourVest may also invest up to 5% in secondary transactions of real estate and infrastructure assets and debt.		

**Cash Flow Summary**

<b>Capital Committed:</b>	\$10,000,000
<b>Total Contributions:</b>	\$5,300,000
<b>Remaining Capital Commitment:</b>	\$4,700,000
<b>Total Distributions:</b>	\$1,213,671
<b>Market Value:</b>	\$5,427,104
<b>Inception Date:</b>	12/16/2016
<b>Inception IRR:</b>	37.03
<b>TVPI:</b>	1.25

**Cash Flow Analysis**



Due to the inconsistencies in reporting methodologies among managers, we do not report on Capital Invested, Management Fees, Expenses and Interest. However, the Market Value is net of all fees and expenses, and Total Contributions reflects interest paid.

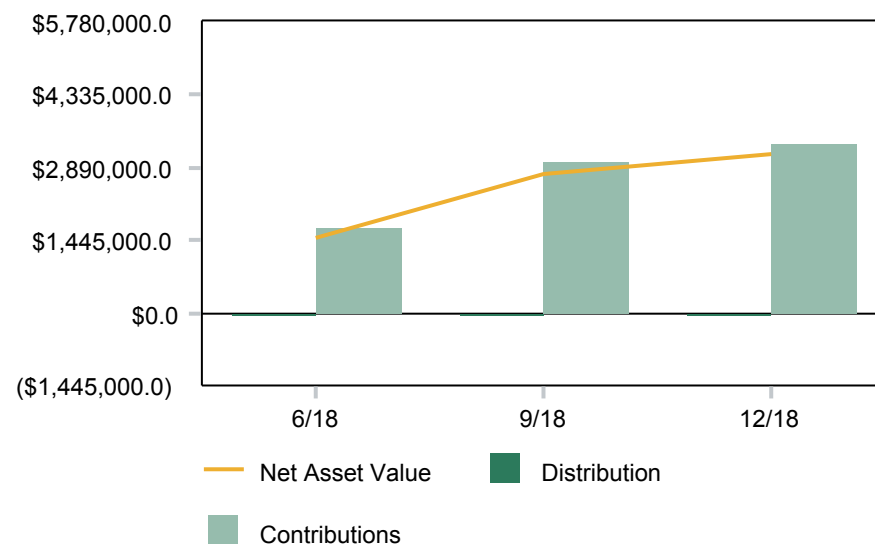
**Fund Information**

<b>Type of Fund:</b>	Co-Investment	<b>Vintage Year:</b>	2017
<b>Strategy Type:</b>	Other	<b>Management Fee:</b>	1.0% on committed capital during investment period; 1.0% on invested capital thereafter
<b>Preferred Return:</b>	8%	<b>Inception:</b>	07/01/2017
<b>General Partner:</b>			
<b>Investment Strategy:</b>	The Fund will seek a highly diversified portfolio of middle market transactions by primarily targeting Co-investments alongside Core Partners with fund sizes less than \$5 billion. The Fund will typically invest \$10 million to \$40 million in any given transaction, although smaller or larger investments may be made where appropriate. The Fund targets opportunities where the sponsor has relevant expertise, a quantifiable history of successful investing, and a proven ability to add tangible value to the target company. The Fund seeks to invest in companies that have proven management teams, strong and sustainable cash flows, and competitive advantages in industries with barriers to entry. A high priority will be placed on companies that have minimal exposure to cyclical downturns, a low threat of obsolescence or rapid technological change, and limited customer and geographic concentrations.		

**Cash Flow Summary**

<b>Capital Committed:</b>	\$10,000,000
<b>Total Contributions:</b>	\$3,369,942
<b>Remaining Capital Commitment:</b>	\$6,630,058
<b>Total Distributions:</b>	-
<b>Market Value:</b>	\$3,162,659
<b>Inception Date:</b>	04/23/2018
<b>Inception IRR:</b>	-8.66
<b>TVPI:</b>	0.94

**Cash Flow Analysis**



Due to the inconsistencies in reporting methodologies among managers, we do not report on Capital Invested, Management Fees, Expenses and Interest. However, the Market Value is net of all fees and expenses, and Total Contributions reflects interest paid.

## **Private Debt**

**Fund Information**

**Type of Fund:** Direct  
**Strategy Type:** Other  
**Size of Fund:** 1,600,000,000  
**Inception:** 10/28/2016  
**Final Close:** 7/14/2017

**Vintage Year:** 2016  
**Management Fee:** 1% of cost basis of investments  
**Preferred Return:** 7%  
**General Partner:** Angelo Gordon

**Investment Strategy:** We seek to capitalize on the long-term investment opportunity in middle market direct lending. The investment strategy is to source, underwrite and actively manage a diversified portfolio of middle market, floating rate, senior secured loans with a focus on first lien secured debt with a loan-to-value target of 40-55%.

