

# ABSOLUTE RETURN FIXED INCOME MANAGER SEARCH

## HOWARD COUNTY



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# INTRODUCTION

NEPC, LLC

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# INTRODUCTION TO ASSET CLASS

The use of unconstrained fixed income mandates has grown considerably since 2008, but no consistent definition has taken hold in the marketplace as to what constitutes an unconstrained or absolute return fixed income strategy given their flexible mandate. Many of these strategies have generically been labeled “Nontraditional Bonds”. NEPC Research however has looked beyond broad categorization to focus on specific attributes and investment objectives associated with an unconstrained bond strategy. NEPC Research defines absolute return fixed income as benchmark-agnostic strategies (alternatively benchmarking against cash) that aim to provide a positive total return irrespective of the market environment. We believe these strategies should diversify away from traditional risks of the Bloomberg Barclays Aggregate Index, and maintain low correlations to global interest rates and turbulent equity markets with a strict focus on mitigating downside risks.

The unconstrained nature of these strategies allows for broad implementation across global fixed income markets and includes allocations to global interest rates, global credit sectors, securitized assets, emerging market debt, foreign currencies, and derivative markets. In addition, unconstrained bond strategies make extensive use of relative value trades, often with the use of derivatives, to provide specific exposure to credit risks, liquidity risks, currency risks, or global interest rate curves. This diverse composite of global exposures provides the



# INTRODUCTION TO ASSET CLASS

foundation for the sources of return for an unconstrained bond strategy and ensures that no specific risk factor, such as interest rates, dominates the overall risk of a strategy. One of the greatest contrasts between unconstrained bond and traditional fixed income strategies is the active management of interest rate risk. An unconstrained bond approach will have flexibility to manage duration across global rates markets, while a traditional approach will have a duration exposure defined by a benchmark. Overriding the broad guidelines of unconstrained bond strategies is a risk controlled framework that is based both on a qualitative understanding of global macro risks and quantitative tools to ensure proper diversification and the hedging of undesired risk exposures. As defined by NEPC Research, unconstrained bond strategies are a conservative fixed income approach with a flexible investment mandate of high conviction investment themes or ideas managed with a strong focus on risk mitigation.



# RESEARCH PROCESS

**NEPC's investment manager research process identifies a Focused Placement List of strategies that we expect will provide superior investment performance over time. Our four step process used for identifying our Focused Placement List includes:**

1. Universe Screening – Minimum inclusion criteria and screening are used to focus our analysis;
2. Quantitative Scoring – Proprietary quantitative analysis measuring the consistency and quality of alpha-only, net of fees returns;
3. Qualitative Research – Rigorous qualitative analysis of a strategy's key characteristics, focusing on identification of a clear and differentiating investment thesis to develop forward-looking conviction in future performance; and
4. Peer Review – Confirmation through careful peer review of each strategy by senior investment professionals to challenge each investment thesis and raise critical business issues.

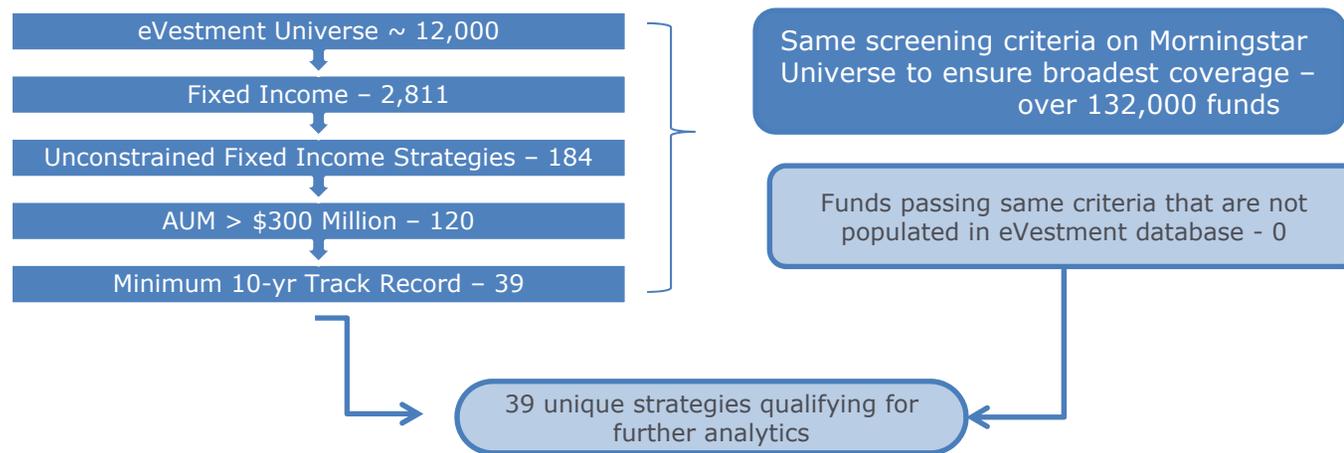
**We believe that this exhaustive process leads to identification of strategies with a reasonable probability of delivering consistent, high quality investment results. From time to time, we may include products specifically requested by clients.**



# RESEARCH PROCESS

## 1. Universe Screening

- The construction of the Focused Placement List begins with initial universe screening to identify candidates that meet acceptable criteria for further analysis.



The chart above is a stylized example of a universe screen.

# RESEARCH PROCESS

## 2. Quantitative Scoring

- Although we use our proprietary Performance Analytics Statistical Software (PASS) to help us identify potential strategies to research further, multi-sector fixed income is an evolving asset class. Product track records vary in length, and benchmarking products that may employ very different investment styles is challenging.

## 3. Qualitative Research

- Deep, qualitative research is conducted on a focused set of strategies identified through scoring and supplemented by our research teams' knowledge of strategies that appear compelling for further research.
- Our research efforts are focused on developing a deep understanding of each strategy's people, philosophy, & process, synthesizing those aspects into our interpretation of each strategy's investment thesis – the identification of a particular set of market inefficiencies and the conviction in a portfolio management team's ability to exploit those inefficiencies over the long-term, thereby, adding value over the benchmark.
- By focusing on investment thesis, our research remains forward-looking, supporting this investment view with critical knowledge of each organization, investment team, research support, investment process, performance expectations, and fees/available investment vehicles to identify strategies that we believe will provide quality excess returns above the relevant benchmark.



# RESEARCH PROCESS

## 4. Peer Review

- The research process culminates in exhaustive peer review. The Fixed Income Advisory Group provides feedback and insight to the research team prior to vetting strategies in front of senior research and consulting professionals on NEPC's Due Diligence Committee. The research team presents each Focused Placement List candidate to the Due Diligence Committee. The committee challenges both the soundness of the investment thesis (NEPC's articulation of why the strategy is expected to outperform over the long-term) and all relevant factors that might effect the long-term stability of the strategy, including business factors at the firm level. Candidates approved by the Due Diligence Committee are placed on the Focused Placement List and included in searches conducted for that asset class.



# SEARCH CANDIDATES

The following is a list of managers under consideration for this search. Each manager's composite track record has been used for this search.

Firm	Strategy	Comments
<b>Absolute Return Fixed Income</b>		
BlackRock	Strategic Income Opportunities (SIO) (Unconstrained US Domiciled)	Strategy has broad flexibility to invest across global fixed income and derivative markets. Intended to retain the risk profile of conservative fixed income investments, the Strategy looks to control volatility and strictly manage potential tail risks.
Loomis Sayles	Loomis Sayles Strategic Alpha	Strategy is a long/short global fixed income approach with a focus on credit. Intended to be uncorrelated to fixed income markets while utilizing a tactical allocation approach and relative value long/short credit positions.
PIMCO	PIMCO Dynamic Bond Full Authority Strategy	Strategy is absolute return oriented with the broad flexibility to express PIMCO's secular and core investment views. Intended to have a greater risk balance across interest rates, credit, and currency risk.
Payden & Rygel	Payden Absolute Return	PARI is a best-ideas, full-tool-kit portfolio. Strategy has a strong emphasis on income and downside protection, with little interest rate exposure. Portfolio is constructed with a stable core, a tactical trading overlay, and hedging as insurance.
Wellington Management	Wellington Opportunistic Fixed Income	Completely unconstrained, alpha seeking strategy investing in strategic themes and tactical beta allocations. Downside focus keeping volatility in normal range of a Core portfolio.



# **FIRM AND PRODUCT SUMMARY**

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# FIRM AND PRODUCT SUMMARY

Firm/Product	Firm/Team Comments	Investment Style/Strategy	Performance Expectations	Portfolio Positioning	Other Comments
<b>Absolute Return Fixed Income</b>					
BlackRock - Strategic Income Opp	Strategy is led by Fixed Income CIO, Rick Rieder and PM Bob Miller with broad support sourced from sector specialists.	Strategy has broad flexibility to invest across global fixed income and derivative markets. Intended to retain the risk profile of conservative fixed income investments, the Strategy looks to control volatility and strictly manage potential tail risks.	Strategy targets a return of LIBOR plus 3% to 6% with a volatility of 3% to 7%. Designed to generate consistent risk-adjusted returns across all market environments.	Strategy duration range is - 2 years to 7 years, typically 0-3 years. CDOs are limited to 15% of net assets, of which CLOs would be under 10%.	Macro top-down in style, high turnover, complex holdings that are highly diversified.
Loomis - Strategic Alpha	Strategy is a best-ideas portfolio overseen by senior portfolio managers from Loomis Sayles' global asset allocation and credit teams.	Strategy is a long/short global fixed income approach with a focus on credit. Intended to be uncorrelated to fixed income markets while utilizing a tactical allocation approach and relative value long/short credit positions.	Strategy targets a return of LIBOR plus 2% to 4% with an average volatility of 4% to 6%. Drawdown risk is actively managed with extensive use of credit hedges.	Strategy duration range is - 2 years to 5 years. Active long/short exposures to global yield curves, credit, and currencies with extensive tail-risk hedges.	Credit heavy, relative value oriented strategy balanced by extensive hedging.
PIMCO - Unconstrained Bond	Strategy team is lead by Marc Seidner, CIO of non-traditional fixed income.	Strategy is absolute return oriented with the broad flexibility to express PIMCO's secular and core investment views. Intended to have a greater risk balance across interest rates, credit, and currency risk.	Strategy targets a return above LIBOR of approximately 3% with a volatility below 5%. Designed to achieve returns regardless of the market environment.	Strategy duration range is - 3 years to 8 years. Alpha opportunities are derived from global interest rate and curve strategies, relative value credit trades, and tactical short positions.	Macro top-down strategy, ultimate expression of PIMCO's secular views across global fixed income markets.
Payden & Rygel - PARI	Strategy is managed by a stable team of 3 senior portfolio managers Brian Matthews, Scott Weiner and Brad Boyd, and the Investment Policy Committee comprises of Payden's most senior fixed income investors.	PARI is a best-ideas, full-tool-kit portfolio. Strategy has a strong emphasis on income and downside protection, with little interest rate exposure. Portfolio is constructed with a stable core, a tactical trading overlay, and hedging as insurance.	Strategy targets LIBOR +2-3% over a rolling 3 year period, with loss protection being their first priority.	Strategy duration range is - 2 to 5 years. Emerging markets and non-agency positions are limited to 40%, while high yield maximum exposure is 50%. Foreign currency is limited to 10% of the fund.	A majority women-owned firm, though not registered as such.
Wellington - Opp Fixed Income	Product is managed by the Asset Allocation team that also manages Opportunistic Investment (GAA). This product originated from the fixed income sleeve of the Opportunistic Investment strategy.	Completely unconstrained, alpha seeking strategy investing in strategic themes and tactical beta allocations. Downside focus keeping volatility in normal range of a Core portfolio.	Strategy is designed to outperform in all environments. OFI has a long standing track record of higher upside and lower downside captures.	Strategy utilizes an asset allocation approach and invests in direct securities as well as customized Wellington investment products such as short duration structured product, global linkers and credit relative value among others.	Thematic asset allocation strategy, complex and high turnover, great long term track record delivering solid returns around Core portfolio type of volatility.



# NEPC INVESTMENT THESIS

Firm/Product	NEPC Investment Thesis
<b>Absolute Return Fixed Income</b>	
BlackRock - Strategic Income Opp	The investment team's ability to identify key drivers in current macro regimes and allocate risk accordingly to specific sectors, alpha opportunities, and tail-risk hedging strategies allow the Strategy to achieve positive returns in most market environments. Central to our investment thesis is BlackRock SIO's macro capabilities, the breadth and depth of their alpha sources, and their sharp focus on risk budgeting and risk management.
Loomis - Strategic Alpha	Strategic Alpha's flexibility to invest across global fixed income markets, a risk-controlled opportunistic approach to credit exposures, and superior security selection leveraging Loomis' expertise in fundamental credit research are key drivers of this Strategy. While the Strategy has a credit bias given their strength in bottom up credit selection, the overall portfolio is constructed to be uncorrelated to fixed income markets due to the extensive use of tail-risk hedging strategies and relative value long/short credit and interest rate positions.
PIMCO - Unconstrained Bond	The key drivers for PIMCO Unconstrained Bond's expected alpha are a disciplined and well-informed secular outlook, a systematic ability to capture the benefits associated with the size and depth of their organization, and a global reach and influence throughout the capital markets. The Unconstrained Bond Strategy is a risk-controlled, pure expression of PIMCO's investment views across the entire spectrum of global fixed income assets. PIMCO's unconstrained allocation across global fixed income markets combined with specific alpha strategies and tail-risk hedging allow the Strategy to achieve positive returns in most market environments.
Payden & Rygel - PARI	Sticking to their core strengths of a consistent team-based approach, their deep expertise in low duration, and a history of achieving stable, income-oriented returns, the PARI team builds a defensible income core of a highly diversified and rigorously vetted global portfolio, to which they then add an outer layer of medium-term thematic and shorter-term tactical views, and protect it with tail hedging. Central to the consistency of PARI's alpha add is the balanced, diversified make-up of the core, the conservative nature of the team, and their emphasis on portfolio insurance with an annual budget set aside for macro hedging.
Wellington - Opp Fixed Income	Excess returns are delivered in the Opportunistic Fixed Income Allocation strategy through strategic themes developed by the Wellington Asset Allocation team that exploit the mispricing of medium- to long-term structural themes across capital markets. The belief that structural change is digested slowly while there is regular over- and under-reaction to short term news is central in identifying asset classes and strategies that are attractively valued or will benefit from anticipated structural themes or macroeconomic forces. Strategic themes are then complemented by tactical strategies, and additional market-neutral (relative value, absolute return) allocations. Bottom-up security selection in underlying Wellington strategies delivers additional value-add on top of macro, top-down asset allocation contributions.



# FIRM COMPARISON SUMMARY

Firm Name	Location	Year Firm Founded	Total Assets Under Mgmt (\$MM)	% Employee Owned	% Parent Owned	Parent Company Name	% Publicly Held	% Other Ownership
<b>Absolute Return Fixed Income</b>								
BlackRock Investments, LLC	New York, New York	1988	6,515,345	0	0	NA	78	22
Loomis, Sayles & Company, L.P.	Boston, Massachusetts	1926	263,508	0	100	Natixis Global Asset Management (NGAM)	0	0
Pacific Investment Management Company LLC	Newport Beach, California	1971	1,758,075	0	100	Allianz Asset Management of America L.P.	0	0
Payden & Rygel	Los Angeles, California	1983	114,200	100	0	NA	0	0
Wellington Management Company LLP	Boston, Massachusetts	1928	1,072,454	100	0	NA	0	0



# PRODUCT COMPARISON

Firm/Product	Inception Date	AUM (\$MM)	# of Portfolio Managers	# of Research Analysts	# of Traders
<b>Absolute Return Fixed Income</b>					
BlackRock - Strategic Income Opp	2010	31,792	3	0	0
Loomis - Strategic Alpha	2011	5,609	3	76	43
PIMCO - Unconstrained Bond	2007	12,069	4	152	0
Payden & Rygel - PARI	2008	9,934	3	24	10
Wellington - Opp Fixed Income	2000	2,934	2	1	0

Firm/Product	PRI Signatory (Y/N)	Strategy is Managed with ESG Considerations (Y/N)
<b>Absolute Return Fixed Income</b>		
BlackRock - Strategic Income Opp	Yes	No
Loomis - Strategic Alpha	Yes	Yes
PIMCO - Unconstrained Bond	Yes	No
Payden & Rygel - PARI	Yes	Yes
Wellington - Opp Fixed Income	Yes	Yes



# PRODUCT COMPARISON

Firm/Product	Vehicle Proposed	Liquidity In	Liquidity Out	Reported Fee for \$40.00 mm	Reported Fee in (bps)
<b>Absolute Return Fixed Income</b>					
BlackRock - Strategic Income Opp	Commingled Fund Mutual Fund	Daily Daily	Daily Daily	220,000.00 244,000.00	55 61
Loomis - Strategic Alpha	Commingled Fund Mutual Fund	Bi-Weekly Daily	Bi-Weekly Daily	220,000.00 300,000.00	55 75
PIMCO - Unconstrained Bond	Mutual Fund	Daily	Daily	348,000.00	87
Payden & Rygel - PARI	Commingled Fund Mutual Fund	Daily Daily	Daily Daily	200,000.00 188,000.00	50 47*
Wellington - Opp Fixed Income	Commingled Fund	Daily	Daily	200,000.00	50

\*Reduction in Standard Fees



# FIXED INCOME COMPARISON

Firm/Product	Duration Emphasis	Weighted Average Coupon (%)	Yield to Maturity (%)	Average Maturity (Years)	Duration (Years)	Average Quality	Minimum Quality
<b>Absolute Return Fixed Income</b>							
BlackRock - Strategic Income Opp	Core/All Durations	4.1	4.0	5.48	3.59	BBB	NA**
Loomis - Strategic Alpha	Short	3.1	4.0	1.53	0.48	BBB	NA**
PIMCO - Unconstrained Bond	Short	3.4	4.5	0.90	0.54*	A	NA**
Payden & Rygel - PARI	Core/All Durations	4.3	4.1	4.50	2.30	BBB	CC
Wellington - Opp Fixed Income	Intermediate	2.0	2.3	6.60	3.70*	A	NA**

\*Effective Duration Shown  
 \*\*No Minimum Quality Issue

Firm/Product	# of Issues	Current Cash (%)	Annual Turnover (%)	Yield to Worst (%)
<b>Absolute Return Fixed Income</b>				
BlackRock - Strategic Income Opp	3,441	NA*	NA*	3.9
Loomis - Strategic Alpha	433	11.1	307.4	4.0
PIMCO - Unconstrained Bond	100	14.3	45.0	4.5
Payden & Rygel - PARI	331	0.0	91.0	4.0
Wellington - Opp Fixed Income	893	48.0	1,944.0	2.3

\*Not Provided



# CURRENT QUALITY ALLOCATIONS

Firm/Product	AAA/Aaa (%)	AA/Aa (%)	A (%)	BBB/Baa (%)	BB/Ba (%)	B (%)	CCC/Caa and Below (%)	Other (%)
<b>Absolute Return Fixed Income</b>								
BlackRock - Strategic Income Opp	4.8	6.0	12.2	19.9	12.1	8.0	3.5	33.5
Loomis - Strategic Alpha	21.1	12.4	19.1	21.5	6.9	4.8	2.0	12.3
PIMCO - Unconstrained Bond	39.7	16.3	17.1	8.2	3.7	2.8	12.1	0.0
Payden & Rygel - PARI	18.0	4.0	13.0	28.0	13.0	9.0	8.0	7.0
Wellington - Opp Fixed Income	-14.0	119.0	-36.0	-48.0	17.0	48.0	7.0	7.0

Firm/Product	Duration <1 Yr (%)	Duration 1-3 Yrs (%)	Duration 3-5 Yrs (%)	Duration 5-7 Yrs (%)	Duration 7-10 Yrs (%)	Duration 10-20 Yrs (%)	Duration >20 Yrs (%)
<b>Absolute Return Fixed Income</b>							
BlackRock - Strategic Income Opp	49.4	31.5	-3.9	5.5	13.4	4.4	-0.2
Loomis - Strategic Alpha	56.3	37.1	12.9	5.2	-10.5	-1.1	0.0
PIMCO - Unconstrained Bond	-77.7	40.8	389.3	229.2	-222.6	29.3	-288.1
Payden & Rygel - PARI	48.0	36.0	17.0	2.0	-3.0	0.0	0.0
Wellington - Opp Fixed Income	90.5	6.3	5.4	7.1	-5.9	-5.0	1.7



