

RECESSION BAROMETER

August 2, 2019

Spotlight on : Canadian Inversion

DICHOTOMY

Dichotomy is defined as a division or contrast between two things that are or are represented as being opposed or entirely different.

In Canada, we have an economic dichotomy.

Many Canadian economic indicators are positive. Elsewhere, conditions are not so bright. Continued U.S. economic growth is suspect, as evidenced by the Federal Reserve's recent interest rate cut. There are signs everywhere of slowing global growth, which would be exacerbated by a drawn-out trade and tariff war between the United States and China. Brexit is continuing to cause turmoil in Europe.

In contrast to the buoyant economic reports in Canada, Canadian yield Spreads are fast inverting. The market never (or very rarely) lies. Sometimes the market gets out of step, but not by much and never for long. Right now, the market is telling us that the economic outlook for Canada is not favourable. This dichotomy between positive economic indicators and negative yield Spreads is concerning.

Using our favoured 10-year/2-year Spread, Inversion in Canada has returned. For the past six consecutive business days, the yield on the 2-year maturity for Government of Canada bonds has exceeded the yield on the 10-year maturity for Government of Canada bonds. The Canadian 10-year/2-year yield curve ratio needs only a further four consecutive business days to reach our Inversion criterion of ten consecutive days in order to begin our Count-Down to Economic Recession in Canada

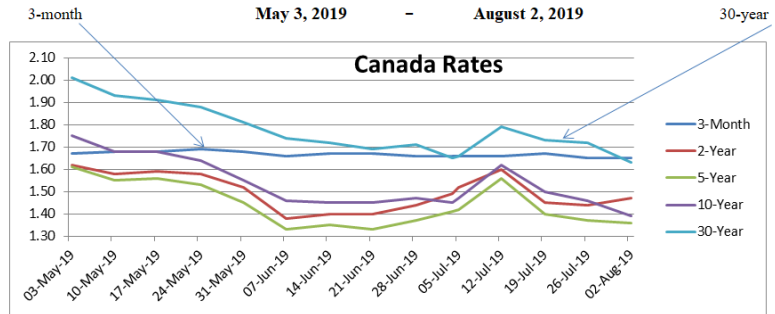
USA: In the United States, there is no economic dichotomy, but there is a deteriorating trend in many yield curve ratios for various maturities. Many yield curve ratios are inverted, but our favoured 10-year/2-year yield curve Spread, at its current 0.14x, is still well above the Inversion level of 0.00x.

Our overall U.S. Recession Barometer rose to an 8.5x reading from 7.5x over the past two weeks (10.0x denotes Inversion).

CANADIAN INVERSION

Here is a list and a chart of interest rates, on a weekly basis, since May 3, 2019 for various Canadian maturities:

	<u>3-Month</u>	<u>2-Year</u>	<u>5-Year</u>	<u>10-Year</u>	<u>30-Year</u>
03-May-19	1.67	1.62	1.61	1.75	2.01
10-May-19	1.68	1.58	1.55	1.68	1.93
17-May-19	1.68	1.59	1.56	1.68	1.91
24-May-19	1.69	1.58	1.53	1.64	1.88
31-May-19	1.68	1.52	1.45	1.55	1.81
07-Jun-19	1.66	1.38	1.33	1.46	1.74
14-Jun-19	1.67	1.40	1.35	1.45	1.72
21-Jun-19	1.67	1.40	1.33	1.45	1.69
28-Jun-19	1.66	1.44	1.37	1.47	1.71
04-Jul-19	1.66	1.49	1.41	1.45	1.65
05-Jul-19	1.66	1.52	1.42	1.47	1.66
12-Jul-19	1.66	1.60	1.56	1.62	1.79
19-Jul-19	1.67	1.45	1.40	1.50	1.73
26-Jul-19	1.65	1.44	1.37	1.46	1.72
02-Aug-19	1.65	1.47	1.36	1.39	1.63



Observation: Let us look at various yield ratios for August 2.

