



Canterbury Consulting

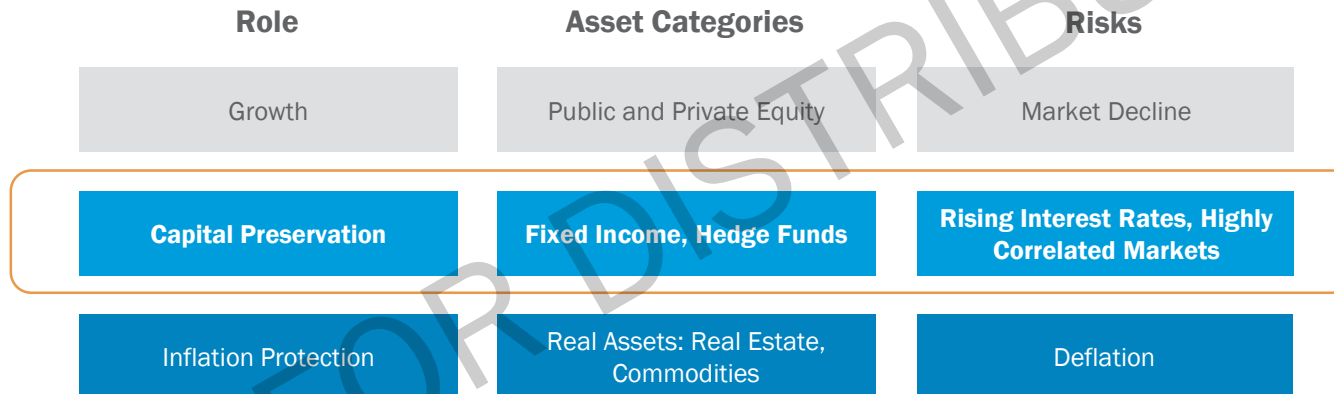
## Quarterly Asset Class Report Tax-Exempt Fixed Income

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September 30, 2022

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 set up with a goal 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 as of September 30, 2022

