DISCIPLINE • BALANCE • PERSPECTIVE

Maryland Capital Advisors

INVESTMENT COMMENT **October 3, 2022**

Capital Markets Update and Focus on Bonds

A review of capital markets returns for 2022 Q3 and YTD reveals a lot of red numbers. Concerns included aggressive monetary policy tightening, risks of global recession, continued war in Ukraine, and – this past week – a significant sell-off in UK assets.

As painful as it is, stock market volatility during uncertain periods is normal. What has been unusual about 2022 for investors with portfolios holding a balance of stocks and bonds is that both asset classes have generated negative returns. In fact, US 5-Year Treasury Notes and Long-Term bonds have generated the worst 12-month returns since data started in 1926. Normally, during stock market downturns, investor portfolios often experience flat to positive returns from their bond holdings.

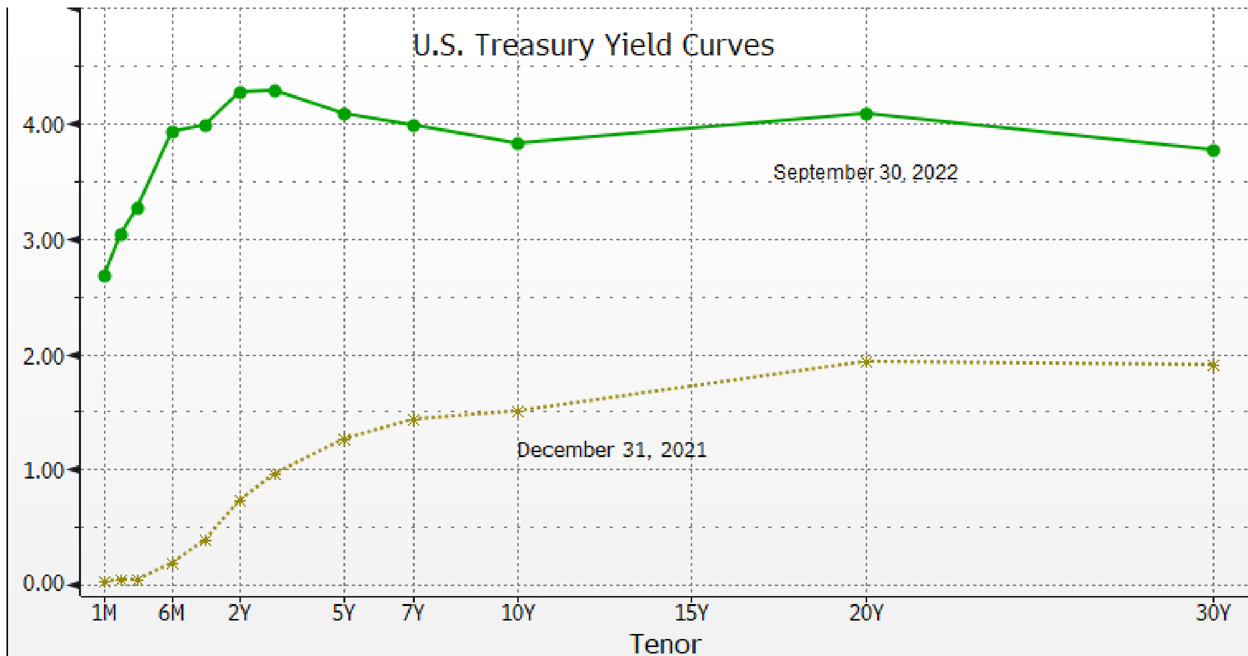
What's going on in the bond market? As we noted in our June 13 Investment Comment, after years of global central bank purchases of bonds (so-called quantitative easing) starting with the Global Financial Crisis in 2008 and most recently during the 2020 pandemic, central banks have reversed course and are now aggressively fighting inflation. *They've stepped away from bond market purchases and have been raising policy interest rates more aggressively than markets had expected.*

