RECESSION BAROMETER

June 21, 2019

Spotlight on : Interest Rates & Yield Spreads

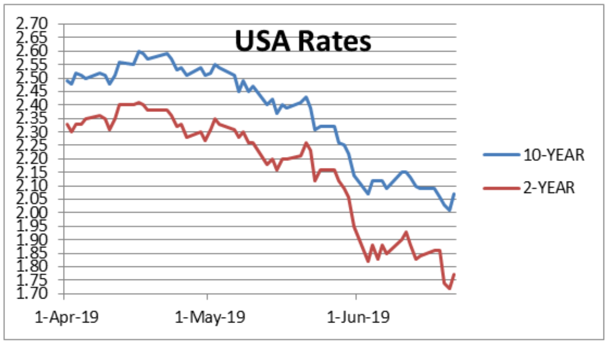
COMMENT: *Last week, U.S. interest rates fell … until Friday. Then they rose and almost recouped the previous four-day decline. The 10-year started the week at 2.09%, dipped to 2.01% and ended the week at 2.07%. The 2-year began at 1.86% and ended at 1.77%. The Spread narrowed briefly to 0.20x then jumped on Wednesday and stayed elevated for the rest of the week to end at 0.30x. The Spread has not been this high since November 2, 2018.*

COMMENT: *In Canada, interest rate movement was more subdued. The 10-year/2-year started the week at 1.44%/1.39% and ended at 1.45%/1.40%, up 0.01% for each maturity. However, the Spread on Wednesday got down to just 0.02x, but ended the week at 0.05x. There is now a 0.25x difference between the U.S. Spread and the Canadian Spread.*

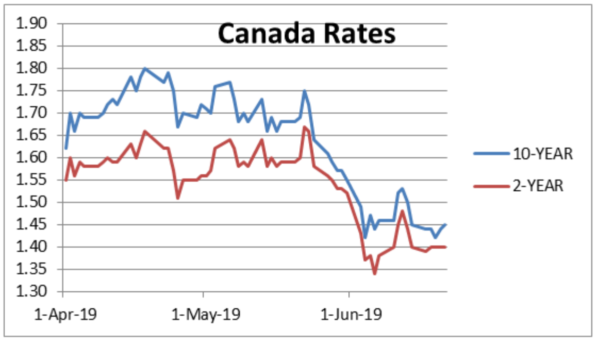
INTEREST RATES

The two charts below show the trend in 10-year and 2-year interest rates since April 1, 2019.

April 1, 2019 – June 21, 2019



April 1, 2019 – June 21, 2019



Observation: The overall trend in both countries is still down. The charts clearly show that the Spread in Canada is much narrower than it is in the United States. The difference in interest rates between Canada and the USA is 0.62% for the 10-year maturity and 0.37% for the 2-year maturity, which gives a Spread difference of 0.25x in the USA's favour. Which means, based on these numbers, Canada is much closer to generating an Inversion for the 10-year/2-year metric than is the USA.

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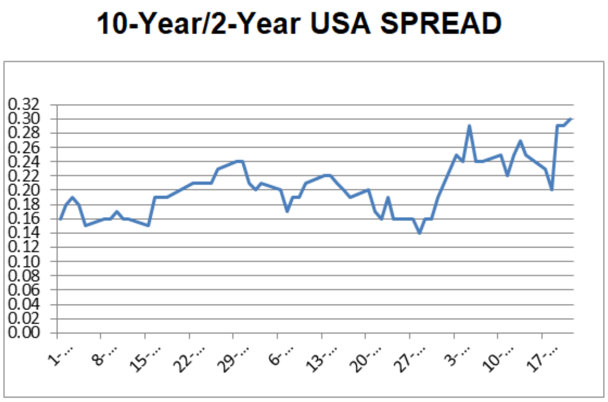
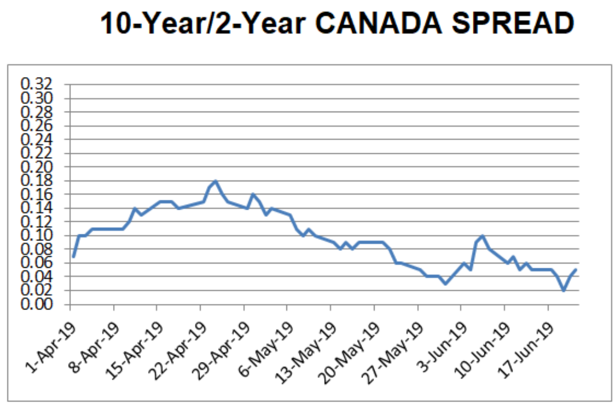
Let us have a look at the charts for these Spreads since April 1, 2019.

April 1, 2019 – June 21, 2019



April 1, 2019 – June 21, 2019



Observation: The U.S. chart clearly shows a rising Spread whereas the Spread is declining in Canada.