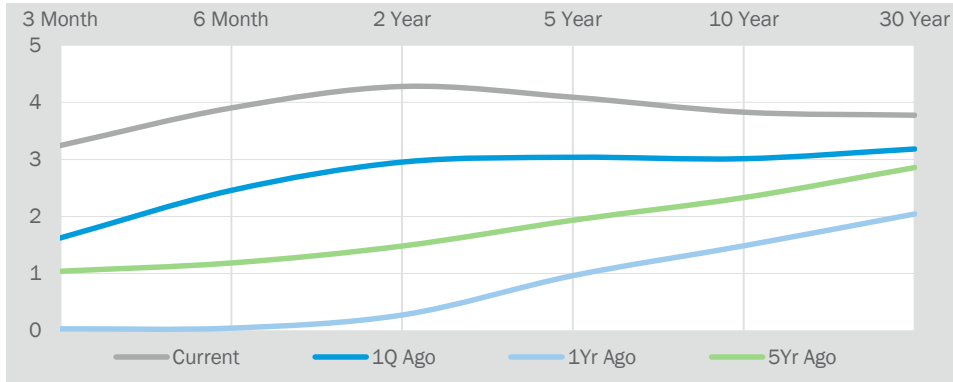
Fixed Income

	QTD	YTD	1 Year	3 Years	5 Years	7 Years	10 Years
<b>Bloomberg Global Aggregate</b>	-6.94	-19.89	-20.43	-5.74	-2.32	-0.64	-0.93
<b>Bloomberg US Agg Bond</b>	-4.75	-14.61	-14.60	-3.26	-0.27	0.54	0.89
<b>U.S. Treasurys</b>							
BofAML 3M US Treasury Note	0.42	0.58	0.59	0.62	1.18	0.97	0.70
Bloomberg Short Treasury	0.28	0.13	0.11	0.54	1.13	0.96	0.72
Bloomberg Intermediate Treasury	-3.08	-8.70	-9.23	-1.72	0.17	0.37	0.59
Bloomberg Long Term US Treasury	-9.63	-28.84	-26.65	-8.51	-1.62	-0.34	0.59
Bloomberg U.S. Treasury TIPS 1-5Y	-3.12	-5.19	-4.09	2.27	2.24	2.07	1.21
Bloomberg US Treasury US TIPS	-5.14	-13.61	-11.57	0.79	1.95	2.21	0.98
<b>U.S. Corporate Credit</b>							
Bloomberg US Corp IG	-5.06	-18.72	-18.53	-3.65	-0.03	1.48	1.70
Morningstar LSTA Leveraged Loan	1.37	-3.25	-2.53	2.21	2.98	3.66	3.53
BofAML US HY Master II	-0.68	-14.62	-14.06	-0.67	1.41	4.04	3.86
BofAML US HY BB-B Constrained	-0.75	-14.29	-13.66	-0.76	1.52	3.86	3.81
BofAML US Corporate AAA	-6.69	-20.89	-20.12	-4.71	-0.22	1.12	1.26
BofAML US Corporate AA	-5.56	-18.19	-17.84	-4.02	-0.39	0.79	1.22
BofAML US Corporate A	-5.16	-17.26	-17.15	-3.48	-0.02	1.25	1.56
BofAML US Corps BBB	-4.95	-19.14	-19.03	-3.43	0.19	1.96	2.09
BofAML US High Yield BB	-0.88	-14.29	-13.67	-0.13	1.97	4.17	4.15
BofAML US High Yield B	-0.59	-14.30	-13.59	-1.42	1.04	3.57	3.44
BofAML US High Yield CCC	-0.17	-17.25	-17.40	-1.14	-0.20	4.46	3.69
<b>Securitized</b>							
Bloomberg ABS	-1.34	-5.06	-5.61	-0.24	1.02	1.16	1.17
Bloomberg MBS	-5.35	-13.66	-13.98	-3.67	-0.92	-0.11	0.51
Bloomberg CMBS	-3.85	-11.81	-12.38	-2.07	0.63	1.07	1.36
<b>Municipals</b>							
Bloomberg Municipal	-3.46	-12.13	-11.50	-1.85	0.59	1.33	1.79
Bloomberg Muni 1-10	-2.25	-7.17	-7.08	-0.75	0.66	1.02	1.28
<b>Global</b>							
Bloomberg Global Aggregate TR Hdg USD	-3.34	-12.09	-12.05	-3.07	0.32	1.11	1.69
Bloomberg Gbl Agg Ex USD	-8.85	-23.88	-24.77	-7.78	-4.03	-1.69	-2.39
FTSE WGBI	-7.61	-21.27	-22.14	-7.03	-3.07	-1.29	-1.76
JPM EMBI Plus	-5.52	-30.70	-30.93	-9.87	-5.52	-1.30	-0.86

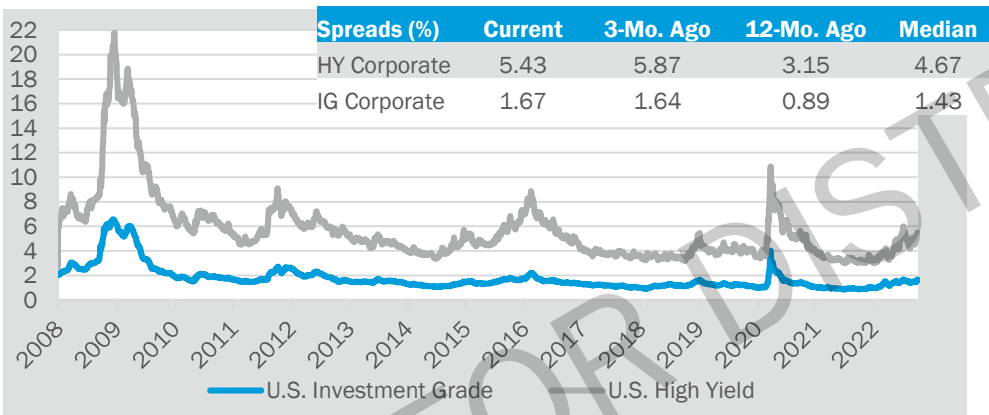
# Market Environment as of September 30, 2022