Selected Asset Classes As of September 30, 2022	**2022 Q3**	**2022 YTD**
PORTFOLIO **RISK** SEGMENTS		
US Large Cap	-4.4%	-24.8%
US Large Cap Value	-5.7%	-14.5%
US Small Cap	-2.6%	-23.6%
US Small Cap Value	-3.8%	-18.7%
International Large Cap	-10.6%	-27.5%
International Large Cap Value	-11.2%	-21.3%
International Small Cap	-10.6%	-32.0%
International Small Cap Value	-10.9%	-27.3%
Emerging Markets	-11.2%	-24.5%
Emerging Markets Value	-6.4%	-22.2%
Emerging Markets Small Cap	-12.1%	-22.1%
US Real Estate Investment Trusts	-11.0%	-29.3%
International Real Estate	-13.8%	-29.3%
SELECTED PORTFOLIO **LOW-RISK** SEGMENTS		
US Treasury 1-3yr Notes	-1.6%	-4.5%
US Treasury 7-10yr Notes	-5.7%	-15.6%
US Treasury 20-30yr Notes	-10.3%	-29.9%
US Treasury Inflation-Protected	-5.3%	-13.9%
Inv Grade Short Duration	-1.7%	-6.1%
Inv Grade Intermediate Duration	-4.7%	-17.1%
Inv Grade Long Duration	-8.6%	-28.8%
Mortgage-Backed Securities	-5.6%	-13.7%
Municipal Bonds	-3.1%	-11.2%
International Bonds (US$ hedged)	-3.4%	-12.9%
MARKET INDICES		
MSCI All-Country World Index	-6.7%	-25.3%
S&P 500 Index	-4.9%	-23.9%
Bloomberg US 1-5yr Bond Index	-2.3%	-7.5%
BALANCED PORTFOLIOS		
Vanguard 60/40 Fund	-4.5%	-20.8%
DFA 60/40 Fund	-4.8%	-18.1%
DFA 25/75 Fund	-3.0%	-11.3%
OTHER NOTABLE MARKET DATA		
Crude Oil Futures	-18.7%	+10.1%
Gold ETF	-8.2%	-9.5%
US Dollar (Trade-Weighted)	+7.1%	+17.2%
High Yield Bond ETF	-1.7%	-16.2%

Source: Bloomberg, Maryland Capital

Note: Returns include reinvested dividends

The U.S. Federal Reserve has led the charge with tough talk and interest-rate action. And bond market yields have moved significantly higher from last year's very low levels. Below is a graph of yields on US Treasury obligations of various maturities from 1-month bills to 30-year bonds. This across-the-board "normalization" of interest rates is both a welcome development for investors (money market funds now yield above 2.25% from near-zero last year) *and* the reason why bonds generated negative returns as prices moved lower to these higher market yields.



Source: Bloomberg

Are rising interest rates a good thing or bad thing? *When your bond investment strategy is in line with your financial plan, then it's a good thing.* Eventually, your bond portfolio will benefit from higher yields. But when? How do we align portfolio interest rate sensitivity within your investment strategy?

First, understand that bond price sensitivity to changes in interest-rates is mathematically tied to maturity date. Longer-dated bonds have greater price variability to a given interest-rate change than shorter-term bonds. You can see this impact on the Selected Asset Classes table on page 1, under Low-Risk Segment returns. For a given increase in yield (decline in value), short-term bonds will "claw back" the negative price adjustment quicker than long-term bonds.

Let's illustrate the concept of bond interest-rate sensitivity in comparison to an assumed 15-year Investment Horizon. We will compare the value of two different bonds that each start at a yield of 1% and evaluate them if interest rates stay at 1% (Scenario 1) or immediately jump to 4% after bond purchase (Scenario 2).