# STRATEGY ALLOCATIONS

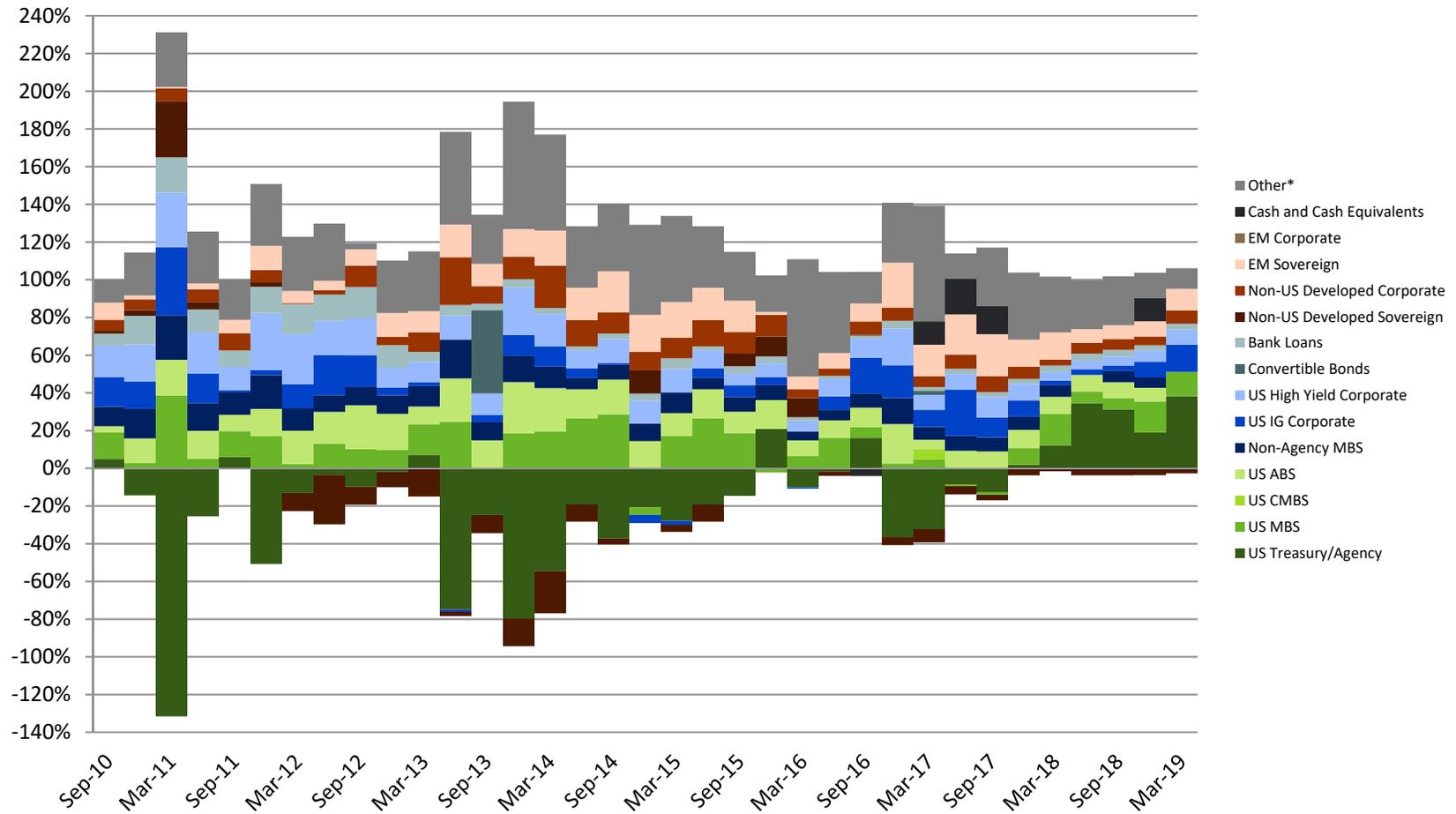
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# SECTOR ALLOCATIONS

## BlackRock Strategic Income Opportunities

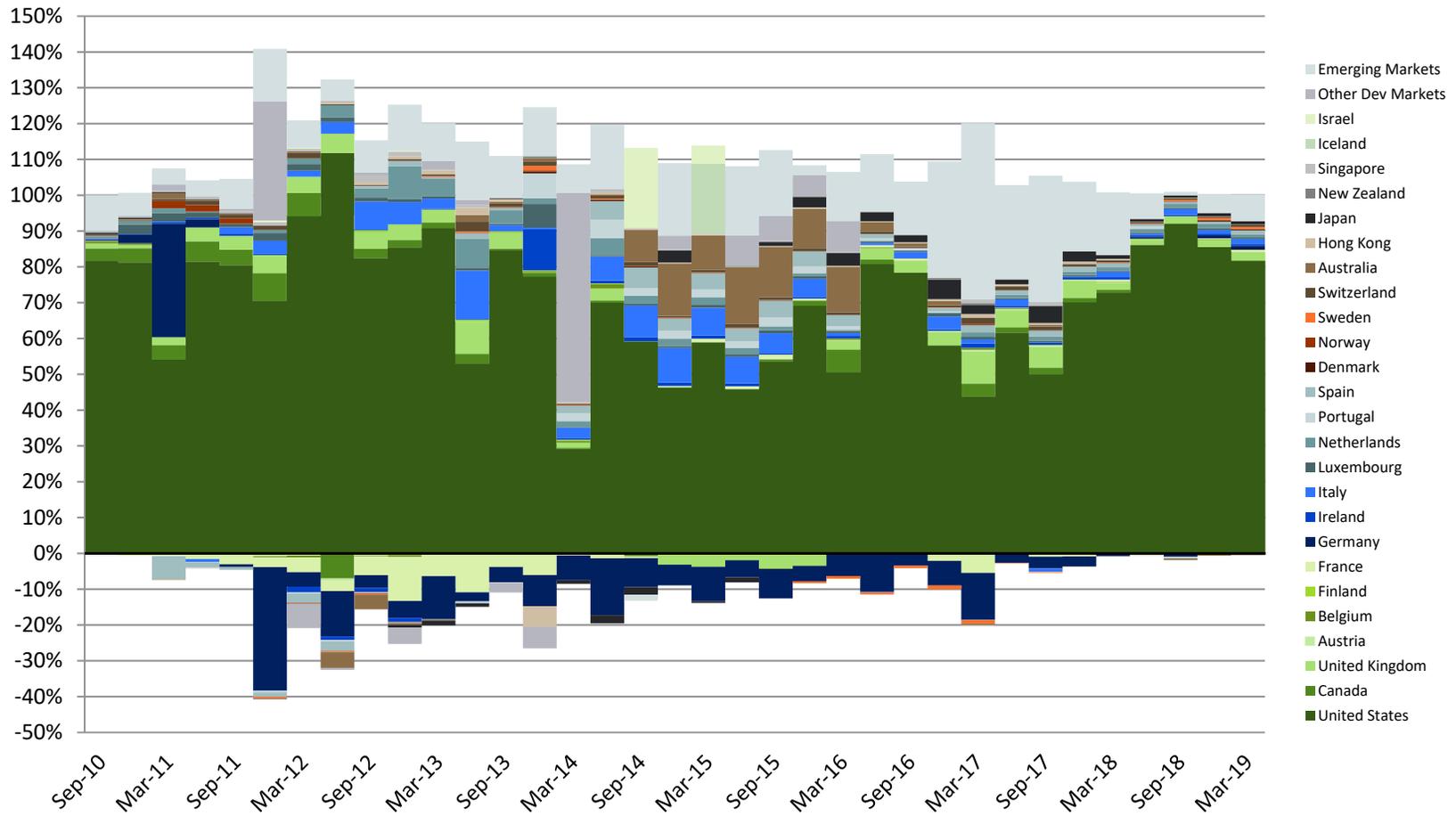
### Sector Allocations



# COUNTRY ALLOCATIONS

**BlackRock**  
Strategic Income Opportunities

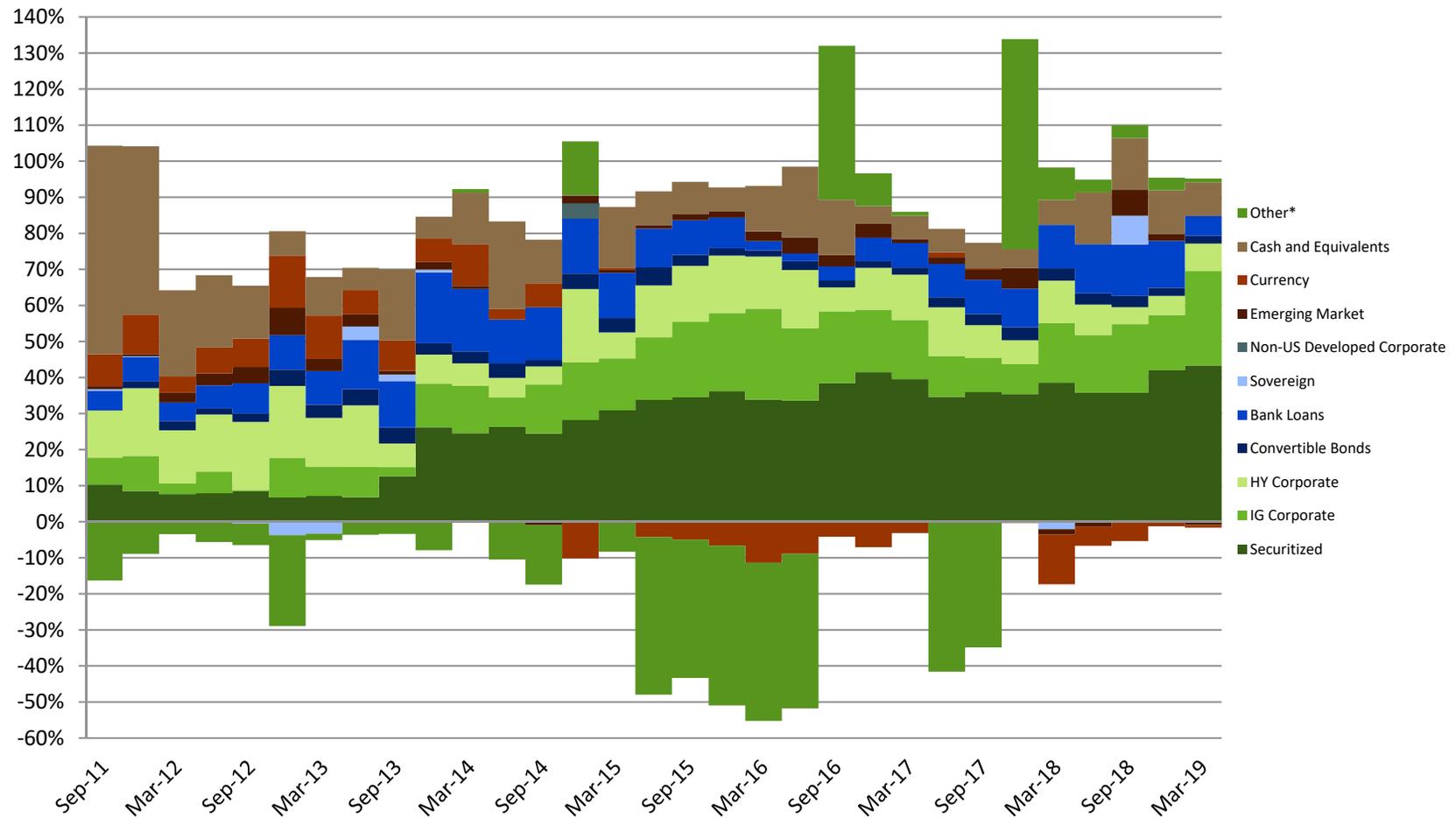
## Country Allocations



# SECTOR ALLOCATIONS

**Loomis, Sayles & Company, L.P.**  
Strategic Alpha

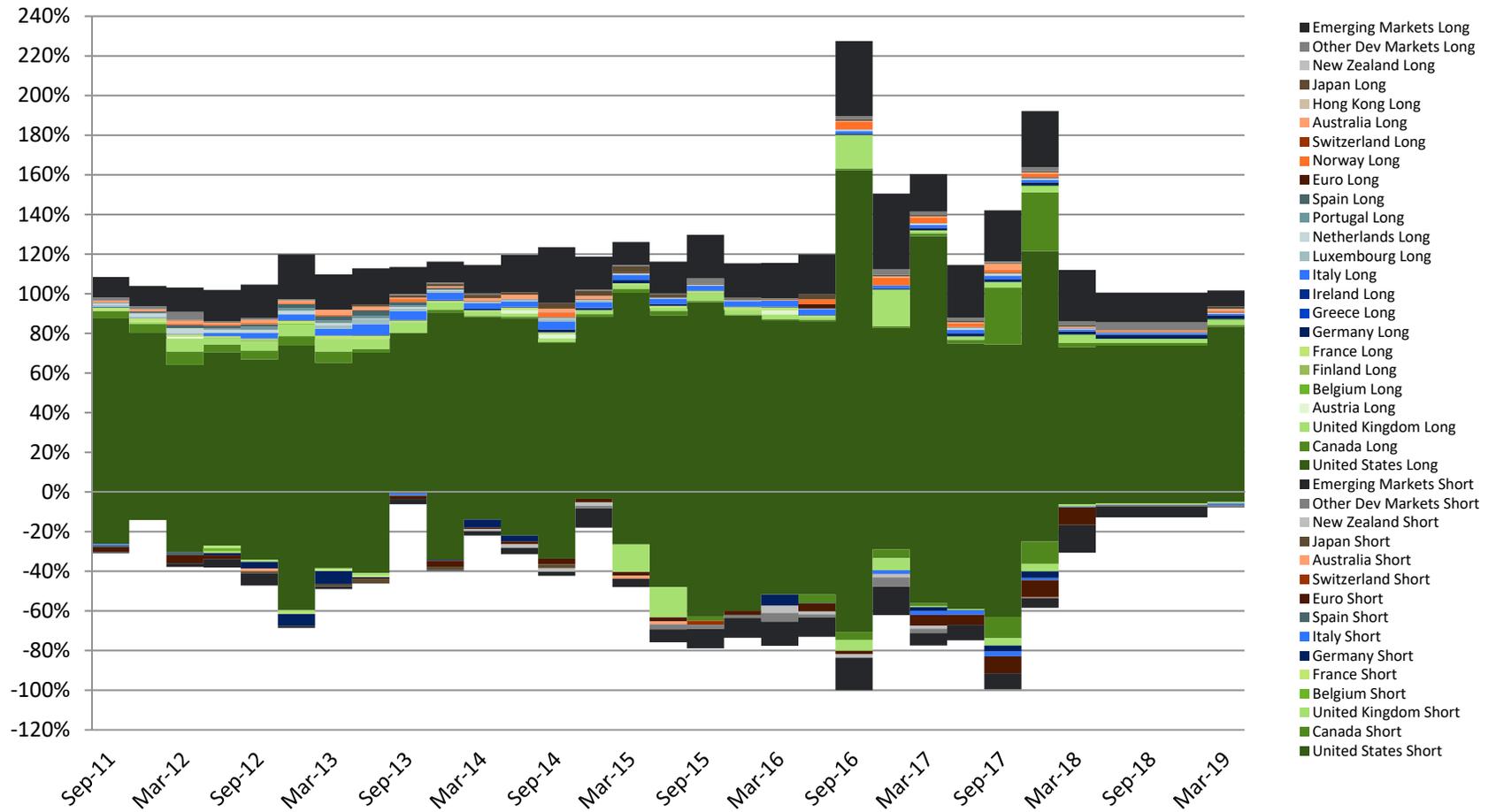
## Sector Allocations



# COUNTRY ALLOCATIONS

Loomis, Sayles & Company, L.P.  
Strategic Alpha

## Country Allocations



Long and short exposures shown.

