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The Friday Memo

If Bonds Matter, Bond Strategies Matter

11.03.23

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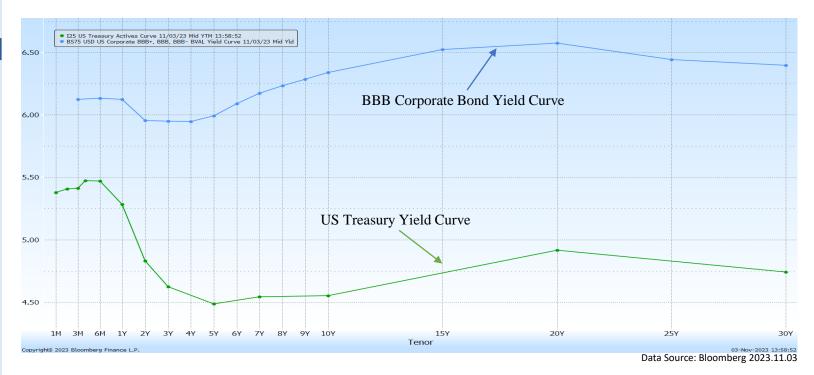
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Bond Strategy: Lots of Choices



- We think higher interest rates have made "bond strategy" a hot topic, for the first time in years, because of the higher yields newly available. For income investors, this is a great development, but leads to interesting questions to us about which bonds to own.
- In recent years, differences between bonds were not that important or interesting: now they are.
- This chart shows the "yield curve" for US Treasury and BBB rated corporate bonds, illustrating differences in yields between Treasury and Corporate bonds, and between different maturities.
- "Bond strategy" includes the range of choices between different kinds of bonds, and specific terms and characteristics of those bonds.

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The Big Question for all Types of Bonds:

Long-Term Inflation Expectations Haven't Changed, but Will They?



- A remarkable aspect of the Fed's ultra-low interest rates policies from 2008 to 2022 was that long-term inflation expectations did not change during this period.
- Why the seemingly complacent view about inflation? We think that demographic and technology trends are part of the answer, but the bigger factor is deep confidence in the Fed's ability to maintain stable financial conditions.
- We believe recent inflation trends were the primary consideration in the Fed's decision in 2022 to reverse a decade of extraordinary monetary policy. These changes have included raising the Fed funds rate and ending "quantitative easing" associated with purchasing Treasury and Mortgage bonds.
- We are monitoring "expected" inflation trends closely, believing that an upward trend in expected inflation would signal less confidence in the Fed, and could lead to significant re-pricing of both stocks and bonds.

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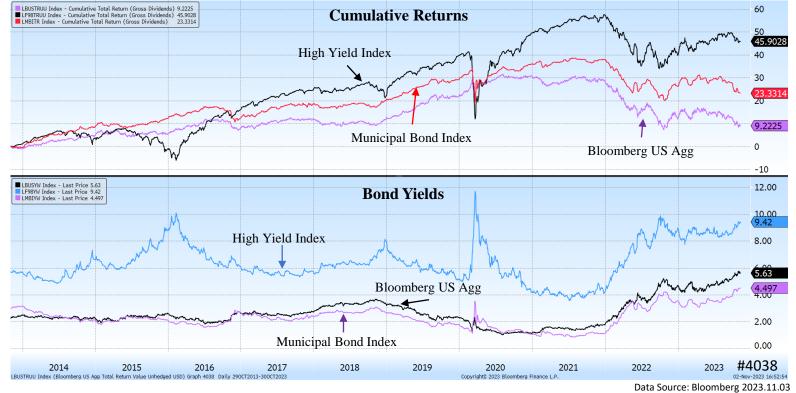
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Bond Strategies Provide Different Results



- The "Bloomberg US Aggregate Index" is the broadest measure of bond market performance, that includes many different categories of bonds. The Bloomberg High Yield Index includes below-investment grade bonds, and the Bloomberg Municipal Index includes tax-exempt municipal bonds.
- The annualized returns of the US Aggregate Index over the past 10 years was .88%, where the High Yield Index was 3.78%, and Municipals Index was 2.11%.
- Now that bond yields have moved much higher, investors have many choices between <u>credit risk</u> and <u>duration</u> risk when developing a bond-oriented strategy.
- During the last 10 years of very low interest rates, our view is that performance was provided by taking <u>credit risk</u> as apposed to <u>duration</u> or <u>maturity risk</u>. Today, we think many opportunities exist to take advantage of <u>both</u> duration and credit risk.