	02-Aug	
30-year/10-year	0.24	
30-year/5-year	0.27	
30-year/2-year	0.16	
30-year/3-month	-0.02	Inversion
10-year/5-year	0.03	
10-year/2-year	-0.08	Inversion
10-year/3-month	-0.26	Inversion
5-year/2-year	-0.11	Inversion
5-year/3-month	-0.29	Inversion
2-year/3-month	-0.18	Inversion

Conclusion: The three main yield curve ratios that we monitor for the possibility of a pending Economic Recession occurring in Canada are:

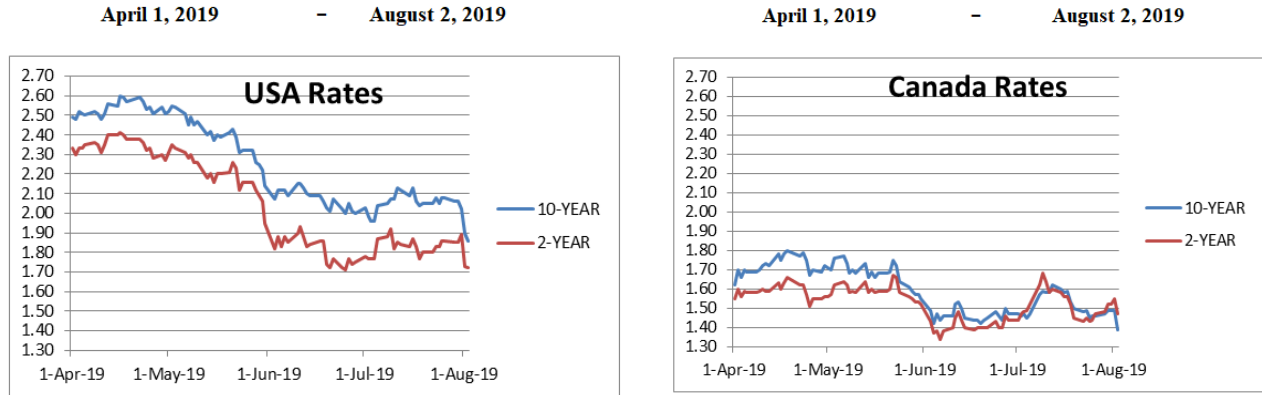
- (1) 10-year/2-year;
- (2) 10-year/3-month; and
- (3) 5-year/2-year.

All three of these metrics are inverted.

COMMENT: The Canadian 10-year/2-year yield curve ratio was the last of the three metrics to become inverted. It has been inverted for the past six business days. Should the ratio remain inverted for another four consecutive sessions, then we will declare "Inversion!" and begin our Count-Down to Economic Recession in Canada.

INTEREST RATES

The two charts below show the trend in interest rates in the United States and Canada since April 1, 2019, for 10-year and 2-year maturities. The two charts are presented with an identical scale.



Observation: U.S. rates are well above the corresponding Canadian rates. There has been much more “separation” in the U.S. rates than in Canada, particularly since near the end of May. There also was a significant decline in rates this past week, particularly notable in the USA. Even more notable is that the 2-year rate in Canada has risen above the 10-year, which means Inversion.

Next, we look at the actual rates this past week and then discuss the Spreads (since April 1).

-----USA-----				-----Canada-----			
Date	10-Year	2-Year	Spread	Date	10-Year	2-Year	Spread
29-Jul-19	2.06	1.85	0.21	29-Jul-19	1.47	1.48	-0.01
30-Jul-19	2.06	1.85	0.21	30-Jul-19	1.49	1.52	-0.03
31-Jul-19	2.02	1.89	0.13	31-Jul-19	1.49	1.52	-0.03
1-Aug-19	1.90	1.73	0.17	1-Aug-19	1.49	1.55	-0.06
2-Aug-19	1.86	1.72	0.14	2-Aug-19	1.39	1.47	-0.08

Observation: Interest rates have come down. Spreads have come down. Each day last week Canada was in Inversion.

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Here are the Spreads since April 1 for the 10-year and 2-year maturities.

