



Canterbury Consulting

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## Quarterly Asset Class Report

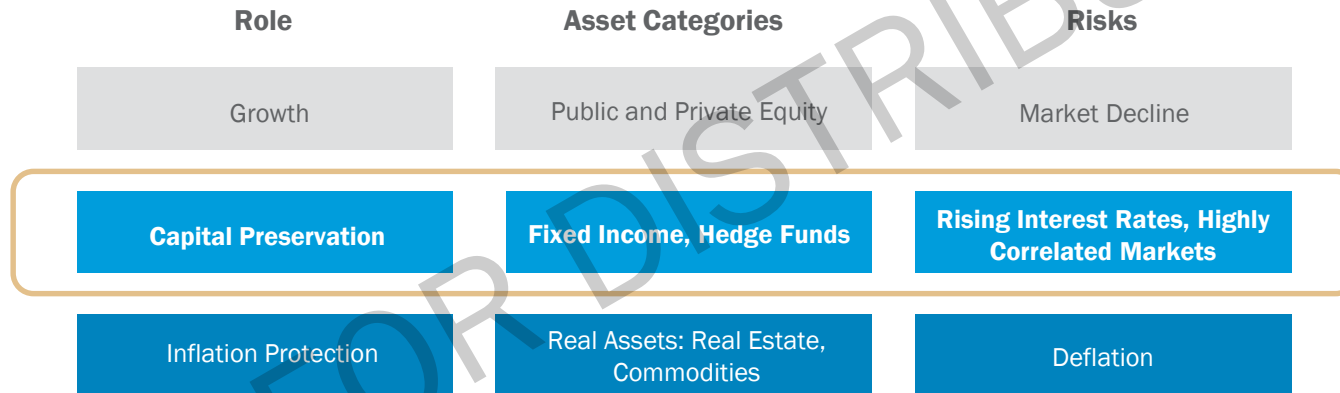
### Tax Exempt Fixed Income

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June 30, 2019

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

- Preserve capital and mitigate volatility
- Provide measured exposure to the diverse universe of fixed income securities
- Exhibit returns uncorrelated to equity markets



- Canterbury fixed income portfolios are expected to deliver consistent net of fees excess returns and moderate tracking error versus the Barclays Global Aggregate.
- Relative to the index, Canterbury’s current fixed income portfolios will exhibit lower duration, similar credit quality, and higher yields.

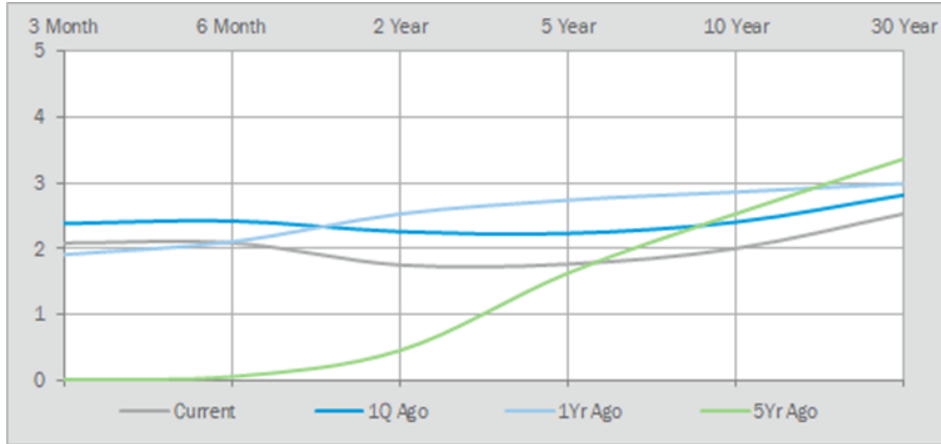
# Index Returns (06/30/19)

