RECESSION BAROMETER

May 24, 2019

Spotlight on : Various Yield Spreads

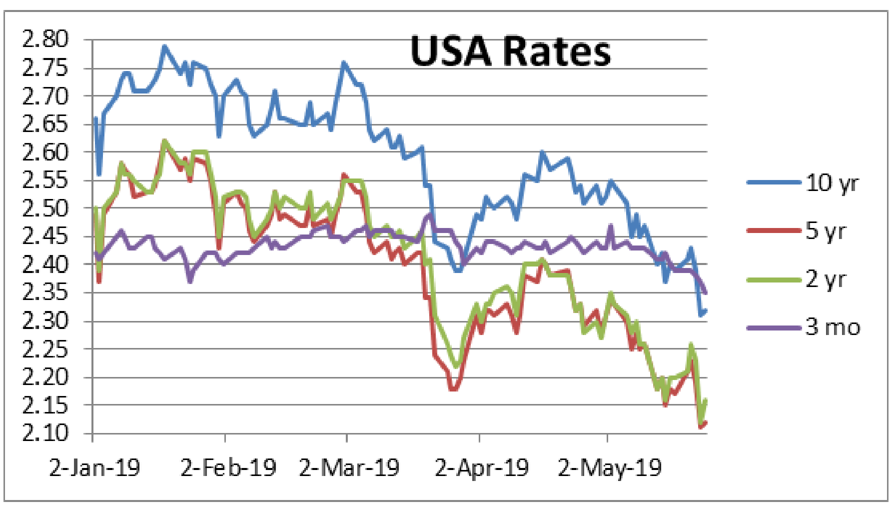
INVERTED YIELD SPREADS

We have been highlighting three yield spreads to measure "Inversion" and the possibility of a subsequent Economic Recession.

These three yield spreads feature U.S. Treasuries for: (1) 10-year/2-year; (2) 10-year/3 month; and (3) 5-year/2-year.

Let us have a look at the spreads for each of these three yield ratios in their respective charts since the beginning of 2019. First, an all-inclusive chart:

January 2, 2019 – May 24, 2019

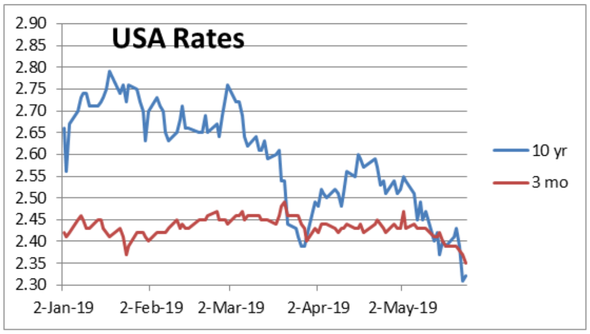


Lookey here!!! The 10-year rate (**blue**) has fallen again below the 3-month rate (**purple**). Anomaly! After a brief period of equality, the 5-year rate (**rust**) has again dipped below the 2-year rate (**green**). Anomaly!

10-Year/3-Month Rates and Spread

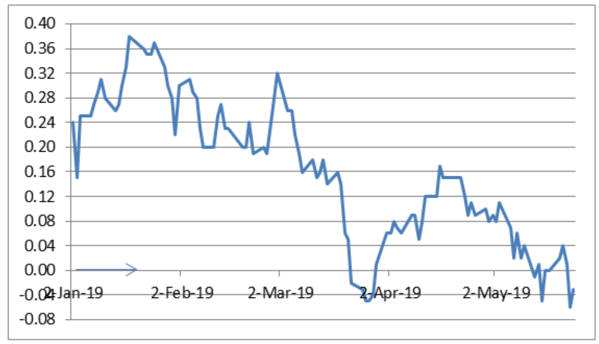
January 2, 2019 - May 24, 2019

10-Year/3-Month



January 2, 2019 - May 24, 2019

USA SPREAD: 10-Year/3-Month



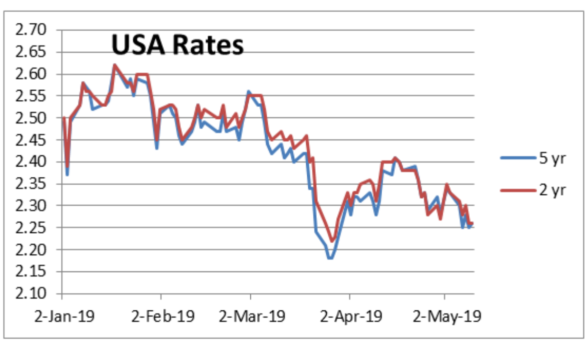
10-year rates have been falling since the beginning of the year (which has really helped the stock market). The arrow on the second chart denotes the inversion point: 0.00x and less.

