The Battle of Yield versus Duration... An Epic Tale.

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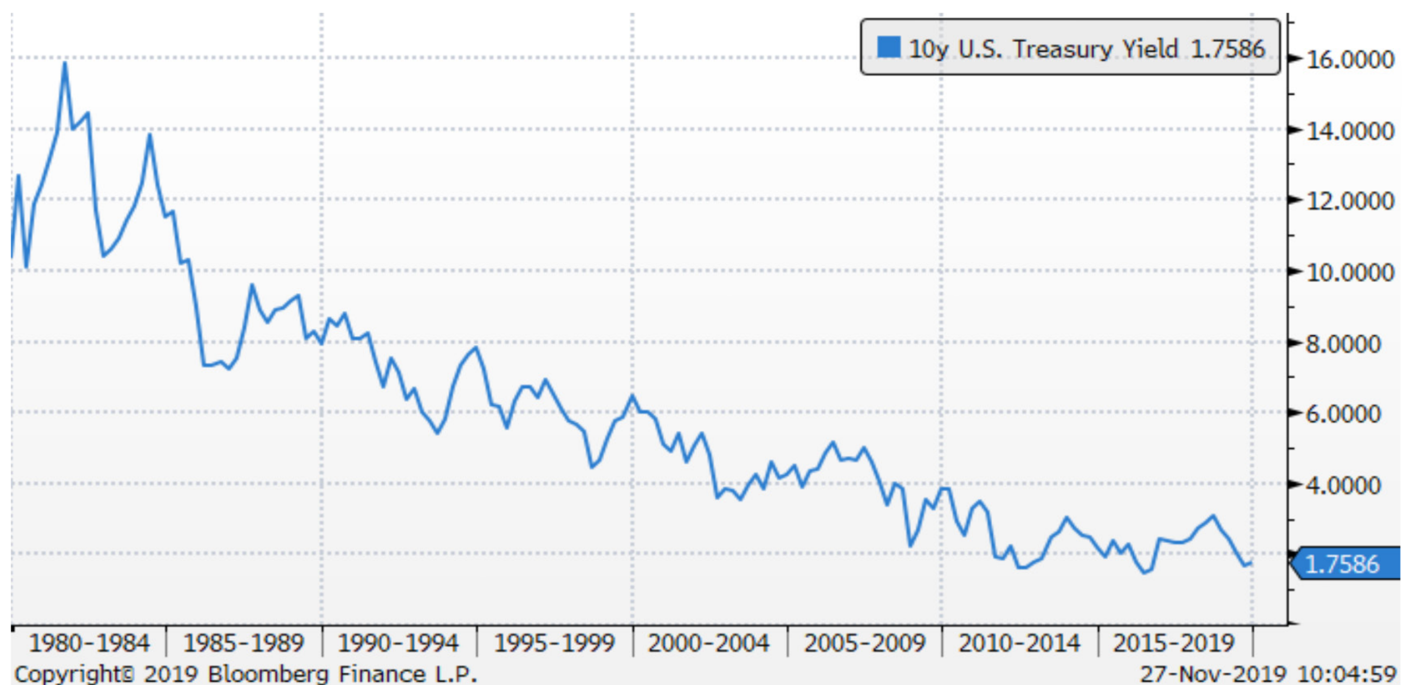
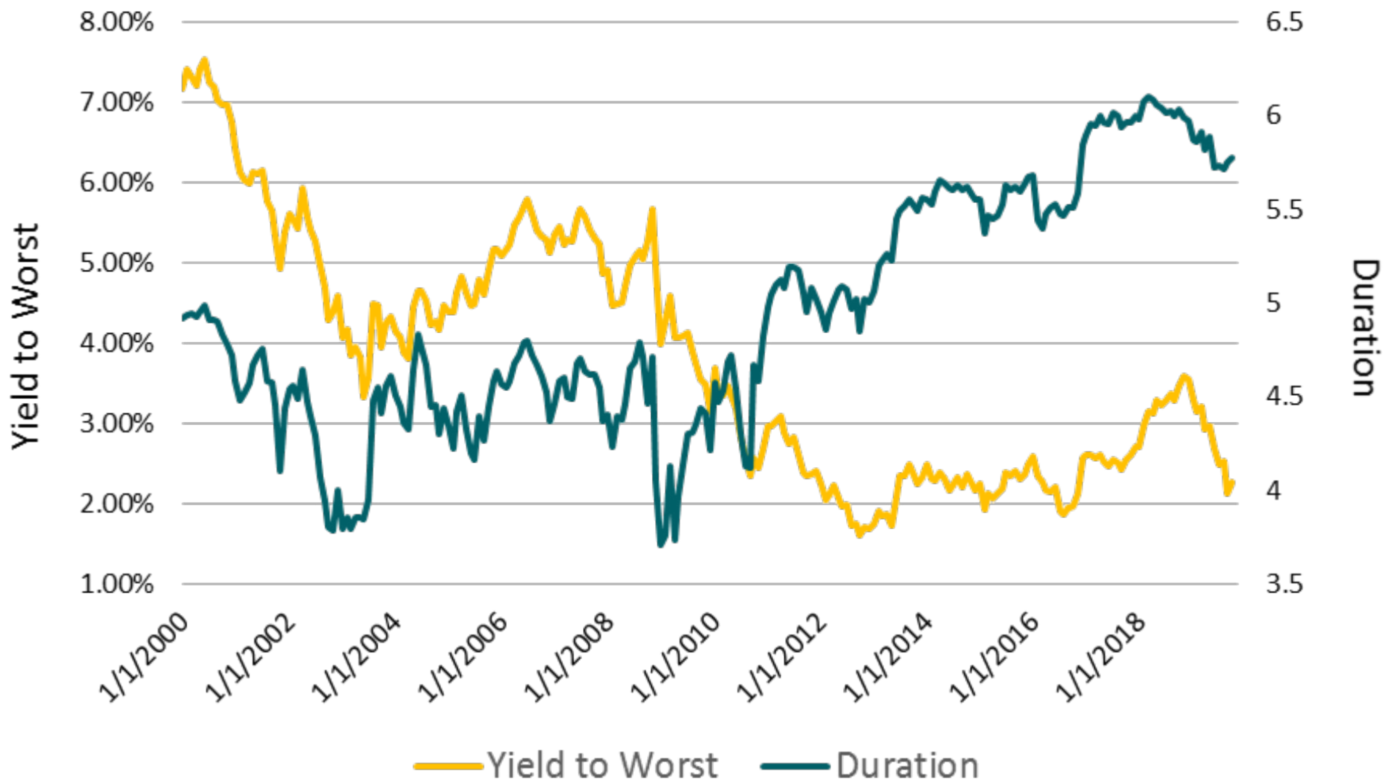
Since the early 1980s, the bond market has produced exceptional returns as interest rates have steadily declined. After peaking in the autumn of 1981 at 15.85%, the yield on the 10-year U.S. Treasury has seen a fairly steady decline to its current rate of 1.76%. Due to the inverse relationship between bond yields and prices (i.e., when market yields move lower, bond prices move higher), investors have frequently experienced gains in the market price of their bond holdings, in addition to the coupon income.