Fixed Income

	QTD	YTD	1 Year	3 Years	5 Years	7 Years	10 Years
<b>Barclays Global Aggregate</b>	<b>3.29</b>	<b>5.57</b>	<b>5.85</b>	<b>1.62</b>	<b>1.20</b>	<b>1.57</b>	<b>2.89</b>
<b>Barclays US Agg Bond</b>	<b>3.08</b>	<b>6.11</b>	<b>7.87</b>	<b>2.32</b>	<b>2.95</b>	<b>2.62</b>	<b>3.90</b>
<b>U.S. Treasurys</b>							
BofAML 3M US Treasury Note	0.65	1.26	2.36	1.38	0.88	0.66	0.50
Barclays Short Treasury	0.71	1.38	2.48	1.42	0.95	0.72	0.58
Barclays Intermediate Treasury	2.36	3.99	6.19	1.31	1.95	1.51	2.44
Barclays Long Term US Treasury	6.03	10.98	12.30	1.34	5.71	3.65	6.53
Barclays US Treasury TIPS 1-5Y	1.82	3.60	3.41	1.60	0.91	0.87	2.03
Barclays US Treasury US TIPS	2.86	6.15	4.84	2.08	1.76	1.17	3.64
<b>U.S. Corporate Credit</b>							
Barclays US Corp IG	4.48	9.85	10.72	3.95	4.08	4.20	6.07
S&P/LSTA Leveraged Loan	1.68	5.74	3.97	5.24	3.68	4.46	6.17
BofAML US HY Master II	2.57	10.16	7.58	7.54	4.70	6.37	9.22
BofAML US HY BB-B Constrained	2.82	10.36	8.62	7.14	4.81	6.24	8.58
BofAML US Corporate AAA	4.86	10.08	11.58	3.57	4.55	3.64	4.85
BofAML US Corporate AA	3.53	7.39	9.31	2.98	3.75	3.51	4.89
BofAML US Corporate A	4.12	8.90	10.24	3.41	3.92	3.93	5.75
BofAML US Corps BBB	4.66	10.50	11.00	4.67	4.17	4.76	6.97
BofAML US High Yield BB	3.16	10.77	9.99	6.71	5.21	6.39	8.84
BofAML US High Yield B	2.42	9.87	7.05	7.75	4.36	6.06	8.36
BofAML US High Yield CCC	0.65	8.60	0.13	9.83	4.16	6.98	11.14
<b>Securitized</b>							
Barclays ABS	1.67	3.17	4.98	1.99	2.07	1.83	3.35
Barclays MBS	1.96	4.17	6.22	2.06	2.56	2.32	3.24
Barclays CMBS	3.28	6.62	8.95	2.57	3.04	3.11	6.57
<b>Municipals</b>							
Barclays Municipal	2.14	5.09	6.71	2.55	3.64	3.50	4.72
Barclays Muni 1-10	1.54	3.62	5.12	1.94	2.30	2.24	3.06
<b>Global</b>							
Citi WGBI	3.57	5.38	5.48	1.00	0.85	0.89	2.21
Barclays Gbl Agg Ex USD	3.42	4.99	4.10	0.97	-0.12	0.71	2.10
JPM EMBI Plus	4.36	10.78	11.68	3.50	4.22	4.52	7.11

# Market Environment

## U.S. Treasury Rates



## Corporate Spreads



## World Bond Yields

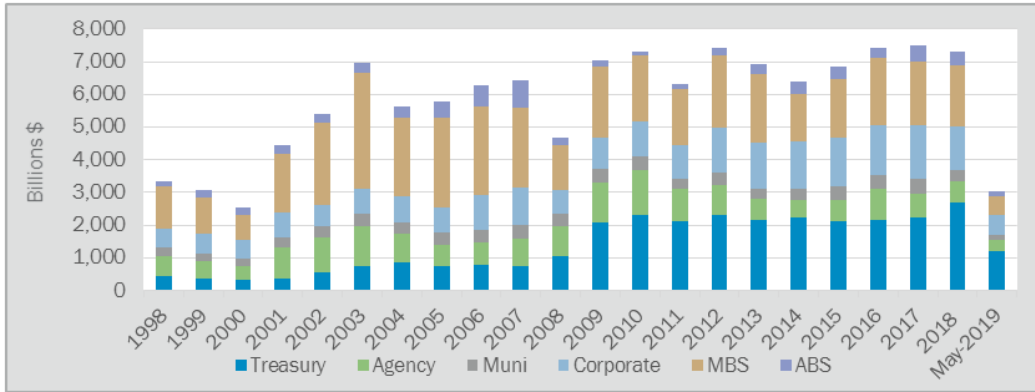
10-Year Sovereign Rates (%)											
Country	US	JAP	CHI*	GER	ITL	FRA	UK	BRA*	MXN*	SPA	CAN
Rates (03/31)	2.40	-0.10	3.05	-0.07	2.48	0.31	0.99	8.94	7.99	1.08	1.61
Rates (06/30)	2.00	-0.16	3.22	-0.33	2.09	-0.01	0.83	7.43	7.54	0.39	1.46