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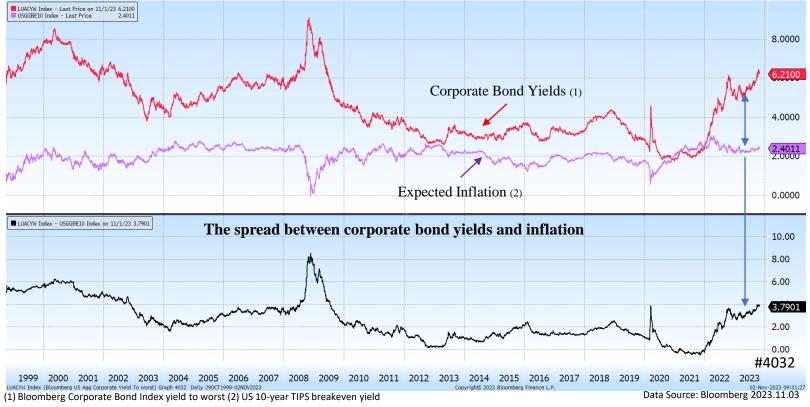
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- The Fed's recent response to higher inflation, including increasing the fed funds rate, has contributed to generally higher yields on many categories of bonds. Corporate bond yields provide a larger "spread" versus expected inflation than offered over the past 15 years.
 - Is the current spread sufficient to compensate investors for exposure to inflation?
- We believe the consensus view is that inflation can be managed toward the Fed's target of 2%, making current spreads reasonably attractive. We generally agree with this view, but a number of factors, including credit quality and maturity, must be considered when evaluating individual bonds.

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A Building Blocks Approach to Evaluating Bond Yields: A Framework for Comparing Bonds

Difference in Credit Quality	4. Credit Spread %	i.e. BBB vs AAA
Difference in Maturity	3. Term Spread %	i.e. 30years vs 2year
Expected Inflation	2. Inflation Spread %	i.e. TIPS Bond "breakeven" yield
The Inflation adjusted cost of funds	1. Real Interest Rate %	i.e. a residual amount
	Total Bond Yield %	

For illustrative purposes only: We use "building blocks" as an analytical tool

- Evaluating yields offered by different types of bonds requires a framework for evaluating how the <u>financial</u> and <u>legal</u> characteristics of a bond can be compared with other bonds.
- We use historical measures of each of the "building blocks", shown in the table above, to provide a frame of reference for evaluating current prices and spreads.
- For bond investors, the important question is whether you are being adequately paid for exposure to different types of risks.

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The Term Spread: Getting Paid to Extend Maturities



- The "term spread" measures the additional yield an investor can receive by purchasing a longer-maturity bond versus a shorter-maturity bond.
- This chart shows that, historically, longer maturity bonds have yielded more than shorter-maturity bonds, but that today the yields are nearly the same.
- The term spread today is very small, due in part to the current Fed funds rate, but also based upon expectations about the level of short-term interest rates.
- Since the term spread is very small today, does it make sense to own longer maturity bonds? We think it <u>might make sense</u>: If interest rates move lower in the coming year, buying longer maturity bonds today can potentially provide a relatively high level of income in the future.

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Data Source: Bloomberg 2023.11.03

The Credit Spread: Getting Paid to Accept Credit Risk

10yr Corporates vs 10yr Treasuries C00910Y Index - Last Price 6.1230 LF98YW Index - Last Price on 11/1/23 9.3700 20 High Yield Bond Yields (1) 15 10yr US Treasury Yield (1) Investment Grade Bond Yield (1) 9.3700 C00910Y Index - CMAT10Y Index 1.4530 LF98YW Index - CMAT10Y Index on 11/1/23 4.6000 20 The Credit Spread The difference between the yield on a 10-year corporate bond, 15 or high yield bond, and a 10 Year US Treasury 2023 #4045 2022 2015 2019 2020 2008 2009 2010 2011 2013 2017 2018

- The "credit spread" measures the additional yield an investor can receive by accepting the credit risk of the bonds of a particular company.
- This chart shows that corporate bonds offer higher yields than Treasury bonds, and that below-investment grade "high yield" bonds yield more than investment-grade corporate bonds.
- Are credit spreads on corporate bonds, or high yield bonds, attractive today? These charts shows that bond credit spreads are at levels consistent with long-term trends: neither better or worse. Is the extra yield worth the risk? When actively managed, we think that answer might be "yes".