A Challenging Set-up:

Since the financial crisis, central banks globally have lowered policy rates and engaged in quantitative easing (QE) programs; at the same time the market's expectations for future economic growth and inflation have also weakened. The combination of these factors have resulted in lower interest rates.

The decline in yields in conjunction with issuers extending the maturity profile of their debt, to take advantage of the lower yields, has resulted in an increase in the duration of the index. Duration is a measure of the price sensitivity of a bond to a change in interest rates. Therefore, the increase in the duration of the bond market today means that bond prices are more sensitive to changes in interest rates than they were historically.



Source: Bloomberg 10.01.2019

The Double Whammy:

This combination of lower yield and higher duration creates a challenge for investors. As the table below highlights, a higher duration means that the market value of a bonds will decline more than has historically been the case for a specific move in interest rates.

Duration	Price Change	Initial Investment		Market Price	
2	-2.00%	$	1,000	$	980
3	-3.00%	$	1,000	$	970
4	-4.00%	$	1,000	$	960
5	-5.00%	$	1,000	$	950

*Based on a 1% instantaneous increase in interest rates.

To make matters worse, the lower levels of yield in today's market means it will take a longer time for the income produced by the bond to offset the mark-to-market price decline… a painful double whammy!!!

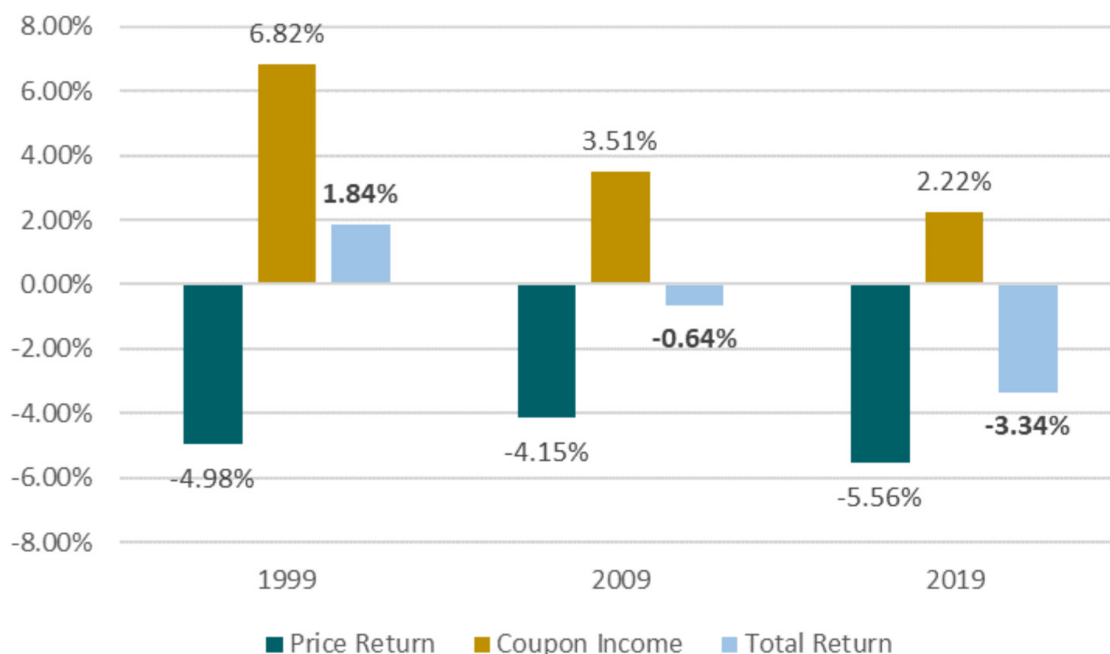
Today's environment in a historical context:

One way to measure the increased risk in today's bond market is to compare the yield-per-unit-of-duration over time. The table below illustrates how the yield/duration has declined by more than 50% in the last 10 years and by over 340% in the last 20 years. This metric suggests that today's bond market has a higher likelihood to produce negative return periods as well as the potential for higher volatility compared to what investors have historically been used to.

	9/30/1999	9/30/2009	9/30/2019
Yield	6.82%	3.51%	2.22%
Duration	4.98	4.15	5.56
Yield/Duration	1.37	0.85	0.40

Source: Bloomberg 10.01.2019

Based on historical index data, the chart below compares the price return based on the duration and a 1% increase in interest rates, the coupon income over a 12-month period based on the starting yield and the total return combining the price change and the coupon income. An investor owning the Bloomberg Barclays U.S. Aggregate Index beginning in September 1999 would have experience a positive total return of ~1.84% over a 12-month period despite the increase in interest rates and the subsequent market price decline of the bonds. Conversely, an investor in 2019 could expect to experience a negative total return over a 12-month period given the same 1% increase in interest rates.



Source: Bloomberg 10.01.2019

The Benefits of Active Management:

We strongly believe that the current environment is one which calls for active management. Today's environment of lower yields and higher sensitivities to changes in interest rates suggests that risk management will be critical. Passively-managed, index-based, strategies will possess the full exposure of this higher-risk environment. On the other hand, actively-managed strategies have the opportunity to deploy techniques such as adjusting sector and sub-sector allocations, utilizing investments which might be outside of the index and pursing duration and yield curve strategies, to create portfolios which offer a higher yield-per-unit-of-duration profile while potentially lowering volatility.

Lastly, it is critical to note the importance of fixed income in an investor's portfolio despite the more challenging backdrop. Bonds continue to provide a form of income generation and, most importantly, a form of capital preservation and a hedge against equity volatility and/or a slowdown in economic growth.

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