

January 9, 2019

### Business Cycle Index

The BCI at 260.8 is down from last week's 262.0, and remains below the previous high for this business cycle indicated by the BCIP of 90.5. Also, the 6-month smoothed annualized growth BCIG at 10.8 is below last week's 11.3. Both BCIP and BCIG are not signaling a recession.

January 10, 2019

### Market Signals Summary:

The MAC-US model, iM-Low Frequency Timer, and the S&P500 Coppock are invested in the markets, as is the "3-mo Hi-Lo Index of the S&P500" which entered the market on 10/22/2018. The MAC-AU is also invested in the markets. The recession indicators COMP and iM-BCIG do not signal a recession. The bond market model avoids high beta (long) bonds, and the yield curve is steepening. The gold Coppock remains invested in gold, however the silver model is in cash. The iM-Gold Timer is in cash. The monthly iM-Google Trend Timer is invested since 12/1/2019.

### MAC-US

The MAC-US model switched into the markets on 2/26/2019. The sell-spread (red line) is above last week's value needs to move below zero to generate a sell signal.

### 3-mo Hi-Lo Index

The 3-mo Hi-Lo Index of the S&P500 is above last week's level at 11.34% (last 10.91%), and is invested in the stock market since 10/22/2019.

### Coppock Indicator for the S&P500

The Coppock indicator for the S&P500 entered the market on 5/9/2019 and is invested.

### MAC-AU

The MAC-AU model is invested in the markets after signaling a buy on February 7, 2019. The sell-spread (red line) is below last week's value and needs to move below zero to generate a sell signal.

### Recession:

#### COMP

Figure 3 shows the COMP above last week's level. No recession is indicated.

#### iM-BCIG

Figure 3.1 shows the recession indicator iM-BCIG below last week's level. An imminent recession is not signaled

### Forward Rate Ratio

The Forward Rate Ratio between the 2-year and 10-year U.S. Treasury yields (FRR2-10) is above last week's level and is not signaling a recession.

## iM-Low Frequency Timer

The iM-Low Frequency Timer is back in the markets since 1/22/2019.

## Bond-market:

The BVR-model avoids high beta bonds (long-bonds) and also intermediate duration bonds. The Bond Value Ratio is shown in Fig 4. The BVR is below last week's level. According to the model, only when BVR turns upward after having been lower than the lower offset-line should one consider long bonds again.

## The Yield Curve:

The yield curve model indicates the trend of the 10-year and 2-year Treasuries yield spread. Figure 5 charts (i10 – i2) shows that the yield curve is above last week's level, general trend steepening. FLAT and STPP are ETNs; STPP profits from a steepening yield curve and FLAT increases in value when the yield curve flattens. This model confirms the direction of the BVR.

## Gold:

### Coppock Gold

The modified Coppock Gold indicator shown in Fig 6. This model generated a new buy signal end March 2019 and is invested in gold.

### iM GOLD-TIMER

The iM GOLD-TIMER Rev-1 sold gold on 12/31/2018 and the model is in cash

## Silver:

### Coppock Silver

The modified Coppock Silver indicator shown in Fig 7. This model generated a sell signal early August 2018 and is in cash.

## Monthly Updates

January 10, 2019 (next update February 7, 2020)

### Unemployment

The unemployment rate recession model (article link), has been updated with the November UER of 3.5%. The model does not signal a recession.

### The Dynamic Linearly Detrended Enhanced Aggregate Spread:

The updated level of this indicator, -264bps, near last months -259bps, confirms the January 2017 signal. Based on past history a recession could have started as early as October 2017, but not later than September 2020. The average lead time to previous recessions provided by DAGS was 15 months which had indicated a possible recession start as early as April 2019. (Note: All our other recession indicators are far from signal a recession.)

### CAPE-Cycle-ID

Fig 9a depicts the CAPE-Cycle-ID and the year-on-year rate-of-change of the Shiller CAPE; the level switched from 0 to +2 end of October-2019.

To avoid the bear market, exit stocks when the spread between the 5-month and 25-month moving averages of S&P-real becomes negative and simultaneously the CAPE-Cycle-ID score is 0 or -2.

#### Estimated Forward 10-Year Returns

The estimated forward 10-year annualized real return decreased to 6.1% (previous 6.2) with a 95% confidence interval : 4.7% to 7.5 (previous 5.0% to 7.7%).

#### iM-GT Timer

Fig-10.-2-1-2019The iM-GT Timer, based on Google Search Trends Volume switched into the markets on 12/02/2019.

