

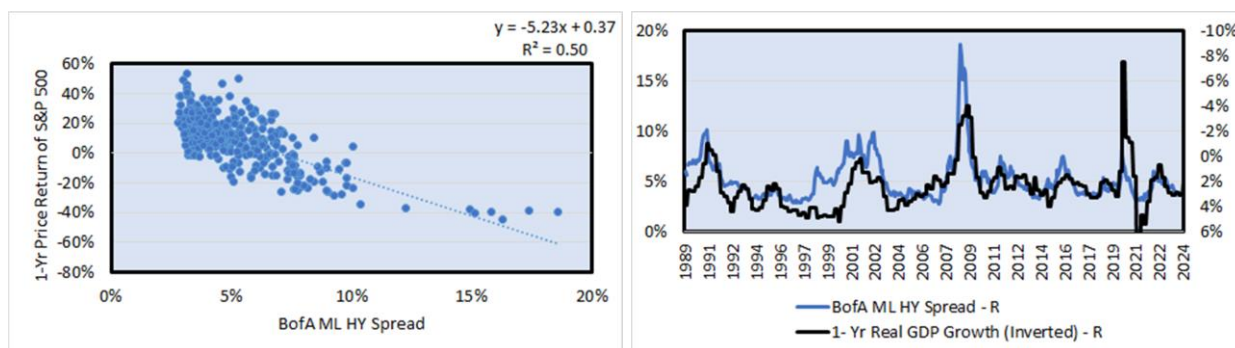
### The Bond Market Says...

On July 11<sup>th</sup> (a few days before the S&P 500 peaked), I published "[Anatomy of a Correction](#)." That piece was premised on the view that growth expectations, as determined by equity valuations, were high, sentiment was high (see "[What's The Market Thinking](#)" from May), and the employment situation was not as good as people believed (see "[Employment Isn't As Good As the Headline Implies](#)" from February). **The equity market is poor at forecasting, as it declined about five months before a recession from 1956+, but only two months ahead of a recession since 1990** (see page 6 of "Anatomy of a Correction").

Should we take warning clues from the bond market instead? Bonds have fixed upsides, which is the yield to maturity (assuming cash flows are paid as promised), so bond investors should focus more on risks. But there are exceptions. The risky credit market is highly correlated with the stock market, and the yield spread (to the 10-year Treasury Note) moves coincident with GDP. High-yield investors earn the lowest credit spreads at economic peaks, and the spread is currently low. They have an equity kicker if credit risk is upgraded, which explains the 50% R<sup>2</sup> to S&P 500 returns, but even BAA and BBB spreads have a range of 37% to 40% R<sup>2</sup>.

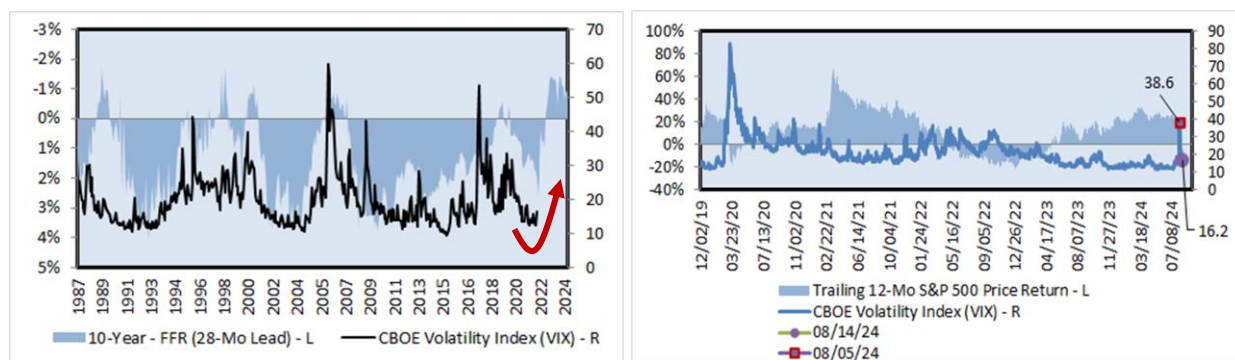
The Treasury yield curve (YC) provides a longer warning. Long rates are driven by future expected inflation (and reinvestment and interest rate volatility risks), and inflation is driven by the economy. We've had a bout of extreme volatility after the weak July jobs report, but the YC suggests the rise in volatility was on schedule. Markets don't like risk and tend to react by selling off.