# Fixed Income

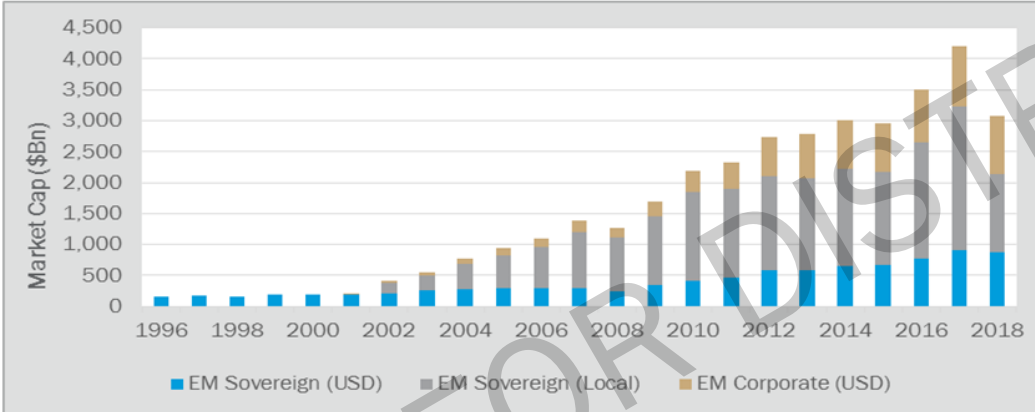
- Core fixed income generated positive returns as heightened trade tariff concerns, lower growth, and inflation expectations resulted in falling long-term interest rates. During the quarter, the 10-year Treasury moved from 2.4% to 2.0% and the 30-year Treasury moved from 2.8% to 2.5%. Concurrently, the Fed continued to communicate dovish guidance and signaled that a rate cut may occur as early as July.
- The high yield sector generated positive returns. However, higher quality (BB-rated credits) outperformed lower quality (B & CCC-rated credits), given the market's volatility.
- Emerging market debt posted positive returns as lower global inflation expectations continued to trend lower. The Fed's renewed accommodative monetary policy and a potential China-U.S. trade deal could provide a supportive backdrop for EMD.

