# Quarterly Asset Class Report Taxable Fixed Income

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Role in the Portfolio Fixed Income

Canterbury Consulting recommends and communicates asset-class strategy with the objective of constructing a diversified portfolio of fixed income strategies designed to (in aggregate):

- (i) Preserve after-tax wealth and mitigate volatility
- (ii) Maintain comparable exposure to the broad municipal market
- (iii) Exhibit returns uncorrelated to equity markets

Role	<b>Asset Categories</b>	Risks	
Growth	Public and Private Equity	Market Decline	
Capital Preservation	Fixed Income, Hedge Funds	Rising Interest Rates, Highly Correlated Markets	

- Canterbury global fixed income portfolios are expected to deliver consistent after-tax and net of fees excess returns and moderate tracking error versus the Barclays Municipal Bond Index
- Canterbury's fixed income portfolios will exhibit benchmark-like after-tax yields and credit quality. However, they will
  do so with more portfolio diversification and lower duration

	QTD	YTD	1 Year	3 Years	5 Years	7 Years	10 Years
Barclays Global Aggregate	-0.92	-2.37	-1.32	1.98	0.75	0.86	2.89
Barclays US Agg Bond	0.02	-1.60	-1.22	1.31	2.16	2.02	3.77
U.S. Treasurys							
BofAML 3M US Treasury Note	0.51	1.35	1.62	0.84	0.52	0.40	0.36
Barclays Short Treasury	0.49	1.27	1.50	0.86	0.57	0.45	0.47
Barclays Intermediate Treasury	-0.12	-0.81	-1.22	0.17	0.93	0.88	2.20
Barclays Long Term US Treasury	-2.88	-5.79	-3.56	0.72	4.41	2.38	5.45
Barclays U.S. Treasury TIPS 0-5Y	0.11	0.81	1.01	1.38	0.63	0.69	1.66
Barclays US Treasury US TIPS	-0.82	-0.84	0.41	2.04	1.37	1.33	3.32
U.S. Corporate Credit							
Barclays US Corp IG	0.97	-2.33	-1.19	3.12	3.54	3.79	6.35
S&P/LSTA Leveraged Loan	1.84	4.03	5.19	5.32	4.13	5.25	6.15
BofAML US HY Master II	2.44	2.52	2.94	8.19	5.54	7.58	9.38
BofAML US HY BB-B Constrained	2.38	1.90	2.29	7.33	5.39	7.16	8.54
BofAML US Corporate AAA	0.11	-3.11	-1.45	2.52	3.39	2.39	4.30
BofAML US Corporate AA	0.59	-1.70	-0.86	2.21	3.03	3.04	4.93
BofAML US Corporate A	0.71	-2.44	-1.37	2.50	3.23	3.54	5.87
BofAML US Corps BBB	1.26	-2.04	-0.89	3.99	3.99	4.47	7.11
BofAML US High Yield BB	2.36	0.55	0.89	6.81	5.58	7.08	8.98
BofAML US High Yield B	2.41	3.48	3.87	8.03	5.19	7.27	8.21
BofAML US High Yield CCC	2.85	6.92	7.70	13.87	6.85	10.10	11.81
Securitized							
Barclays ABS	0.49	0.52	0.51	1.17	1.51	1.54	3.69
Barclays MBS	-0.12	-1.07	-0.92	0.98	2.02	1.79	3.34
Barclays CMBS	0.46	-0.93	-0.58	1.26	1.88	2.95	5.54
Municipals							
Barclays Municipal	-0.15	-0.40	0.35	2.24	3.54	3.36	4.75
Barclays Muni 1-10	-0.09	0.15	-0.24	1.21	1.88	1.96	3.15
Global							
Citi WGBI	-1.62	-2.55	-1.54	1.68	0.20	-0.06	2.21
Barclays GbI Agg Ex USD	-1.74	-3.03	-1.45	2.40	-0.33	-0.06	2.20
JPM EMBI Plus	1.48	-4.70	-5.01	4.81	4.24	4.85	6.84



## **Market Environment**

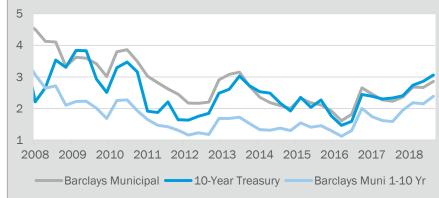
J.S. Treasury Rates

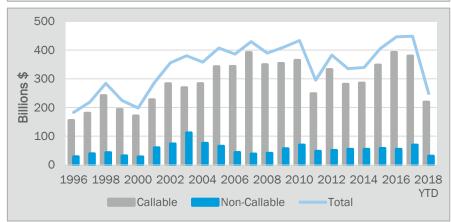
**Yields** 

J.S. Municipal Issuance

### Fixed Income







- U.S. core fixed income posted flat returns on the back of rising inflation and higher growth expectations. The 10 year treasury rose by 20 basis points as a result
- Emerging Market debt continued to exhibit volatility as escalating concerns over global trade and an appreciating dollar put pressure on the space. Furthermore, idiosyncratic events in Argentina, Brazil, and Turkey resulted in broad-based volatility across EM
- U.S. high yield continued to be the best performing asset class in fixed income as strong growth and solid underlying fundamentals resulted in slightly tighter spreads over the quarter. However, investors should proceed with caution given currently high valuations
- Municipal bond issuance remained subdued in Q3, however, secondary supply increased as many investors sold exposure on the back of rising rates. Municipal yields generally followed those of treasurys over the quarter