### Credit Markets Don't Warn of a Recession, and the Low Spread Suggests All is OK



ISS EVA, FactSet, BEA, ICE B of A, S&P; Spread = YTM of BofA ML High Yield Bonds – 10-year Treasury Note rate

### The Spike in Volatility on August 5th Was Forecasted by the Yield Curve 28 Months Ago

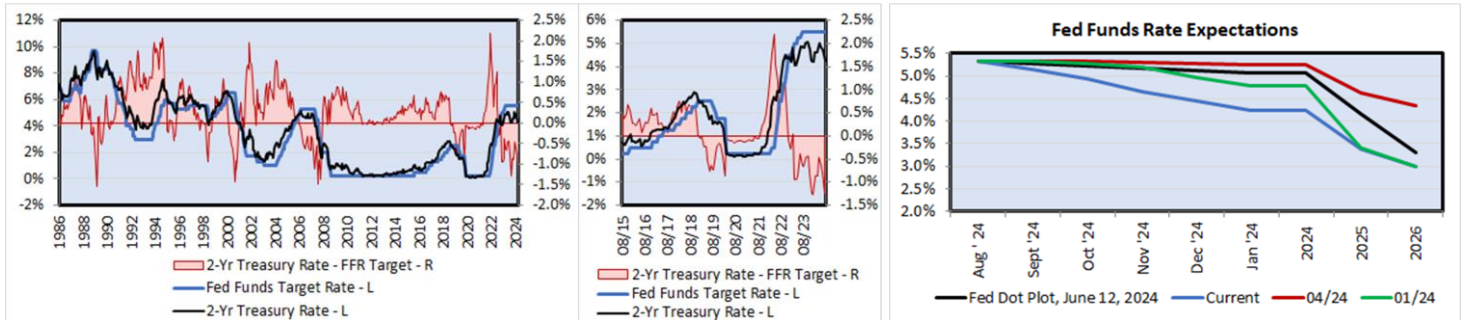


ISS EVA, FactSet, CBOE, S&P; FFR = Fed Funds Rate

## Be Careful What You Wish For

It appears a foregone conclusion that the Federal Reserve will lower the Fed Funds Rate (FFR) in September. The two-year Treasury Note rate is below the Fed Funds Rate, and **this 2-year rate is normally a pretty good predictor of the future FFR**. The Fed Funds futures market also expects a decrease.