April 1, 2019 - August 2, 2019

10-Year/2-Year USA SPREAD



April 1, 2019 - August 2, 2019

10-Year/2-Year CANADA SPREAD



Observation: The U.S. Spread is far from Inversion, which is denoted by the **red** line at 0.00x. After almost rebounding back to the June highs, U.S. Spreads have declined almost back to the December 2018 lows (not shown). In Canada, Inversion occurred between July 2 and July 10 inclusive, then out of Inversion until July 26, and then back into Inversion ever since.

COMMENT: *Inversion usually precedes an Economic Recession by an average of 15-20 months. But, when do you start the Count-Down from Inversion to the expected Recession? The eResearch criterion is that we start the Count-Down when there is an Inversion for ten consecutive business days, or when there is Inversion for 20 out of 30 business days.*

COMMENT: *In Canada, the first Inversion period lasted for seven consecutive business days. The second Inversion period, which is ongoing, has now lasted six consecutive business days. Also, since the initial Inversion on July 2, there has been Inversion for 13 out of 24 business days. So, we are monitoring (a) the current consecutive-day streak (and it sure looks like it will go ten consecutive business days), and (b) the 20 out of 30 business day benchmark.*

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THE eRESEARCH RECESSION BAROMETER

Our Recession Barometer for the United States reflects the average of three different yield spreads. These are:

- 10-Year/2-Year Spread
- Equal-Weight Average of Three Spreads: 20-Year/10-Year; 10-Year/3Month; and 5-Year/2-Year
- Equal-Weight Average of Twelve 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.

The Spreads from these three metrics are then averaged to derive the Reading for the Recession Barometer.

The table below shows how these metrics have evolved since the beginning of May 2019.

Date	<u>10Year/2Year U.S. Spread</u>		<u>3 U.S. Spreads</u>		<u>12 U.S. Spreads</u>		<u>Combined Spreads</u>	
	Spread	Reading	Spread	Reading	Spread	Reading	Spread	Reading
May 3, 2019	0.21	6.5 X	0.11	8.0 X	0.10	8.0 X	0.14	7.5X
May 10, 2019	0.21	6.5 X	0.09	8.0 X	0.08	8.5 X	0.13	7.5X
May 17, 2019	0.19	7.0 X	0.07	8.5 X	0.07	8.5 X	0.11	7.5X
May 24, 2019	0.16	7.5 X	0.06	8.5 X	0.06	8.5 X	0.09	8.0X
May 31, 2019	0.19	7.0 X	0.01	9.5 X	-0.01	10.0 X	0.06	8.5X
June 7, 2019	0.24	6.5 X	0.03	9.0 X	0.00	9.5 X	0.09	8.0X
June 14, 2019	0.25	6.5 X	0.06	8.5 X	0.04	9.0 X	0.12	7.5X
June 21, 2019	0.30	6.0 X	0.10	8.0 X	0.07	8.5 X	0.15	7.5X
June 28, 2019	0.25	6.5 X	0.07	8.5 X	0.04	9.0 X	0.12	7.5X
July 5, 2019	0.17	7.0 X	0.03	9.0 X	0.02	9.5 X	0.07	8.5X
July 12, 2019	0.28	6.0 X	0.10	8.0 X	0.07	8.5 X	0.15	7.5X
July 19, 2019	0.25	6.5 X	0.10	8.0 X	0.08	8.5 X	0.14	7.5X
July 26, 2019	0.22	6.5 X	0.08	8.5 X	0.07	8.5 X	0.12	8.0X
August 2, 2019	0.14	7.5 X	0.01	9.5 X	0.02	9.5 X	0.06	8.5X

CURRENT RECESSION BAROMETER READING, Week Ending August 2:

8.5x.

COMMENT: *The Combined Spread reading has risen 0.5x in each of the last two weeks. It has reached this 8.5x level twice before since May 1. The U.S. 10/2 Spread has halved since July 12. The equi-weight 3 selective Spreads and the equi-weight 12 selective Spreads are both very close to Inversion. However, even if both do go into Inversion in the near-term, our criterion is that the Count-Down to Economic Recession does not begin unless the 10-year/2-year Spread is in Inversion. It is not close to that at the present time.*

U.S. 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, an equal-weighted average of three spread readings, and an equal-weighted average of twelve spread readings.

