CHART OF THE DAY

January 18, 2018

Spotlight on : 10-2 Yield Curve

COMMENT: *Yields in the USA were on the march last week. Not so in Canada. However, the "spreads" hardly changed at all in both countries, and they continue to stand well above the recession-prediction level.*

Recently, there have been increasing signs of economic slowdown, both globally and in the USA. In the United States, the Philadelphia Fed Business Conditions Index was up significantly in January, but the New York Fed Manufacturing Sentiment Index contracted, suggesting the government shut-down and the tariff wars with China were having an adverse effect. On Friday, the Michigan Consumer Expectations Index dropped precipitously, as did the Michigan Consumer Sentiment Index for January. Further, shipping volumes declined in December, perhaps reflecting deteriorating economic fundamentals in the USA. However, manufacturing and shipping both seasonally decline in January and then increase into the spring. So, no definite conclusions here.

Our "recession barometer" kicks in when the "spread" between the 10-year rate and the 2-year rate for Treasuries in the USA and Government of Canada Bonds in Canada reach 0.00x, which means that the yield on the 10s equals the yield on the 2s. If the 10s yield less than the 2s, an "inversion" occurs and then it is likely that a recession will soon follow. See JP Morgan reference comments included on page 5 of this report.

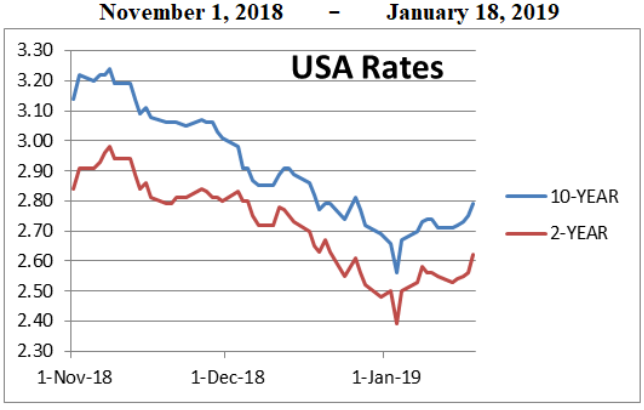
The yield curve is narrow but still comfortably above the 0.00x level required to denote a recession is near. Using guidelines set out later in this report, a recession will probably not occur until sometime around the end of Q1/2020 until the beginning of Q3/2020.

1. U.S. Treasuries

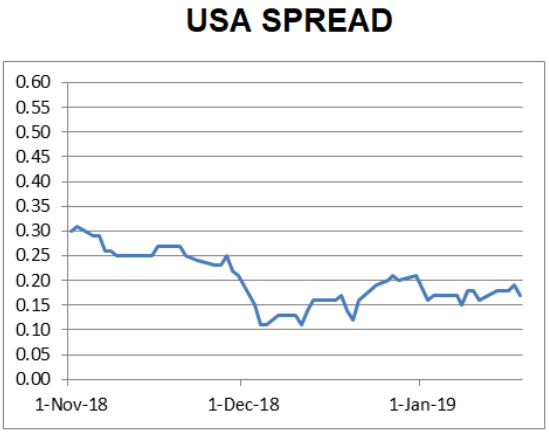
- The 10-year U.S. Treasuries yield rose each day last week, rising from 2.71% to 2.79%.
- The 2-year U.S. Treasuries yield did likewise, rising from 2.55% to close the week at 2.62%.
- The 10/2 yield spread ("diff" in the table on the next page) continued to be stable throughout the week and ended at 0.17x compared to 0.16x at the end of the previous week.
- The table below shows the trend in rates since November 1, 2018.
- The accompanying chart (at the bottom of the next page) is for the same time-frame. It shows clearly the falling trend in both the 10-year and the 2-year since their respective highs on November 8 until early January, with a subsequent and persistent rise after that.