An Illustration of a 3-year bond and 20-year bond compared with 15-year Horizon

Investment Horizon	15 years
Starting Interest Rates	1%
Starting Wealth	$100,000
Scenario 1	Interest Rates remain at 1% through the entire period
Scenario 2	Interest Rates immediately increase to 4% and remain there

Year	3-year Bond		20-year Bond		Note
	Scenario 1	Scenario 2	Scenario 1	Scenario 2	
0	$100,000	**$91,594**	$100,000	**$55,689**	
1	$101,000	$95,258	$101,000	$57,916	
2	$102,010	$99,068	$102,010	$60,233	
3	$103,030	**$103,031**	$103,030	**$62,642**	3-year bond has recovered from rate shock to equal original 1% expected return, then benefits from reinvestment at higher (4%) rate every 3 years
4	$104,060	$107,152	$104,060	$65,148	
5	$105,101	$111,438	$105,101	$67,754	
6	$106,152	$115,895	$106,152	$70,464	
7	$107,214	$120,531	$107,214	$73,282	
8	$108,286	$125,352	$108,286	$76,214	
9	$109,369	$130,366	$109,369	$79,262	
10	$110,462	$135,581	$110,462	$82,433	
11	$111,567	$141,004	$111,567	$85,730	
12	$112,683	$146,645	$112,683	$89,159	
13	$113,809	$152,510	$113,809	$92,726	
14	$114,947	$158,611	$114,947	$96,435	
15	$116,097	**$164,955**	$116,097	**$100,292**	20-year bond has not yet recovered from rate shock to equal original 1% expected return
16	$117,258	$171,553	$117,258	$104,304	
17	$118,430	$178,416	$118,430	$108,476	
18	$119,615	$185,552	$119,615	$112,815	
19	$120,811	$192,974	$120,811	$117,327	
20	$122,019	$200,693	$122,019	$122,020	

Note: This analysis assumes a flat yield curve, is for illustrative purposes only, and uses hypothetical bonds rather than actual investments. The 3-year bond has a duration of 3.0 and 20-year bond a duration of 20.0.

- Under Scenario 1, interest rates are steady, and the 3-year and 20-year bonds generate the same ending wealth in each year.
- Under Scenario 2, where interest rates spike to 4% immediately after bond purchase:
  - 3-year bond wealth at the end of year 1 has generated -8.4% return. It recovers to equal the original expected 1% return at the end of year 3. After year 3, wealth benefits from reinvesting in a 3-year bond at 4% every three years.
  - 20-year bond wealth at the end of year 1 has generated -44.3% return. By the end of our 15-year investment horizon, the value has not yet recovered to the expected 1% return from the interest-rate shock. If you need the money in year 15, the bond would be sold at a value with nearly zero return.

This simple case highlights the fact that there is a risk to holding a bond portfolio with average maturity longer than when you need the money. It doesn't make sense, for example, to buy a 30-year bond with money in your checking account that needs to be available to spend on living expenses. On the other hand, we would not likely not earn a reasonable yield if we simply purchased 1-month treasury bills in a long-term portfolio. For this reason, we regularly evaluate the trade-offs between yield and interest-rate risk in managing Low Risk bond portfolios.

Bottom Line

Bonds make up an important ingredient in any portfolio. The concept of interest-rate risk is not new, but the culmination of global central bank inflation-fighting rate hikes and the end of their bond buying programs has reminded investors of this inherent risk. In an effort to help clients understand how we construct and manage the Low Risk Asset portion of your portfolio, we have created the Bond Market Overview attached. Keep in mind that we are flexible in the management of bond holdings as market yields change, reinvesting cash in maturities and segments that offer attractive risk-reward portfolio benefits.

We are always more than happy to discuss details of our investment process surrounding Low Risk or Risk assets.

U.S. Bond Market Overview

Returns (USD), Year-to-Date through 9/30/2022

United States: -14.6%

Sector	Sector Return	Maturity: 1-5 Years	Maturity: 5-10 Years	Maturity: 10+ Years	Quality
U.S. Government	-12.9%	-6.1%	-13.6%	-28.8%	AAA/AA
Credit	-18.1%	-6.8%	-15.2%	-29.4%	AAA/AA
		-7.6%	-17.1%	-29.4%	A/BBB
		-8.5%	-17.2%	-29.3%	B/BB/BBB
Securitized	-13.4%				

Maryland Capital Advisors manages client Low Risk Asset allocations to have average interest-rate sensitivity more in line with 1-5 year maturities, rather than long-term or even total U.S. bond market interest-rate sensitivity.

Source: Bond classifications, credit, and maturity category returns using Bloomberg indexes. Indexes are not available for direct investment.