### 2-Year Treasury Note and Fed Funds Futures Expect FFR to Decline

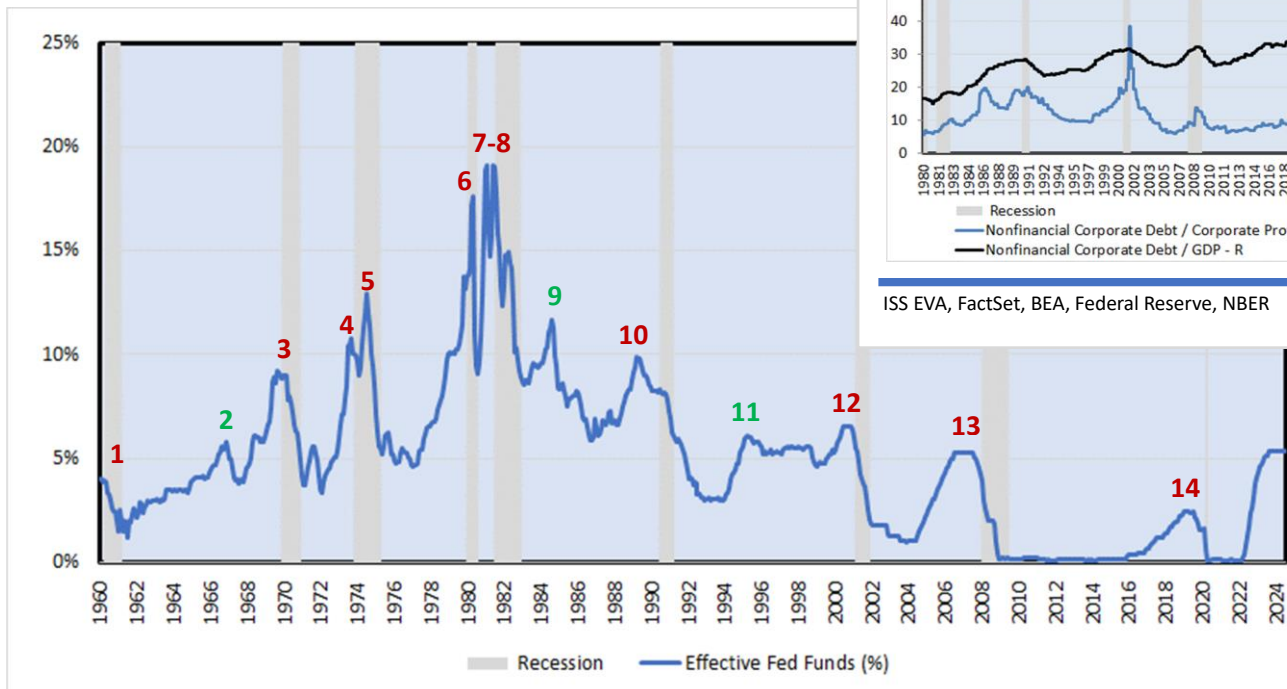


ISS EVA, FactSet, Federal Reserve, FFR = Fed Funds Rate

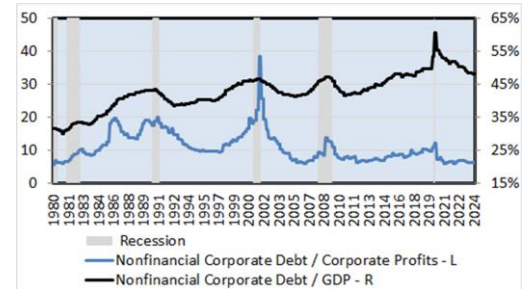
The better question at this point is whether lower interest rates will help or not. Are lower rates something to cheer? Looking at history, the answer is "no." 11 of the past 14 reductions in the effective Fed Funds Rate led or occurred during recessions.

While lower rates may benefit consumers with variable rate credit cards, **S&P 500 corporations refinanced at low rates (3.7% for 2024 estimated by Goldman Sachs)**. **Maturities have been extended** and **non-financial corporate debt to profits is low**.

### Be Careful What You Wish For: 11 of 14 Reductions in Effective FFR Led or Occurred during Recessions



### Business Debt to Profits Is Low



ISS EVA, FactSet, BEA, Federal Reserve, NBER

ISS EVA, FactSet, Federal Reserve, NBER

## Will a Lower Fed Funds Rate Help Housing?

While the rates banks borrow from each other – the Fed Funds Rate – may decline, mortgage rates are not set based on the FFR. Instead, the 10-year Treasury Note rate is a better benchmark. Currently, the 30-year mortgage spread to the 10-year Treasury Note is about 2.8%, compared to the average of 1.8% since 1971, or 1% high. The 10-year Treasury Note spread to the FFR is a negative 1.4%, compared to an average of 1.0%, or 2.4% too low. Given this, one could argue that, if the FFR doesn't move, **mortgage rates should rise 1.4% (2.4% - 1.0%), or that mortgage rates shouldn't change**, as they are already pricing in a 1.4% drop in the FFR to close to what the Fed Funds future curve (top right of prior page) suggests we'll be at in 2025.

While lower interest rates may be welcomed by first-time home buyers, **the average effective rate on mortgages in the US was 4.1% in Q1**, so unless the Fed lowers rates significantly they will still be higher for existing mortgage holders and the existing home sales could remain low. However, on the margin, the recent flattening in mortgage rates has helped. Trends in existing housing sales and starts tend to follow, with a six-month lag, mortgage rates. *The rise in housing*

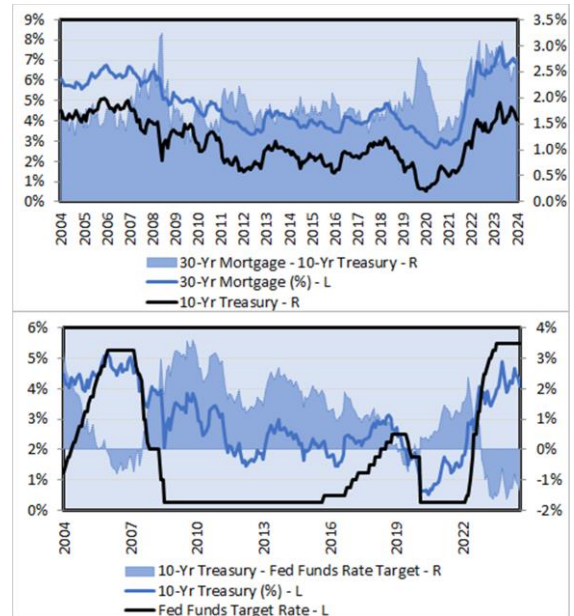
*starts – which has perhaps a greater impact on the economy per home than existing home sales – are up because of a dearth of homes for sale. New*

home shipments are running at about 20% higher than a year ago, and existing home sales growth is closing in on no growth (it was negative) as the change in interest rates peaked.