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(1) Bloomberg bond indices



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Credit Quality: Measures of the Riskiness of Bonds

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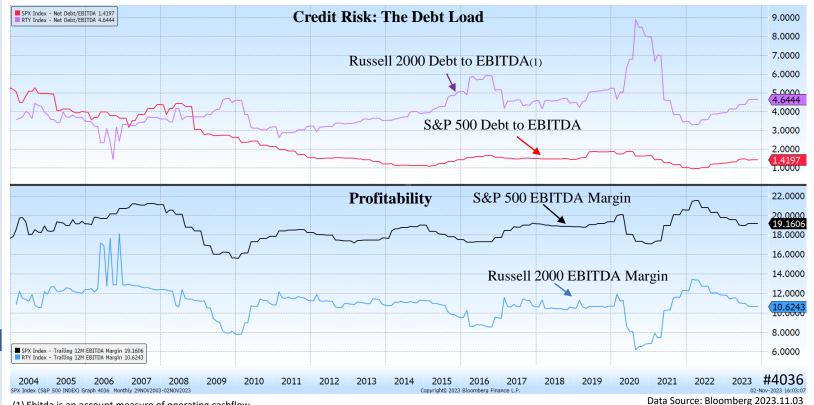
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(1) Ebitda is an account measure of operating cashflow

- Evaluating bond yields includes measures of "credit quality", including financial characteristics that provide insight about the riskiness of a bond.
- These charts compare big companies vs small ones (S&P 500 vs Russell 2000). Two measures of credit quality are 1) the level of total debt versus annual operating cashflow and 2) the cashflow profit margin. Large companies generally have a smaller level of debt relative to annual cash flow and higher profitability. Based upon these measures, big companies generally might be viewed as having higher credit quality than small companies.
- In general, we think that higher interest rates will have a more negative impact on small companies than big ones.

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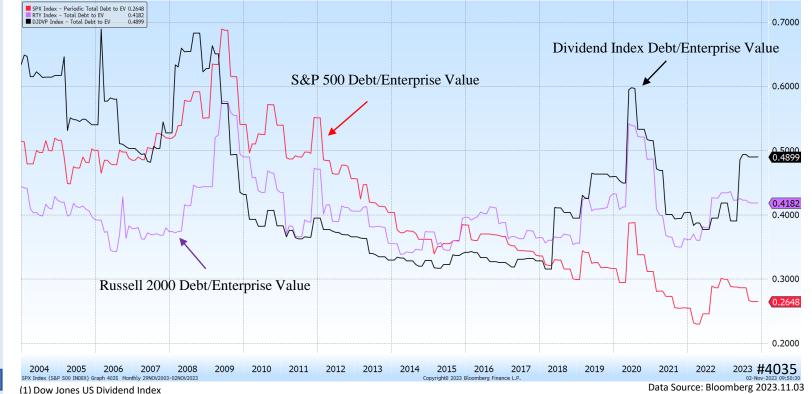
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How Will Higher Interest Rates Impact Earnings Trends?



- This chart shows, "total debt divided by market-based enterprise value", showing differences in the significance of debt for the S&P 500, the Dow Jones Dividend index and the Russell 2000 index of small cap stocks.
- We expect that higher interest rates will impact some companies more than others, depending upon their level of debt.
- We believe higher interest rates are likely to have a more negative impact on the earnings of heavily-indebted companies.
- The 2023 year-to-date under-performance of the Dow Jones U.S. Dividend Index versus the S&P 500 may be partly due to anticipating that higher interest rates will have a more negative impact on the earnings of companies in the Dividend Index than in the S&P 500.

