RECESSION BAROMETER

August 9, 2019

Spotlight on : Canadian 10/2 Inversion

INVERSION WATCH: CANADA

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eResearch considers the 10-Year/2-Year yield curve ratio to be the most important metric to assess the possibility of an Economic Recession occurring in the near future. While we watch other yield curve ratios and factor in their performance, we believe a 10/2 inversion is the most reliable harbinger of recession.

To reflect the different economic parameters that exist in Canada versus the USA, we have developed different criteria for measuring the possibility of recession in Canada as opposed to the United States.

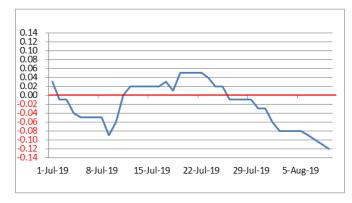
For Canada, our criterion for beginning a "count-down" to economic recession is for either (a) the 10/2 yield curve ratio to be negative for 10 straight business days, or (b) the ratio to be negative for 20 out of 30 consecutive business days.

This past week, (a) was achieved and (b) was almost achieved. The 10/2 yield curve ratio has been negative for 11 consecutive business days and negative for 18 out of 29 consecutive business days.

Thus, under our criteria, Canada is now on Economic Recession Watch!

Here is the 10-Year/2-Year Spread for Government of Canada bonds since July 1. The chart is provided below, and the actual rates and Spread are shown in table form on the next page.

July 1, 2019 – August 9, 2019



10-Year/2-Year CANADA SPREAD



Date	10-yr	2-yr	Spread
1-Jul-19	1.47	1.44	0.03
2-Jul-19	1.46	1.47	-0.01
3-Jul-19	1.47	1.48	-0.01
4-Jul-19	1.45	1.49	-0.04
5-Jul-19	1.47	1.52	-0.05
8-Jul-19	1.57	1.62	-0.05
9-Jul-19	1.59	1.68	-0.09
10-Jul-19	1.58	1.64	-0.06
11-Jul-19	1.58	1.58	0.00
12-Jul-19	1.62	1.60	0.02
15-Jul-19	1.60	1.58	0.02
16-Jul-19	1.58	1.56	0.02
17-Jul-19	1.59	1.56	0.03
18-Jul-19	1.53	1.52	0.01
19-Jul-19	1.50	1.45	0.05
22-Jul-19	1.48	1.43	0.05
23-Jul-19	1.49	1.45	0.04
24-Jul-19	1.45	1.43	0.02
25-Jul-19	1.46	1.44	0.02
26-Jul-19	1.46	1.47	-0.01
29-Jul-19	1.47	1.48	-0.01
30-Jul-19	1.49	1.52	-0.03
31-Jul-19	1.49	1.52	-0.03
1-Aug-19	1.49	1.55	-0.06
2-Aug-19	1.39	1.47	-0.08
5-Aug-19	1.39	1.47	-0.08
6-Aug-19	1.37	1.46	-0.09
7-Aug-19	1.24	1.34	-0.10
8-Aug-19	1.22	1.33	-0.11
9-Aug-19	1.24	1.36	-0.12

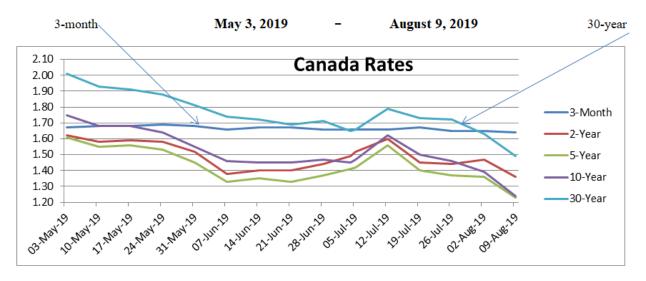
Observation: As shown by the negative red numbers, the 10/2 has been inverted for 11 consecutive business days, from July 26 to August 9. In addition, the Spread is widening, now at -0.12x, so a continuation of the Inversion is most likely.

Let us look at other Canadian interest rate Spreads. First a table of interest rates for various maturities since the beginning of May. The corresponding chart follows on the next page.

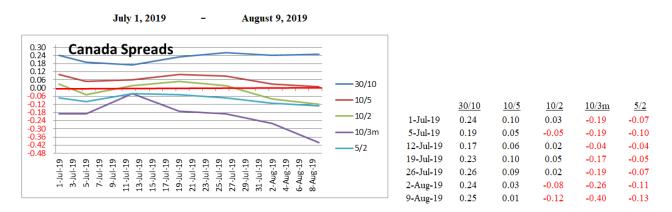
	<u>3-Month</u>	<u>2-Year</u>	5-Year	<u> 10-Year</u>	<u> 30-Year</u>
03-May-19	1.67	1.62	1.61	1.75	2.01
10-May-19	1.68	1.58	1.55	1.68	1.93
17-May-19	1.68	1.59	1.56	1.68	1.91
24-May-19	1.69	1.58	1.53	1.64	1.88
31-May-19	1.68	1.52	1.45	1.55	1.81
07-Jun-19	1.66	1.38	1.33	1.46	1.74
14-Jun-19	1.67	1.40	1.35	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
09-Aug-19	1.64	1.36	1.23	1.24	1.49



Here are the above interest rates in chart form:



Let us next look at some select Canadian Spreads, since July 1, in chart form with its accompanying numbers:



Here is a list of the Spreads of some current various Canadian maturities:

	<u>09-Aug</u>	
30-year/10-year	0.25	
30-year/5-year	0.26	
30-year/2-year	0.13	
30-year/3-month	-0.15	Inversion
10-year/5-year	0.01	
10-year/2-year	-0.12	Inversion
10-year/3-month	-0.40	Inversion
5-year/2-year	-0.13	Inversion
5-year/3-month	-0.41	Inversion
2-year/3-month	-0.28	Inversion

Observation: Our three main metrics are 10-year/2-year, 10-year/3-month, and 5-year/2-year. Their respective Spreads are -0.12x, -0.40x, and -0.13x, all firmly negative.