DATE	USA		
	10-YEAR	2-YEAR	DIFF
1-Nov-18	3.14	2.84	0.30
2-Nov-18	3.22	2.91	0.31
5-Nov-18	3.20	2.91	0.29
6-Nov-18	3.22	2.93	0.29
7-Nov-18	3.22	2.96	0.26
8-Nov-18	3.24	2.98	0.26
9-Nov-18	3.19	2.94	0.25
12-Nov-18	3.19	2.94	0.25
13-Nov-18	3.14	2.89	0.25
14-Nov-18	3.09	2.84	0.25
15-Nov-18	3.11	2.86	0.25
16-Nov-18	3.08	2.81	0.27
19-Nov-18	3.06	2.79	0.27
20-Nov-18	3.06	2.79	0.27
21-Nov-18	3.06	2.81	0.25
23-Nov-18	3.05	2.81	0.24
26-Nov-18	3.07	2.84	0.23
27-Nov-18	3.06	2.83	0.23
28-Nov-18	3.06	2.81	0.25
29-Nov-18	3.03	2.81	0.22
30-Nov-18	3.01	2.80	0.21
3-Dec-18	2.98	2.83	0.15
4-Dec-18	2.91	2.80	0.11
5-Dec-18	2.91	2.80	0.11
6-Dec-18	2.87	2.75	0.12
7-Dec-18	2.85	2.72	0.13
10-Dec-18	2.85	2.72	0.13
11-Dec-18	2.89	2.78	0.11
12-Dec-18	2.91	2.77	0.14
13-Dec-18	2.91	2.75	0.16
14-Dec-18	2.89	2.73	0.16
17-Dec-18	2.86	2.70	0.16
18-Dec-18	2.82	2.65	0.17
19-Dec-18	2.77	2.63	0.14
20-Dec-18	2.79	2.67	0.12
21-Dec-18	2.79	2.63	0.16
24-Dec-18	2.74	2.55	0.19
26-Dec-18	2.81	2.61	0.20
27-Dec-18	2.77	2.56	0.21
28-Dec-18	2.72	2.52	0.20
31-Dec-18	2.69	2.48	0.21
2-Jan-19	2.66	2.50	0.16
3-Jan-19	2.56	2.39	0.17
4-Jan-19	2.67	2.50	0.17
7-Jan-19	2.70	2.53	0.17
8-Jan-19	2.73	2.58	0.15
9-Jan-19	2.74	2.56	0.18
10-Jan-19	2.74	2.56	0.18
11-Jan-19	2.71	2.55	0.16
14-Jan-19	2.71	2.53	0.18
15-Jan-19	2.72	2.54	0.18
16-Jan-19	2.73	2.55	0.18
17-Jan-19	2.75	2.56	0.19
18-Jan-19	2.79	2.62	0.17

November 1, 2018 – January 18, 2019



● The table below shows the "spread" between the 10-year yield and the 2-year yield since November 1. From 0.30x then, it fell to 0.10x in early January, then began to rise again. As the table on the previous page shows, this past week saw the spread remain stable and closed at 0.17x, and still well above the 0.00x benchmark that denotes the fear level for an impending recession.

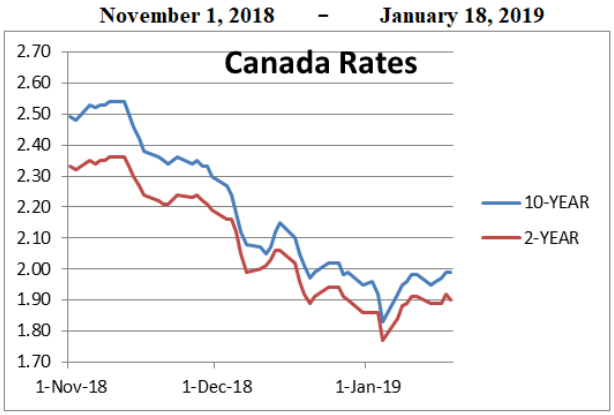


2. Government of Canadas

- Both the 10-year and the 2-year Canadian rates hardly moved this past week, the 10s ending at 1.99% and the 2s at 1.90%.

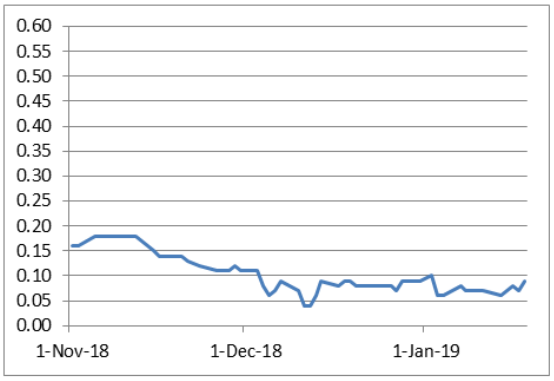
- The table below is from January 2, 2019, while the chart is for the same period as shown for the U.S. Rates, from November 1, 2018.

DATE	CANADA		
	10-YEAR	2-YEAR	DIFF
2-Jan-19	1.96	1.86	0.10
3-Jan-19	1.92	1.86	0.06
4-Jan-19	1.83	1.77	0.06
7-Jan-19	1.92	1.84	0.08
8-Jan-19	1.95	1.88	0.07
9-Jan-19	1.96	1.89	0.07
10-Jan-19	1.98	1.91	0.07
11-Jan-19	1.98	1.91	0.07
14-Jan-19	1.95	1.89	0.06
15-Jan-19	1.96	1.89	0.07
16-Jan-19	1.97	1.89	0.08
17-Jan-19	1.99	1.92	0.07
18-Jan-19	1.99	1.90	0.09



- The 10-year/2-year spread in Canadian rates was less stable this past week, going lower on Monday, then rising to end the week at 0.09x, still comfortably above the 0.00x recession level.

CANADA SPREAD



COMMENTARY

- A declining spread that approaches 0.00x or that actually goes negative (or inverts) signifies slowing economic growth and, even, the likelihood of a recession.