## Fixed Income

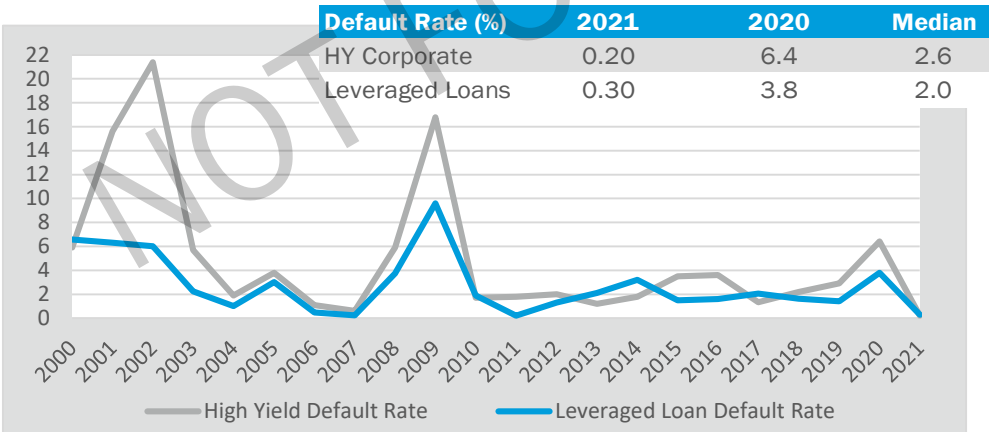
U.S. Treasury Rates



Corporate Spreads



Default Rates

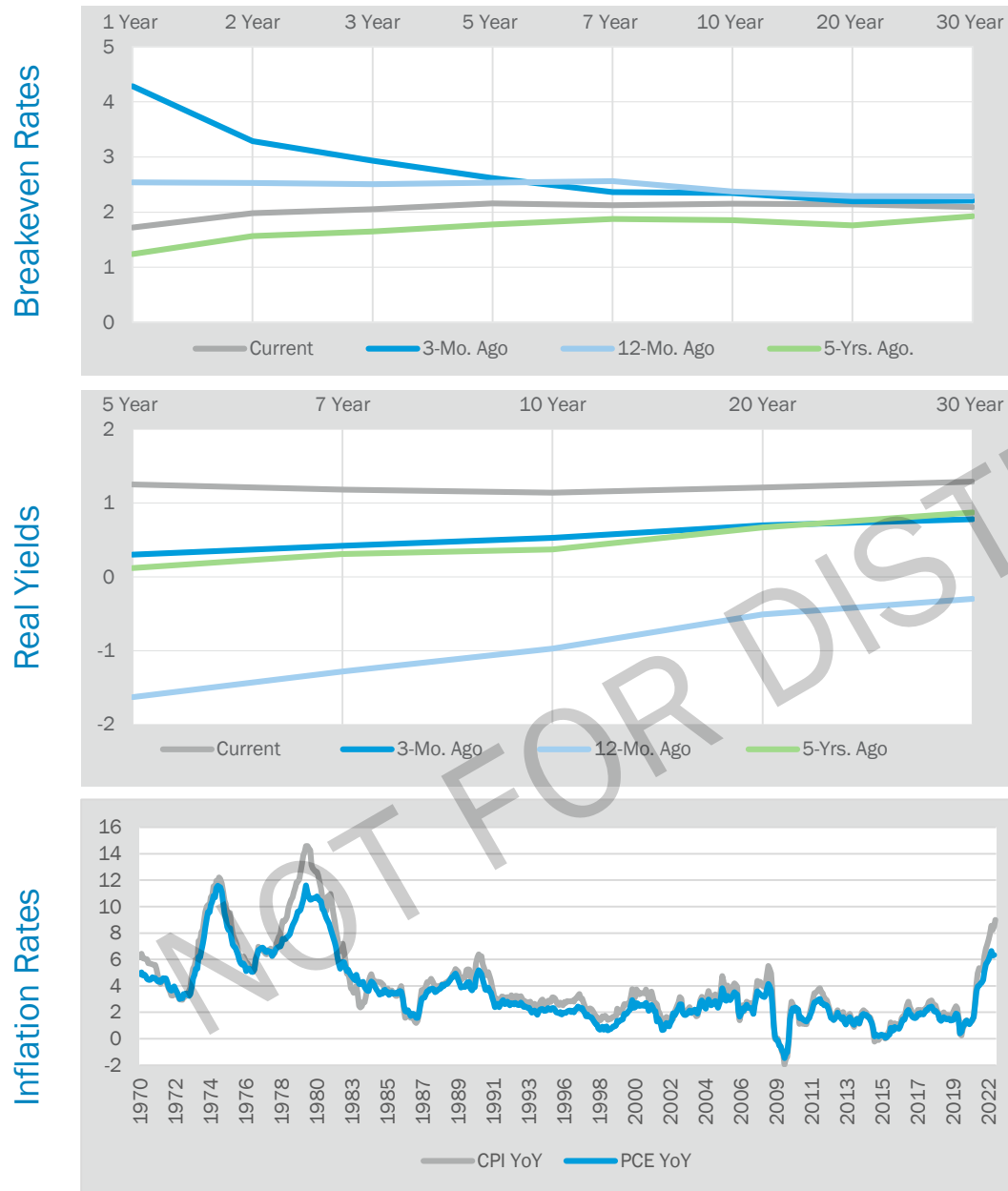


- Amid growing inflation, the Federal Reserve raised the key interest rate twice, 75 basis points in July and 75 basis points in September to a range between 3.0% - 3.25%.
- Chairman Powell communicated that he is prepared to move more quickly to reduce policy support if inflationary pressures continue, even though it may lead to a recession.
- The FOMC has increased their fed funds rate forecast range from 3.25% - 3.5% to 4.0% - 4.5% by year-end.
- The treasury yield curve increased across all maturities, particularly on the short-end. This has caused an inverted yield curve between 2-year and 10-year maturities.
- Bonds are on track for their worst performance in recent history, surpassing the lows of the 1970's and 1980's.
- Investment grade (IG) spreads remained relatively stable at 167 basis points (bps) over the quarter while high yield (HY) spreads narrowed by 44 bps to 543 bps.