So: we have inversion once again with these two metrics.

5-Year/2-Year Rates and Spread

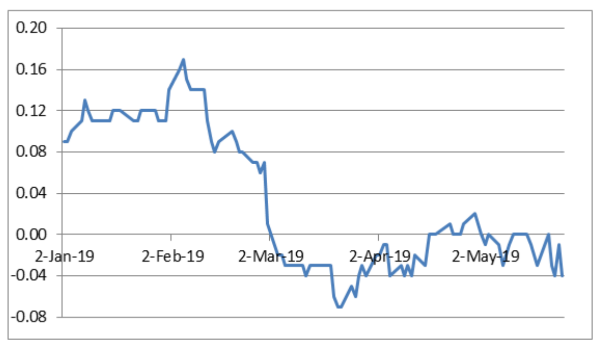
January 2, 2019 - May 24, 2019

5-Year/2-Year



January 2, 2019 - May 24, 2019

USA SPREAD: 5-Year/2-Year



The 5-year and the 2-year rates have been moving pretty much in lock-step since the beginning of the year. The second chart shows the spread between the two rates with all data points below the 0.00x line denoting an inversion situation.

So: we continue to have an inversion with these two metrics.

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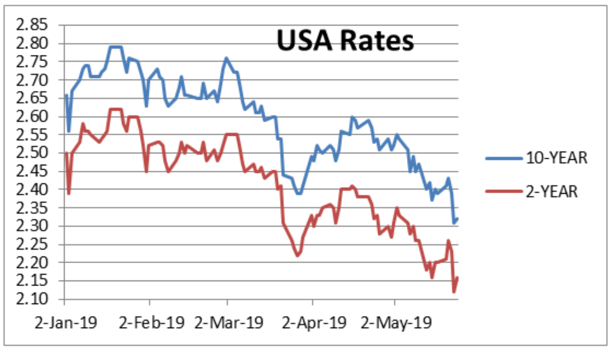
10-Year/2-Year Rates and Spread

This is the yield spread that is the most widely followed.

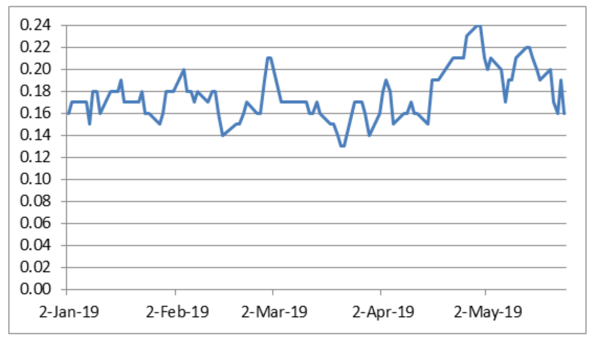
January 2, 2019 – May 24, 2019

10-Year/2-Year



January 2, 2019 – May 24, 2019

10-Year/2-Year USA SPREAD



The first chart shows the overall decline in 10-year and 2-year interest rates since the beginning of the year. The second chart shows that the spread between the 10-year and 2-year rates has stayed fairly stable since January 2, starting out at 0.16x and is still there on May 24.

So: there is definitely no sign of inversion on the horizon for these two metrics.

COMMENT: *The above charts for three different rate spreads show that there is not a consensus by using just these three comparisons. As a result, we have extended our recession monitoring by comparing a myriad of yield spreads.*

ANALYZING VARIOUS YIELD SPREADS

There are a myriad of different yield spreads that can be calculated. With so many iterations possible, which one(s) is(are) the most relevant? It is too easy to choose one iteration, eg., 10-year/6-month or 10-year/3-month (both currently “inverted”) and declare “Inversion!”, while both the 10-year/5-year and the 10-year/2-year yield spreads do not currently show inversion.

We have extended our yield-spread watch to include a total of **24** yield spread ratios, ranging all the way from 30-year/20-year to 1-year/1-month.

Interestingly, more than half, now 15 in total, are in an inverted state and all are at the short-end of the curve.

Q: What is the market saying? What does this tell us?
A: It could suggest that the market is expecting that there will be a rate cut by the Fed, which would send short-end rates lower. It might also suggest that the short-end is waiting for the longer-end to “catch up” and “join it” in inversion.