We also are dealing with low housing affordability, which is a function of rates and prices. **Lower rates would help affordability, but lower prices would depress wealth even if it helps inflation** (stubbornly high rents and owners' equivalent rents have kept inflation high).

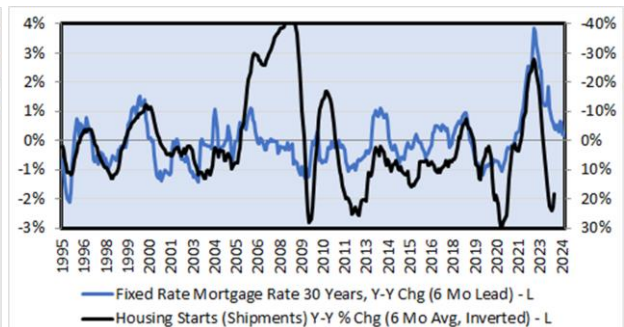
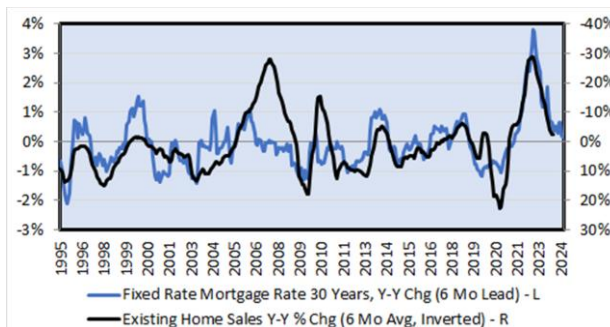
Overall, housing is very important to the economy as it drives various spending and employment, is quite volatile (a large change on a small percent of the economy can matter), and **about 45% of US homeowner wealth (2021) is tied up in the value of homes**.

### Mortgage Rates High vs 10-Year, but 10-Year < Fed Funds Rate



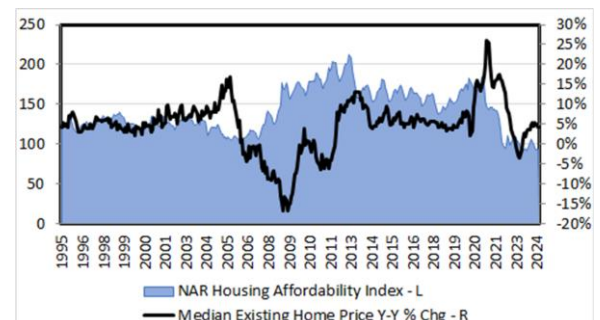
ISS EVA, FactSet, Freddie Mac

### Will Lower Rates Help Housing?



ISS EVA, FactSet, Freddie Mac, National Association of Realtors, US Census Bureau

### Housing Affordability is Depressed



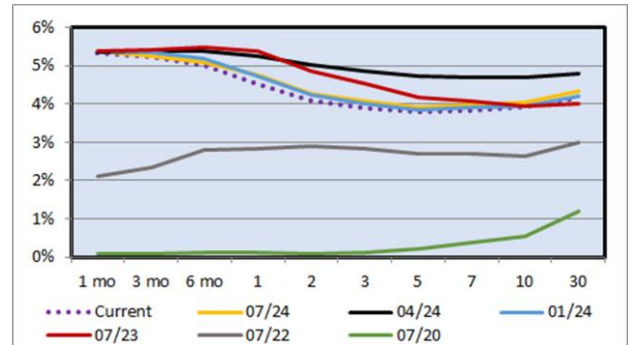
ISS EVA, FactSet, NAR



## The Yield Curve Is Forecasting a Recession

The yield curve, based on the 10-year rate versus the FFR, is at its maximum inversion for this cycle. The 10-year rate has been below the FFR for 21 months, which is longer than any cycle since the 1960s. Also, the 10-year rate has been below the 2-year Treasury rate for 25 months.

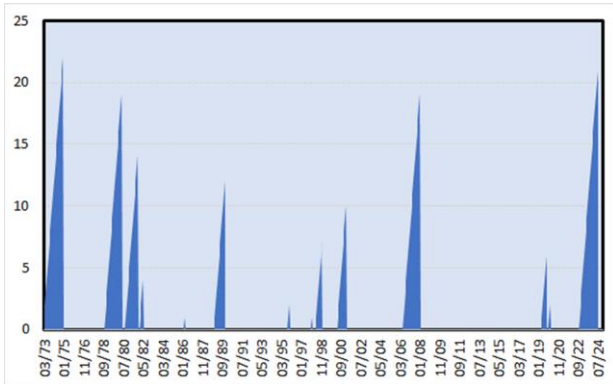
### The Yield Curve at Max Inversion This Cycle



ISS EVA, FactSet

Some prefer analyzing the 10-year rate less 2-year rate (10-2) over the 10-year minus the FFR (10-FFR). The 10-2 is a purer gauge of market expectations since the market has more control over the 2-year rate and the Fed controls the FFR. However, we have a shorter history of the 2-year to assess its batting average.