Sources: Federal Reserve Economic Data, U.S. Treasury Department, Moody's, S&P LCD. Data as of 9/30/2022. Default rate data as of 12/31/2021.

# Market Environment as of September 30, 2022

## Fixed Income



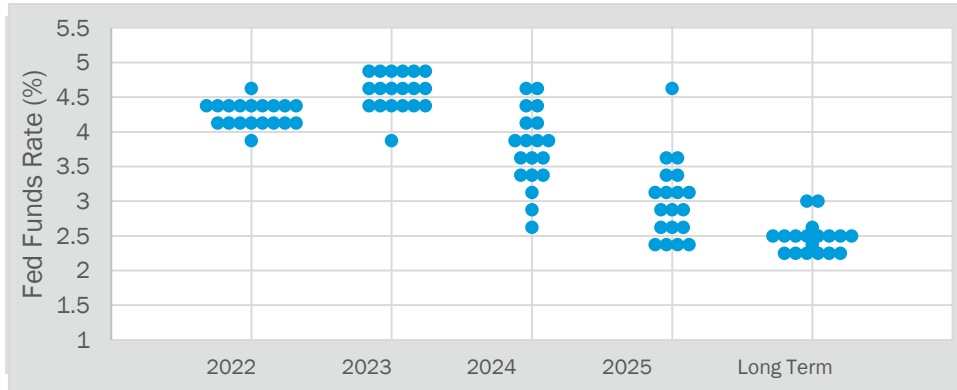
- Breakeven inflation rates on the short end of the curve decreased while long-term breakeven rates remained relatively stable between 2.0% - 2.5%. The breakeven rate is the implied inflation rate for a given maturity and is calculated by subtracting the real yield of a treasury bond from the nominal yield.
- Short-term break even rates largely decreased over the quarter given the rapid rise in the fed funds rate and expectations of slower economic growth.
- Current long-term breakeven rates imply that inflation should trend above the Fed's original inflation target of 2% in the long run.
- Intermediate and long-term real yields increased and have surpassed the levels seen 5 years ago.
- Inflation is being driven by supply/demand imbalances, the Ukraine/Russia war, a tight labor market, high wage growth, and various supply chain disruptions across the globe.