COMMENT: *As Readers of the Recession Barometer will know, we monitor a significant number of interest rates and yield curves over various maturities. Our stance on Inversion and, therefore, the (probable) subsequent Economic Recession, is predicated on our Recession Barometer reflecting the collective Inversions for our yield curve universe. Indeed, some of the yield curves are currently inverted. However, we need a consensus of Inversions before we initiate our Count-Down to an Economic Recession. Further discussion on this issue lies ahead.*

ANALYZING VARIOUS YIELD SPREADS

We track a myriad of different yield spreads. In total, our yield-spread watch includes a total of **24** yield spread ratios, ranging all the way from 30-year/20-year to 1-year/1-month. Many of the spread ratios are in an inverted state and all are at the short-end of the curve.

As was widely reported in the media this past week, this suggests that the market is expecting that, soon, there will be a rate cut or cuts by the Fed, which would send short-end rates lower. This past week, after the Fed announcement, longer-term interest rates (5-year to 30-year) rose the most; intermediate-term rates (1-year to 2-year) rose a little bit; and short-term rates (1-month to 6-month) actually declined.

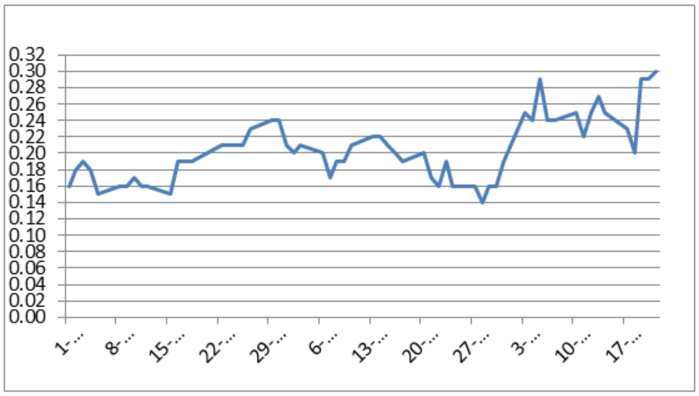
COMMENT: *We have altered our approach to monitoring yield spreads to measure "Inversion". We now have THREE Series of spreads. We added the metric that we have always maintained was the most useful, and that is the 10-year/2-year ratio. To begin the Count-Down to Recession, we require all three of the Series to be in an inverted state. Our three different* ***series*** *of Spreads are as follows: The First Spread Series is the 10-year-2-year Spread. The Second Spread Series is a weighted average of 3 Spreads: 10-year/2-year (40%), 10-year/3-month (40%), and 5-year/2-year (20%). (We changed the weighting in the previous Series!) The Third Spread Series 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.*

First Spread Series: The 10-Year/2-Year Spread

The first chart shows the 10-year/2-year Spread for U.S. Treasuries since April 1, 2019. The Spread stands at a recent high of 0.30x.

April 1, 2019 – June 21, 2019

10-Year/2-Year USA SPREAD



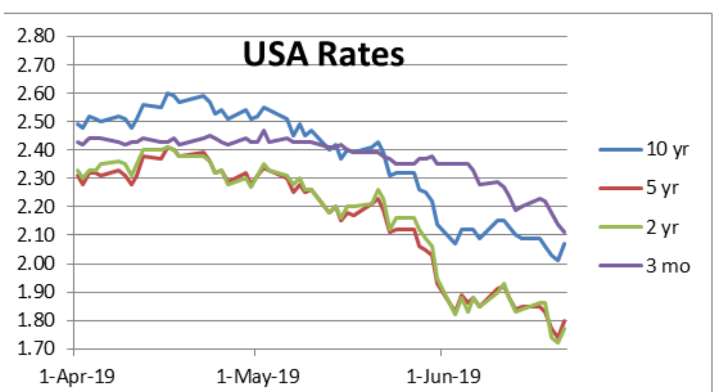
Second Spread Series: Weighted Average Of Three Spreads

Our Second Spread Series highlights 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. We weight these three Spreads at 40%/40%/20%.

The chart below shows all four rates since April 1, 2019.

April 1, 2019 – June 21, 2019



Observation: In a normal market, the 10-year would be the highest rate, then the 5-year, and followed by the 2-year, and the 3-month. The most surprising aspect of the above chart is that the 3-month rate is at the top of the chart and, therefore, has the highest rate of all of the maturities. With the Fed announcement this past week, there was a move towards some form of normalcy. But there is still a long way to go. The 10-year rate (**blue**) is now approaching the 3-month rate (**purple**), and the 5-year rate (**rust**) is starting to pull ahead of the 2-year rate (**green**).

Third Spread Series: Equal-Weight Average Of Twelve Spreads

As previously mentioned, we have chosen an equal-weight average of 12 spreads to monitor Inversion. Here are the ratios for all 12 of these spreads over the past eight weeks:

	30Y	30Y	20Y	20Y	10Y	10Y	5Y	5Y	2Y	2Y	1Y	1Y
	20Y	10Y	10Y	5Y	2Y	3M	2Y	3M	1Y	3M	6M	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
May 31, 2019	0.19	0.44	0.25	0.46	0.19	-0.21	-0.02	-0.42	-0.26	-0.40	-0.14	-0.14
June 7, 2019	0.21	0.48	0.27	0.51	0.24	-0.19	0.00	-0.43	-0.12	-0.43	-0.18	-0.31
June 14, 2019	0.21	0.50	0.29	0.53	0.25	-0.11	0.01	-0.35	-0.16	-0.36	-0.18	-0.20
June 21, 2019	0.22	0.52	0.30	0.57	0.30	-0.04	0.03	-0.31	-0.18	-0.34	-0.10	-0.16

The table above shows that Inversions occur in 6 of the 12 yield spreads, but the Spreads are rising across the board.