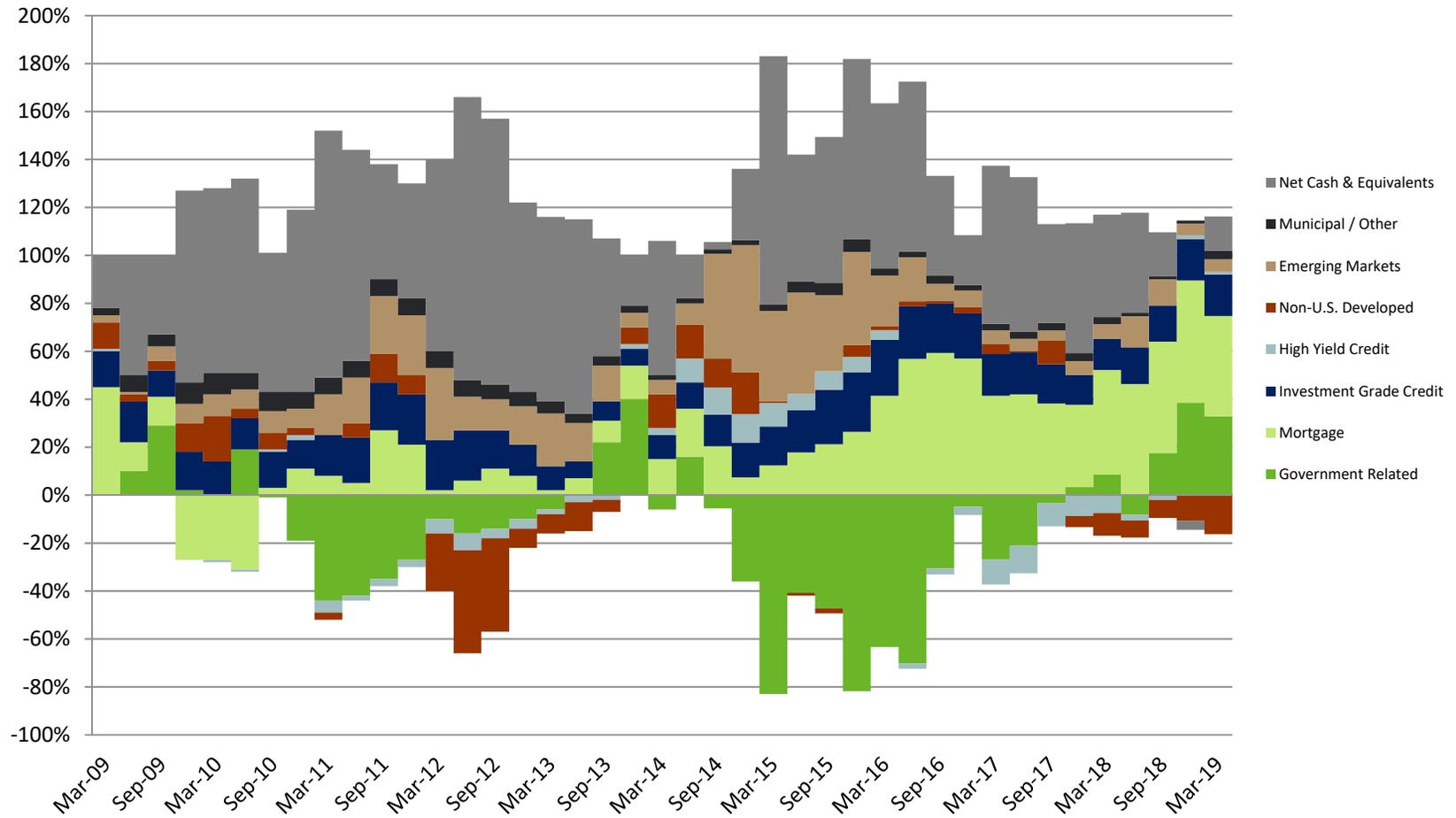
Characteristics as of March 31, 2019



# SECTOR ALLOCATIONS

## PIMCO Unconstrained Bond

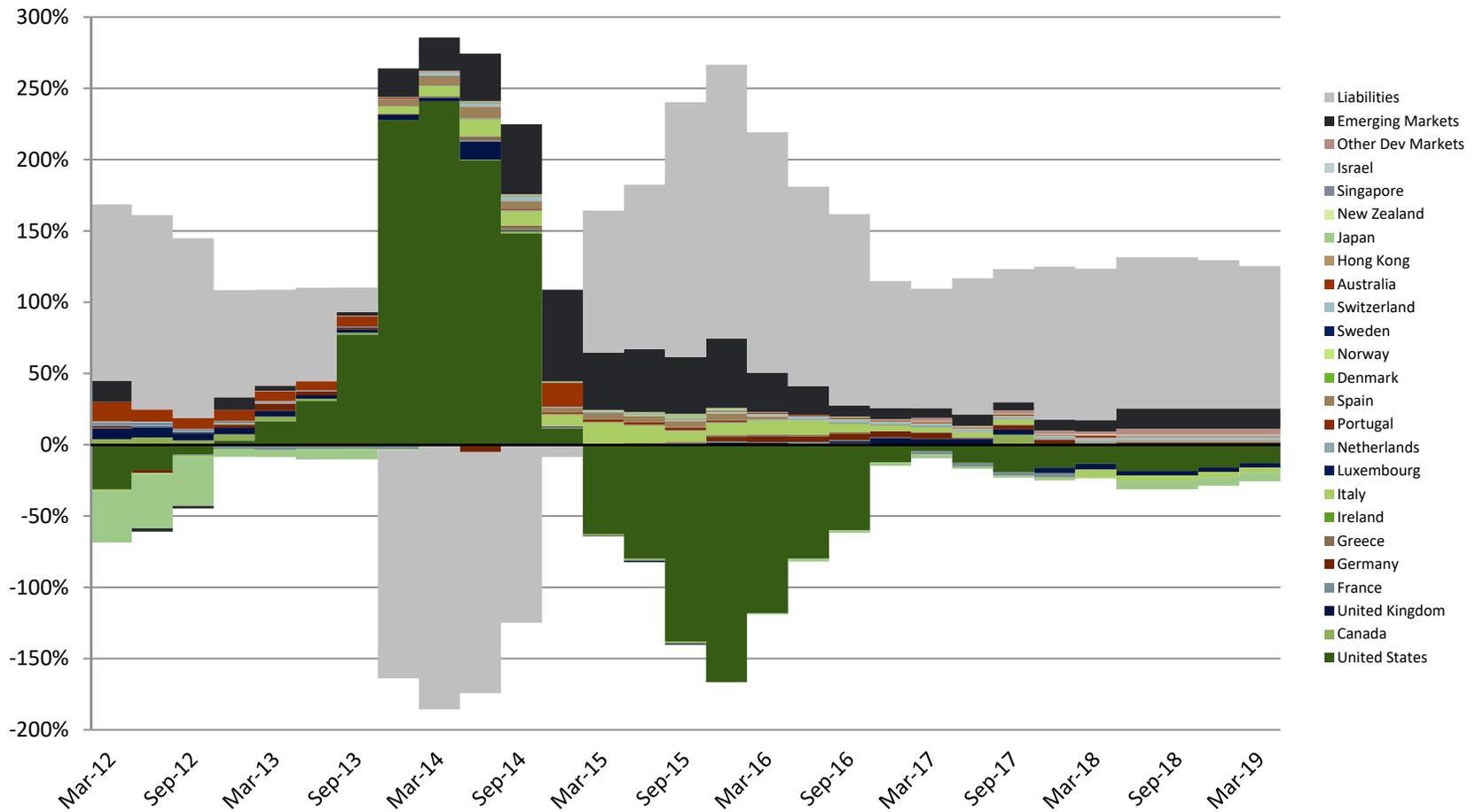
### Sector Allocations



# COUNTRY ALLOCATIONS

**PIMCO**  
Unconstrained Bond

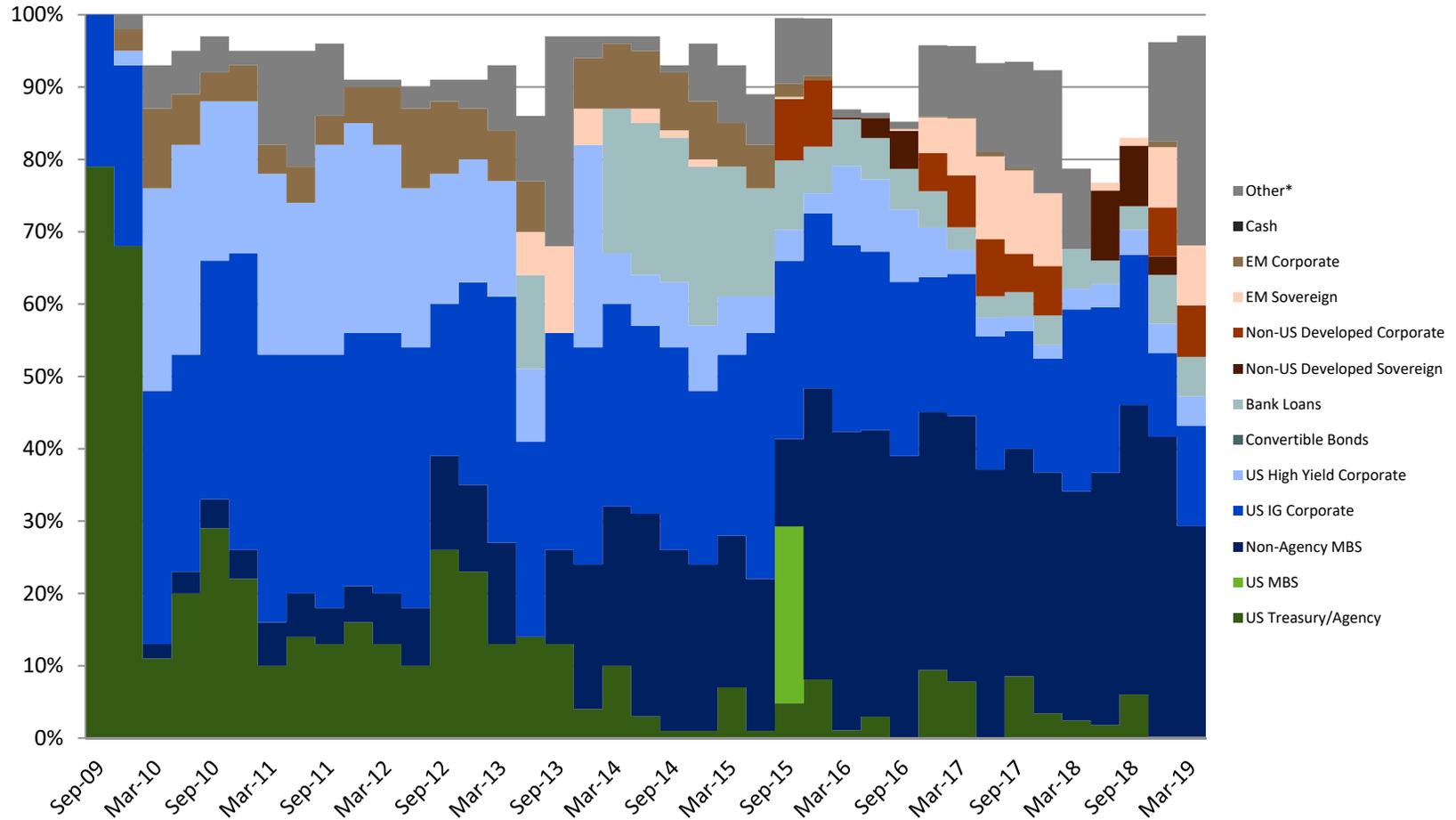
## Country Allocations



# SECTOR ALLOCATIONS

**Payden & Rygel**  
Payden Absolute Return Investing

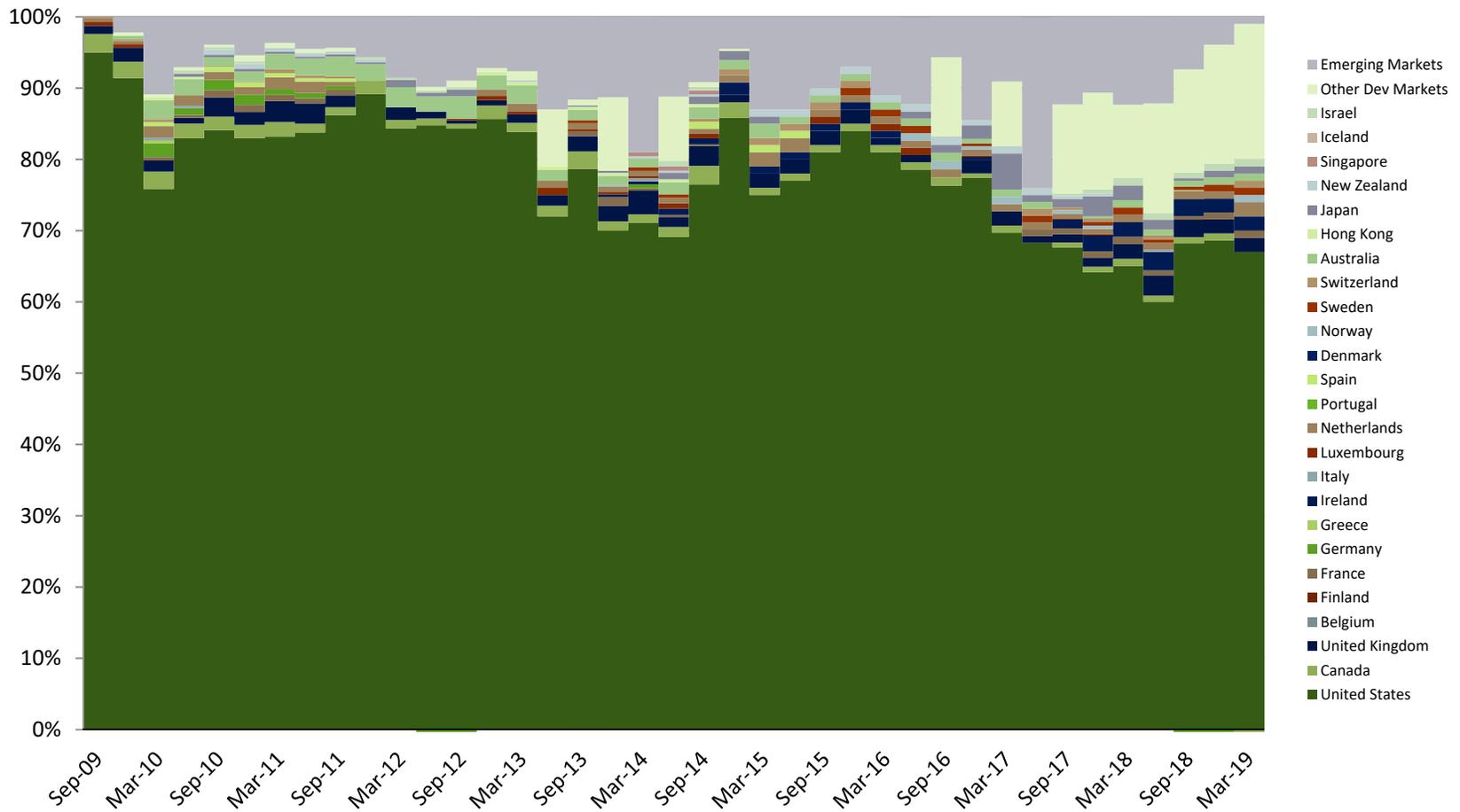
## Sector Allocations



# COUNTRY ALLOCATIONS

## Payden & Rygel Payden Absolute Return Investing

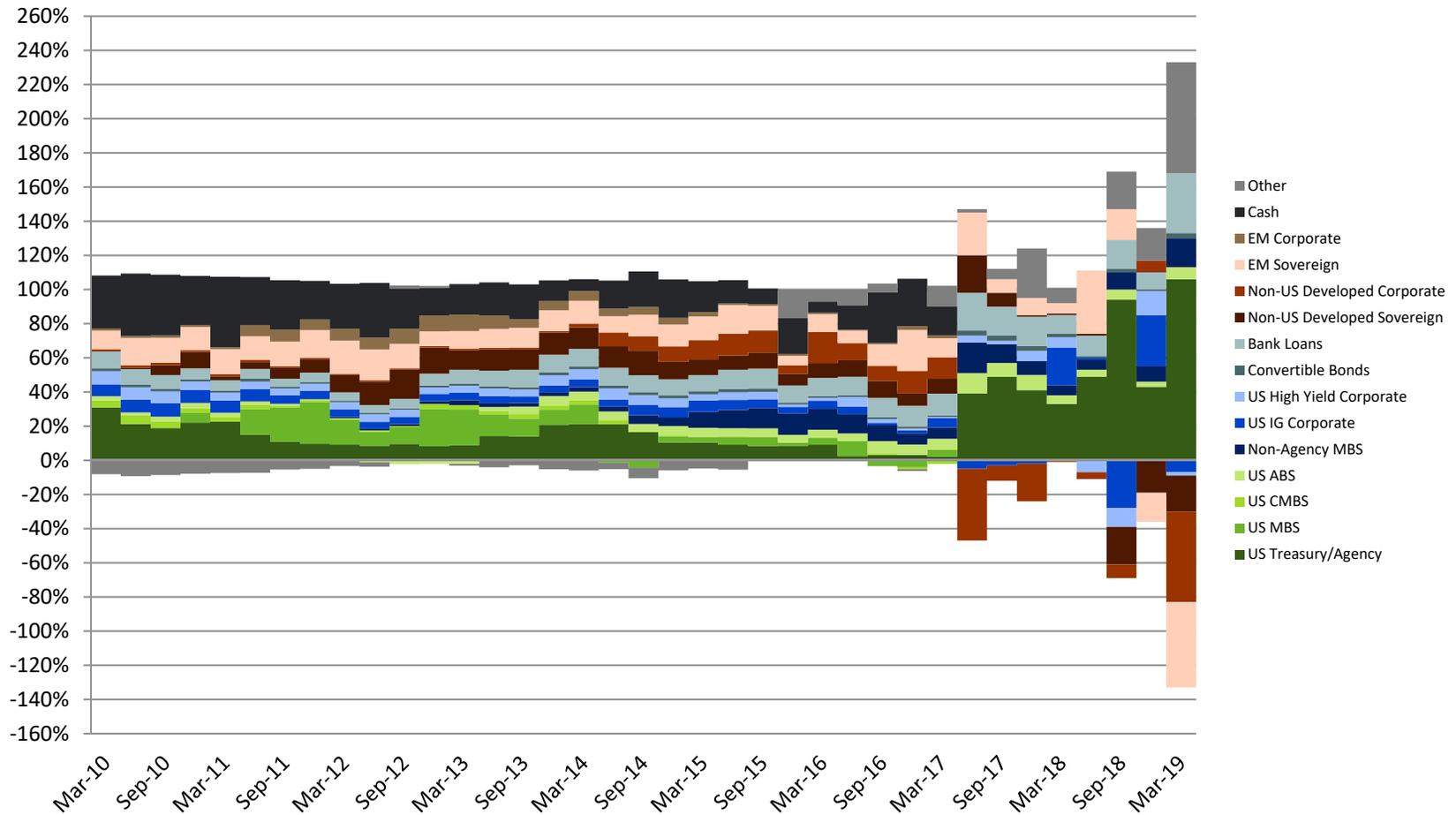
### Country Allocations



# SECTOR ALLOCATIONS

## Wellington Management Company LLP Opportunistic Fixed Income

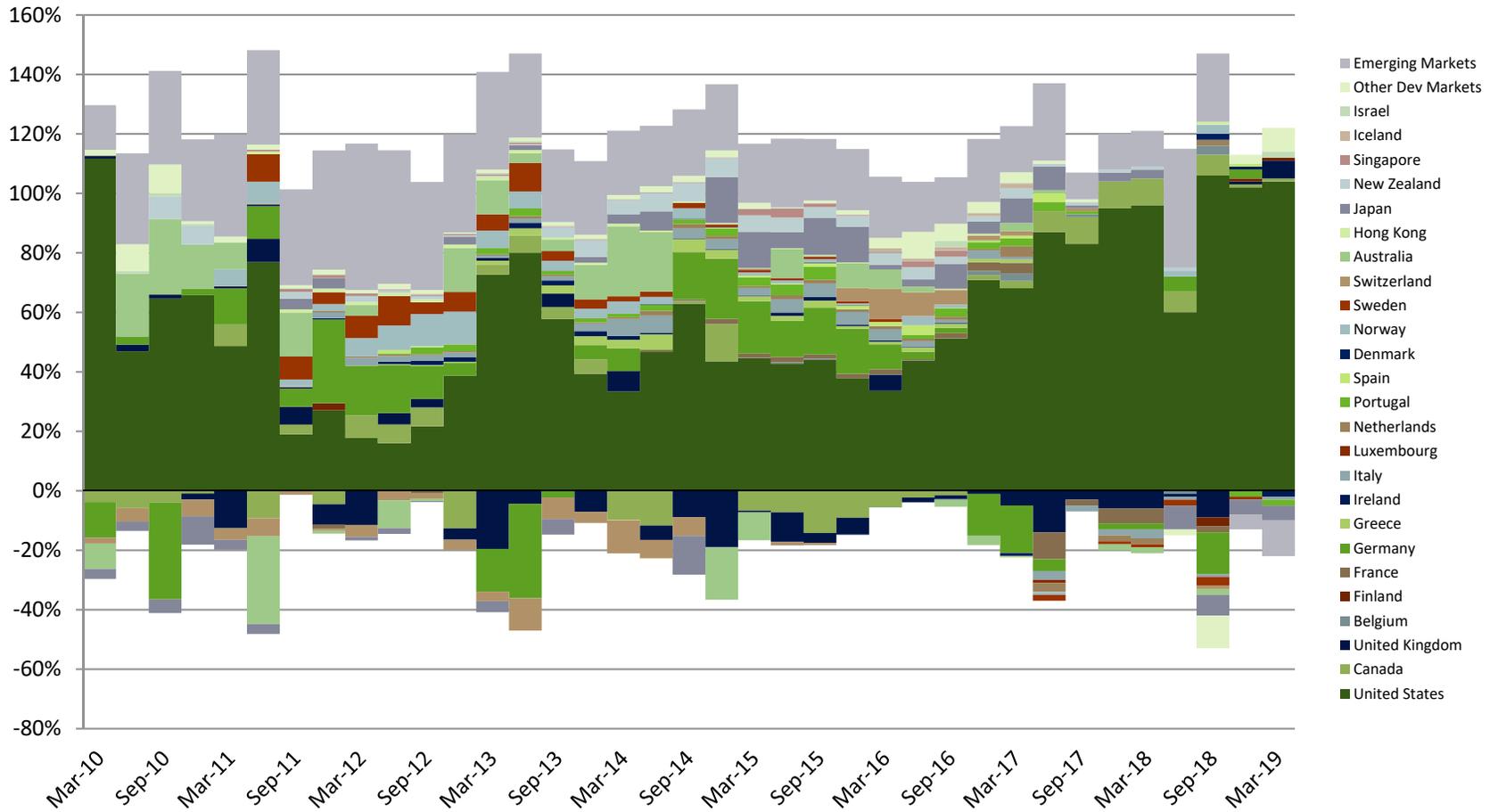
### Sector Allocations



# COUNTRY ALLOCATIONS

Wellington Management Company LLP  
Opportunistic Fixed Income

## Country Allocations



# PERFORMANCE

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# INTRODUCTION TO PERFORMANCE ANALYSIS

The following performance charts show the historical record for the strategies under consideration. To manage client portfolios, each manager has a range of offerings (separate accounts, commingled funds or mutual funds) that allow all types of clients access to the strategy at reasonable prices.

## **Trailing Period Returns and Calendar Year Returns:**

These pages highlight a manager's performance for quarter, year to date, 1, 3, 5, 7 & 10 year periods as well as calendar year returns.

## **Performance Summary:**

These pages highlight a manager's excess performance over various periods. All managers are also shown from the inception of the shortest record referred to as LCD or Least Common Denominator.

## **Return Histogram:**

These charts display the frequency of a manager's monthly excess performance data.

## **Rolling One Year and Three Year Excess Returns:**

These charts demonstrate the manager's demonstrated relative performance versus the benchmark over time. Using each manager's one year return and subtracting the one year benchmark return shows how each manager has performed relative to the relevant benchmark. The same method is used for the three year charts.

## **Rolling One Year and Three Year Excess Return Versus Benchmark:**

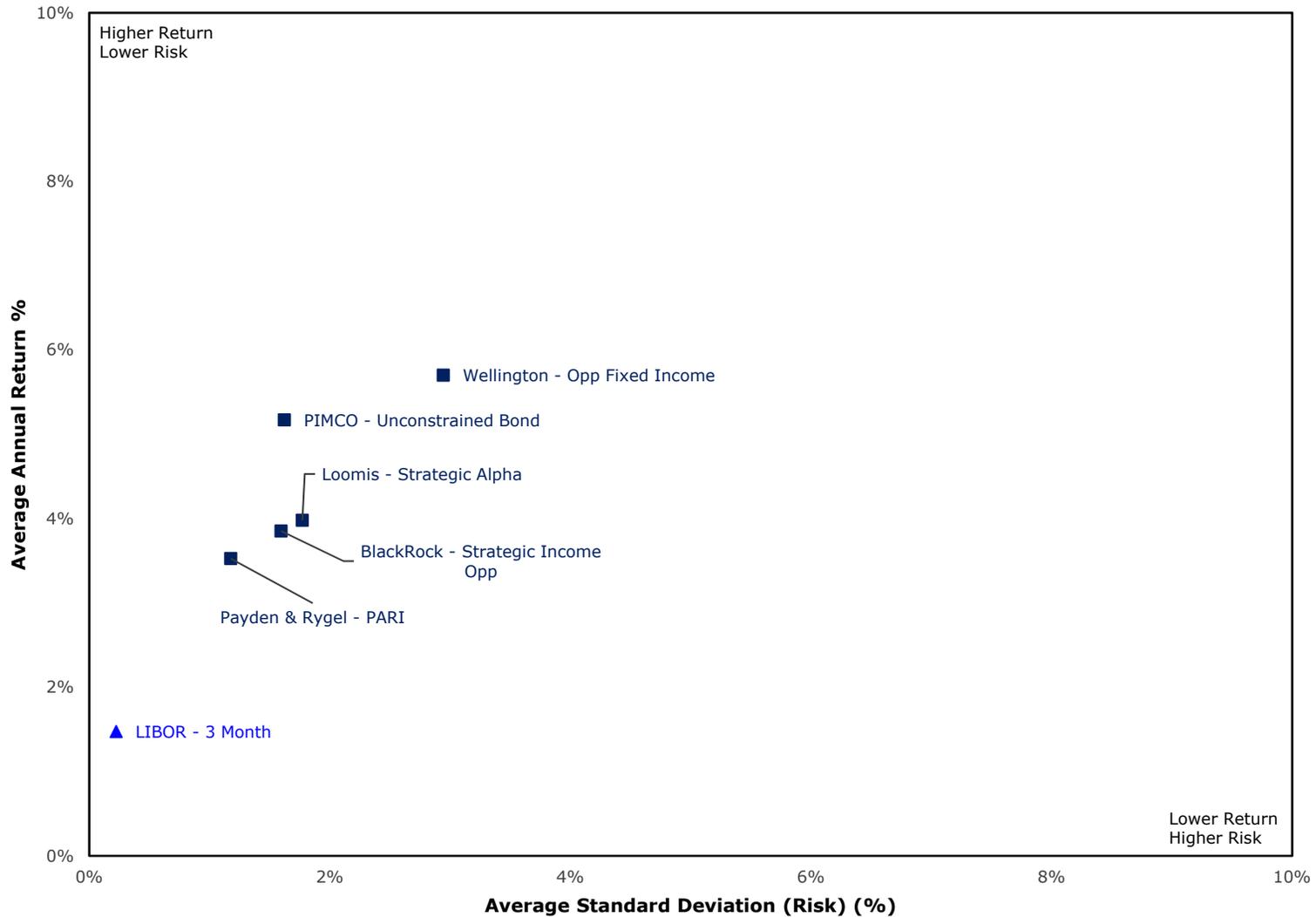
These charts demonstrate the manager's demonstrated relative performance behavior over up and down equity markets. The charts are displayed in order of benchmark performance along the X-Axis rather than chronological order. By looking at the Y-Coordinate you can determine whether or not the manager added or detracted value versus the benchmark over that one year period. Each dot represents the one year excess return versus the relevant benchmark. The same method is used for the three year charts.