## **Market Environment**

**EM Debt Size** 

Corporate Issuance







## Asset Class Report Updates

- U.S. treasury issuance significantly increased after the financial crisis.
   Since the Fed began tapering, treasury issuance plateaued while corporate and MBS issuance continued to grow
- The EM debt market has grown significantly since 1996. While investors have worried about EM liabilities denominated in U.S. dollars, debt denominated in local currency has exponentially grown since 2004
- Corporate leverage significantly decreased after 2008. Leverage in the U.S. and EM has since grown while leverage in Europe and Japan has moderated

#### Sector Distribution

	Current Portfolio	Barclays Municipal Bond Index	Barclays 1- 10 YR Muni Bond
US Treasury	5.9%	0.0%	0.0%
Agency	0.8%	0.0%	0.0%
Local Authority (non-US)	0.0%	0.0%	0.0%
Municipal (US)	48.4%	100.0%	100.0%
Sovereign (non-US)	16.4%	0.0%	0.0%
IG Corporate	3.4%	0.0%	0.0%
HY Corporate	6.7%	0.0%	0.0%
Bank Loans	3.1%	0.0%	0.0%
MBS	7.6%	0.0%	0.0%
ABS	0.4%	0.0%	0.0%
CMBS	0.7%	0.0%	0.0%
CLO	0.5%	0.0%	0.0%
Other & Cash	6.2%	0.0%	0.0%

#### Regional Distribution

	Current Portfolio	Barclays Municipal Bond Index	Barclays 1- 10 YR Muni Bond
US	76.4%	100.0%	100.0%
Non-US Developed	13.8%	0.0%	0.0%
Non-US Emerging	9.8%	0.0%	0.0%

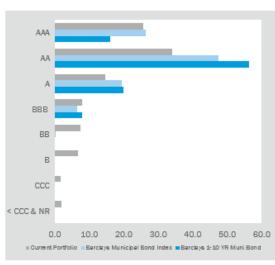
#### Currency Distribution

	Current Portfolio	Barclays Municipal Bond Index	Barclays 1- 10 YR Muni Bond
US	89.1%	100.0%	100.0%
Non-US Developed	-1.6%	0.0%	0.0%
Non-US Emerging	12.5%	0.0%	0.0%

#### Portfolio Characteristics

	Current Portfolio	Barclays Municipal Bond Index	Barclays 1- 10 YR Muni Bond
Effective Duration	2.33	5.02	3.80
Yield to Maturity (%)	4.83	3.30	2.37
Coupon Rate (%)	4.62	4.60	4.80

#### Credit Quality Distribution vs. Benchmark



#### Portfolio Checklist

	Current Portfolio	Barclays Municipal Bond Index	Barclays 1- 10 YR Muni Bond
Yield <sup>1</sup>	$\overline{\checkmark}$	$\overline{\checkmark}$	$\overline{\checkmark}$
Duration <sup>2</sup>	$\overline{\checkmark}$	$\overline{\checkmark}$	$\overline{\checkmark}$
Credit Quality <sup>3</sup>	$\overline{\checkmark}$	$\overline{\checkmark}$	$\overline{\checkmark}$
Sector Diversification <sup>4</sup>	$\checkmark$	X	X
Region Diversification <sup>5</sup>	X	X	X

- 1. The yield-to-maturity ("YTM") should be 80% of the YTM of the benchmark or greater
- 2. Duration should not exceed the benchmark
- 3. Average credit quality, using Barclays methodology, should be BBB or higher
- 4. No sector should exceed 50% of the total allocation and at least half of the sectors should have allocations greater than 2.5%
- 5. No region (see "Regional Distribution") should exceed 75% of the of the total allocation

- Depending on a client's equity exposure, duration and credit allocations can fluctuate within the fixed income segment
- Fixed income portfolios should target a duration less than that of the benchmark (Barclays Municipal Index) in order to reduce interest rate risk
- Investors can lower portfolio duration (while maintaining yield) by allocating to credit and diversifying globally
- Inefficiencies in the municipal market allow us to target similar credit quality as the benchmark with much less duration risk
- risk return relationship of fixed income portfolios by spreading risk across several factors (interest rate, credit, prepayment, liquidity, currency, political, counterparty, etc.)

The Baseline Portfolio has allocations to the following investment manager types: 50% Municipals, 30% Global, 10% Credit, and 10% Mortgage-Backed Source of Benchmark Information: Barclays