COMMENT: *Just because an Inversion occurs, it is not automatic that a Recession follows. And, when an Inversion does occur, the average lag time to a Recession is 15 to 20 months. Also, if an Inversion occurs for just one day, is it automatic that the Recession Count-Down begins at that point? Or, should there be a certain number of days of a continuous Inversion to give confirmation? Also, which yield spreads do you choose?*

The number of Inversions across the spectrum is bad enough, but the following table should cause even more angst.

Date	OBFR	1 mo	2 mo	3 mo	6 mo	1 yr	2 yr	3 yr	5 yr	7 yr	10 yr	20 yr	30 yr
1-Mar-19	2.40	2.44	2.46	2.44	2.52	2.55	2.55	2.54	2.56	2.67	2.76	2.97	3.13
15-Mar-19	2.41	2.46	2.46	2.45	2.52	2.52	2.43	2.39	2.40	2.49	2.59	2.83	3.02
1-Apr-19	2.41	2.42	2.43	2.43	2.46	2.41	2.33	2.29	2.31	2.40	2.49	2.71	2.89
15-Apr-19	2.41	2.42	2.43	2.43	2.46	2.43	2.40	2.36	2.37	2.46	2.55	2.77	2.96
1-May-19	2.44	2.42	2.41	2.43	2.44	2.39	2.31	2.28	2.31	2.41	2.52	2.74	2.92
15-May-19	2.39	2.40	2.41	2.42	2.43	2.30	2.16	2.12	2.15	2.25	2.37	2.63	2.82
31-May-19	2.38	2.35	2.38	2.35	2.35	2.21	1.95	1.90	1.93	2.03	2.14	2.39	2.58
14-Jun-19	2.35	2.23	2.21	2.20	2.18	2.00	1.84	1.79	1.85	1.96	2.09	2.38	2.59
21-Jun-19	2.36	2.16	2.16	2.11	2.05	1.95	1.77	1.74	1.80	1.93	2.07	2.37	2.59

Note: The **green** numbers are the Overnight Banking Fund Rates (OBFR).
Note: The **red** numbers are those rates that are lower than the OBFR.

COMMENT: *The table above, in the first column, shows in* ***green*** *numbers, the federal overnight banking funds rate. (The overnight bank funding rate (OBFR) is calculated as a volume-weighted median of overnight federal funds transactions, Eurodollar transactions, and domestic deposits.) The* ***red*** *numbers are those rates that are below the overnight rate. This table illustrates the anomaly that exists in the current market. How could federal overnight fund rates be higher than 5-year or 10-year rates? Or any longer-dated rates? These Inversions suggest that a Recession is on its way. Additionally, across the board, every rate is LOWER than last week. This is the fifth week in a row that that has occurred. Rates are continuing to move down.*

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.

We present the readings from the three Spread Series in the table on the next page. As shown, and thanks to the Fed, the Spreads for all three Series widened considerably last week.

The recession reading for the First Spread Series dropped to 6.5x, for the Second Spread Series it dropped to 8.0x, and for the Third Spread Series it fell to 8.5x. No Inversion readings there!

	10Year/2Year U.S. Spread		Weighted 3 U.S. Spreads		Unweighted 12 U.S. Spreads	
Date	**Spread**	**Reading**	**Spread**	**Reading**	**Spread**	**Reading**
May 3, 2019	0.21	6.5x	0.13	7.5x	0.10	8.0x
May 10, 2019	0.21	6.5x	0.10	8.0x	0.08	8.5x
May 17, 2019	0.19	7.0x	0.07	8.5x	0.07	8.5x
May 24, 2019	0.16	7.5x	0.04	9.0x	0.06	8.5x
May 31, 2019	0.19	7.0x	-0.01	**10.0x**	-0.01	**10.0x**
June 7, 2019	0.24	6.5x	0.02	9.5x	0.00	9.5x
June 14, 2019	0.25	6.5x	0.06	8.5x	0.04	9.0x
June 21, 2019	0.30	6.0x	0.11	8.0x	0.07	8.5x

Recession Forecast

The following chart shows when a recession could occur for various post-inversion dates. For inversion, we are monitoring three yield spread ratios, a widely-followed two-maturity metric, a weighted reading, and an unweighted reading.

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

We are mindful that a substantial number of Spreads at the short-end are inverted. However, rates and spreads are currently rising, so there seems to be no need to change our 15-month Count-Down period once Inversion for all three Series occurs. This is not imminent.

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**
June/2019	June/2020	**Sept/2020**	Dec/2020	June/2021	Dec/2021	May/2022

Source: eResearch

Bob Weir, CFA: Contributing Analyst

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