## **Risk/Return Performance Charts:**

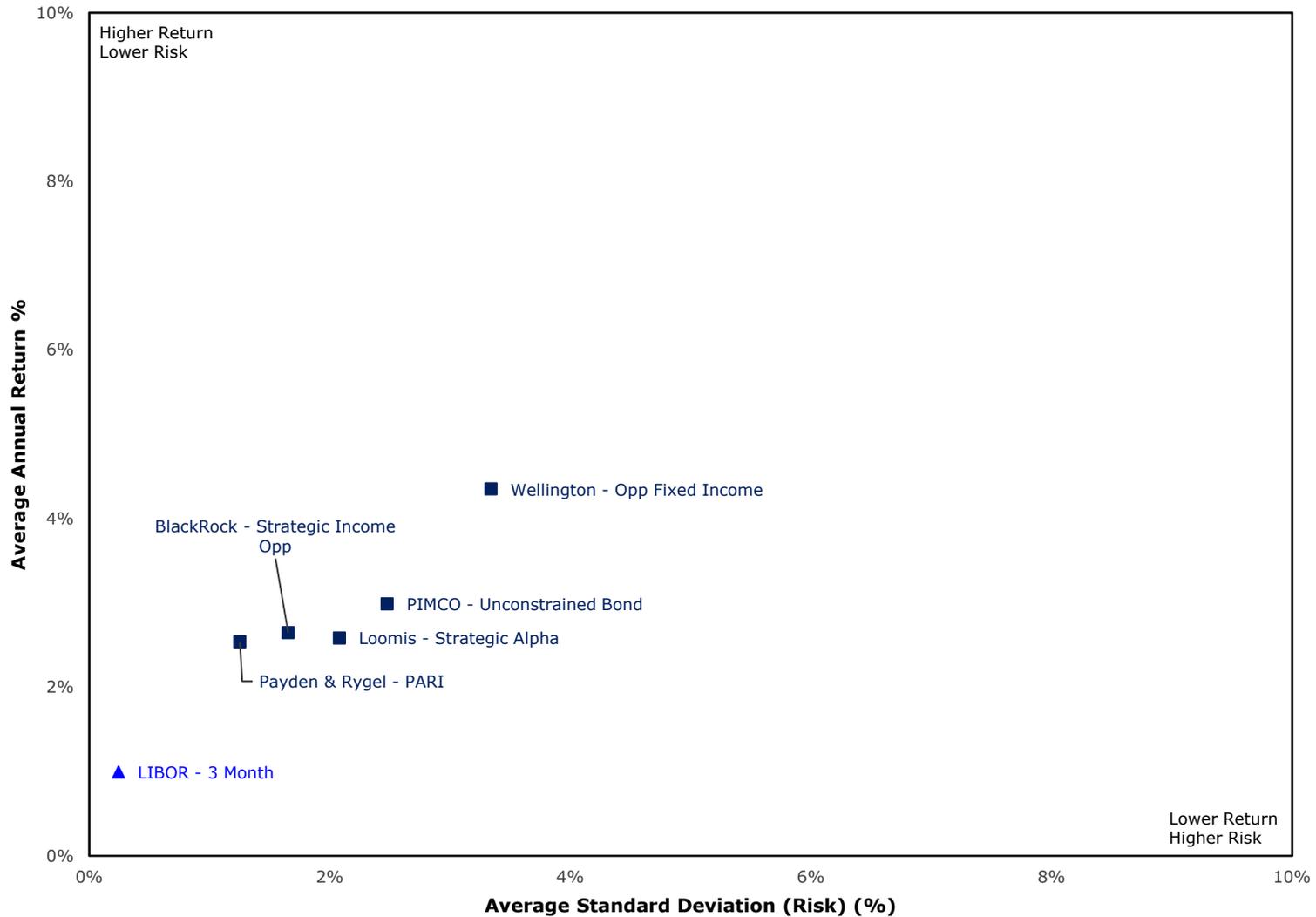
These charts show the risk and return of the candidates and indices for 3, 5, 7 & 10 year periods.



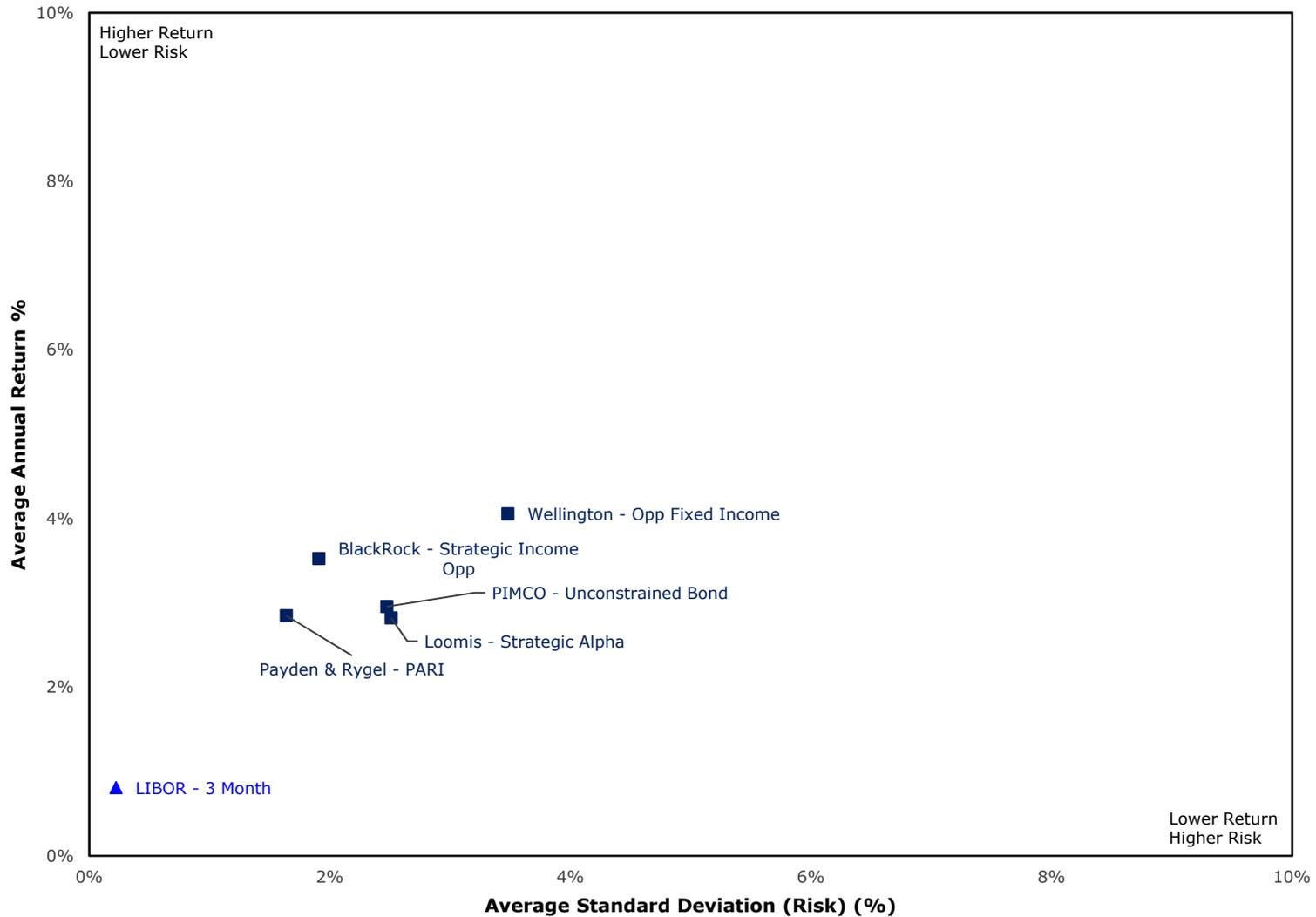
# 3 YEAR TOTAL RISK/RETURNS COMPARISON - (NET OF FEES)



# 5 YEAR TOTAL RISK/RETURNS COMPARISON - (NET OF FEES)



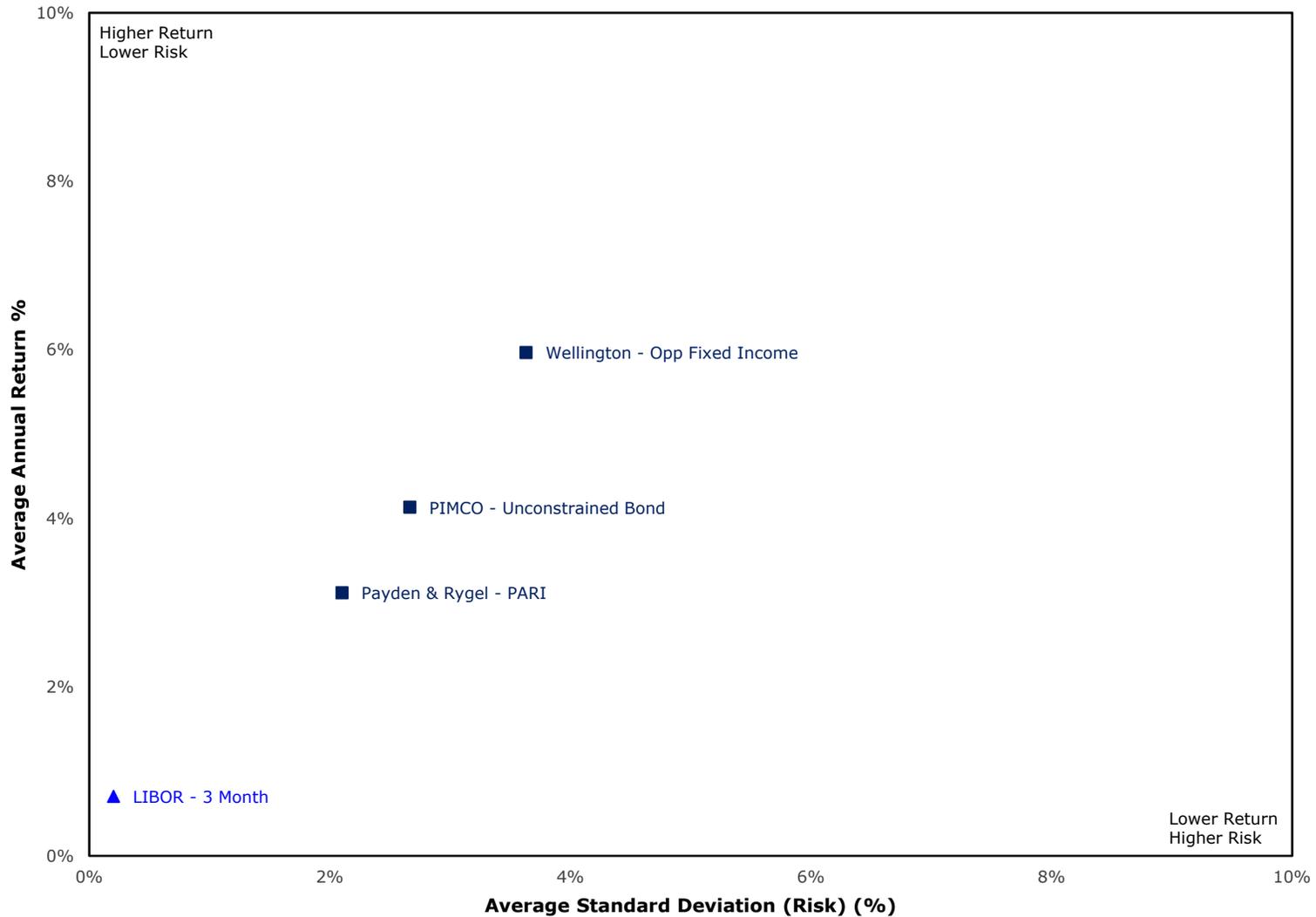
# 7 YEAR TOTAL RISK/RETURNS COMPARISON - (NET OF FEES)



Past performance is no guarantee of future results

Performance as of March 31, 2019

# 10 YEAR TOTAL RISK/RETURNS COMPARISON - (NET OF FEES)



# TRAILING PERIOD RETURNS - (NET OF FEES)

	Benchmark	Qtr	YTD	1 Year	3 Year	5 Year	7 Year	10 Year
<b>Absolute Return Fixed Income</b>								
<b>BlackRock - Strategic Income Opp</b>	1	2.5%	2.5%	1.8%	3.9%	2.6%	3.5%	NA
<b>Loomis - Strategic Alpha</b>	1	2.0%	2.0%	1.7%	4.0%	2.6%	2.8%	NA
<b>PIMCO - Unconstrained Bond</b>	1	2.1%	2.1%	3.6%	5.2%	3.0%	3.0%	4.1%
<b>Payden &amp; Rygel - PARI</b>	1	2.4%	2.4%	2.8%	3.5%	2.5%	2.8%	3.1%
<b>Wellington - Opp Fixed Income</b>	1	5.2%	5.2%	6.1%	5.7%	4.4%	4.1%	6.0%

## Actual Return

<b>1 LIBOR - 3 Month</b>	0.7%	0.7%	2.5%	1.5%	1.0%	0.8%	0.7%
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Past performance is no guarantee of future results

Performance as of March 31, 2019

# CALENDAR YEAR RETURNS - (NET OF FEES)

	Bench mark	2018	2017	2016	2015	2014	2013	2012	2011	2010	2009
<b>Absolute Return Fixed Income</b>											
<b>BlackRock - Strategic Income Opp</b>	1	-0.2%	5.0%	3.8%	-0.1%	4.2%	3.5%	10.2%	-1.0%	NA	NA
<b>Loomis - Strategic Alpha</b>	1	0.6%	3.4%	6.2%	-1.0%	2.4%	0.4%	10.2%	NA	NA	NA
<b>PIMCO - Unconstrained Bond</b>	1	1.8%	5.7%	5.4%	-1.8%	2.8%	-2.0%	9.0%	0.8%	5.9%	14.0%
<b>Payden &amp; Rygel - PARI</b>	1	0.9%	3.7%	4.0%	1.2%	1.9%	0.1%	7.4%	0.8%	5.5%	4.5%
<b>Wellington - Opp Fixed Income</b>	1	0.6%	5.7%	7.7%	-0.1%	5.2%	-1.9%	9.3%	2.6%	11.8%	18.2%

## Actual Index Return

<b>1 LIBOR - 3 Month</b>	2.1%	1.1%	0.7%	0.2%	0.2%	0.3%	0.5%	0.3%	0.3%	1.0%
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Past performance is no guarantee of future results

Performance as of March 31, 2019

# TOTAL RETURN PERFORMANCE SUMMARY - (NET OF FEES)

	# of Months (Track Record)	% Positive (Mo.)	% Negative (Mo.)	High (Mo.)	Low (Mo.)	Total Return				
						1 Yr.	3 Yrs.	5 Yrs.	7 Yrs.	10 Yrs.
<b>Absolute Return Fixed Income</b>										
<b>BlackRock - Strategic Income Opp</b>	108	73%	27%	2.6%	(1.9%)	1.8%	3.9%	2.6%	3.5%	NA
<b>Loomis - Strategic Alpha</b>	95	64%	36%	2.6%	(3.1%)	1.7%	4.0%	2.6%	2.8%	NA
<b>PIMCO - Unconstrained Bond</b>	138	70%	30%	3.4%	(3.4%)	3.6%	5.2%	3.0%	3.0%	4.1%
<b>Payden &amp; Rygel - PARI</b>	126	77%	23%	1.8%	(2.2%)	2.8%	3.5%	2.5%	2.8%	3.1%
<b>Wellington - Opp Fixed Income</b>	229	70%	30%	5.7%	(7.8%)	6.1%	5.7%	4.4%	4.1%	6.0%

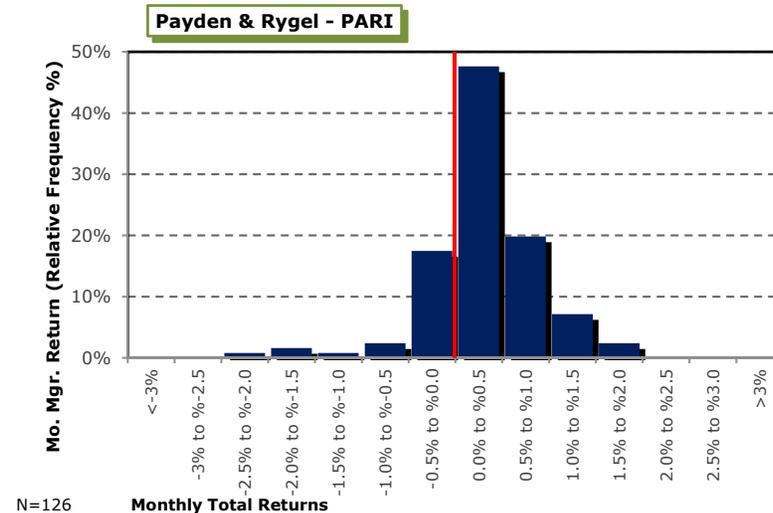
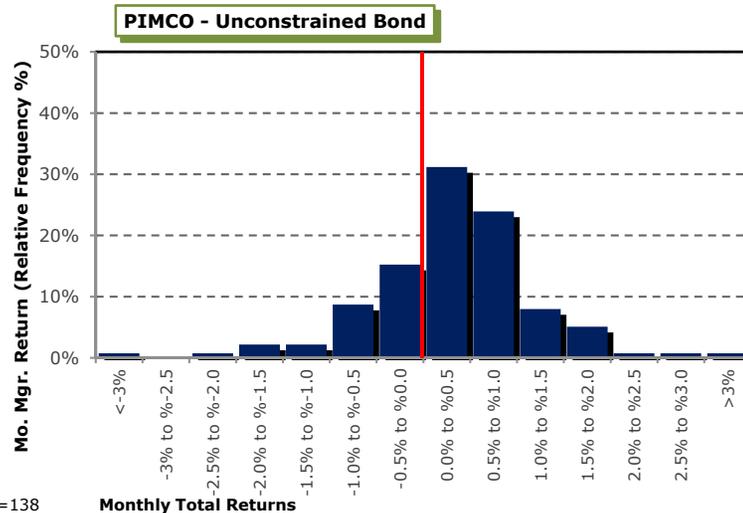
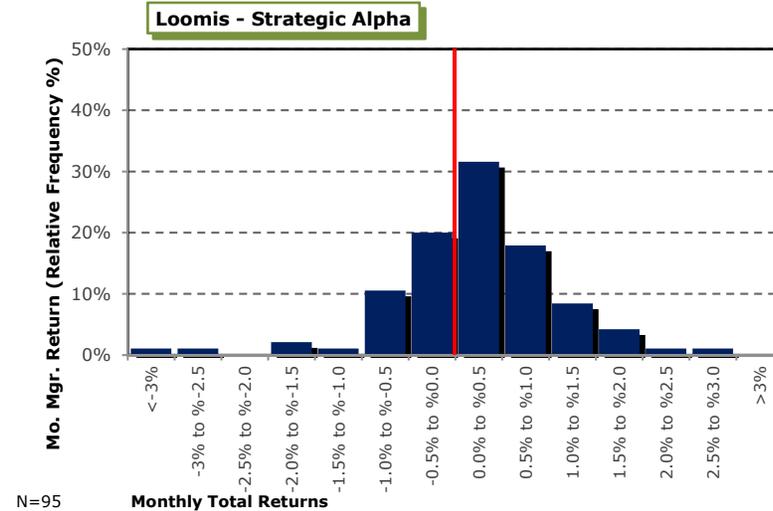
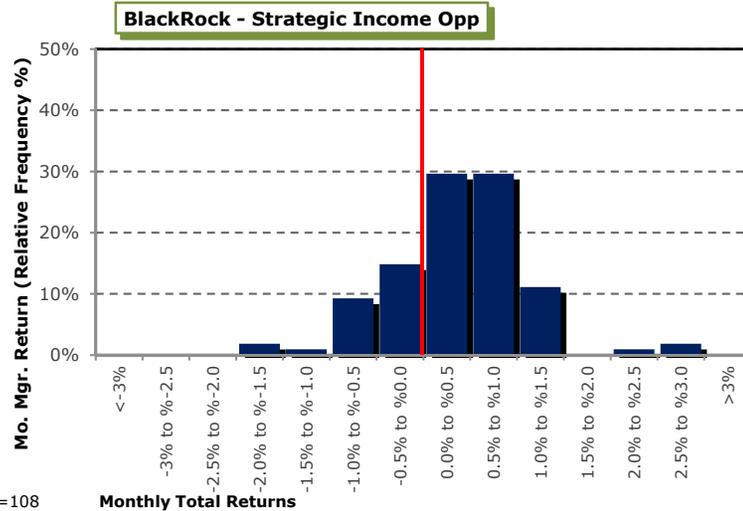