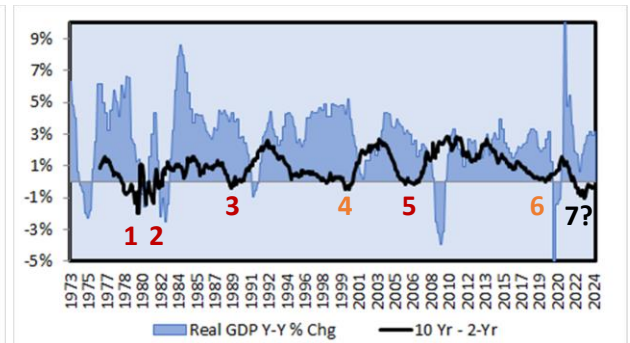
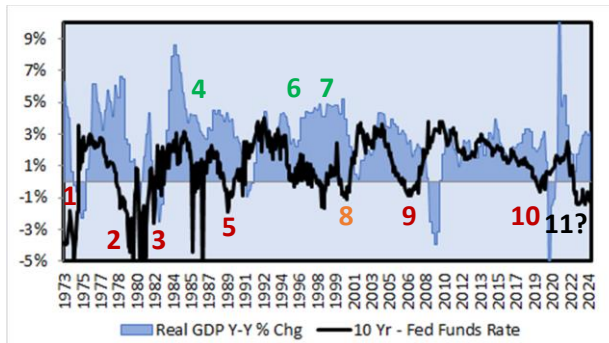
### 10-Yr – FFR Inverted Near a Record in Months



ISS EVA, FactSet, Federal Reserve

Yield curve inversion has a pretty good record at predicting a negative one-year change in real GDP. The 10-FFR's batting average is 7 for 10 and the 10-2 is even better.

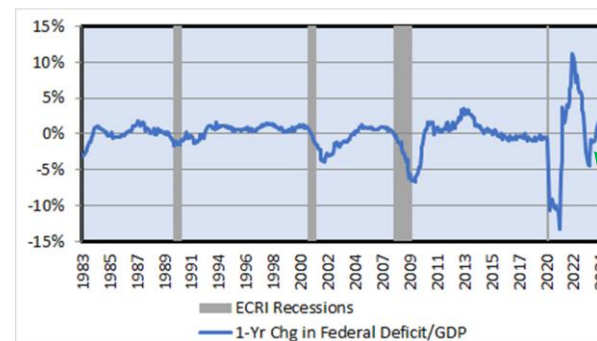
### Yield Curve Has a Pretty Good Track Record



ISS EVA, FactSet; Note: GDP growth shown as one year change instead of annualized quarterly change

Why hasn't the YC rule worked this time? I've written about how the unemployment rate hasn't spiked because job openings to the number of people unemployed was 2.03 to 1 in March 2022 and it would take time to become balanced (it's now 1.14 and the unemployment rate is rising). Consumers plodded along spending without rising unemployment, plus they reduced their savings rate (it's now low) and spent out of extra cash (stimulus checks are now gone) or borrowed (debt is rising but obligations to income are still OK). Plus, in this expansion, fiscal policy has been unusually strong and the wealth effect from housing and the stock market has been high.