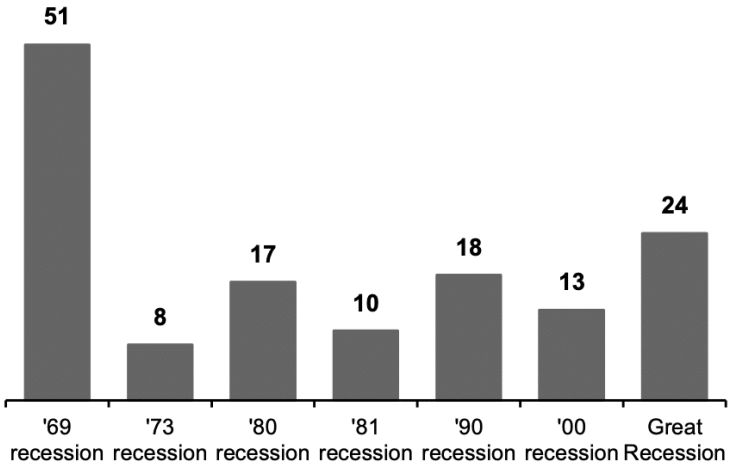
- A recession usually occurs a few months (or possibly up to two years) after the yield curve inverts (see the next chart and comment on the following page and the long-term chart on page 6).

<continued>

- The following chart was produced by J.P. Morgan Asset Management. It shows how long it has taken during each of the last seven recessions from the first yield curve inversion until the actual start of the recession.

CHART OF THE WEEK

Months between the first inversion of the yield curve and the start of a recession



- The average lag-time for all seven recessions was 20 months, although this was skewed somewhat by the 51-month lag shown by the 1969 recession. Omitting it, the average for the remaining six recessions was 15 months.

- Sometimes, a negative yield curve gives a false positive (again, see the long-term chart on page 6).

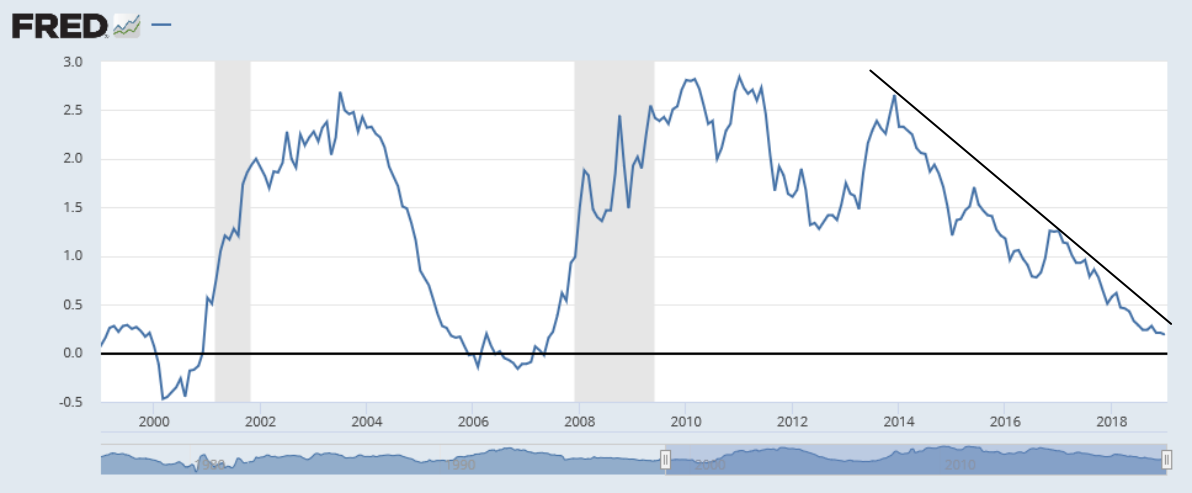
- A negative or inverted yield curve indicates that long-term debt instruments have a lower yield than short-term debt instruments, given that these debt instruments are of the same or similar credit quality.

- Historically, inversions of the yield curve have preceded most U.S. recessions. Thus, the yield curve is considered an important barometer for predicting business cycle turning points.

- Here is a recent quote from JP Morgan on the yield curve:
  Investors tend to fear yield curve inversion, looking at it as a signal that a recession is looming. However, we believe investors should not over-react to these recent moves for a few reasons. First, a flattening of the yield curve is common during rate hiking cycles, which is where we are today. Second, this time around, the shape of the curve has been distorted by central bank asset purchases around the world, making it a less trustworthy predictor of a recession. Lastly, the curve can stay flat for a long time before inverting and, even then, a recession can take a while to arrive. Over the last 7 recessions, it has taken an average of 20 months between the first inversion of the curve and the start of a recession.

U.S. Treasuries 10-2 Yield Ratio Since January 1, 1999 (20 Years)

Here is a look at the 10-2 yield curve going back 20 years to January 1999. It shows the negative occurrences (below 0.0x) and the corresponding 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. The current ratio is 0.17x, up slightly from 0.16x one week ago.



CONCLUSION

- Despite the discouraging down-trend that is currently occurring, U.S. economic growth still continues positively, although signs of global slowing could start to impact the USA as well as slower growth from its own making. Still, at this point, the possibility of a near-term recession in the United States seems remote. However, using the JP Morgan 20-month statistic as a yard-stick and January 1, 2019 as the starting point, a recession could occur in the USA sometime in the middle of 2020.

- If the statistic that causes a skewing in the calculation of the average is removed, the recalibrated average is 15 months, or around the end of Q1/2020.

Bob Weir, CFA
Contributing Analyst

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