

RECESSION BAROMETER

January 17, 2020

Spotlight on : Yield Curve Ratios - USA and Canada

1. U.S.A.

Interest Rates: 10-Year and 2-Year

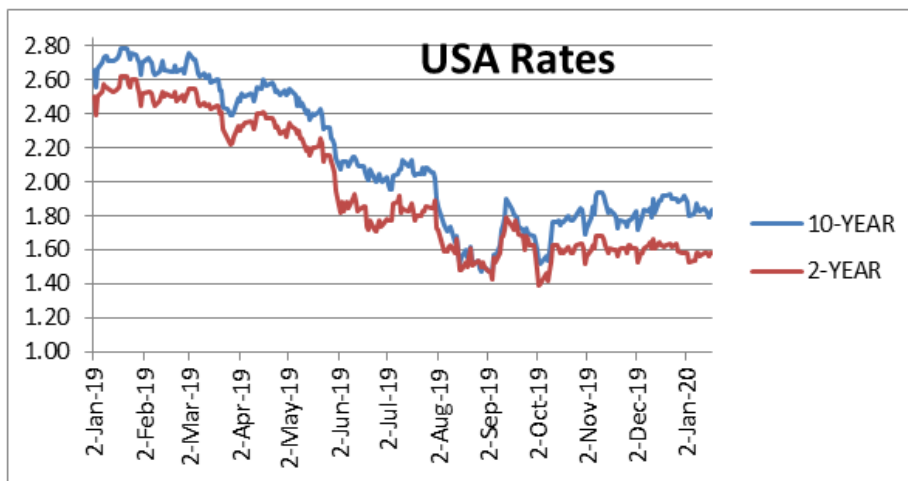
The following graph shows the trend in interest rates over the past year for the U.S. 10-Year and 2-Year maturities.

January 2, 2019

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January 17, 2020

10-Year/2-Year

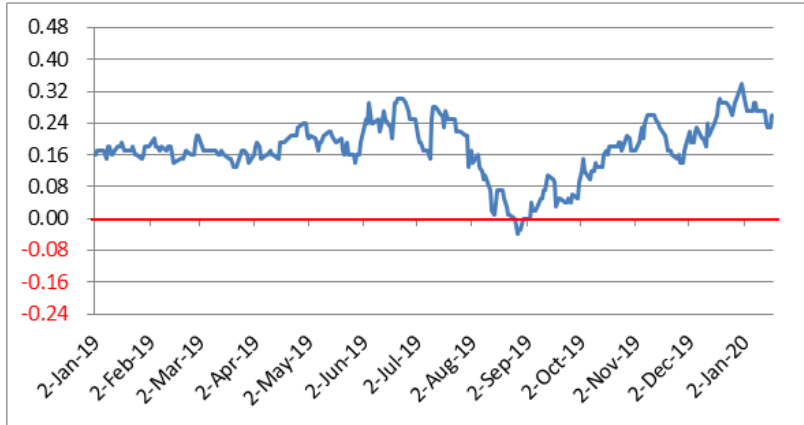


Observation: Since the beginning of 2019, the trend in U.S. 10-2 year interest rates fell consistently for nine months until the beginning of September with virtually no Spread differential at that time. Since then, both maturities have moved sideways and the Spread has ranged within a fairly narrow band.

The graph on the next page shows the Spread over the same time-frame.

January 2, 2019 - January 17, 2020

10-Year/2-Year USA SPREAD



Observation: The Spread ran a narrow course around 0.16x from the start of the year until mid-April, after which it moved with much greater volatility. For seven days at the end of August – beginning of September, the Spread was neutral at 0.00x or was negative or inverted (three days). After that brief flirtation with Inversion, the Spread has risen to a high of 0.34x on December 31 and currently stands at 0.26x.

Conclusion: Currently, there is no fear of an Economic Recession occurring in the United States in the foreseeable future if using this widely-acclaimed 10-Year/2-Year benchmark.