Source: Bloomberg, FRED, CPI & PCE Data, U.S. Breakeven Rates, U.S. Treasury Inflation-Indexed Rates. Data as of 9/30/2022.

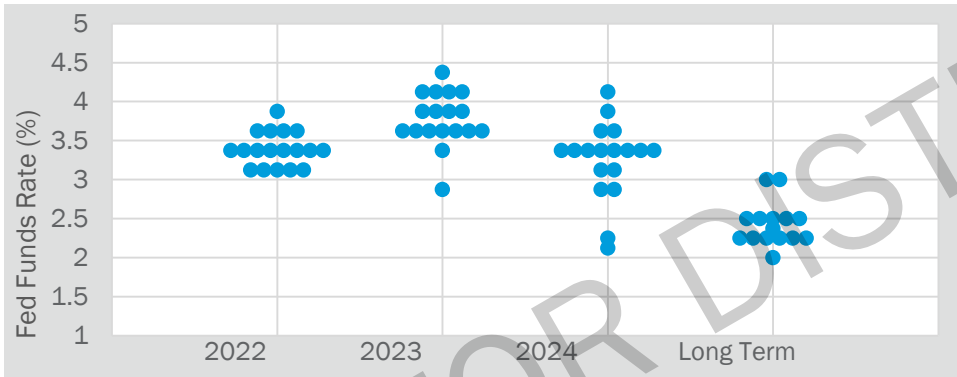
# Market Environment as of September 30, 2022