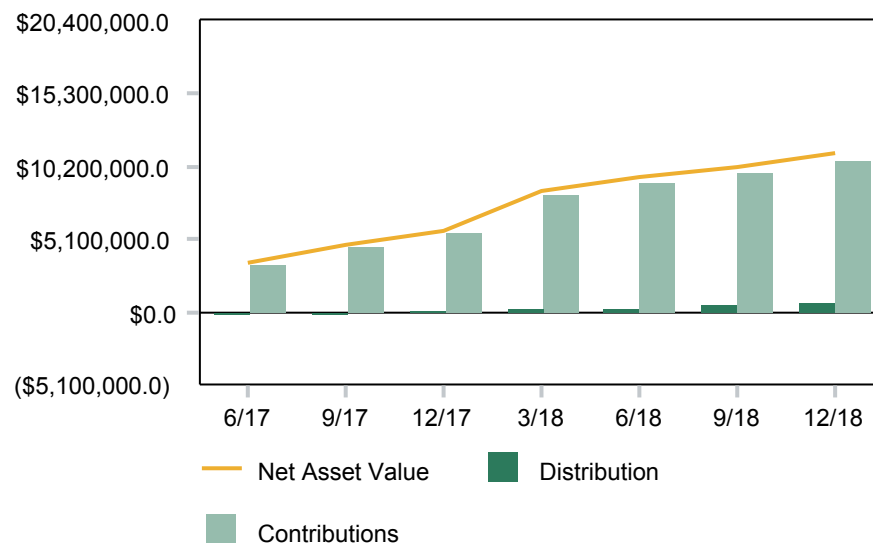
**Cash Flow Summary**

**Capital Committed:** \$12,000,000  
**Total Contributions:** \$10,583,388  
**Remaining Capital Commitment:** \$1,440,000

**Total Distributions:** \$652,690  
**Market Value:** \$11,181,129

**Inception Date:** 05/26/2017  
**Inception IRR:** 11.23  
**TVPI:** 1.12

**Cash Flow Analysis**



Due to the inconsistencies in reporting methodologies among managers, we do not report on Capital Invested, Management Fees, Expenses and Interest. However, the Market Value is net of all fees and expenses, and Total Contributions reflects interest paid.

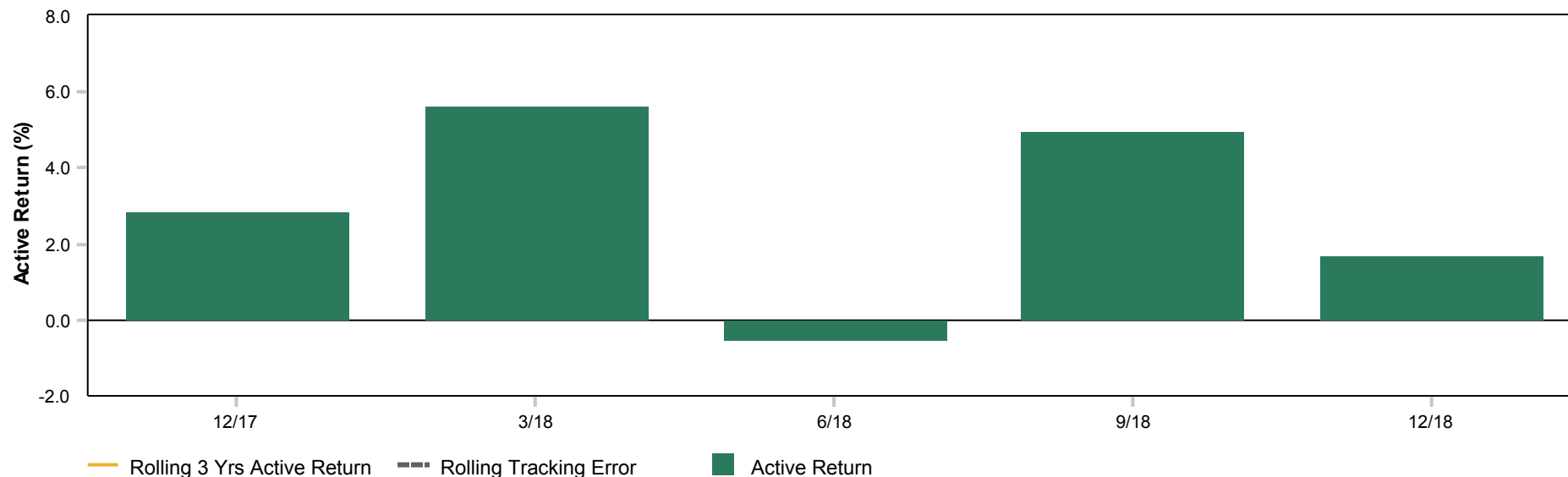


# Infrastructure

Gain / Loss

	1 Qtr	YTD	1 Yr	3 Yrs	5 Yrs
<b>IFM Global Infrastructure</b>					
Beginning Market Value	12,241,377	10,657,727	10,657,727	-	-
Net Cash Flows	5,206	5,206	5,206	-	-
Income	-	-	-	-	-
Gain/Loss	347,312	1,930,963	1,930,963	-	-
Ending Market Value	12,593,895	12,593,895	12,593,895	-	-

Rolling Return and Tracking Error



Performance

	1 Qtr	YTD	1 Yr	3 Yrs	5 Yrs	7 Yrs	10 Yrs
IFM Global Infrastructure	2.84	18.12	18.12	N/A	N/A	N/A	N/A
CPI + 350 bps	1.15	5.51	5.51	5.62	5.04	5.08	5.36
Difference	1.69	12.61	12.61	N/A	N/A	N/A	N/A