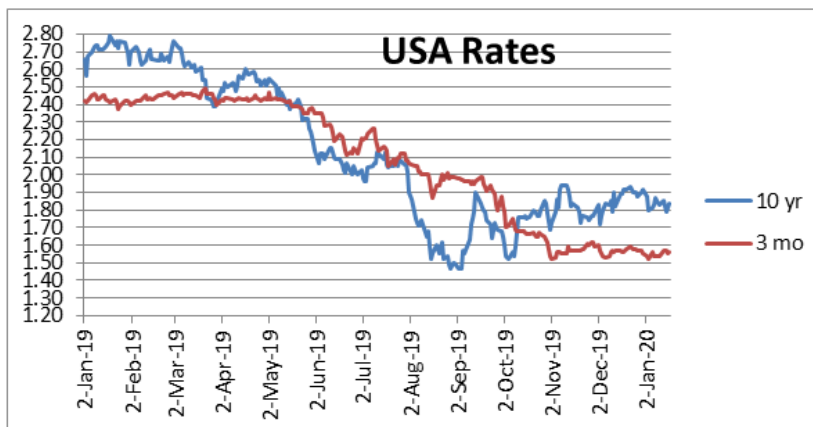
So, let us look at another one.

Interest Rates: 10-Year and 3-Month

We will use the same time-frame for the 10Y-3M maturities as we did for the 10Y-2Y maturities.

January 2, 2019 - January 17, 2020

USA Rates: 10-Year/3-Month



Observation: An Inversion occurs when a longer-dated maturity yields less than a shorter-dated maturity. In the above chart, there were two distinct periods when Inversion occurred: between mid-May and mid-July and then between the beginning of August and the first week of October. There was much conversation in the media that Inversion had occurred and an Economic Recession was assured. We never ascribed to that theory. We believe that it takes more than one metric in Inversion territory to state definitively that a recession is “in the cards”. See our comment “Recession Barometer: USA” on Page 6.

Let us look at the Spread for the 10Y-3M maturities and the Inversion occurrences.

January 2, 2019 - January 17, 2020

USA SPREAD: 10-Year/3-Month



Observation: That was a fairly long period that the Inversion existed and the Spread got quite negative reaching its nadir at -0.52x on August 28th. The Spread quickly narrowed after plumbing the depths. Inversion ceased on October 11 and the Spread reached a high of 0.39x quickly after, on November 8th. The current Spread is 0.28x.

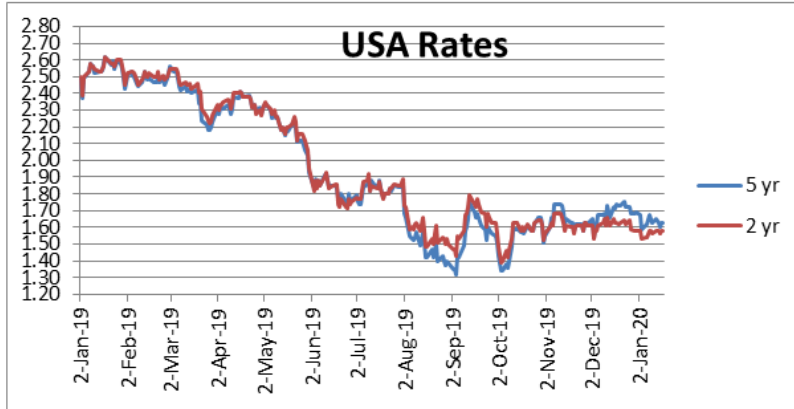
Another metric that exhibited considerable Inversion was the 5-Year/2-Year maturities.

Interest Rates: 5-Year and 2-Year

On the next page is the graph for the 5-year and 2-year maturities since the beginning of 2019.

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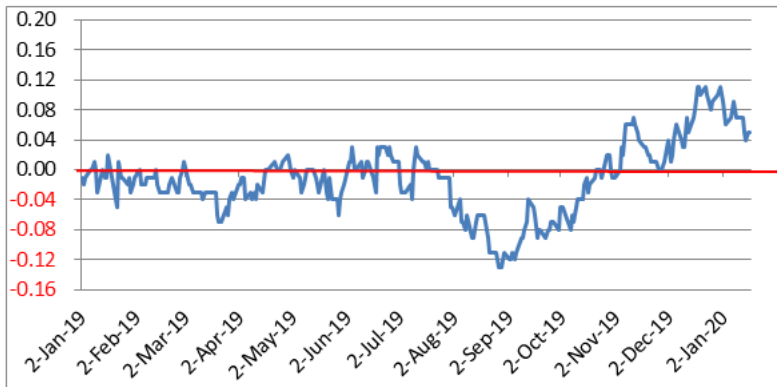
USA Rates: 5-Year/2-Year



Observation: For much of the past year the 5-year and 2-year interest rates have tracked one another very closely. There has been some Inversion and the Spread graph below shows this much better.