## Fixed Income

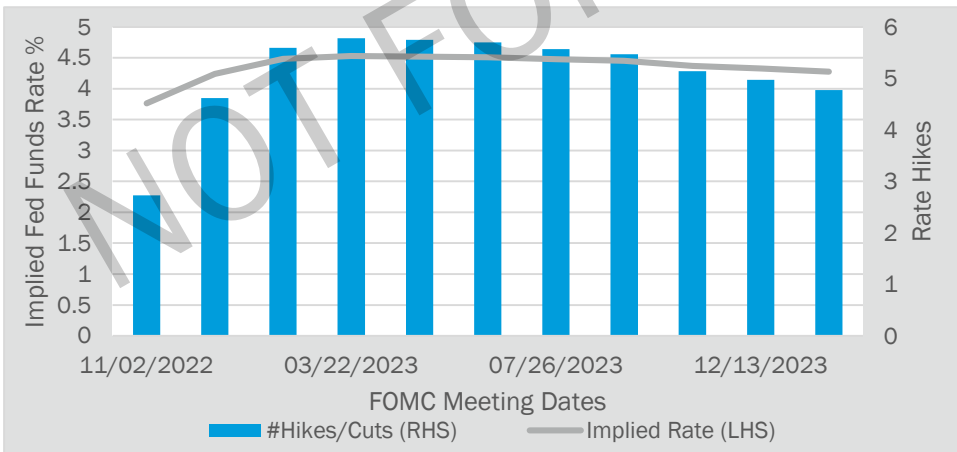
Fed Dot Plot  
September 2022



Fed Dot Plot  
June 2022



Implied Fed Funds Rate &  
Rate Hike Probabilities



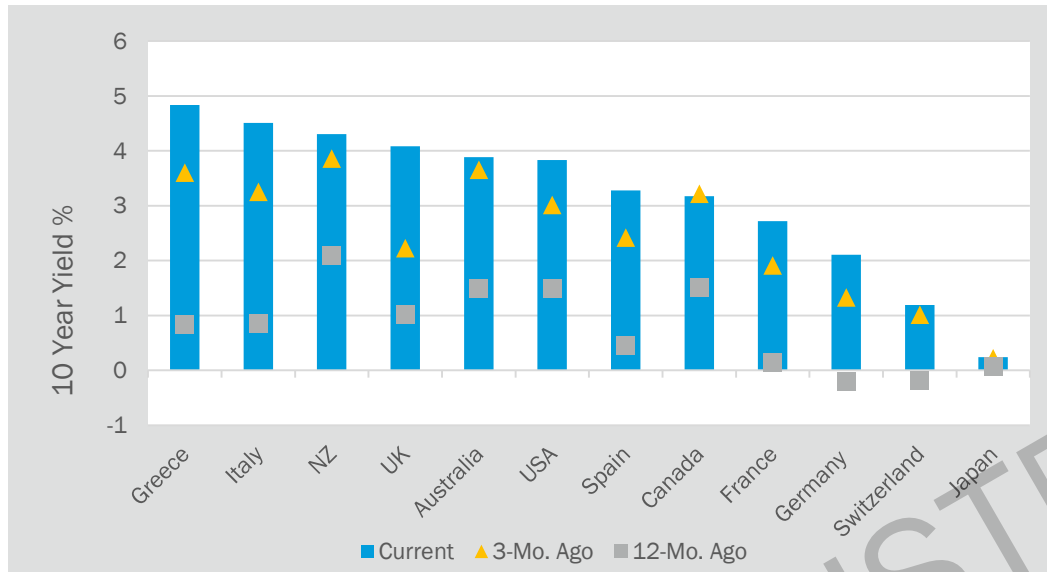
- The Federal Reserve increased its fed funds rate forecast from the prior quarter with the possibility of raising rates up to 4.0% - 4.5% by the end of 2022 and 4.5% - 5.0% by the end of 2023.
- As of end of September, market participants expected the Fed to raise rates to a range between 4.0% - 4.25%.
- The Fed Dot Plot represents where each of the Federal Open Markets Committee (FOMC) members believe the fed funds rate will be in the future.
- The implied fed funds rate is where market participants believe the fed funds rate will be based on futures prices.

Source: Bloomberg. December FOMC Dot Plot. Fed Funds Futures as of time of December FOMC meeting. Implied Fed Funds Futures & Rate Hike Probabilities as of 9/30/2022.

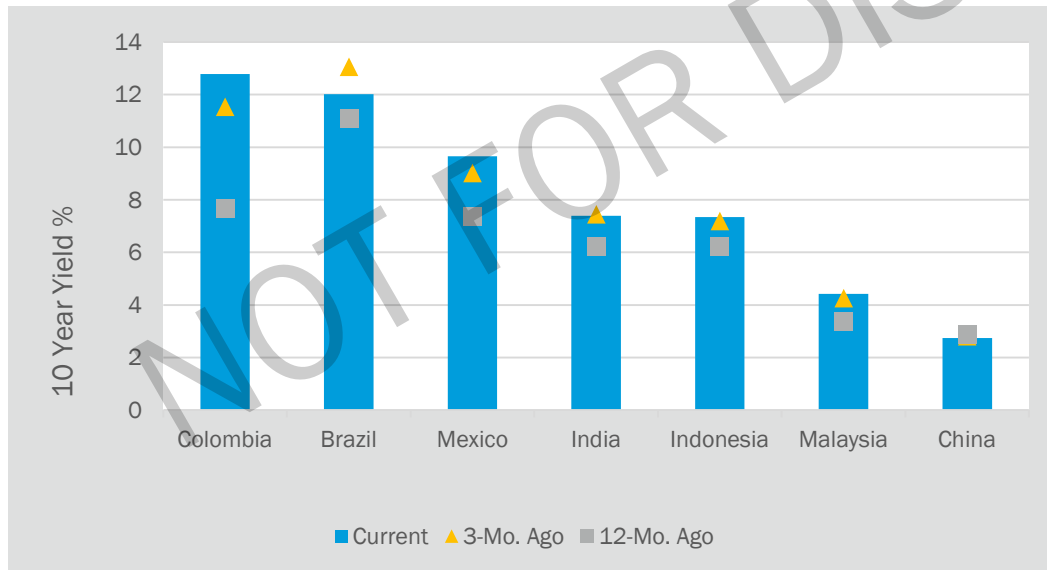
# Market Environment as of September 30, 2022

## Fixed Income

Developed Yields



EM Yields (Local Currency)



- Developed sovereign bond yields ended the quarter higher. Countries that faced elevated inflation prints and hawkish central bank signaling saw long-term yields rise higher than others.
- Emerging markets (EM) sovereign yields remained relatively unchanged on a quarter-over-quarter basis.
- Emerging and developed market currency performance was generally weak as the U.S. dollar appreciated relative to most global currencies.