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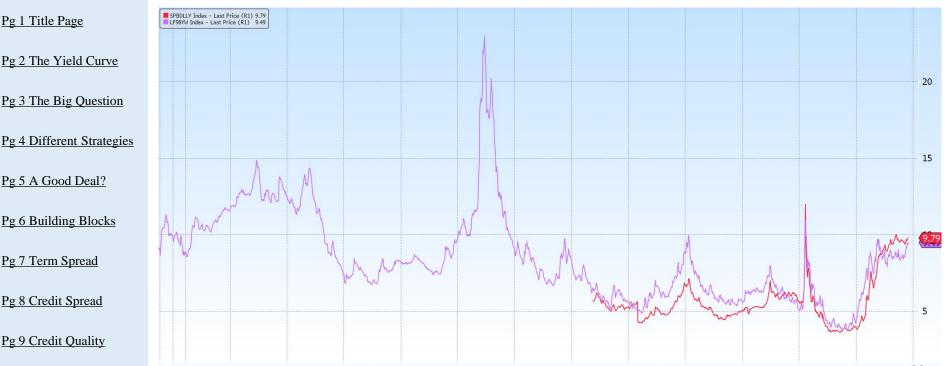
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Leveraged Loans: A New Type of High Yield Bond



- During the past decade, floating-rate bank loans, often referred to as "leveraged loans", have emerged as a significant category of the high yield bond sector.
- Leveraged loans are generally rated below-investment grade, based upon the ratings criteria of the major bond rating agencies, S&P and Moody's.
- Leverage loans are often issued by smaller "middle market" companies, and often by companies controlled by private equity firms. The loans are originated and syndicated by banks, and trade in very large minimum sizes. Credit research and transaction size have led us to prefer investing in diversified portfolios of leveraged loans through mutual funds versus buying individual loans.

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1995-1999

2000-2004

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2005-2009

2010-2014

Data Source: Bloomberg 2023.11.03

2015-2019

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For index, indicator and survey definitions referenced in this report please visit the following: https://www.morganstanley.com/wealth-investmentsolutions/wmir-definitions An investment cannot be made directly in a market index. Pg 5 A Good Deal?

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Pg 9 Credit Quality Bonds are subject to interest rate risk. When interest rates rise, bond prices fall; generally, the longer a bond's maturity, the more sensitive it is to this risk. Bonds may also be subject to call risk, which is the risk that the issuer will redeem the debt at its option, fully or partially, before the scheduled maturity date. The market value of debt instruments may fluctuate, and proceeds from sales prior to maturity may be more or less than the amount originally invested or the maturity value due to changes in market conditions or changes in the credit quality of the issuer. Bonds are subject to the credit risk of the issuer. This is the risk that the issuer

might be unable to make interest and/or principal payments on a timely basis. Bonds are also subject to reinvestment risk, which is the risk that principal and/or interest payments from a given investment may be reinvested at a lower interest rate.

Pg 10 Earnings Outlook Bonds rated below investment grade may have speculative characteristics and present significant risks beyond those of other securities, including greater credit risk and price volatility in the secondary market.

Pg 11 Leveraged Loans Investors should be careful to consider these risks alongside their individual circumstances, objectives and risk tolerance before investing in high-yield bonds. High yield bonds should comprise only a limited portion of a balanced portfolio.

Interest on municipal bonds is generally exempt from federal income tax. However, some bonds may be subject to the alternative minimum tax (AMT). Typically, state tax-exemption applies if securities are issued Pg 12 Disclosures within one's state of residence and, local tax-exemption typically applies if securities are issued within one's city of residence. The tax exempt status of municipal securities may be changed by legislative process, which

could affect their value and marketability.

Bonds are affected by a number of risks, including fluctuations in interest rates, credit risk and prepayment risk. In general, as prevailing interest rates rise, fixed income securities prices will fall. Bonds face credit risk if a decline in an issuer's credit rating, or creditworthiness, causes a bond's price to decline. Finally, bonds can be subject to prepayment risk. When interest rates fall, an issuer may choose to borrow money at a lower

interest rate, while paying off its previously issued bonds. As a consequence, underlying bonds will lose the interest payments from the investment and will be forced to reinvest in a market where prevailing interest rates are lower than when the initial investment was made. NOTE: High yield bonds are subject to additional risks such as increased risk of default and greater volatility because of the lower credit quality of the issues.

Equity securities may fluctuate in response to news on companies, industries, market conditions and the general economic environment. Companies cannot assure or guarantee a certain rate of return or dividend yield; they can increase, decrease or totally eliminate their dividends without notice.

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