# TOTAL RETURN PERFORMANCE SUMMARY - (NET OF FEES)

	# of Months (Track Record)	Standard Deviation				Sharpe Ratio			
		3 Yrs.	5 Yrs.	7 Yrs.	10 Yrs.	3 Yrs.	5 Yrs.	7 Yrs.	10 Yrs.
<b>Absolute Return Fixed Income</b>									
<b>BlackRock - Strategic Income Opp</b>	108	1.6%	1.7%	1.9%	NA	1.25	0.42	0.75	NA
<b>Loomis - Strategic Alpha</b>	95	1.8%	2.1%	2.5%	NA	1.20	0.30	0.29	NA
<b>PIMCO - Unconstrained Bond</b>	138	1.6%	2.5%	2.5%	2.7%	2.05	0.42	0.35	0.64
<b>Payden &amp; Rygel - PARI</b>	126	1.2%	1.3%	1.6%	2.1%	1.42	0.46	0.46	0.33
<b>Wellington - Opp Fixed Income</b>	229	2.9%	3.3%	3.5%	3.6%	1.31	0.72	0.57	0.98



# TOTAL MONTHLY RETURNS HISTOGRAM - (NET OF FEES)



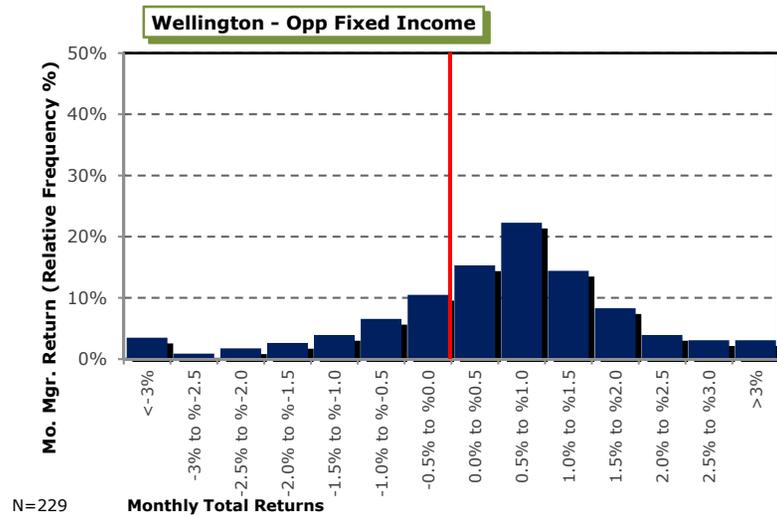
 Absolute Return Fixed Income



Past performance is no guarantee of future results

Performance as of March 31, 2019

# TOTAL MONTHLY RETURNS HISTOGRAM - (NET OF FEES)

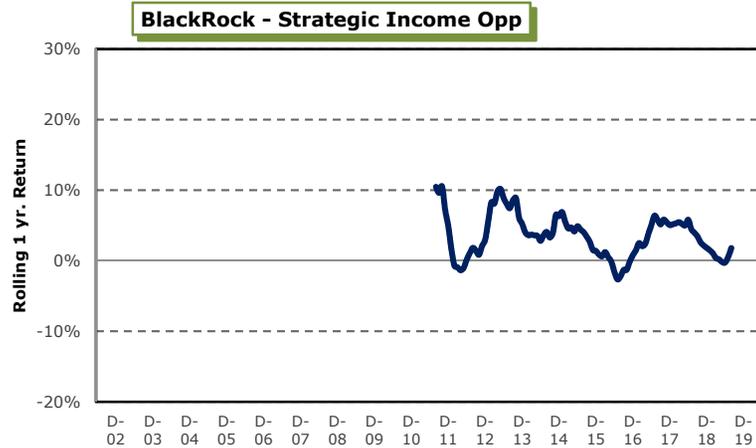


 Absolute Return Fixed Income

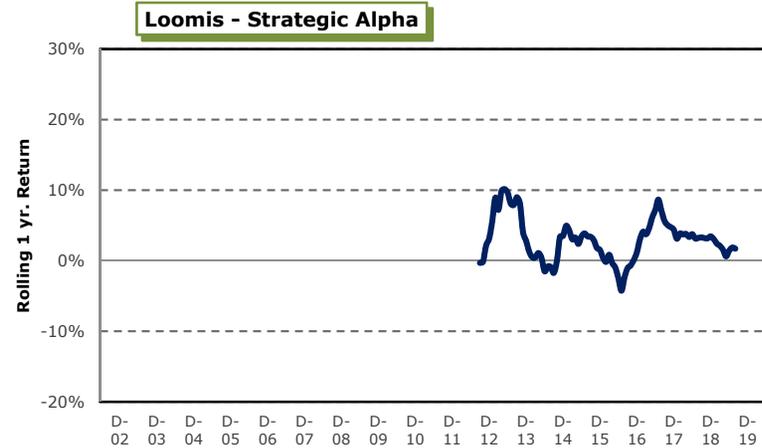
Past performance is no guarantee of future results

Performance as of March 31, 2019

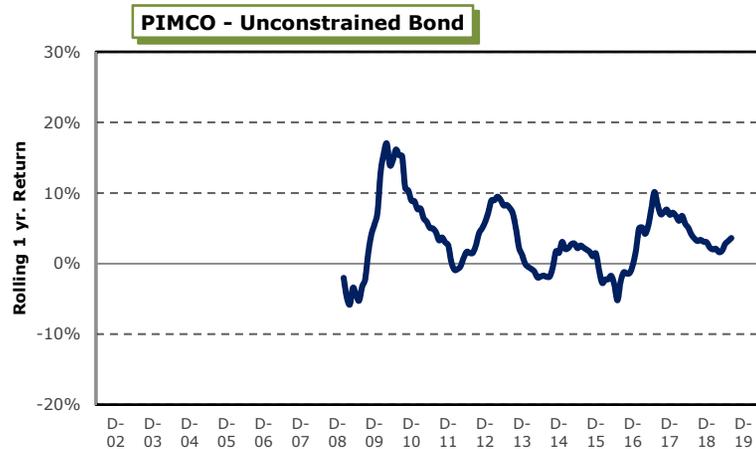
# ROLLING 1 YEAR TOTAL RETURNS - (NET OF FEES)



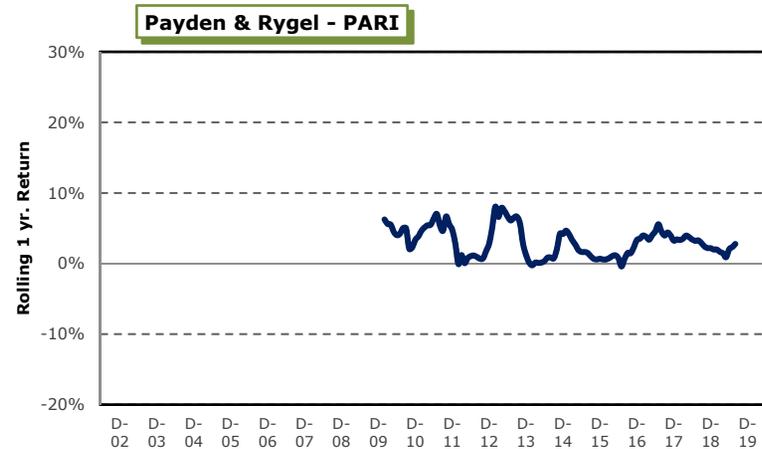
Total Returns



Total Returns



Total Returns



Total Returns

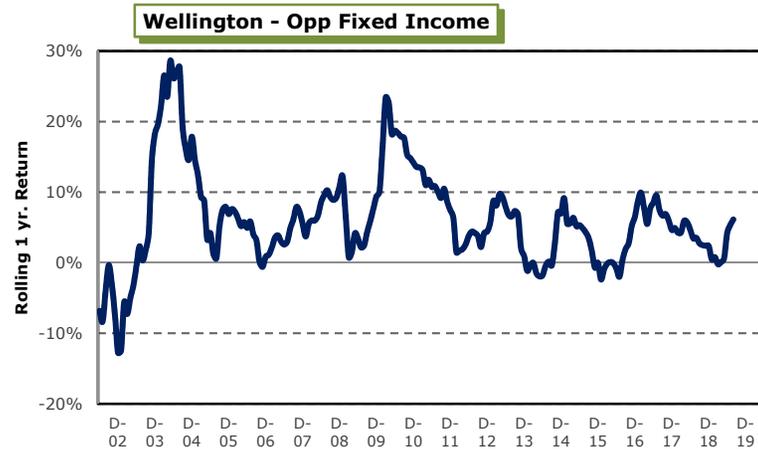
 Absolute Return Fixed Income



Past performance is no guarantee of future results

Performance as of March 31, 2019

# ROLLING 1 YEAR TOTAL RETURNS - (NET OF FEES)



Total Returns

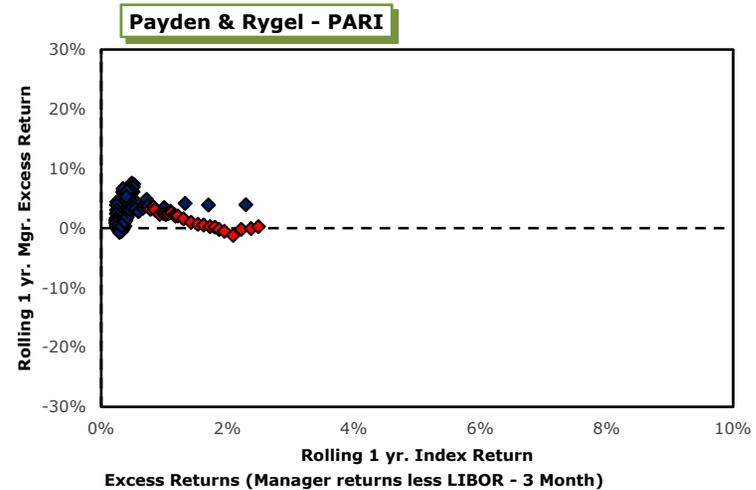
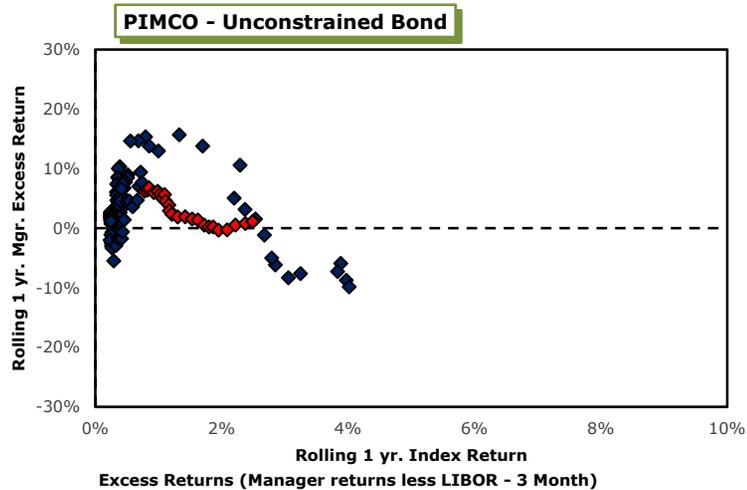
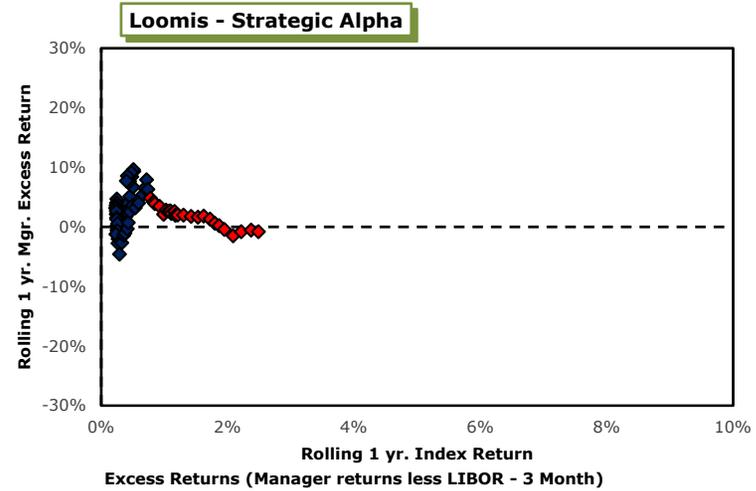
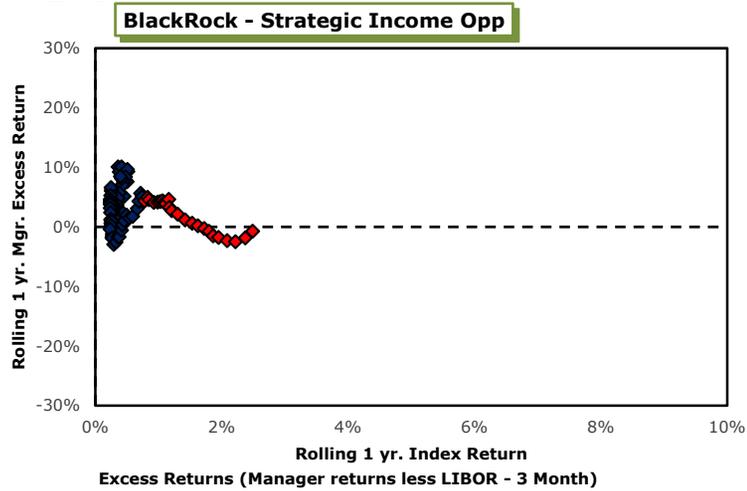
 Absolute Return Fixed Income



Past performance is no guarantee of future results

Performance as of March 31, 2019

# ROLLING 1 YEAR TOTAL RETURNS - (NET OF FEES)



◆ = Rolling 1 year periods; ◆ = Last 24 rolling 1 year periods

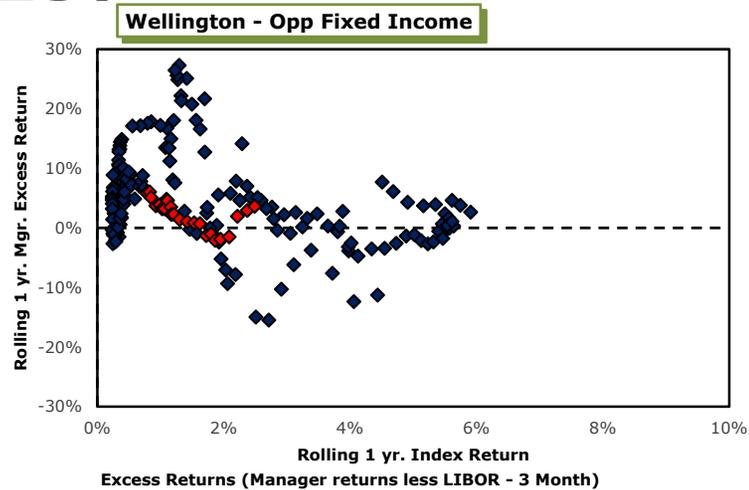
□ Absolute Return Fixed Income



Past performance is no guarantee of future results

Performance as of March 31, 2019

# ROLLING 1 YEAR TOTAL RETURNS - (NET OF FEES)



◆ = Rolling 1 year periods; ◆ = Last 24 rolling 1 year periods

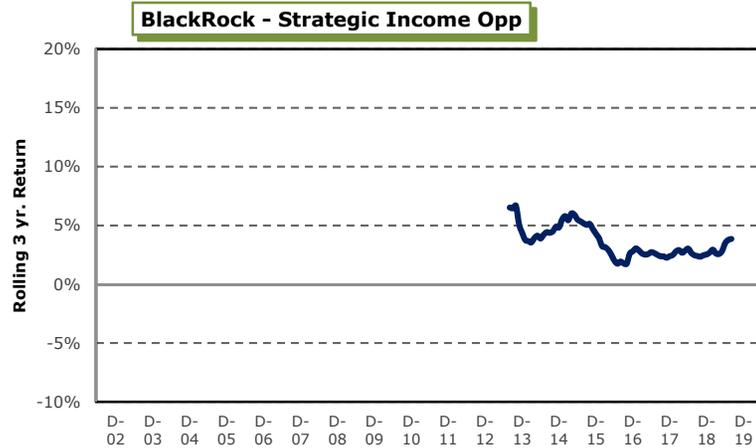
■ Absolute Return Fixed Income



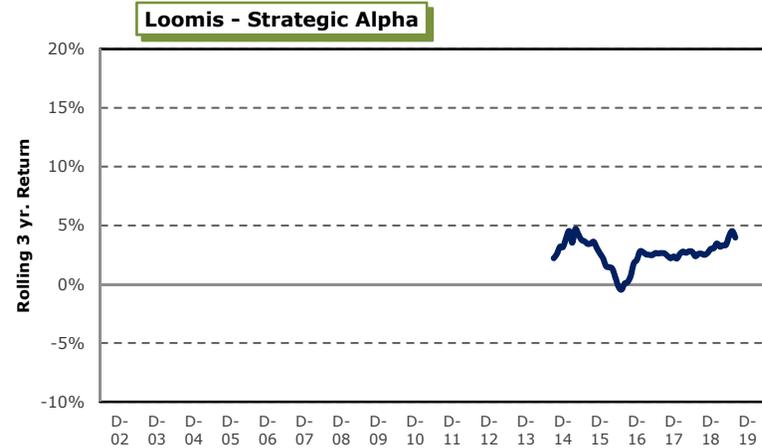
Past performance is no guarantee of future results

Performance as of March 31, 2019

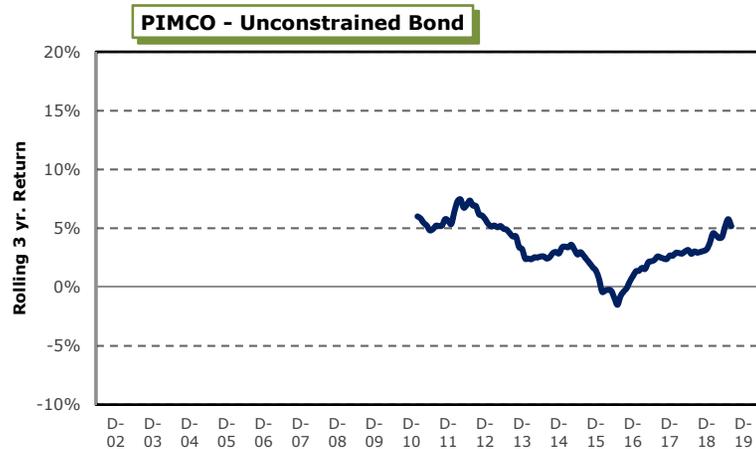
# ROLLING 3 YEAR TOTAL RETURNS - (NET OF FEES)