January 2, 2019 - January 17, 2020

USA SPREAD: 5-Year/2-Year

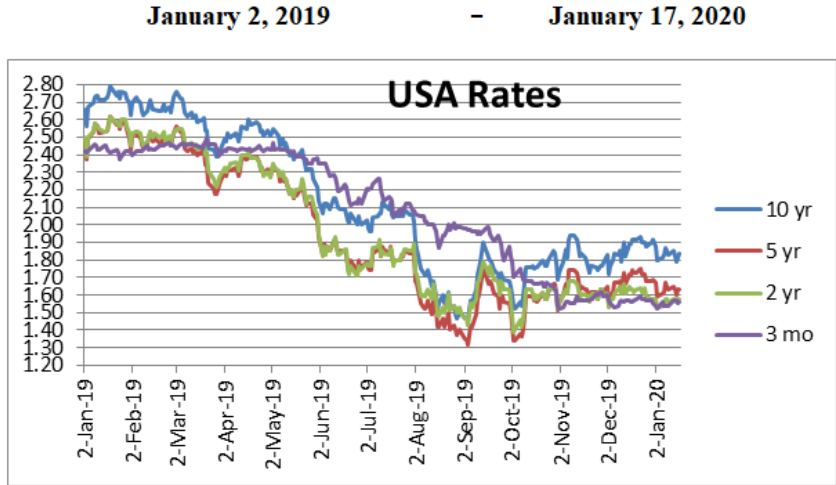


Observation: For much of the past year, the 5Y-2Y metric has exhibited Inversion. But the Spread never got too wide, and the metric exited Inversion for good on November 4. The Spread is currently 0.05x.

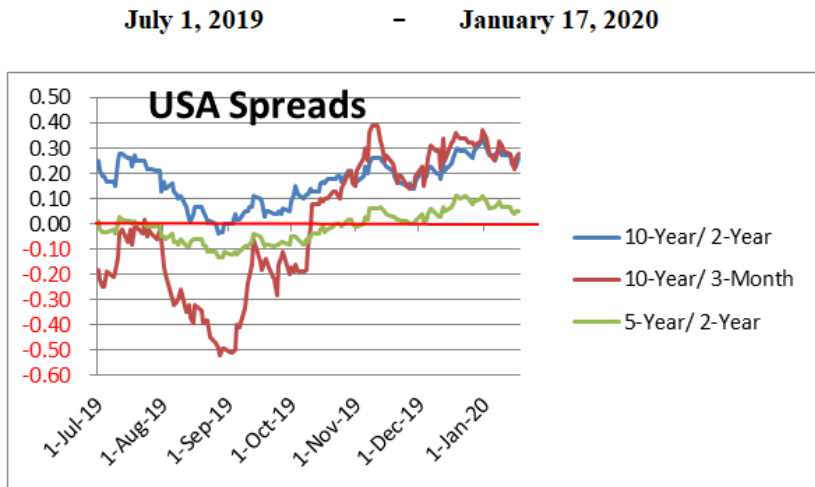
COMMENT: Although there were considerable periods of Inversion in both the 10Y-3M and the 5Y-2Y metrics, Inversion in the most important metric, the 10Y-2Y yield curve ratio, was a brief 3 days and was very shallow. We do not pinpoint only one metric as a predictor of a recession but use all three of the above metrics, and they are weighted in concert to judge whether an Economic Recession is imminent. We explain below.

Key Interest Rates: 10-Year/5-Year/2-Year/3-Month

The following chart shows the trend in interest rates in the USA since January 1, 2019 for our four key maturities: 10-years, 5-years, 2-years, and 3-months. After a protracted downward trend since the beginning of 2019, all four maturities have been moving sideways since about mid-October. As it should be, the four interest rates are in their proper order according to maturity.