### Fiscal Policy (Deficit) Grew Until Recently



ISS EVA, FactSet, BEA, DOL, NBER

## Yield Curve's Batting Average Is...

### 10-FFR Forecasts Recessions and a Few Non-Recessions

Date EPS "Top"	Date EPS "Bottom"	Date YC (10-Yr-FFR) Inversion "Start"	Last Mo YC (10-Yr-FFR) Inverted	Date YC (10-Yr-2-Yr) Inversion "Start"	Last Mo YC (10-Yr-2-Yr) Inverted	Date Recession "Start" or Drop in Real GDP	Date Recession "Bottom" or of Real GDP	Earnings Drawdown	Months Earnings Drawdown	Months Earnings Recovery	Total Months of Recession or Drop in Real GDP	Total Amount Real GDP Down	10-Yr - FFR						10-Yr - 2-Yr					
													Months Inverted	Max Inversion	Mo Inversion Leads Recession	Mo Normalization Leads Recovery	Mo Normalization Leads Recession	Mo Normalization Leads Negative Y-Y % Chg GDP	Months Inverted	Max Inversion	Mo Inversion Leads Recession	Mo Normalization Leads Recovery	Mo Normalization Leads Recession	Mo Normalization Leads Negative Y-Y % Chg GDP
12/1966	9/1967	5/1966	3/1967					-4.5%	9	9			11	-0.8%										
9/1969	12/1970	4/1968	4/1970			12/1969	11/1970	-12.9%	15	17	12	-1.1%	24	-2.4%	(20)	(8)	5	(5)						
9/1974	9/1975	3/1973	12/1974			11/1973	3/1975	-14.8%	12	9	17	-3.1%	22	-5.0%	(8)	(3)	14	9						
3/1980	3/1981	11/1978	5/1980	8/1978	4/1980	1/1980	7/1980	-4.6%	12	7	7	-2.2%	19	-6.9%	(14)	(2)	5	2	21	-2.0%	(17)	(3)	4	1
12/1981	3/1983	10/1980	5/1982	9/1980	6/1982	7/1981	11/1982	-19.1%	15	13	17	-2.6%	18	-6.5%	(9)	(6)	11	5	18	-1.4%	(10)	(5)	12	6
12/1984	6/1987	3/1986	3/1986					-13.3%	30	5			1	-0.1%										
6/1989	12/1991	1/1989	12/1989			7/1990	3/1991	-36.7%	30	31	9	-1.4%	12	-1.4%	(18)	(15)	(6)	(12)	7	-0.4%	(18)	(18)	(9)	(15)
9/1995	12/1995	11/1995	12/1995					-3.5%	3	7			2	0.0%										
9/1997	12/1998	6/1998	10/1999	6/1998	6/1998			-7.2%	15	6			8	-1.1%					1	-0.1%				
9/2000	12/2001	6/2000	3/2001	2/2000	11/2000	3/2001	11/2001	-54.0%	15	29	9	-0.4%	10	-1.3%	(9)	(8)	1		10	-0.5%	(13)	(12)	(3)	
8/2007	3/2009	7/2006	1/2008	6/2006	5/2007	1/2008	6/2009	-91.9%	21	29	18	-4.0%	19	-0.8%	(18)	(17)	1	(8)	12	-0.2%	(25)	(25)	(7)	(16)
9/2011	12/2011					1/2011	9/2011	0.0%	3	1	6	-0.2%												
3/2012	9/2012							-2.3%	6	7														
						1/2014	3/2014				3	-0.3%												
9/2014	3/2016							-18.4%	18	17														
6/2019	9/2019							-1.8%	3	2														
12/2019	12/2020	5/2019	2/2020			3/2020	6/2020	-32.5%	12	5	2	-9.1%	8	-0.6%	(10)	(2)	-	(1)						
3/2022	12/2022	11/2022	7/2024	7/2022	7/2024	1/2022	6/2022	-12.7%	9	19	6	-0.6%	21	-1.5%					25	-1.1%				

Spellman, FactSet, BEA, Federal Reserve, NBER, Shiller earnings data

Note 1: 2-year data only available since 1976

Note 2: During some inverted periods, the yield curve fluctuated between inverted and normal and only inverted months are counted

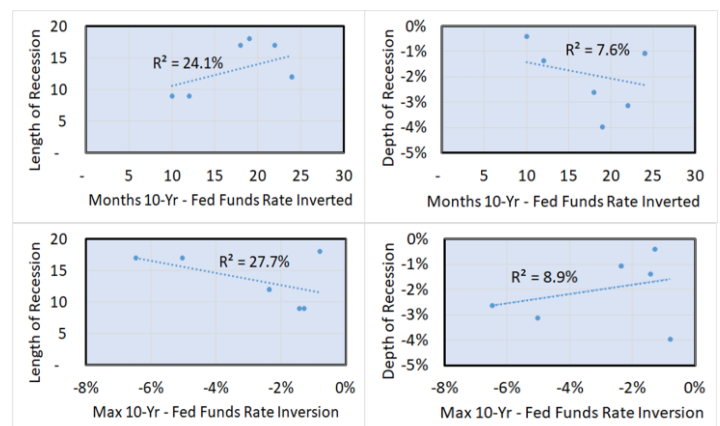
Note 3: An inversion or normalization lead is denoted with a negative number and a lag with a positive number

The table above shows that there have been a few times (1966-7, 1986, 1995, and 1998-9) when the 10-FFR inverted and there was not a recession, but otherwise its batting average record is perfect. During two of those "misses," the curve was inverted for only 1 or 2 months, and in all four cases, while there may not have been an economic recession, there was an earnings recession. The 10-FFR was associated with 13 of 17 earnings declines and only one of the four EPS "misses" were major (18.4% drop in earnings per share from 2014-16), as the others were less than 2.3% drawdowns. Given that earnings declined in 2022, one could argue that the inverted yield curve was accurate on earnings but not on a recession (at least not yet).