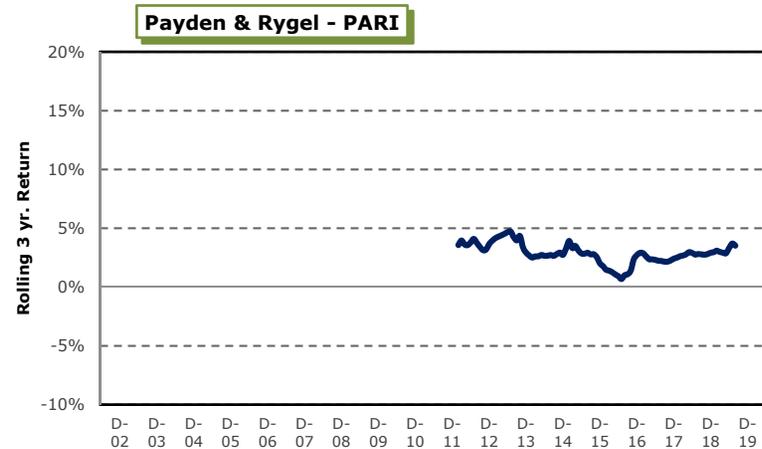
Total Returns



Total Returns



Total Returns



Total Returns

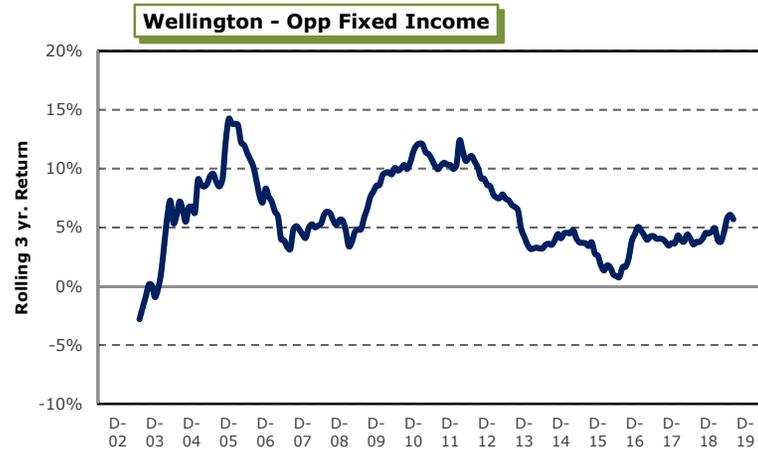
 Absolute Return Fixed Income



Past performance is no guarantee of future results

Performance as of March 31, 2019

# ROLLING 3 YEAR TOTAL RETURNS - (NET OF FEES)



Total Returns

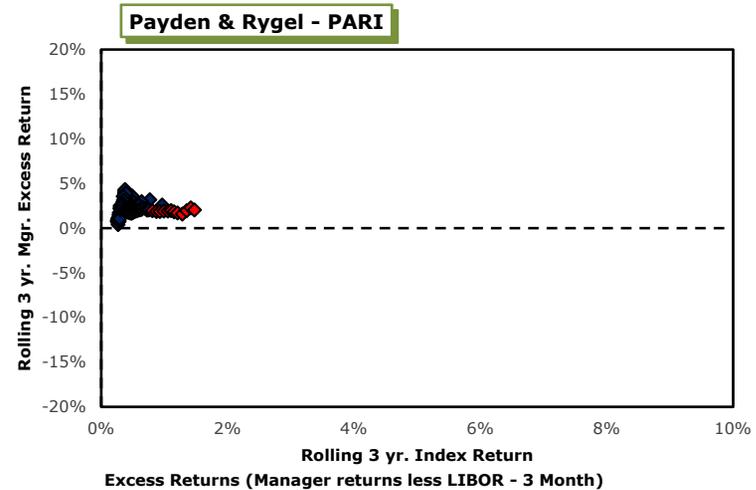
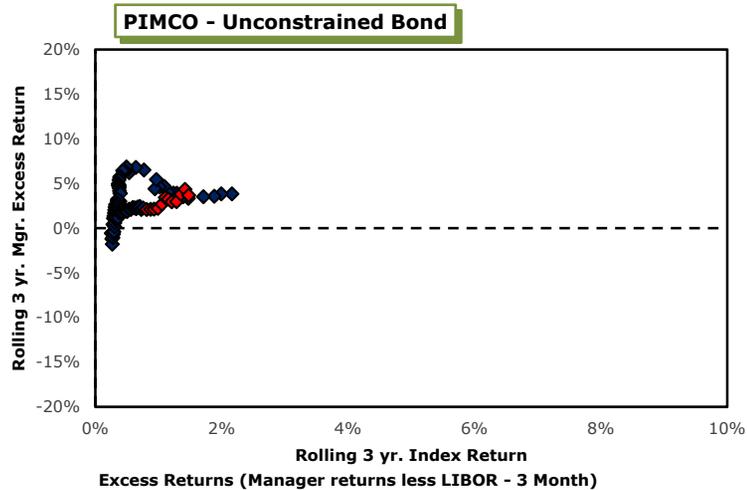
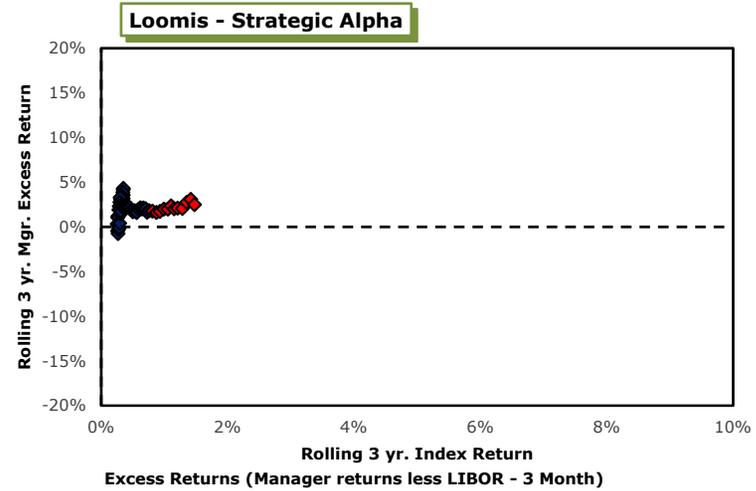
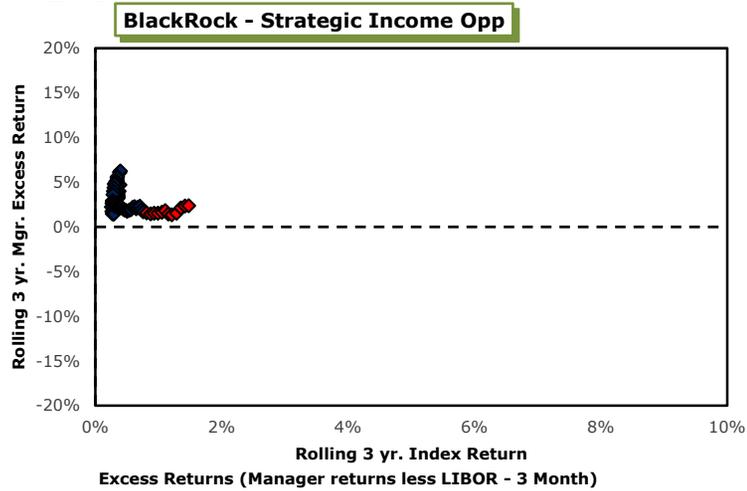
□ Absolute Return Fixed Income



Past performance is no guarantee of future results

Performance as of March 31, 2019

# ROLLING 3 YEAR TOTAL RETURNS - (NET OF FEES)



◆ = Rolling 3 year periods; ◆ = Last 12 rolling 3 year periods

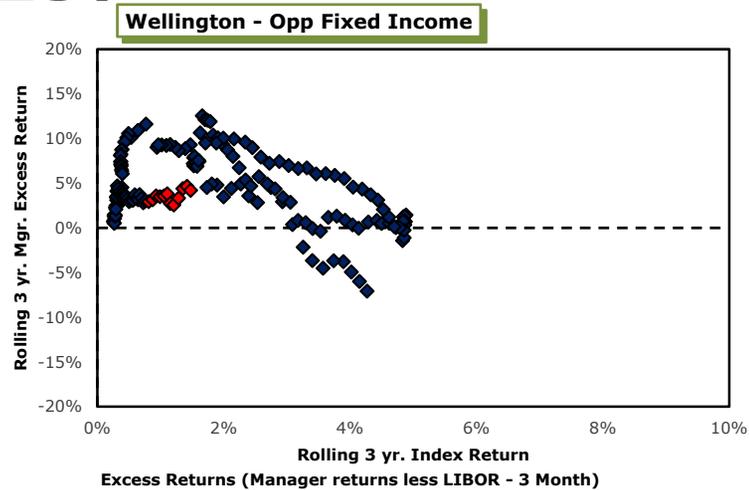
□ Absolute Return Fixed Income



Past performance is no guarantee of future results

Performance as of March 31, 2019

# ROLLING 3 YEAR TOTAL RETURNS - (NET OF FEES)



◆ = Rolling 3 year periods; ◆ = Last 12 rolling 3 year periods

□ Absolute Return Fixed Income



Past performance is no guarantee of future results

Performance as of March 31, 2019

# PROFILES

NEPC, LLC

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# INVESTMENT FIRM/PRODUCT PROFILE

## **BlackRock Investments, LLC Strategic Income Opportunities (SIO) (Unconstrained US Domiciled)**

### **Firm Description**

BlackRock, Inc. is an independent, publicly traded company, with no single majority shareholder and over two-thirds of its Board of Directors consisting of independent directors. BlackRock was founded in 1988 by a group of investment professionals with a unique skill set in securitized bonds. In addition, some of the founders of BlackRock were early developers of CMOs and other mortgage derivatives. The firm has since grown to be one of the largest fixed income managers in the world through a series of mergers and acquisitions and organic growth of existing product lines. Most recently, BlackRock acquired Barclays Global Investors (BGI) and merged the investment management divisions. BGI brought with them a significant presence in ETF markets and model-based strategies. Roughly one third of the firm's total assets under management is equity, one third fixed income, with the remaining portion split among cash, alternatives and multi-asset. The firm is also known for its development of BlackRock Solutions, a widely used analytical and risk management advisory tool.

### **NEPC Investment Thesis**

The investment team's ability to identify key drivers in current macro regimes and allocate risk accordingly to specific sectors, alpha opportunities, and tail-risk hedging strategies allow the Strategy to achieve positive returns in most market environments. Central to our investment thesis is BlackRock SIO's macro capabilities, the breadth and depth of their alpha sources, and their sharp focus on risk budgeting and risk management.

### **People**

BlackRock's Fixed Income CIO, Rick Rieder and Managing Director, Bob Miller, oversee the Strategic Income Opportunities Fund with broad support from over 100 fixed income investment specialists. The Strategy is broadly segmented into three groups; portfolio management, sector specialists, and risk management, who respectively direct the top-down asset allocation framework, bottom-up alpha generation, and risk analysis. The sector specialists constitute the members of BlackRock's global fixed income platform and are responsible for global rates strategies, securitized assets, corporate credit, and emerging markets.



# INVESTMENT FIRM/PRODUCT PROFILE

## **BlackRock Investments, LLC Strategic Income Opportunities (SIO) (Unconstrained US Domiciled)**

### **Philosophy**

BlackRock's Strategic Income Opportunities Fund has broad flexibility to invest across global fixed income and derivative markets, while retaining the general risk profile of conservative fixed income investments. The Strategy is designed to generate consistent risk-adjusted returns across all market environments with a diversified portfolio of market risk and alpha exposures with low correlations to traditional fixed income indices. The Strategy tactically adjusts risk exposures based upon the market environment and alpha opportunities but with a keen focus on controlling volatility and mitigating potential tail risks.

### **Investment Strategy**

The Strategic Income Opportunities Strategy was designed to be benchmark agnostic and includes all global fixed income assets and financial instruments that meet the Strategy's liquidity criteria. The Strategy is intended to retain the risk profile of a conservative fixed income investment while offering a risk balanced exposure to interest rate risk, credit risk, and alpha opportunities. The process begins with the co-heads of the Strategy, BlackRock's Fixed Income CIO, Rick Rieder and Managing Director, Bob Miller, who define the characteristics and profile of the macro investment regime. Mr. Rieder and Mr. Miller review broad global economic trends, financial trends, and structural investment themes to provide a global perspective on the macro investment risk regime. This macro risk budget provides an investment framework that informs the top-down asset allocation and the scaling of active risks while ensuring that the investment team is cognizant of the risk/return profile of the Strategy.



# INVESTMENT FIRM/PRODUCT PROFILE

## **BlackRock Investments, LLC Strategic Income Opportunities (SIO) (Unconstrained US Domiciled)**

Upon defining the macro investment regime, Mr. Rieder and Mr. Miller look to identify risk exposures and assets that may perform well in the current regime based upon historical relationships and current valuations. These risk exposures include but are not limited to equity risk, currency, real interest rates, inflation, credit spread, liquidity risk, and beta neutral/relative value opportunities. Mr. Rieder and Mr. Miller then optimally allocate risk budgets to underlying fixed income sector specialists based on their conviction and alpha opportunity. While the Strategy is an unconstrained fixed income allocation approach, risk-based constraints are applied to investment themes and allocations to ensure consistent liquidity and diversification through multiple risk scenarios. Mr. Rieder and Mr. Miller seek to exploit these market inefficiencies and alpha opportunities in such a manner that the Strategy collectively responds positively in a variety of economic conditions and scenarios.

Following the identification of the macro investment regime and the assignment of risk budgets, the sector specialists target bottom-up alpha opportunities. More constrained limitations are in place at the underlying sector allocation level as sector specialists have explicit guidelines within their sectors and manage according to a predefined risk budget. Security and instrument selection is based upon both macro and fundamental views and opportunities are sourced across an array of risk exposures such as duration, yield curve, country exposure, credit spreads, and relative value opportunities. The sector specialist teams include Global Rates Strategy, Securitized Assets, US Investment-Grade Credit, Agency MBS, Leveraged Finance, Municipals, European Credit, and Emerging Markets.



# INVESTMENT FIRM/PRODUCT PROFILE

## **BlackRock Investments, LLC Strategic Income Opportunities (SIO) (Unconstrained US Domiciled)**

Integral to the management of the Strategy is an understanding of the risk interaction of the macro top-down views and bottom-up security selection. BlackRock and the investment team are focused on quantifying both the security level active risk and macro risk exposures to ensure the risk/return characteristics of the Strategy are well balanced. The investment team has leveraged the resources of BlackRock to develop a detailed risk management matrix that provides a daily active risk profile. The investment team utilizes these tools to manage the liquidity profile of active positions and the overall portfolio while also quantifying the systematic and non-systematic risks within the Fund. This detailed risk focus allows the investment team to quantify the interaction of risks associated with all active positions and to quickly reduce or hedge undesired security or market risk factors. In addition, the investment team actively monitors the stability of the current investment risk regimes and utilizes custom market stress scenarios to mitigate the Strategy tail and downside risks.

### **Portfolio**

The Strategy duration will range from -2 years to 7 years at the portfolio level and may also include negative duration positions within specific developed bond markets. Sector weights are unconstrained across geography and credit but risk allocations are carefully monitored to maintain portfolio risk targets and high levels of liquidity. Allocation and risk exposures are sourced from traditional US fixed income sectors such as government bonds and credit, global fixed income sectors, macro-themed allocations across global yield curves and currency, and non-traditional exposures such as relative value trades, capital structure arbitrage, and beta neutral alpha exposures.

### **Performance Expectations**

The Strategic Income Opportunities Strategy targets a return of LIBOR plus 3% to 6% with a volatility range of 3% to 7%. The Strategy is designed to generate consistent risk-adjusted returns across all market environments. The fixed income team seeks to add value by defining the current macro investment regime, identifying sectors likely to perform well in the current regime with compelling valuations, and then allocating risk to sector specialists to generate bottom-up alpha opportunities. The Strategy is intended to retain the risk profile of conservative fixed income investments and looks to control volatility and strictly manage potential tail risk.



# BIOGRAPHIES OF KEY PROFESSIONALS

## **BlackRock Investments, LLC Strategic Income Opportunities (SIO) (Unconstrained US Domiciled)**

### **Rick Rieder, Managing Director, Chief Investment Officer of Fundamental Fixed Income**

Mr. Rieder, Managing Director, is BlackRock's Chief Investment Officer of Fundamental Fixed Income, co-head of Americas Fixed Income and a member of the Executive Committee of the firm-wide Alpha Strategy business. He is a portfolio manager for BlackRock's Strategic Income Opportunities for US investors, and Fixed Income Global Opportunities for non-US investors; he's also a portfolio manager for BlackRock's Total Return and Core Bond funds. Additionally, Mr. Rieder is a member of BlackRock's firm-wide Operating, Leadership, and Philanthropy Committees. Before joining BlackRock in 2009, Mr. Rieder was President and Chief Executive Officer of R3 Capital Partners. He served as Vice Chairman and member of the Borrowing Committee for the U.S. Treasury. Mr. Rieder is currently a member of the Federal Reserve Bank of New York's Investment Advisory Committee on Financial Markets, and was recently elected as the 2013 inductee into the Fixed Income Analysts Society Fixed Income Hall of Fame. From 1987 to 2008, Mr. Rieder was with Lehman Brothers, most recently as head of the firm's Global Principal Strategies team, a global proprietary investment platform. He was also global head of the firm's credit businesses, Chairman of the Corporate Bond and Loan Capital Commitment Committee, and a member of the Board of Trustees for the corporate pension fund. Before joining Lehman Brothers, Mr. Rieder was a credit analyst at SunTrust Banks in Atlanta. Mr. Rieder earned a BBA degree in finance from Emory University in 1983 and an MBA degree from The Wharton School of the University of Pennsylvania in 1987.



# BIOGRAPHIES OF KEY PROFESSIONALS

## **BlackRock Investments, LLC Strategic Income Opportunities (SIO) (Unconstrained US Domiciled)**

### **Bob Miller, Managing Director, Portfolio Manager**

Bob Miller, Managing Director, is a member of the Multi-Sector Mutual Fund team within BlackRock Fundamental Fixed Income Portfolio Management Group. He is a portfolio manager for BlackRock's Strategic Income Opportunities for US investors, and Fixed Income Global Opportunities for non-US investors; he's also a portfolio manager for BlackRock's Total Return and Core Bond funds. Prior to joining BlackRock in 2011, Mr. Miller was a co-founder and partner at the Round Table Investment Management Company, a multi-strategy, research-based investment company, where he managed a global macro strategy. Previously, Mr. Miller spent 20 years at Bank of America, where he served in a variety of roles, most recently as senior portfolio manager for the bank's proprietary multi-asset class investment portfolio. Mr. Miller managed global equity and credit, global interest rate derivative, and sovereign debt portfolios during his tenure at Bank of America. He earned a BA degree in economics from Davidson College in 1984.



# INVESTMENT FIRM/PRODUCT PROFILE

## **Loomis, Sayles & Company, L.P.** **Loomis Sayles Strategic Alpha**

### **Firm Description**

Loomis, Sayles & Company was founded as an investment management company in 1926. Throughout its history, the firm has grown to become a primarily institutional investment manager with specialized products in domestic/international fixed income, equities and alternatives. Currently, the firm is a wholly owned subsidiary of NATIXIS Global Asset Management. Loomis has built a strong organizational culture around proprietary research and fundamental analysis, and has applied this approach to investing across all of its products. The firm manages strategies across multiple asset classes, with a majority in domestic and international fixed income.

### **NEPC Investment Thesis**

Strategic Alpha's flexibility to invest across global fixed income markets, a risk-controlled opportunistic approach to credit exposures, and superior security selection leveraging Loomis' expertise in fundamental credit research are key drivers of this Strategy. While the Strategy has a credit bias given their strength in bottom up credit selection, the overall portfolio is constructed to be uncorrelated to fixed income markets due to the extensive use of tail-risk hedging strategies and relative value long/short credit and interest rate positions.

### **People**

The portfolio management team consists of Kevin Kearns, Matthew Eagan and Todd Vandam. Kevin Kearns also manages Loomis' Long/Short credit strategy and will bring many of the derivatives and relative value views on credit to Strategic Alpha. Matthew Eagan is a member of the Full Discretion team, which is the group responsible for Loomis' core plus and multi-sector fixed income strategies. Todd Vandam is a senior credit strategist working with the high yield and investment grade sector teams. The Macro Sector team which includes Loomis' Chief Economist, Senior Global Macro Strategist and team analysts, and the Credit Research team will also factor heavily into the process.



# INVESTMENT FIRM/PRODUCT PROFILE

## **Loomis, Sayles & Company, L.P.** **Loomis Sayles Strategic Alpha**

### **Philosophy**

Loomis believes that added value can come from multiple sources within the various global fixed income sectors. The best way to add incremental value over time is through an unconstrained and flexible approach that allows for the expression of top-down macroeconomic views and bottom-up security specific opportunities. The strategy seeks to take advantage of short-term tactical opportunities and longer-term structural opportunities within the broad fixed income market.

### **Investment Strategy**

Strategic Alpha is an opportunistic global fixed income strategy with flexible guidelines that invests across multiple fixed income sectors. The return target for the strategy is LIBOR plus 2-4% over a full market cycle. Volatility of returns (standard deviation) is targeted at 4-6%. Thus the objectives of the strategy are to deliver returns in excess of short-term LIBOR, with expected volatility similar to core fixed income (the BC Aggregate Index). Duration may range from -2 to 5 years. Strategies related to interest rates will generally be defensive in nature and may include term structure, yield curve, and average duration positions. Strategic Alpha will use shorting strategies through derivative instruments. The maximum gross long or short position for the fund is 100% (of total capital) on a notional basis. Short positions may be reflected in government bond markets through futures, in credit markets through CDX or CDS contracts, and in currencies through forward/options contracts. The strategy will also incorporate options as a way to hedge the portfolio. Investment strategies will focus on three primary areas: credit (both corporate and sovereign), currency, and yield curve. Up to 50% of the portfolio may be below investment grade and up to 20% may be invested in emerging markets. Maximum non-government issuer size is 5%.

The strategy is designed to capture some of Loomis' best credit ideas, with the ability to short the indexes, single-name exposures, and rates and currencies as a way to diversify risks and to lower certain beta exposures. Opportunities may be short-term and tactical in nature, or long-term structural themes. Investment opportunities are continually resized based on the team's risk objective to maintain volatility in the 4-6% range. Similar to other Loomis strategies, we expect a large amount of the value-add to come from credit investments and selection.



# INVESTMENT FIRM/PRODUCT PROFILE

## **Loomis, Sayles & Company, L.P.** **Loomis Sayles Strategic Alpha**

The strategy will leverage input from Loomis' sector teams, providing a top-down framework for allocating risk, and bottom-up security selection from the various research specialists. Sector teams identify and assess value in their respective market segment, and identify the best security opportunities. The team of portfolio managers (Matthew Eagan, Kevin Kearns, Todd Vandam) will synthesize portfolio strategy (utilizing inputs from the macro team). Loomis maintains a large credit research effort with their in-house staff, which generates approximately 90% of the research used. The Fixed Income Research Group, based in the Boston office, covers a universe of 1,500 credit issuers, assigning investment ratings based on their internal rating system. Strategic Alpha will utilize input from Loomis' investment grade credit team, high yield, leveraged loans and global credit.

The fixed income investment process employed by Loomis seeks to uncover mis-priced bonds, which have the potential to be upgraded. When considering credit selection, analysts evaluate a number of factors including cash flow projections, market position, management strength, industry developments and trends, company developments and trends, political climate, and economic forecasts. They screen all sectors for unrecognized value, assessing the potential for credit improvement, but do not believe in using a large number of mortgages in their portfolios. The investment process is initiated within the Sector Teams, composed of credit analysts, traders and portfolio managers. Analysts offer fundamental analysis on securities and industry developments. Traders identify liquidity, relative value and opportunity within the market. Portfolio managers focus on portfolio strategy, cross sector analysis and the macro-economic environment.