Our criterion for declaring Inversion is that: (1) the Recession Barometer reading must be 10; and (2) two of the three Series must be inverted and one of these must be the 10-Year/2-Year Yield Curve.

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, the overall Recession Barometer Reading is 8.5x and the Spreads for all three Series are still positive. So, for the moment, there seems to be no need to change our 15-month Count-Down period once our Inversion criterion is reached. This looks like it is not going to be anytime soon.

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 +20 Months	Inversion +24 Months	Inversion +30 Months	Inversion +36 Months
August/2019	August/2020	November/2020	April/2021	August/2021	February/2022	August/2022

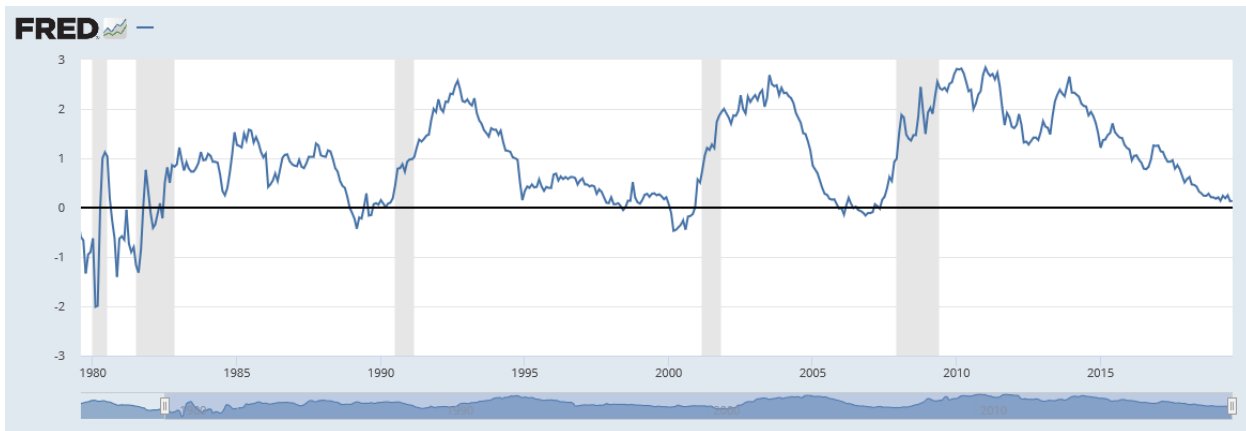
Source: eResearch

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U.S. Treasuries 10-Year/2-Year Yield Ratio

1. Since July 1, 1979 (40 Years)

Here is the 10-2 yield curve going back 40 years to August 1979. Inversions occur below the black “zero” line. The recessions are shaded. The chart clearly shows the “occurrence relationship” between Inversions and Recessions. Look how close to Inversion the current reading is.



Source: Federal Reserve Bank of St. Louis

2. Since August 1, 1999 (20 Years)

Here is a look at the 10-2 yield curve going back 20 years to July 1999. It shows the negative occurrences (below 0.0x) and the corresponding two recessions (shaded areas) that soon followed. Currently, despite the falling trend-line, there is still further to go to reach the inversion level and the possibility of a resulting recession.



Source: Federal Reserve Bank of St. Louis

The current ratio is 0.14x, down from 0.28x three weeks ago, but still comfortably above the 0.00x inversion level. As shown, the down-trend line was breached for a short time. To examine this more closely, let us look at the last six years, in the next chart, with the same down-trend line.

4. Since August 1, 2013 (6 Years)

The chart below shows that the 10/2 yield curve ratio is right at the down-trend line. Five weeks ago, in mid-to-late June, when the ratio reached and stayed around 0.30x, the ratio was ever so slightly above the down-trend line. Since then it has oscillated above and below and currently is below after the dramatic fall on Friday. Will the down-trend line prevail and the ratio stay below, or will it break out above? Our opinion is that with so many other Inversions out there, the ratio, now 0.14x, is most likely to move lower in the near-term. However, there is still a ways to go to reach Inversion at 0.00x.



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