The 10-2 has a good record at recessions besides 1998 and 2020. In 1998, the yield curve was only negative for one month, so it is hardly a miss (i.e., calling a recession when there wasn't one). It missed calling the 2020 recession but barely, as the 10-2 was 0.0% in August 2019. Importantly, a few weeks ago the 10-2 almost went positive when the 10-year dipped after the latest jobs report. The 10-2 has normalized (10-year rate greater than 2-year rate) before three of the last four recessions, including in 2020.

The current 10-FFR inversion is long. **Longer reversions have been related to longer recessions.** Conversely, this inversion is relatively shallow, and shallower inversions are related to shorter recessions. Perhaps an upcoming recession will be average in length?

### Longer/Deeper Inversions = Longer Recessions?



ISS EVA, FactSet, BEA, Federal Reserve

Note: Data excludes outlier exogenous Covid-19 recession in 2020 and includes only inversions related to recessions

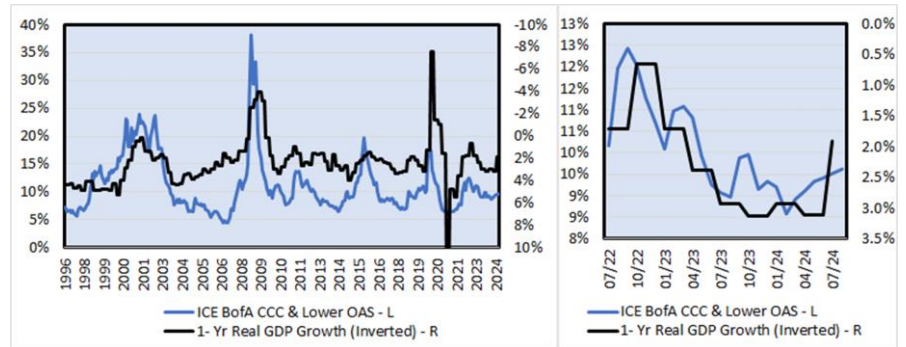
## Risky Credit Spreads Widening Relative to Low Investment Grade

On page 1, I showed that **high-yield credit spreads don't lead the economy**. High-yield bonds are a cross between stocks and a bond. They provide a coupon, but also benefit from possible capital appreciation from credit upgrades. While the spread does not provide insight into the future economy – other than “when spreads are low the economy tends to be strong and vice versa” – **it does help gauge investor expectations**.

Even the riskiest corporate bonds – those rated CCC and lower – move with GDP, and as you can see on the rightmost graph, spreads have begun to widen.

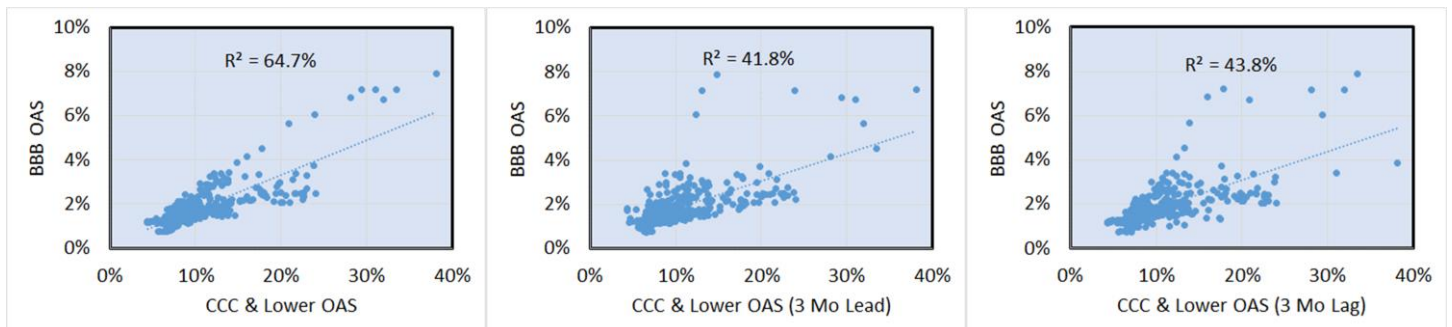
I hypothesized that interest rates for CCC and lower may widen before BBB as those investing in CCC and lower should pay the most attention to risk. When I found that the coincident correlation is best and the further the lead the worse the relationship, I then reversed the theory and tried lagging CCC and lower to BBB spreads. The second theory was based on the notion that those who don't venture out to high yield (the BBB investors) are risk adverse and quicker to recognize problems. This theory failed as well and coincident correlation was still best. The CCC & lower spread to BBB is widening as GDP growth has peaked