### **Portfolio**

Active positions and trade ideas are evaluated based on contribution to risk (which measures the estimated volatility using factor risks and issuer-specific risks). Scenario analysis examines hypothetical portfolio impacts using a series of historical market events and forward looking events. Risk management is fully integrated into the investment process. The contribution-to-risk of each security and position is decomposed into contributing factors. Nominal risk controls include gross long/short exposure, maximum sector and industry exposures, interest rate exposures, and maximum issuer limits.



# INVESTMENT FIRM/PRODUCT PROFILE

**Loomis, Sayles & Company, L.P.**  
**Loomis Sayles Strategic Alpha**

## **Performance Expectations**

The Strategy targets a return of LIBOR plus 2% to 4% with an average volatility of 4% to 6%. Drawdown risk is actively managed with extensive use of credit and interest rate hedges to ensure the Strategy is uncorrelated to fixed income markets over time.



# BIOGRAPHIES OF KEY PROFESSIONALS

## **Loomis, Sayles & Company, L.P. Loomis Sayles Strategic Alpha**

### **Kevin P. Kearns, Vice President, Portfolio Manager, Senior Derivatives Strategist**

Kevin Kearns is a vice president of Loomis, Sayles & Company, and is a Senior Derivatives Strategist for the fixed income group. Mr. Kearns is responsible for leading the firm's efforts in the development and implementation of investment strategies which incorporate credit default swaps (CDS) and other related derivative instruments. Mr. Kearns works closely with the investment grade and high yield sector teams, credit research, the trading desk and product teams to assist in the development of CDS capabilities. Before joining Loomis Sayles in 2007, Mr. Kearns was the director of derivatives, quantitative analysis and risk management at Boldwater Capital Management in Boston, where he was responsible for the development and implementation of a credit-focused relative value hedge fund. Mr. Kearns managed derivative-based strategies focused on capital structure arbitrage, event driven, risk arbitrage and relative value strategies. Prior to that, he spent 14 years with Fleet Boston as managing director, group head, credit derivatives. He previously held positions with Cooper & Lybrand and Federal Home Loan Bank. Mr. Kearns holds a degree in physics from Bridgewater State College and earned his MBA from Bryant College.

### **Matthew Eagan, CFA, Fixed Income Portfolio Manager**

Mr. Eagan started his investment career in 1990 and joined Loomis Sayles in 1997. During his tenure, he has also served as part of the medium grade fixed income team and as a fixed income Research Analyst, and is currently a key member of the Full Discretion team. Prior to Loomis Sayles, he worked for Liberty Mutual Insurance Company as a Senior Fixed Income Analyst and for BancBoston Financial Company as a Senior Credit Analyst. Previously, Mr. Eagan had served as a Fixed Income Analyst at Loomis Sayles as well as at Liberty Mutual Insurance Company. He earned a BA from Northeastern University and an MBA from Boston University.



# BIOGRAPHIES OF KEY PROFESSIONALS

## **Loomis, Sayles & Company, L.P. Loomis Sayles Strategic Alpha**

### **Todd Vandam, CFA, Fixed Income Portfolio Manager**

Todd Vandam is a Vice President of Loomis, Sayles & Company, and Co-Portfolio Manager of the Loomis Sayles Absolute Strategies Fund. He is also Senior Credit Strategist for the firm, where he works with the fixed income high yield and investment grade teams. Prior to joining Loomis Sayles in 1994, Mr. Vandam worked as a Field Artillery Officer in the United States Army, most recently working as a Fire Support Officer stationed at Fort Davis, Panama. Mr. Vandam is a member of the Boston Security Analysts Society. He earned a BA in business and economics from Brown University.



# INVESTMENT FIRM/PRODUCT PROFILE

## **Pacific Investment Management Company LLC PIMCO Dynamic Bond Full Authority Strategy**

### **Firm Description**

Pacific Investment Management Company (PIMCO) is an investment manager focused on delivering fixed income products and solutions to clients. The firm was founded in 1971 by Mr. William Gross, who left the firm in 2014. As of March 2016, PIMCO had more than 2,250 employees, of which more than 300 were investment professionals. In 2000, PIMCO was acquired by Allianz SE, a large global financial services company based in Germany. PIMCO operates as a separate and autonomous subsidiary of Allianz, and the acquisition allowed for PIMCO's key professionals to purchase an equity stake in the firm. PIMCO also has a profit sharing plan, where 30% of profits are distributed to eligible employees. The firm is headquartered in Newport Beach, California and has investment management offices around the world, in such locations as New York, Singapore, Tokyo, London, Sydney, Munich, Toronto and Hong Kong.

### **NEPC Investment Thesis**

The key drivers for PIMCO Unconstrained Bond's expected alpha are a disciplined and well-informed secular outlook, a systematic ability to capture the benefits associated with the size and depth of their organization, and a global reach and influence throughout the capital markets. The Unconstrained Bond Strategy is a risk-controlled, pure expression of PIMCO's investment views across the entire spectrum of global fixed income assets. PIMCO's unconstrained allocation across global fixed income markets combined with specific alpha strategies and tail-risk hedging allow the Strategy to achieve positive returns in most market environments.

### **People**

Marc Seidner is the lead portfolio manager responsible for the Unconstrained Bond Strategy with support provided by PIMCO's Investment Committee, which is responsible for setting the top-down macro-economic views for all of the firm's fixed income strategies.



# INVESTMENT FIRM/PRODUCT PROFILE

## **Pacific Investment Management Company LLC PIMCO Dynamic Bond Full Authority Strategy**

### **Philosophy**

PIMCO believes by employing a flexible investment approach, whereby they are not constrained within a sector or market, a strategy can out perform the broad market with a similar level of risk. The unconstrained nature of the product will allow PIMCO to seek opportunities across the entire spectrum of global fixed income securities. As the Strategy is benchmark agnostic, PIMCO has greater flexibility in expressing their secular and core views to identify attractive valuations while managing downside risks. The Strategy is intended to offer a greater risk balance across interest rates, credit, and currency risk while offering a high level of liquidity.

### **Investment Strategy**

The portfolio management team of the Unconstrained Bond Strategy use both external and proprietary factor models to determine risk factor exposures inherent in each asset class. Utilizing PIMCO's proprietary factor models, each asset class' fundamental risk factors are determined. While the models identify a variety of underlying factors, PIMCO believes asset classes can be decomposed into approximately 5 broad factors. These factors may include real interest rates, inflation, credit spread, currency, and liquidity. The portfolio management team and Investment Committee are focused on determining broad factor allocations, while other sub-factors may have specific weights based on insight from PIMCO's specialist teams.



# INVESTMENT FIRM/PRODUCT PROFILE

## **Pacific Investment Management Company LLC PIMCO Dynamic Bond Full Authority Strategy**

Once risk factor exposures are determined, the Investment Committee and portfolio managers will determine where to allocate capital and risk across the available risk factors. The decision of how to allocate is a four step process incorporating the following: PIMCO's secular top-down view, which is a core competency of the Firm and aids the Unconstrained Bond Strategy in allocating risk and capital. PIMCO's cyclical views, which assist the allocation of risk factors along the capital structure. Followed by the implementation of the risk factor exposures. The final step is an iterative proprietary risk modeling process that allows the portfolio management team to gain comfort with the underlying factor exposures or to adjust factor exposures until the exposures more accurately reflect the team's views. Alpha opportunities are exploited within the Strategy through the factor allocation process while looking to capture the best alpha opportunities being generated across the PIMCO platform. The alpha opportunity set may include structural (basis) trades, yield curve opportunities, credit selection, mortgage & ABS selection/arbitrage, and opportunities in emerging markets amongst many other. In addition, tail-risk hedging is expected over the long-term to be a consistent alpha source for the Strategy. The approach to tail-risk hedging is an integrated process with the factor exposure and alpha process. If tail-risk hedges become expensive, the team may choose to de-risk the portfolio to reduce exposure to tail events rather than explicitly implement hedges to manage market risk.

### **Portfolio**

The Strategy duration will range from -3 years to 8 years at the portfolio level and may also include negative duration positions within specific developed bond markets. Sector weights are generally unconstrained across geography, sector, and credit quality with allocations to developed market bond markets ranging from 50% to 100% of the portfolio. Allocation ranges for the remainder of the portfolio include, emerging market debt exposure of 0% to 50%, net currency exposure of 0 to 35%, and high yield exposure of 0% to 40%.



# INVESTMENT FIRM/PRODUCT PROFILE

## **Pacific Investment Management Company LLC PIMCO Dynamic Bond Full Authority Strategy**

### **Performance Expectations**

The Strategy targets a return above LIBOR of approximately 3% with a volatility below 5% and is designed to achieve returns regardless of the market environment. The investment guidelines and approach are vastly different from traditional core bond approach and performance is intended to be non-correlated to interest rate and equity risk. The Strategy is designed to earn positive returns in most market environments, as alpha opportunities are derived from global interest rate and curve strategies, relative value credit trades, and tactical short positions.



# BIOGRAPHIES OF KEY PROFESSIONALS

## **Pacific Investment Management Company LLC PIMCO Dynamic Bond Full Authority Strategy**

### **Marc Seidner, CFA, Managing Director**

Mr. Seidner is CIO Non-traditional Strategies, a managing director and head of portfolio management in the New York office. He is also a generalist portfolio manager and a member of the Investment Committee. He rejoined PIMCO in November 2014 after serving as head of fixed income at GMO LLC, and previously he was a PIMCO managing director, generalist portfolio manager and member of the Investment Committee until January 2014. Prior to joining PIMCO in 2009, he was a managing director and domestic fixed income portfolio manager at Harvard Management Company. Previously, he was director of active core strategies at Standish Mellon Asset Management and a senior portfolio manager at Fidelity Management and Research. He has 29 years of investment experience and holds an undergraduate degree in economics from Boston College.

### **Mohsen Fahmi, Portfolio Manager**

Mr. Fahmi is a managing director and generalist portfolio manager in the Newport Beach office, focusing on global fixed income assets. Prior to joining PIMCO in 2014, he was with Moore Capital Management, most recently as a senior portfolio manager and previously as chief operating officer. In London earlier in his career, he was co-head of bond and currency proprietary trading at Tokai Bank Europe, head of the leveraged investment group at Salomon Brothers and executive director of proprietary trading at Goldman Sachs. Prior to this, he was a proprietary trader for J.P. Morgan in both New York and London, and he also spent seven years as an investment officer at the World Bank in Washington, DC. He has 31 years of investment experience and holds an MBA from Stanford University. He received a master's degree in civil engineering from the Ohio State University and an undergraduate degree from Ain Shams University, Cairo.



# BIOGRAPHIES OF KEY PROFESSIONALS

## **Pacific Investment Management Company LLC PIMCO Dynamic Bond Full Authority Strategy**

### **Daniel Ivascyn, Chief Investment Officer, Portfolio Manager**

Mr. Ivascyn is Group Chief Investment Officer and a managing director in the Newport Beach office. He is lead portfolio manager for the firm's income strategies and credit hedge fund and mortgage opportunistic strategies. He is a member of PIMCO's Executive Committee and a member of the Investment Committee. Morningstar named him Fixed-Income Fund Manager of the Year (U.S.) for 2013. Prior to joining PIMCO in 1998, he worked at Bear Stearns in the asset-backed securities group, as well as T. Rowe Price and Fidelity Investments. He has 24 years of investment experience and holds an MBA in analytic finance from the University of Chicago Graduate School of Business and a bachelor's degree in economics from Occidental College.

### **Sudi Mariappa, Managing Director, Portfolio Manager**

Mr. Mariappa is a managing director and generalist portfolio manager in the Newport Beach office. He rejoined PIMCO in 2014 from GLG, a London-based hedge fund, where he was a managing director, developing and managing fixed income funds. Previously at PIMCO, Mr. Mariappa was a managing director and head of global portfolio management. He also served as a senior advisor to PIMCO's portfolio management group from 2009-2011. Prior to joining PIMCO in 2000, he was a managing director for Merrill Lynch in Tokyo, overseeing Japanese government bond and swap derivative trading. He has 29 years of investment experience and holds an MBA, as well as a bachelor's degree in chemical engineering, from Cornell University.



# BIOGRAPHIES OF KEY PROFESSIONALS

## **Pacific Investment Management Company LLC PIMCO Dynamic Bond Full Authority Strategy**

### **Mohit Mittal, Managing Director, Portfolio Manager**

Mr. Mittal is a managing director and portfolio manager in the Newport Beach office, and a senior member of the liability driven investment and credit portfolio management teams. He manages multi-sector portfolios with added specialization in long credit, investment grade credit, and unconstrained bond portfolios. In addition, he is the head of U.S. investment grade trading desk. Previously, he was a specialist on PIMCO's interest rates and derivatives desk. Mr. Mittal joined the firm in 2007 and holds an MBA in finance from the Wharton School of the University of Pennsylvania and an undergraduate degree in computer science from Indian Institute of Technology (IIT) in Delhi, India.



# INVESTMENT FIRM/PRODUCT PROFILE

## **Payden & Rygel** **Payden Absolute Return**

### **Firm Description**

Payden & Rygel is an employee-owned firm founded in 1983. The firm is headquartered in Los Angeles, with offices in Boston, London and Paris. Payden & Rygel advises institutional investors through segregated accounts and mutual funds with over 350 relationships in more than 30 countries. The company runs a wide range of fixed income and equity mandates, researching, monitoring and trading markets in most developed and emerging markets.

### **NEPC Investment Thesis**

Sticking to their core strengths of a consistent team-based approach, their deep expertise in low duration, and a history of achieving stable, income-oriented returns, the PARI team builds a defensible income core of a highly diversified and rigorously vetted global portfolio, to which they then add an outer layer of medium-term thematic and shorter-term tactical views, and protect it with tail hedging. Central to the consistency of PARI's alpha add is the balanced, diversified make-up of the core, the conservative nature of the team, and their emphasis on portfolio insurance with an annual budget set aside for macro hedging.

### **People**

Payden Absolute Return Investing (PARI) strategy is co-managed by three senior portfolio managers Brian W. Matthews, Scott J. Weiner and Brad Boyd with a broader team of over 20 analysts. All of the senior members of the PARI team have been involved with the strategy since its inception in 2008. The most senior fixed income investment professionals form Payden's Investment Policy Committee (IPC). The role of the IPC is to guide the firm's broad market views and maintain oversight of all strategies. Brian W. Matthews and Scott J. Weiner represent the PARI team on the IPC.



# INVESTMENT FIRM/PRODUCT PROFILE

## **Payden & Rygel** **Payden Absolute Return**

### **Philosophy**

Payden believes that by adopting a dynamic approach free from benchmarks, and by accepting risks that are often avoided due to credit quality limitations, liquidity concerns or lack of resources for proper analysis and valuation, the team can allocate assets to sectors and securities that offer the most attractive value and obtain incremental returns with limited downside and reduced correlations with traditional asset classes. Being unanchored from traditional benchmarks gives them the flexibility to search for cheap assets globally. Experienced analysts scrutinize each opportunity and assigning their own ratings to each issuer based on an internal list of criteria. The focus is not on base case, but rather on the likelihood of exceptional events and how to mitigate downside in those scenarios. The result is a Payden best-ideas portfolio that reflects the most promising risk-adjusted opportunities around the world.

### **Investment Strategy**

PARI team employs a three step process. Firstly, Payden's Absolute Return portfolio is built with a multi-sector income core. The team then builds a tactical overlay consists of high conviction ideas, and adds tail hedges on top to protect the portfolio against extreme events.

The process starts with an assessment of the macro environment. The firm's Investment Policy Committee's (IPC) is responsible for the formation of Payden's broad-based and long term macro views including growth, inflation and political risks, the ongoing review and determination of Payden's broad risk management parameters, and the regular monitoring and review of investment results for consistency with their fundamental views. The PARI strategy team incorporates the macro view of the IPC in determining the broad asset allocation for the portfolio. These macro asset allocation decisions then serve as the fundamental guiding backdrop for analysts, traders and strategists in their search for opportunities in their respective areas of expertise. Rigorous risk management process helps the team monitor key exposures as well as gauge the potential downside effects of extreme market environments, enabling them to build robust portfolios by understanding portfolio breaking points and thereby establishing risk exposure limitations. The Portfolio Architecture and Compliance Teams are responsible for monitoring the risk management process and are in regular communication with the PARI strategy team to ensure adherence to the risk limits of the portfolio.



# INVESTMENT FIRM/PRODUCT PROFILE

## **Payden & Rygel Payden Absolute Return**

### **Portfolio**

The Strategy duration will range from -2 years to 5 years at the portfolio level. Emerging markets and non-agency positions are limited to 40%, while high yield maximum exposure is 50%. Foreign currency is limited to 10% of the fund.

### **Performance Expectations**

The PARI strategy aims to achieve a return of 200-300 basis points above 1-month LIBOR after fees over a 3-year period, while seeking preservation of capital. The PARI team generates alpha by combining the firm's long term macro views with the most compelling value opportunities uncovered by their fundamental research analysts. Consistency is achieved by balancing opportunities with acceptable level of risks. Historical volatility ranges from 1-4%, averaging out over the 8 years since inception at just over 2%. The team budgets 50bps annually for embedding tail hedges as portfolio insurance against extreme macro moves.



# BIOGRAPHIES OF KEY PROFESSIONALS

## **Payden & Rygel** **Payden Absolute Return**

### **Scott Weiner, PhD, Managing Principal**

Dr. Weiner is a managing principal at Payden & Rygel and a member of the Executive Committee that manages the firm. He is also a member of the firm's Investment Policy Committee which directs investment strategy and monitors the risk controls for the firm and its clients. Prior to joining Payden & Rygel in 1993, Dr. Weiner was a senior strategy member of the investment arm at First Interstate. More previously, he was with Goldman Sachs in New York as one of the strategists in the 1980s developing expertise in the mortgage market. He earned a PhD in Pharmaceutical Chemistry from the University of California, San Francisco and an AB degree in Mathematics from Occidental College in Los Angeles.

### **Brian Matthews, CFA, Managing Principal and Chief Financial Officer**

Mr. Matthews is a managing principal and the chief financial officer at Payden & Rygel, and is a member of the Executive Committee of the board of directors. He is a member of the firm's Investment Policy Committee and serves as a senior portfolio manager advising institutional clients, including corporations, pension funds, insurance companies, and foundations and endowments. Prior to joining Payden & Rygel in 1986, Mr. Matthews was an investment officer at Brown Brothers Harriman & Company in New York. He holds the Chartered Financial Analyst designation and earned a BS in Economics at the University of Notre Dame.

### **Brad Boyd, CFA, Senior Vice President**

Mr. Boyd is a senior vice president and a senior strategist on the global unconstrained fixed income team with a focus on absolute return strategies. He is responsible for strategy implementation, risk management, and performance attribution. He also helped with the development of models and processes used for efficient and robust portfolio risk assessment. Prior to joining Payden & Rygel in 2002, Mr. Boyd worked on the bond trading desk at Standish, Ayer & Wood in Boston. He holds the Chartered Financial Analyst designation and received a BA degree in Finance from the University of Utah.



# INVESTMENT FIRM/PRODUCT PROFILE

## **Wellington Management Company LLP Wellington Opportunistic Fixed Income**

### **Firm Description**

Wellington Management Company was founded in 1928 by Walter Morgan when he established the first balanced mutual fund in the US. In 1967 the firm merged with Thorndike, Doran, Paine & Lewis, an independent investment counseling firm. In 1979, 29 original partners bought back the firm, which then switched to a partnership structure. In 1996 the firm was restructured as a limited liability partnership. Wellington is a full service investment manager focused on institutional clients. The firm's organizational culture is built around research and fosters creativity and independent thinking at all levels of the firm from analysts to portfolio managers. Wellington remains an independent private partnership owned entirely by its active partners.

### **NEPC Investment Thesis**

Excess returns are delivered in the Opportunistic Fixed Income Allocation strategy through strategic themes developed by the Wellington Asset Allocation team that exploit the mispricing of medium- to long-term structural themes across capital markets. The belief that structural change is digested slowly while there is regular over- and under-reaction to short term news is central in identifying asset classes and strategies that are attractively valued or will benefit from anticipated structural themes or macroeconomic forces. Strategic themes are then complemented by tactical strategies, and additional market-neutral (relative value, absolute return) allocations. Bottom-up security selection in underlying Wellington strategies delivers additional value-add on top of macro, top-down asset allocation contributions.

### **People**

Brian Garvey, Asset Allocation Strategist, is the primary portfolio manager for Opportunistic Fixed Income. He is responsible for implementing the overall asset allocation strategy, relying on input from the various sector specialist teams at Wellington. Brij Khurana, a member of the Global Multi-Asset team, is a co-manager with Mr. Garvey.



# INVESTMENT FIRM/PRODUCT PROFILE

## **Wellington Management Company LLP Wellington Opportunistic Fixed Income**

### **Philosophy**

The objective of the Opportunistic Fixed Income investment approach is to outperform core US fixed income markets by making concentrated allocations to niche areas across fixed income markets. Opportunistic Fixed Income is an unconstrained, non-benchmark oriented investment approach, which aims to maximize total return while limiting downside through dynamic sector rotation and superior bottom-up security selection. The Barclays Capital US Aggregate Index is only used as a reference benchmark; investments may deviate significantly from the core bond sectors.