Source: Bloomberg. Data as of 9/30/2022.



## Goals

- Are clients seeking to preserve capital, generate total return, or blend the two within a fixed income segment?
- What level of risk related to portfolio correlation is the client looking to incur?



## Interest Rate & Inflationary Environment

- How does the current interest rate regime and inflationary environment affect return and risk (i.e. stagnant, slow-rise, rapid rise)?
- What level of interest rate volatility is the client willing to take?



## Risk Tolerance

- How much risk is a client willing to take?
- Duration, yield curve positioning, sector exposure, credit exposure, the correlation to equities, and the client's distribution flows are important factors to measure.



## Tax Considerations

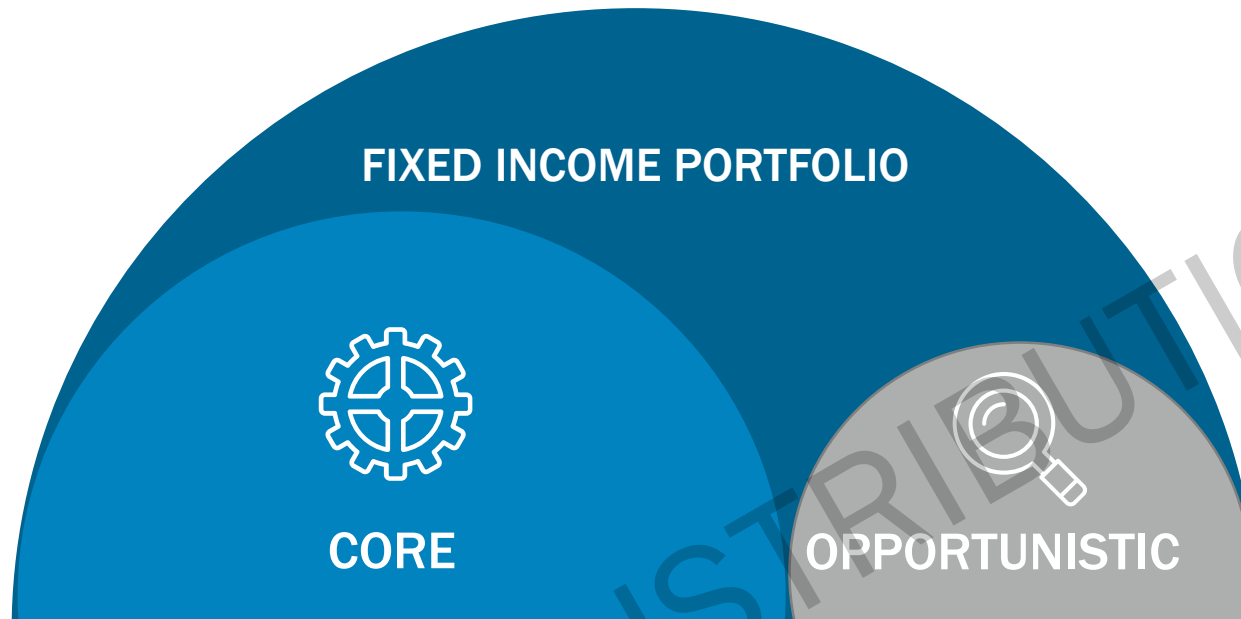
- Is the client's status taxable or tax-exempt?
- Does the client have a higher threshold given the respective tax situation?



## Time Horizon

- Does the client have short term or long term goals?
- Are spending requirements quarterly, annually, or longer?
- Is spending consistent with the return/risk profile of the portfolio?





**Characteristics**

- Low volatility
- Uncorrelated to equities
- U.S. Focus



**Exposure**

- Treasuries
- Agencies
- Investment grade corporate
- MBS



**Characteristics**

- Income orientated
- Total return focus
- Uncorrelated to core bonds



**Exposure**

- Non-U.S. developed sovereigns
- EM sovereigns
- High yield
- Bank loans
- Private debt