# Market Environment

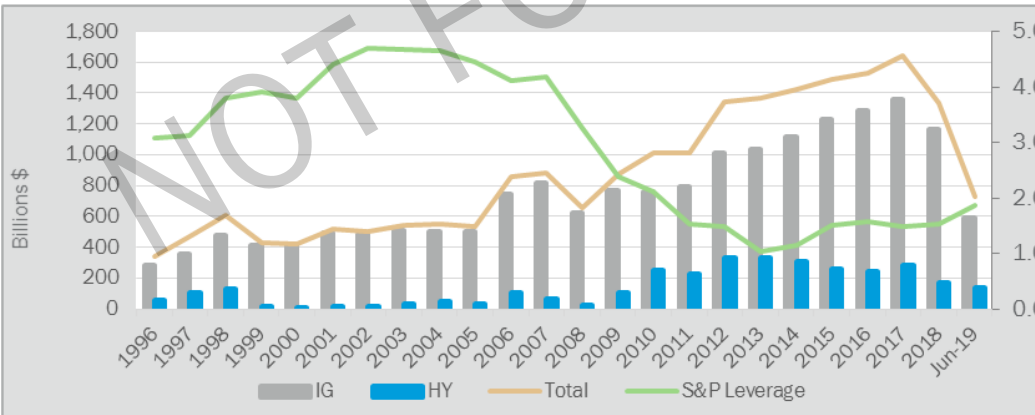
U.S. Bond Issuance



EM Debt Size



Corporate Issuance & Leverage



# 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.

# Portfolio Characteristics

## Fixed Income

### Sector Distribution

	Baseline Portfolio	Barclays Global Aggregate	Barclays Aggregate
US Treasury	30.4%	16.2%	39.5%
Agency	0.5%	5.7%	1.3%
Local Authority (non-US)	0.0%	3.0%	2.2%
Municipal (US)	0.2%	0.0%	0.9%
Sovereign (non-US)	2.9%	1.3%	0.1%
IG Corporate	12.9%	20.4%	24.7%
HY Corporate	6.9%	0.1%	0.0%
Bank Loans	3.8%	0.0%	0.0%
MBS	25.7%	11.1%	27.2%
ABS	2.2%	0.2%	0.5%
CMBS	2.3%	0.8%	2.0%
CLO	3.1%	0.0%	0.0%
Other & Cash	9.2%	41.1%	1.7%

### Regional Distribution - Country Allocation

	Baseline Portfolio	Barclays Global Aggregate	Barclays Aggregate
US	79.9%	39.3%	92.0%
Non-US Developed	8.7%	52.8%	6.3%
Non-US Emerging	11.4%	8.0%	1.7%

### Currency Allocation

	Baseline Portfolio	Barclays Global Aggregate	Barclays Aggregate
US	84.4%	45.3%	100.0%
Non-US Developed	7.4%	51.4%	0.0%
Non-US Emerging	8.2%	3.3%	0.0%

### Portfolio Characteristics

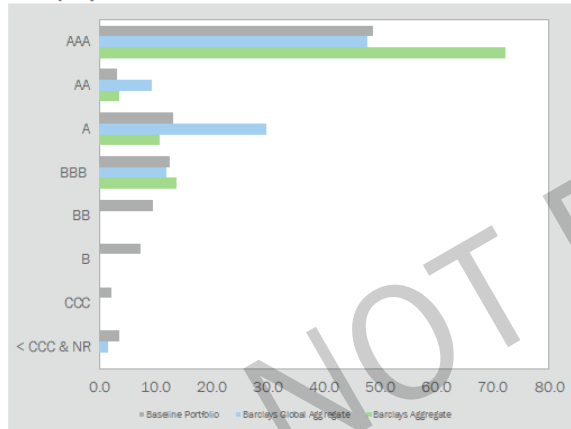
	Baseline Portfolio	Barclays Global Aggregate	Barclays Aggregate
Effective Duration	3.65	6.90	5.70
Yield to Maturity (%)	3.88	1.49	2.49
Coupon Rate (%)	3.96	2.67	3.23
Average Credit Quality (Barclays)	A	AA	AA

### Portfolio Checklist

	Baseline Portfolio	Barclays Global Aggregate	Barclays Aggregate
Yield <sup>1</sup>	✓	✓	✓
Duration <sup>2</sup>	✓	✓	✓
Credit Quality <sup>3</sup>	✓	✓	✓
Sector Diversification <sup>4</sup>	✓	✓	✗
Region Diversification <sup>5</sup>	✗	✓	✗

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 total allocation

### Credit Quality Distribution vs. Benchmark



The Current Portfolio has allocations to the following investment manager types: 45% Core Plus, 30% Global, 10% Credit, and 15% Mortgage-Backed

Source of Benchmark Information: Barclays

As of 06/30/19

- Depending on a client's equity exposure, duration and credit allocations can vary within the fixed income segment.
- Fixed income portfolios should target a portfolio duration less than that of the benchmark (Barclays Global Aggregate) in order to reduce interest rate risk.
- Investors can lower portfolio duration (while maintaining yield) by allocating to credit and diversifying globally.
- To ensure the fixed income allocation reduces overall portfolio risk and provides diversification, Canterbury seeks to maintain a portfolio that, on average, is investment grade or better.
- Canterbury attempts to optimize the risk-return relationship of fixed income portfolios by spreading risk across several factors (interest rate, credit, prepayment, liquidity, currency, political, counterparty, etc.).