The next chart shows the Spread for the 3 key maturity combinations of those same maturities and which were described above. Although we have assembled the data only from July 1, 2019, this does not change the observations or conclusions.



Observations: The 10-year/2-year (Blue line) yield curve ratio (our preferred metric) remains well above the Inversion level and is joined by the 10-year/3-month (Rust line) (our second-most preferred metric). The Spread for both of these metrics is well above the Inversion line (Red horizontal). The 5-year/2-year (Green line) yield curve ratio has moved above the Inversion line. Thus, all three metrics are not showing any tendency towards Inversion. Consequently, there are no thoughts of a recession Count-Down at this time. However, let us have a look at where our Recession Barometer for the USA currently stands.

Recession Barometer: USA

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 Combined Reading for the Recession Barometer.

The table below shows how these metrics have evolved since the beginning of June 2019. The Spreads are shown on a weekly basis.

Date	10Year/2Year U.S. Spread		3 U.S. Spreads		12 U.S. Spreads		Combined Spreads	
	Spread	Reading	Spread	Reading	Spread	Reading	Spread	Reading
31-May-19	0.19	7.0 X	0.01	9.5 X	-0.01	10.0 X	0.06	8.5 X
7-Jun-19	0.24	6.5 X	0.03	9.0 X	0.00	9.5 X	0.09	8.0 X
14-Jun-19	0.25	6.5 X	0.06	8.5 X	0.04	9.0 X	0.12	7.5 X
21-Jun-19	0.30	6.0 X	0.10	8.0 X	0.07	8.5 X	0.15	7.5 X
28-Jun-19	0.25	6.5 X	0.07	8.5 X	0.04	9.0 X	0.12	7.5 X
5-Jul-19	0.17	7.0 X	0.03	9.0 X	0.02	9.5 X	0.07	8.5 X
12-Jul-19	0.28	6.0 X	0.10	8.0 X	0.07	8.5 X	0.15	7.5 X
19-Jul-19	0.25	6.5 X	0.10	8.0 X	0.08	8.5 X	0.14	7.5 X
26-Jul-19	0.22	6.5 X	0.08	8.5 X	0.07	8.5 X	0.12	8.0 X
2-Aug-19	0.14	7.5 X	0.01	9.5 X	0.02	9.5 X	0.06	8.5 X
9-Aug-19	0.11	8.0 X	-0.01	10.0 X	0.00	9.5 X	0.03	9.0 X
16-Aug-19	0.07	8.5 X	-0.04	10.0 X	-0.03	10.0 X	0.00	9.5 X
23-Aug-19	0.01	9.5 X	-0.09	10.0 X	-0.06	10.0 X	-0.05	10.0 X
30-Aug-19	0.00	9.5 X	-0.11	10.0 X	-0.08	10.0 X	-0.06	10.0 X
6-Sep-19	0.02	9.5 X	-0.08	10.0 X	-0.06	10.0 X	-0.04	10.0 X
13-Sep-19	0.11	8.0 X	0.06	8.5 X	0.05	9.0 X	0.07	8.5 X
20-Sep-19	0.05	9.0 X	0.00	9.5 X	0.02	9.5 X	0.02	9.5 X
27-Sep-19	0.06	8.5 X	0.03	9.0 X	0.04	9.0 X	0.04	9.0 X
4-Oct-19	0.12	8.0 X	0.02	9.5 X	0.02	9.5 X	0.05	9.0 X
11-Oct-19	0.13	7.5 X	0.11	8.0 X	0.11	8.0 X	0.12	8.0 X
18-Oct-19	0.18	7.0 X	0.13	7.5 X	0.12	8.0 X	0.14	7.5 X
25-Oct-19	0.17	7.0 X	0.14	7.5 X	0.13	7.5 X	0.15	7.5 X
1-Nov-19	0.17	7.0 X	0.17	7.0 X	0.16	7.5 X	0.16	7.5 X
8-Nov-19	0.26	6.0 X	0.26	6.0 X	0.22	6.5 X	0.25	6.5 X
15-Nov-19	0.23	6.5 X	0.21	6.5 X	0.18	7.0 X	0.20	7.0 X
22-Nov-19	0.16	7.5 X	0.17	7.0 X	0.15	7.5 X	0.16	7.5 X
29-Nov-19	0.17	7.0 X	0.10	8.0 X	0.14	7.5 X	0.14	7.5 X
6-Dec-19	0.23	6.5 X	0.22	6.5 X	0.19	7.0 X	0.21	6.5 X
13-Dec-19	0.21	6.5 X	0.19	7.0 X	0.17	7.0 X	0.19	7.0 X
20-Dec-19	0.29	6.0 X	0.24	6.5 X	0.19	7.0 X	0.24	6.5 X
27-Dec-19	0.29	6.0 X	0.23	6.5 X	0.18	7.0 X	0.23	6.5 X
3-Jan-20	0.27	6.0 X	0.21	6.5 X	0.18	7.0 X	0.22	6.5 X
10-Jan-20	0.27	6.0 X	0.22	6.5 X	0.18	7.0 X	0.22	6.5 X
17-Jan-20	0.26	6.0 X	0.21	6.5 X	0.18	7.0 X	0.22	6.5 X