### CCC & Lower OAS Widening as Real GDP Growth Has Peaked



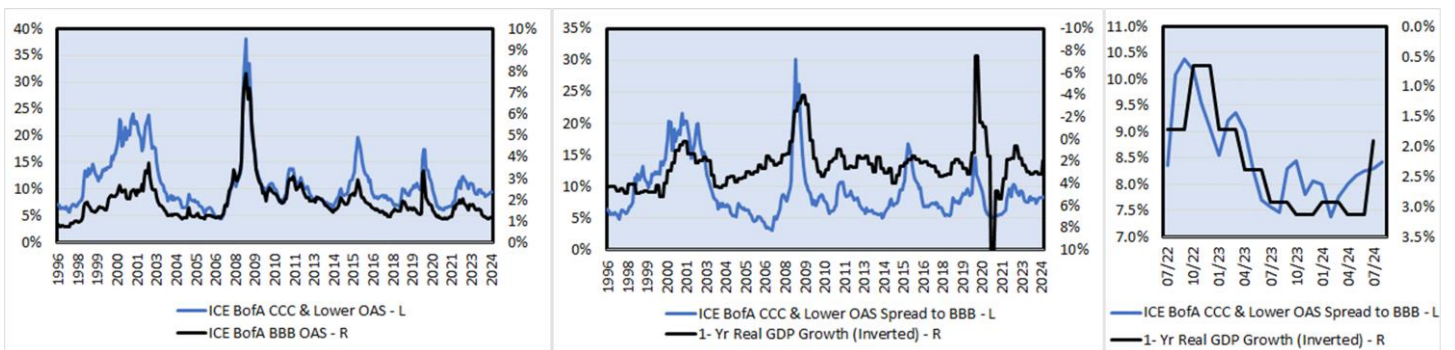
Spellman, FactSet, BEA, Federal Reserve Bank of St. Louis, ICE B of A; OAS = option-adjusted spread

### CCC & Lower and BBB Spreads Move Together



Spellman, FactSet, Federal Reserve Bank of St. Louis, ICE B of A; OAS = option-adjusted spread

### CCC & Lower Spread to BBB Starting to Widen as Real GDP Growth Has Peaked



Spellman, FactSet, BEA, Federal Reserve Bank of St. Louis, ICE B of A; OAS = option-adjusted spread



## Investment Takeaways

The market is **supposed** to reflect the present value of future EVA plus capital (this is equivalent to the present value of future cash flow as shown in "[How EVA Can Enhance DCF and P/E Analysis: A Case Study](#)"), yet the equity market and bond market (non-government sectors) often behave more like coincident indicators to the economy.

It appears that the stock market is cheering expectations of a September cut in the Fed Funds rate, but cuts are normally a precursor to a recession rather than a savior to the economy. Perhaps a FFR cut will lower mortgage rates, but mortgage rates are priced more on the 10-year Treasury Note rate than the FFR, and the 10-FFR spread is quite low (lower than mortgage rates are high to the 10-year), so it's uncertain whether mortgage rates will decline.

The yield curves (10-FFR and 10-2) appear to be forecasting a recession, and they have a pretty good track record even if not perfect. When the 10-FFR inversion missed and forecasted a non-recession, it has still been associated with an earnings drawdown. So, government bond investors, who probably care most about risk, appear to be good at forecasting downside risk. The 10-FFR has been negative for 21 months, which is somewhat long. It maxed out at a low of -1.5%, which is higher (less negative) than average. Unfortunately, longer and shallower inversions have been associated with longer recessions.

We can't rely on credit markets for help in forecasting the economy, unless perhaps as a contrary indicator at tops and bottoms. Those who take the most risks (investing in CCC & lower-rated bonds) and less risk (those in BBB-rated bonds) tend to band together with their thoughts. However,, when OAS on CCC & lower-rated bonds widens relative to BBB-rated bonds, the economy is normally cooling – an environment much like the last several months.

Wishing you the best navigating these interesting times!

Coach



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