Here is a history of these and other maturities we follow, since July 1:	

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	<u>30/10</u>	<u>30/5</u>	30/2	<u>30/3m</u>	<u>10/5</u>	10/2	<u>10/3m</u>	5/2	<u>5/3m</u>	<u>2/3m</u>
01-Jul-19	0.24	0.34	0.27	0.05	0.10	0.03	-0.19	-0.07	-0.29	-0.22
05-Jul-19	0.19	0.24	0.14	0.00	0.05	-0.05	-0.19	-0.10	-0.24	-0.14
12-Jul-19	0.17	0.23	0.19	0.13	0.06	0.02	-0.04	-0.04	-0.10	-0.06
19-Jul-19	0.23	0.33	0.28	0.06	0.10	0.05	-0.17	-0.05	-0.27	-0.22
26-Jul-19	0.26	0.35	0.28	0.07	0.09	0.02	-0.19	-0.07	-0.28	-0.21
02-Aug-19	0.24	0.27	0.16	-0.02	0.03	-0.08	-0.26	-0.11	-0.29	-0.18
09-Aug-19	0.25	0.26	0.13	-0.15	0.01	-0.12	-0.40	-0.13	-0.41	-0.28

Observation: The 10-year/3-month and the 5-year/2-year have been negative since July 1 and the 10-year/2-year is now joining them.

Last week, we discussed Dichotomy. Dichotomy is defined as a division or contrast between two things that are or are represented as being opposed or entirely different.

We said, "In Canada, we have an economic dichotomy." There have been worsening interest rate Spreads, as shown in the tables and charts above, against a fairly positive economic background.

However, in our opinion, Canada's economic indicators cannot buck for long the trend that is playing out in the USA. U.S. economic indicators are not as strong as Canada's. And, now, Canada is seeing some cracks develop in its economic landscape.

Last week, Statistics Canada announced that the country's labour market shed 24,200 jobs in July. This is attributed largely to a decline in both retail and wholesale trade. This is the third month in a row that job declines have occurred. The unemployment rate rose to 5.7% in July from 5.5% in June. CMHC announced that the construction of new homes slowed in July, and StatsCan stated that the value of Canadian building permits declined by an unexpected 3.7% in June.

So, it looks like Canada's favourable economic conditions are becoming suspect. That means that the dichotomy between positive economic indicators and negative yield Spreads may be coming to an end. The economic indicators are starting to catch up to the market.

Comment: We are now in a Count-Down mode to an Economic Recession in Canada and, since Inversion usually precedes an Economic Recession by 15-20 months, in our opinion, an Economic Recession will occur in Canada between November 2020 and April 2021.

Forecasting the Commencement of a Recession

If an inversion occurs during the current month	then a recession will begin at stated date projections.					
Current	Inversion	Inversion	Inversion	Inversion	Inversion	Inversion
Month	+12 Months	+15 Months	+20 Months	+24 Months	+30 Months	+36 Months
August/2019	August/2020	November/2020	April/2021	August/2021	February/2022	August/2022
Source: eResearch						

DEFINING AN ECONOMIC RECESSION

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From Wikipedia:

In the United States, the National Bureau of Economic Research defines an economic recession as: "a significant decline in economic activity spread across the economy, lasting more than a few months, normally visible in real GDP, real income, employment, industrial production, and wholesale-retail sales.

In the United Kingdom, recessions are generally defined as two consecutive quarters of negative economic growth, as measured by the seasonal adjusted quarter-on-quarter figures for real GDP, with the same definition being used for all other member states of the European Union.

From The Canadian Encyclopedia:

In Canada, authorities use the same definition as Europe. A recession occurs when two or more successive quarters (six months) show a drop in real gross domestic product (GDP), i.e., the measure of total economic output in the economy after accounting for inflation.

COMMENT: At eResearch, we use the Canadian/European definition and define an economic recession as two successive quarters of negative real GDP growth.

INVERSION WATCH: USA

Our Inversion indicators are creeping closer to occurrence in the United States as well.

THE eRESEARCH RECESSION BAROMETER

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

- 1. 10-Year/2-Year Spread
- 2. Equal-Weight Average of Three Spreads: 20-Year/10-Year; 10-Year/3Month; and 5-Year/2-Year
- 3. 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.

<continued>



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

	10Year/2Year U.S. Spread		<u>3 U.S. Spreads</u>		<u>12 U.S</u>	12 U.S. Spreads		Combined Spreads	
Date	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	
August 9, 2019	0.11	8.0 X	-0.01	10.0 X	-0.02	10.0 X	0.03	9.0X	

CURRENT U.S. RECESSION BAROMETER READING, Week Ending August 9: 9.0X.

COMMENT: The Combined Spread reading has risen by 0.5x in each of the last three weeks. It is now at a recent all-time high of 9.0x. The U.S. 10/2 Spread has fallen by 2/3rds over the past seven weeks and now sits at 0.11x. The equi-weight 3 selective Spreads and the equi-weight 12 selective Spreads have both now reached Inversion. However, even with both into Inversion, our criterion is that the Count-Down to Economic Recession does not begin unless the 10-year/2-year Spread is also in Inversion. It is approaching that but still quite a ways off at the present time.

Bob Weir, CFA: Contributing Analyst

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RECESSION BAROMETER

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