### **Investment Strategy**

The strategy is managed by Wellington's Asset Allocation Strategies Group, which manages other Wellington products such as Diversified Inflation Hedges, Opportunistic Investment Allocation, and other GAA strategies. Brian Garvey and Brij Khurana, both Asset Allocation Portfolio Managers, supported by a team of under ten dedicated professionals, are responsible for performing the macroeconomic analysis and synthesize asset allocation strategies. Once allocation is made, investment portfolio sleeves are managed by the respective fixed income product and sector teams.



# INVESTMENT FIRM/PRODUCT PROFILE

## **Wellington Management Company LLP Wellington Opportunistic Fixed Income**

Opportunistic Fixed Income is broadly unconstrained in both market segments and strategy. There is no tracking error target for the strategy, and the duration range is not benchmark constrained. However the strategy aims to deliver similar levels of volatility as the Barclays Aggregate, and consider duration bets unappealing from a risk-adjusted returns standpoint. The strategy will not borrow capital to invest (direct leverage), although gross fund exposure may exceed 100% (usually between 100 and 120%) through the use of derivatives. The investment universe is global and unconstrained and includes all quality ratings categories of the fixed income market, as well as exposure to equities, commodities, currencies, and derivatives. Net equity market exposure is limited to 10% of the portfolio's total market value, and net commodity market exposure is limited to 10% of the portfolio's total market value. Other Wellington strategies and products will be utilized in the portfolio including Credit Relative Value, Government Relative Value (both long/short strategies), EMD Market Neutral and Global Macro. Markets that compose a significant amount of the portfolio include high yield bonds, bank loans, emerging markets debt, mortgage-backed securities, structured finance, global sovereign bonds and investment grade credit, although allocations might fluctuate greatly from period to period.

### **Portfolio**

In addition to allocations to Wellington's underlying funds, the Asset Allocation Strategy Group may enter a position at the portfolio level. Depending on the nature of the investment view (time horizon, market, etc.) the team may work with portfolio management teams to design a fund that will allow for proper expression of a theme. When short-term execution is important to express a view, and the desired exposure can be obtained through derivatives or index exposure, the team will allocate at the portfolio level without the use of an actively managed Wellington fund. A synthetic position, or overlay, may also be used to hedge away undesirable risk at the portfolio level that results from the opportunistic allocation to various underlying funds. Excess duration in the fixed income allocation would be an example of risk that is often hedged away by the Asset Allocation team.

### **Performance Expectations**

Wellington's strategy is highly flexible and is designed to outperform in most market environments. Performance track record is long and impressive, with a great balance of upside delivery and downside protection.



# BIOGRAPHIES OF KEY PROFESSIONALS

## **Wellington Management Company LLP Wellington Opportunistic Fixed Income**

### **Brian Garvey, Vice President Asset Allocation Analyst**

Mr. Garvey is a member of Wellington Management's Asset Allocation Strategies Group. As an asset allocation analyst, he contributes to the active asset allocation research effort, with a particular focus on currencies and global fixed income markets. Prior to joining Wellington Management in October 2007, Mr. Garvey was the North American head of macro research at State Street Global Markets. Prior to State Street, Mr. Garvey was a fixed income research analyst at Standish, Ayer & Wood, and a senior currency strategist for I.D.E.A. He started his professional career at the US Bureau of Labor Statistics as an economist. Mr. Garvey received a BA in economics from Colby College (1991) and an MBA concentrating in finance/economics from Boston University (1998). He is a regular participant in the Bank for International Settlements' (BIS) emerging markets monitoring group, and is a member of the National Association of Business Economists.

### **Brij Khurana, Vice President and Portfolio Manager**

Mr. Khurana is a multi-asset portfolio manager within Global Multi-Asset Strategies. He manages global total return and unconstrained fixed income portfolios. Prior to joining the firm, Mr. Khurana was a senior vice president and portfolio manager at Pacific Investment Management Company (PIMCO), where he managed core, unconstrained, and multi-credit fixed income portfolios. He started his professional career trading structured products at Goldman, Sachs & Co. Mr. Khurana received his MBA from Harvard Business School (2011) and a BA in economics from Princeton University (2007), with honors.



# BIOGRAPHIES OF KEY PROFESSIONALS

## **Wellington Management Company LLP Wellington Opportunistic Fixed Income**

### **Scott Elliott, Senior Vice President - Director, Asset Allocation Strategies, Portfolio Manager**

As director of asset allocation strategies, Mr. Elliott oversees Wellington Management's active and strategic asset allocation efforts. He manages global balanced, asset allocation, and commodity portfolios for mutual fund sponsors and institutional clients around the world. The Asset Allocation Strategies Group also assists clients in developing their long-term asset allocation policies. He is a frequent lecturer at industry conferences on issues related to asset allocation policy. Mr. Elliott is a member of the firm's Global Equity, Global Bond, and Asset Allocation Strategy Groups. Prior to joining Wellington Management in 1994, Mr. Elliott worked at Callan Associates where he was the head of Quantitative Consulting (1990-1993). Mr. Elliott received his MS in economics and statistics from the University of Illinois (1989) and his BA in economics and sociology, with honors, from Illinois State University (1985). Scott works out of his home in Hawaii.



# APPENDIX

NEPC, LLC

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# FIRM COMPARISON SUMMARY

Firm Name	Registered Investment Advisor	GIPS Compliant	Past or Pending Litigation	Firm uses Placement Agent
<b>Absolute Return Fixed Income</b>				
BlackRock Investments, LLC	Yes	Yes	Yes	No
Loomis, Sayles & Company, L.P.	Yes	Yes	Yes	Yes
Pacific Investment Management Company LLC	Yes	Yes	Yes	No
Payden & Rygel	Yes	Yes	No	No
Wellington Management Company LLP	Yes	Yes	Yes	Yes



# PRODUCT COMPARISON

Firm/Product	Internal ESG Research Utilized (Y/N)	Third Party ESG Research Utilized (Y/N)	Manager Explanation of Research Methodologies Used
<b>Absolute Return Fixed Income</b>			
BlackRock - Strategic Income Opp	Yes	Yes	<p>The BlackRock Sustainable Investing team houses a dedicated ESG research function, which seeks to produce specific insights from ESG materiality to portfolio implementation methodologies to share across our investment teams in order to further drive our ESG integration efforts to enhance risk-adjusted return. We begin from the view that, to be effective sustainable investors, we must deeply understand the ways in which environmental, social and governance issues do and do not affect long-term return. We are leveraging the scale of our investment platform, our proprietary technology, and our direct, private engagement with companies through our investment stewardship activities to create sophisticated approaches to measuring and assessing sustainability-related risks and opportunities. Our Sustainable Investing team analyzes sustainability-related data, examines questions about causation and performance, and generates insights for portfolios firm-wide. Currently, BlackRock leverages third-party ESG data in addition to in-house research in order to gather company-level information on key ESG indicators. We have integrated issuer level ESG information into the firm's investment and risk management system, Aladdin, which BlackRock investors use to make investment decisions and monitor portfolios. As a result, BlackRock's global investors have access to ESG metrics that can inform their investment processes by flagging long-term risks and value drivers and enabling portfolio reporting and analytics. Our third-party sources include MSCI, ISS-Ethix, RepRisk, Sustainalytics, Thomson Reuters, Bloomberg, and others listed below. We continue to build out our reporting and analytics capabilities, which will leverage multiple data providers, and provide insights beyond topline ESG scores and carbon emissions stats. We routinely engage with investment research providers about our views on emerging issues and the type of research we would find useful.</p>



# PRODUCT COMPARISON

Firm/Product	Internal ESG Research Utilized (Y/N)	Third Party ESG Research Utilized (Y/N)	Manager Explanation of Research Methodologies Used
<b>Absolute Return Fixed Income</b>			
Loomis - Strategic Alpha	No	No	NA
PIMCO - Unconstrained Bond	No	No	NA
Payden & Rygel - PARI	Yes	Yes	As a firm, we embed ESG considerations in all aspects of our investment process and consider it an important part of fundamental analysis. In particular, we use the Sustainable Accounting Standards Board's (SASB) "industry standards" as a touchstone for organizing our ESG thinking at the issuer level. Our analysts and portfolio managers consider ESG issues whenever they depend on or undertake fundamental analysis. In particular, we focus on factors such as: *Transparency of management *Board independence *Executive compensation *Reputation *Employee-employer relations *Employee safety *Pollution impact *Climate change In addition, we utilize the services of third-party ESG related data providers to further aid to our research process.
Wellington - Opp Fixed Income	Yes	No	In addition to in-depth analysis of ESG factors and company engagement, our ESG team generates tailored, proprietary ESG research, which includes market analysis, and sector and country trends. To augment this research we maintain relationships with over 400 research providers, allowing access to multiple data sets across thousands of securities across every asset class. To help portfolio teams distill this data, our ESG team publishes sector and country guides that highlight key ESG risks. In addition, our ESG team works closely with the investment teams to tailor research and conduct in-depth portfolio reviews that identify holdings with the greatest ESG risks and strengths. We use ESG research from Goldman Sachs, UBS, Bank of America Merrill Lynch, Soci t G n rale, MSCI, Bloomberg, GMI, Sustainalytics, Equilar and FactSet amongst others.



# TOTAL FIRM ASSETS

Firm	YTD		2018		2017		2016	
	\$MM	# of accounts						
<b>Absolute Return Fixed Income</b>								
BlackRock Investments, LLC	6,515,345	28,213	5,975,818	28,113	6,288,195	29,424	5,147,852	26,577
Loomis, Sayles & Company, L.P.	263,508	1,531	249,718	1,525	268,086	1,560	240,193	1,554
Pacific Investment Management Company LLC	1,758,075	2,079	1,664,646	2,064	1,755,666	2,027	1,467,000	2,050
Payden & Rygel	114,200	387	111,501	385	117,100	377	106,000	369
Wellington Management Company LLP	1,072,454	2,322	1,003,389	2,327	1,080,307	2,193	979,210	2,077



# TOTAL PRODUCT ASSETS

Firm/Product	YTD		2018		2017		2016	
	\$MM	# of accounts						
<b>Absolute Return Fixed Income</b>								
BlackRock - Strategic Income Opp	31,792	10	33,092	9	30,213	8	25,356	7
Loomis - Strategic Alpha	5,609	54	5,309	53	4,492	48	4,451	54
PIMCO - Unconstrained Bond	12,069	33	11,704	34	11,472	38	10,654	40
Payden & Rygel - PARI	9,934	16	8,491	13	5,700	12	2,985	14
Wellington - Opp Fixed Income	2,934	5	2,816	4	2,267	2	1,878	1

Firm/Product	Separate Account		Commingled Fund		Inst. Mutual Fund	Retail Mutual Fund
	\$MM	# of accounts	\$MM	# of accounts	\$MM	\$MM
<b>Absolute Return Fixed Income</b>						
BlackRock - Strategic Income Opp	0	0	593	9	0	31,198
Loomis - Strategic Alpha	652	3	2,152	44	907	1,898
PIMCO - Unconstrained Bond	3,490	20	4,488	10	3,252	840
Payden & Rygel - PARI	6,949	14	2,496	1	490	0
Wellington - Opp Fixed Income	319	2	2,615	3	0	0



# ACCOUNT MINIMUMS AND FEE SCHEDULES

Firm/Product	Separate Account Min. (\$MM)	Commingled Fund Min. (\$MM)	Mutual Fund Min. (\$MM)	Separate Account Fee Schedule	Commingled Fund Fee Schedule	Mutual Fund Ticker and Fee
<b>Absolute Return Fixed Income</b>						
BlackRock - Strategic Income Opp	300	5	2	All Assets at 0.60%	All Assets at 0.55%	BSIIX - 0.82%
Loomis - Strategic Alpha	100	5	0	First \$100 million - 0.47% Balance - 0.40%	First \$20 million - 0.60% Next \$30 million - 0.50% Balance - 0.40%	LASYX - 0.75%
PIMCO - Unconstrained Bond	75	NA	1	First \$200 million - 0.60% Balance - 0.55%	Not Available	PFIUX - 0.87%
Payden & Rygel - PARI	50	1	1*	First \$100 million - 0.40% Balance - 0.35%	All Assets at 0.50%	PYAIX - 0.47%**
Wellington - Opp Fixed Income	250	1	NA	All Assets at 0.55%	First \$100 million - 0.50% Balance - 0.45%	Not Available

\*Reduced Minimum

\*\*Reduction in Standard Fees



# LITIGATION

Firm	Manager's explanation of Prior or Pending Litigation
<b>Absolute Return Fixed Income</b>	
BlackRock Investments, LLC	<p>BlackRock, Inc. and its various subsidiaries have been subject to certain business litigation that has arisen in the normal course of its business. Our litigation has included a variety of claims, some of which are investment-related. None of BlackRock's prior litigation has been, and none of its pending litigation currently is expected to be, material to BlackRock's business.</p> <p>In no instance has BlackRock been found to have violated its fiduciary duty.</p> <p>In the past years, BlackRock has acquired organizations that provide investment-related services, including, but not limited to, State Street Research &amp; Management Company, Merrill Lynch Investment Managers, the fund of funds business of Quellos Group, LLC, and Barclays Global Investors. This response does not address litigation that arose out of conduct within the acquired organizations prior to their acquisition by BlackRock.</p>



# LITIGATION

Firm	Manager's explanation of Prior or Pending Litigation
<b>Absolute Return Fixed Income</b>	
Loomis, Sayles & Company, L.P.	<p>Pending Firm Litigation In July 2011, the Loomis Sayles Credit Alpha Fund was named as a defendant along with all former shareholders of the Tribune Corporation (the Company ) that received cash in exchange for shares of the Company in a public-to-private leveraged buyout in 2007 (the LBO ). The Fund received \$1,190,000 for the shares it owned at the time of the LBO. Within one year of the LBO, the company filed for Chapter 11 bankruptcy.</p> <p>Pre-bankruptcy bondholders and unsecured creditors seek to recover all amounts paid to the shareholder defendants ( Defendants ) in connection with the LBO, with pre-bankruptcy interest, alleging that the LBO constituted a fraudulent conveyance by the Company.</p> <p>The entirety of this litigation has been consolidated in federal district court in New York. A settlement offer, which would have involved Defendants agreeing to repay 57.2% of the proceeds received, was rejected on the advice of counsel as premature, at the high end of the range of reasonableness, and not in the best interests of the Fund.</p> <p>In May 2014, Ropes &amp; Gray, on behalf of shareholder defendants (including Loomis) filed a Global Motion to Dismiss in the federal district court.</p> <p>In March 2016, the United States Court of Appeals for the Second Circuit upheld the federal district court's dismissal of the plaintiffs' claim of constructive fraudulent conveyance.</p> <p>The plaintiffs have appealed this decision to the Supreme Court of the United States, which has not yet decided whether it will hear the case.</p> <p>In January 2017, the federal district court dismissed the plaintiffs' second claim, for intentional fraudulent conveyance.</p> <p>This decision is subject to appeal.</p> <p>A recent decision on the constructive fraudulent conveyance issue in another circuit, which differs from the Second Circuit decision in Tribune, is scheduled to be heard by the U.S. Supreme Court in the spring of 2018.</p> <p>Loomis, Sayles &amp; Company, L.P. is defendant in a civil complaint initially filed in April 2014.</p> <p>The complaint alleges that Loomis Sayles misclassified a software engineer as an independent contractor, when he should have been an employee of Loomis Sayles under applicable Massachusetts statute.</p> <p>The complaint purports to represent a class of unnamed technology contractors the plaintiff claims were misclassified as contractors.</p> <p>In its answer, Loomis denied all the allegations. Loomis believes the plaintiff's case has no merit, and intends to vigorously defend its position in this matter.</p> <p>The plaintiff represented and certified that he was an employee in fact of a sub vendor, and his employer represented and certified to Loomis Sayles that it complied with all state and federal tax and employment laws applicable to the employment of this individual.</p> <p>Depositions began in January 2015.</p> <p>Discovery ended in late May 2015 and dispositive motions, including a motion for class certification by the plaintiff and a motion for summary judgment by Loomis Sayles, were filed at the end of June 2015.</p> <p>A hearing on various motions was held in September 2016.</p> <p>The judge denied plaintiff's motion for class certification and Loomis Sayles' motion for summary judgment.</p> <p>The parties are now preparing for trial. A trial date has been set for April 2018.</p>



# LITIGATION

Firm	Manager's explanation of Prior or Pending Litigation
<b>Absolute Return Fixed Income</b>	
Pacific Investment Management Company LLC	<p>During the period, Pacific Investment Management Company LLC ( PIMCO ) has not been the subject of any lawsuit which could reasonably be expected to have had a material adverse effect on PIMCO's ability to provide investment management services.</p> <p>Although PIMCO does not expect the below matters will have a material adverse effect on its ability to provide investment management services, PIMCO notes the following:</p> <p>On December 31, 2014, a lawsuit was filed in the United States District Court for the Western District of Washington by Robert Kenny, an investor in the PIMCO Total Return Fund, against PIMCO and PIMCO Investments LLC (collectively, the "36(b) Parties"). This lawsuit alleges that the 36(b) Parties received excessive advisory, supervisory and administration, and distribution fees from the PIMCO Total Return Fund in breach of their fiduciary duties under Section 36(b) of the Investment Company Act of 1940. In August 2018, the parties reached a settlement in this matter and the case was dismissed.</p> <p>PIMCO has denied, and continues to deny, all of the allegations contained in the lawsuit.</p> <p>On April 4, 2018, a lawsuit was filed in Orange County Superior Court by a PIMCO employee against PIMCO. The lawsuit alleges, among other things, the employee received unequal pay based on gender and that she was the subject of age discrimination. In November 2018 the parties reached a settlement in the matter and the case was dismissed on November 15, 2018.</p> <p>PIMCO and PIMCO Investments LLC have been named in a complaint filed in the U.S. Virgin Islands. In addition to PIMCO and PI, the complaint names certain BlackRock entities as defendants (together, the Defendants ).</p> <p>The complaint alleges, among other things, that the Defendants engaged in a coordinated effort designed to damage the business operations of Ocwen, the mortgage servicing company, which had certain business relationships with Altisource Asset Management Corporation, both companies in which the plaintiffs hold equity interests.</p> <p>On August 8, 2018, the plaintiffs filed an amended complaint.</p> <p>The substance of the allegations in the amended complaint are the same as the original complaint. PIMCO believes the claims are without merit and intends to vigorously defend the matter.</p>
Payden & Rygel	There is no prior or pending litigation.
Wellington Management Company LLP	From time to time, Wellington Management is involved in litigation that arises in the ordinary course of its business, none of which is material with respect to the firm's investment management business or its clients.



# DISCLOSURE

## Data Disclosure:

- Investment fees can have a significant effect on total returns. The results profiled herein reflect the deduction of management fees and other expenses, except where specifically noted.

## Footnotes:

- Firm Ownership:
  - BlackRock is an independent, publicly traded company, with no single majority shareholder and over two-thirds of its Board of Directors consisting of independent directors. As of June 30, 2018, The PNC Financial Services Group, Inc. ("PNC") owned 21.7% of BlackRock and institutional investors, employees and the public held economic interest of 78.3%. With regard to voting common stock, PNC owned 21.2% and institutional investors, employees and the public owned 78.8% of voting shares.
- Fees:
  - Payden & Rygel: The mutual fund represents a reduction in standard fee and the minimum investment has been reduced to \$1 million.



# GLOSSARY OF TERMS

- **Beta:** A measure of volatility, or systematic risk, of a security or a portfolio in comparison to the market as a whole. Beta can be thought of as the tendency of a security's returns to respond to swings in the market. A beta of 1 indicates that the security's price will move with the market.
- **Correlation:** A statistical measure of how two securities move in relation to each other. Correlation is computed into a correlation coefficient which ranges between -1 to +1. A perfect positive correlations (+1) implies that as one security moves either up or down, the other security will move in the same direction. Alternatively, a perfect negative correlation (-1) means that if one security moves in either direction, the security that is perfectly negatively correlated will move by an equal amount in the opposite direction.
- **Information Ratio:** A measure of portfolio management's performance against risk and return relative to a benchmark or alternative measure.
- **Kurtosis:** A statistical measure used to describe the distribution of observed data around the mean. Kurtosis describes trends in charts. A high kurtosis portrays a chart with fat tails and a low, even distribution, whereas a low kurtosis portrays a chart with skinny tails and a distribution concentrated toward the mean.
- **Skewness:** A statistical term used to describe a situation's asymmetry in relation to a normal distribution. A positive skew describes a distribution favoring the right tail, whereas a negative skew describes a distribution favoring the left tail.
- **Tracking Error:** A divergence between the price behavior of a position or a portfolio and the price behavior of a benchmark. Tracking errors are reported as a "standard deviation percentage" difference. It represents the difference between the return of a fund and that of the benchmark the fund was trying to copy.



# DISCLAIMER

- **This report contains summary information regarding the investment management approaches described herein but is not a complete description of the investment objectives, policies or portfolio management and research that supports these approaches. This analysis does not constitute a recommendation to implement any of the aforementioned approaches.**
- **Past performance is no guarantee of future results.**
- **Information on market indices was provided by sources external to NEPC, and other data used to prepare this report was obtained directly from the investment manager(s). While NEPC has exercised reasonable professional care in preparing this report, we cannot guarantee the accuracy of all source information contained within.**
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