Observation: Since the beginning of June 2019, the 2-Spreads ratio has never inverted. The 3-Spreads ratio was inverted for five consecutive weeks. The 12-Spreads ratio was inverted for five weeks, four consecutively. The Combined-Spreads ratio was inverted for three consecutive weeks. The eResearch requirement is that all three Spread ratios must be inverted and the Combined-Spreads ratio has to be inverted for ten consecutive weeks. Thus, we have not initiated a Count-Down to an Economic Recession in the USA.

The same is not the case for Canada, as we will discuss shortly. But first, ...

U.S. RECESSION BAROMETER READING, Week Ending January 17, 2020:

6.5x.

COMMENT: *The trend in the Combined Spread reading has been generally receding ever since the three Inversion weeks. The U.S. 10/2 Spread, the equi-weight 3 selective Spreads, and the equi-weight 12 selective Spreads have all been fairly stable since the beginning of December, 2019. There is no Inversion threat for the United States at the present time.*

2. CANADA

Canada Recession Count-Down

eResearch put Canada on Recession Alert on August 8 after an Inversion occurred for ten consecutive days in the 10-Year/2-Year Yield Curve Ratio.

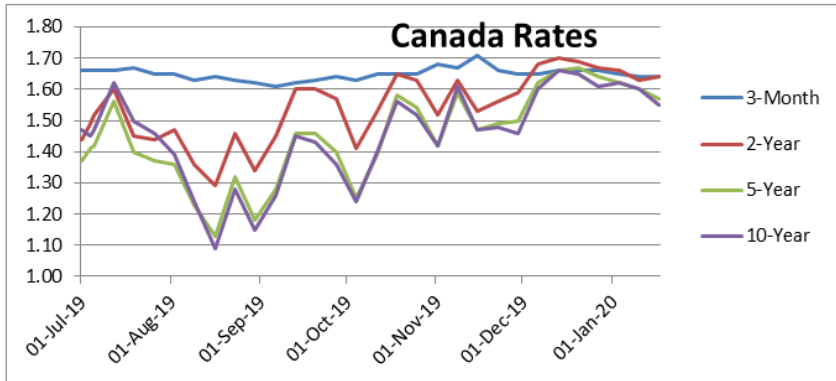
Given that, historically, Economic Recessions have occurred some 15 to 20 months after an interest rate Inversion occurs, and that suggests a possible Economic Recession in Canada could occur between November 2020 and April 2021.

We define an Economic Recession as being characterized by two consecutive quarters of negative GDP growth. That would mean that, to meet the first recessionary date of November 2020, Q2/2020 and Q3/2020 would have to experience negative GDP growth. To meet the April 2021 date, Q4/2020 and Q1/2021 would need to experience negative GDP growth. Between those dates, the other scenario to define a recession is negative GDP growth in Q3/2020 and Q4/2020.