COMMENT: *If we were to choose only one yield spread to measure "Inversion", it would be the 10-year/2-year ratio. However, we are, instead, going to monitor two different series of spreads. The First, which we highlighted earlier in this report, is a weighted average of 3 spreads: 10-year/2-year (70%), 10-year/3-month (20%), and 5-year/2-year (10%). The Second is an equal-weight average of 12 spreads: 30-year/20-year, 30-year/10-year, 20-year/10-year, 20-year/5-year, 10-year/2-year, 10-year/3-month, 5-year/2-year, 5-year/3-month, 2-year/1-year, 2-year/3-month, 1-year/6-month, and 1-year/3-month.*

Here are the ratios for all 12 of these spreads over the past four weeks:

	30Y 20Y	30Y 10Y	20Y 10Y	20Y 5Y	10Y 2Y	10Y 3M	5Y 2Y	5Y 3M	2Y 1Y	2Y 3M	1Y 6M	1Y 3M
May 3, 2019	0.18	0.39	0.21	0.42	0.21	0.11	0.00	-0.10	-0.08	-0.10	-0.05	-0.02
May 10, 2019	0.19	0.42	0.23	0.44	0.21	0.04	0.00	-0.17	-0.10	-0.17	-0.09	-0.07
May 17, 2019	0.19	0.43	0.24	0.46	0.19	0.00	-0.03	-0.22	-0.13	-0.19	-0.09	-0.06
May 24, 2019	0.18	0.43	0.25	0.45	0.16	-0.03	-0.04	-0.23	-0.17	-0.19	-0.06	-0.02

As we noted previously, all of the spreads at the short end are "inverted" and a few mid periods have joined them this past week. Note that the spread that caused so much consternation in late March, i.e., the 10-year/3-month, is back to being inverted.

We have refined our Recession Barometer table in order to reflect better the readings to measure "inversion" and the prognosis for going into recession.

The revised table is presented on the next page.

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RECESSION BAROMETER READING

We have devised a barometer to depict the status of where we believe the economy is in forecasting an economic recession. The barometer runs from 0 to 10 in 0.5 intervals, with 0 being the least worrisome level for recession expectations, and 10 reflecting that an inversion has occurred. Each barometer numeric is associated with a range of yield spreads.

RECESSI0N BAROMETER

Interest Rate Yield Spread	Barometer Reading	
>1.00x	0	
0.94x - 1.00x	0.5	
0.87x - 0.93x	1	
0.79x - 0.86x	1.5	
0.71x - 0.78x	2	
0.64x - 0.70x	2.5	
0.57x - 0.63x	3	
0.51x - 0.56x	3.5	
0.46x - 0.50x	4	
0.41x - 0.45x	4.5	
0.36x - 0.40x	5	
0.31x - 0.35x	5.5	
0.26x - 0.30x	6	
0.21x - 0.25x	6.5	
0.17x - 0.20x	7	
0.13x - 0.16x	7.5	
0.09x - 0.12x	8	
0.06x - 0.08x	8.5	
0.03x - 0.05x	9	
0.00x - 0.02x	9.5	
<0.00x	10	Inversion!

The above matrix is applied to our yield spread ratios to derive our Barometer Readings.

Here are the readings from the two spread series. As shown, there were no changes this past week.

Date	Weighted 3 U.S. Spreads Reading	Unweighted 12 U.S. Spreads Reading
May 3, 2019	7.0x	8.0x
May 10, 2019	7.5x	8.5x
May 17, 2019	8.0x	8.5x
May 24, 2019	8.0x	8.5x

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Recession Forecast

The following chart shows when a recession could occur for various post-inversion dates. For inversion, we are monitoring two yield spread ratios, a weighted and an unweighted measurement. These barometer readings, currently 8.0x and 8.5x, are rising and are getting ever closer to 10!

Our current "guess" is that a recession could occur 15 months post-inversion (shown in Red). This is a "moving target" and will change with each ensuing month. It will also change with changes in global economic conditions.

Right now, the global economy is showing some signs of slowing while the U.S. economy keeps performing well. But how much better can the U.S. figures get? Longer term, this is not sustainable.

Forecasting the Commencement of a Recession

If an inversion occurs during the current month …	… then a recession will begin at stated date projections.					
Current Month	**Inversion +12 Months**	**Inversion +15 Months**	**Inversion +18 Months**	**Inversion +24 Months**	**Inversion +30 Months**	**Inversion +36 Months**
May/2019	May/2020	**August/2020**	Nov/2020	May/2021	Nov/2021	April/2022

Source: eResearch

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