Interest Rates: 10-year/5-Year/2-Year/3-Month

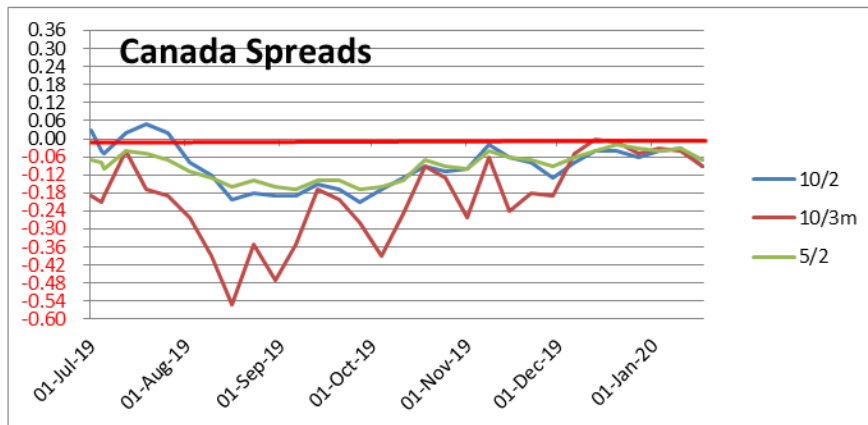
The following chart shows the trend for the four key interest rates since July 1. The 3-month is remaining stable while the longer-dated maturities are slowly declining.

July 1, 2019 - January 17, 2020



Here is the Spread for the three ratio combinations from these four maturities.

July 1, 2019 - January 17, 2020



Observations: All three ratios are below the Inversion level although all three rose to it or very near to it recently. In the last few days the three metrics have dropped slightly below the Inversion line. This adds to our conviction that an Economic Recession will occur in Canada within the next 15 months.

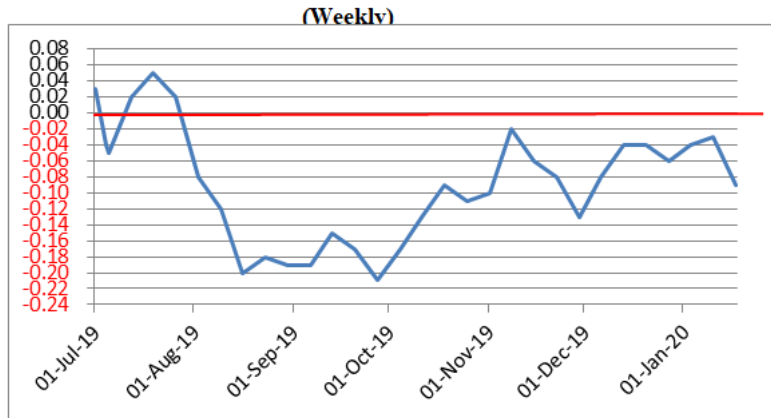
Recession Barometer: Canada

In Canada, we have already started our Count-Down to a possible recession. This was based on the 10-year/2-year Government of Canada bonds exhibiting Inversion for ten consecutive business days, which it did on August 8. (Our alternative criterion is that the 10/2 must be inverted for 20 out of 30 consecutive business days, and this has also occurred.)

The chart below shows the 10-year/2-year Spread for Canadas since July 1, 2019. It is nowhere near coming out of Inversion.

July 1, 2019 - January 17, 2020

Canada Spread: 10-Year/2-Year



Observation: As shown above, there was an Inversion in the 10/2 from July 2 through July 10, being only seven consecutive days. However, starting on July 26, the 10/2 inverted again and it has remained inverted ever since. August 8 marked the tenth consecutive day of Inversion and, so, the Count-Down to an Economic Recession in Canada began. Historically, after an Inversion has occurred, it has taken between 15 and 20 months before a recession occurs.

Canada Recession Forecast

The following table shows when a recession could occur for various time-frames once an Inversion happens. The traditional 15-months/20-months periods are shown in **Red** in the table.

Forecasting the Commencement of a Recession in Canada

Using eResearch criteria, an inversion in Canada occurred on August 8, 2019	Historically, a recession begins 15 to 20 months hence	
<u>Inversion Occurred</u> August 8, 2019	<u>+15 Months</u> November/2020	<u>+20 Months</u> April/2021

Source: eResearch

Bob Weir, CFA: Contributing Analyst

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