#### Trade Weighted USD

The trend of Trade Weighted \$ value is indeterminate and remains strong even though federal fund rates have been reduced.

#### TIAA Real Estate Account

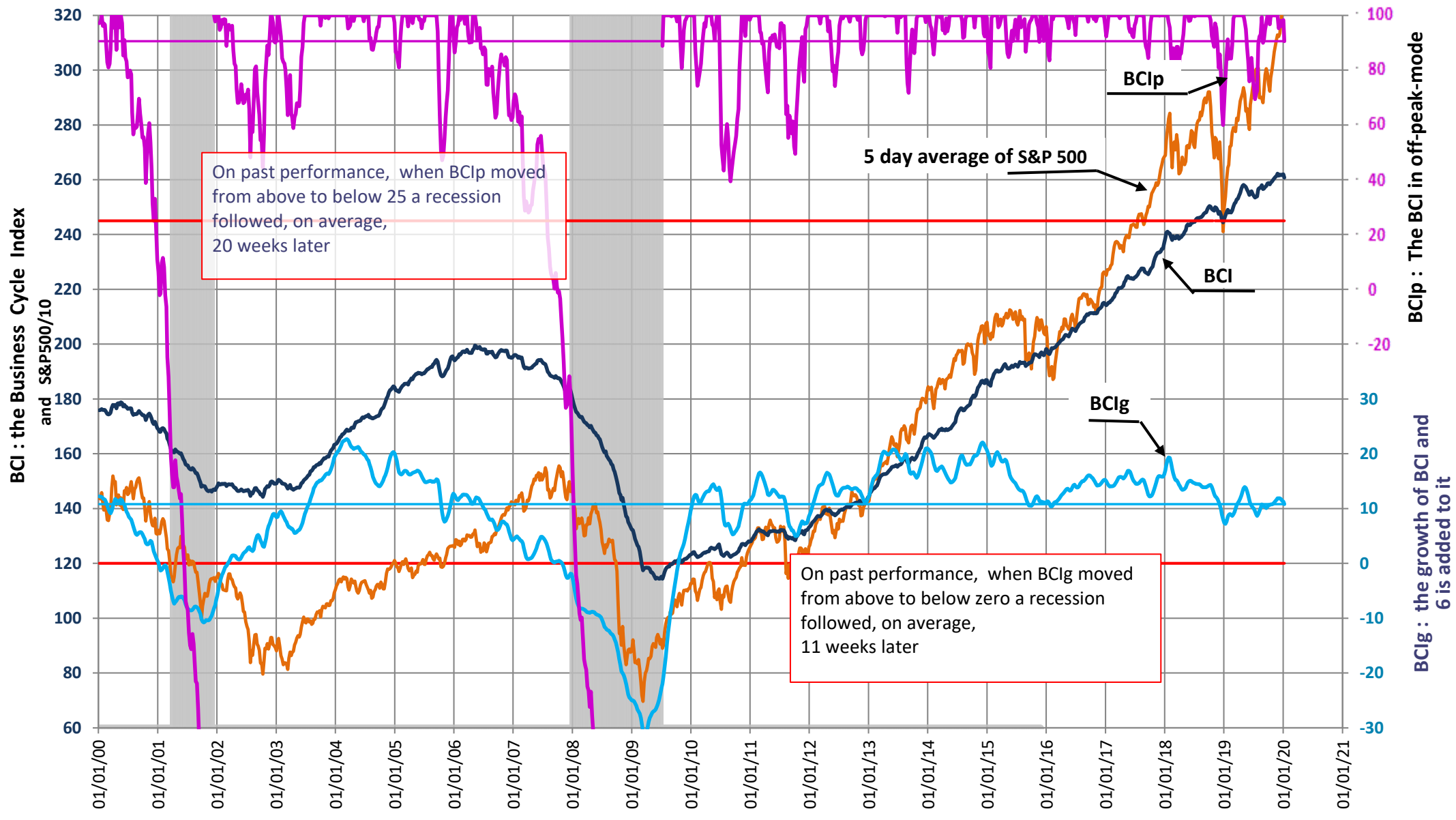
The 1-year rolling return for the end of last month is 5.51%, down from last month. A sell signal is not imminent.

# iM's Business Cycle Index (BCI)

Date	12/12	12/19	12/26	01/02	01/09
BCIp	98.0	96.1	98.0	98.3	<b>90.5</b>
BCI	261.9	261.6	261.9	262.0	<b>260.8</b>
BCIg	11.9	11.7	11.4	11.3	<b>10.8</b>

BCIp, BCI and BCIG  
updated to January 09, 2020

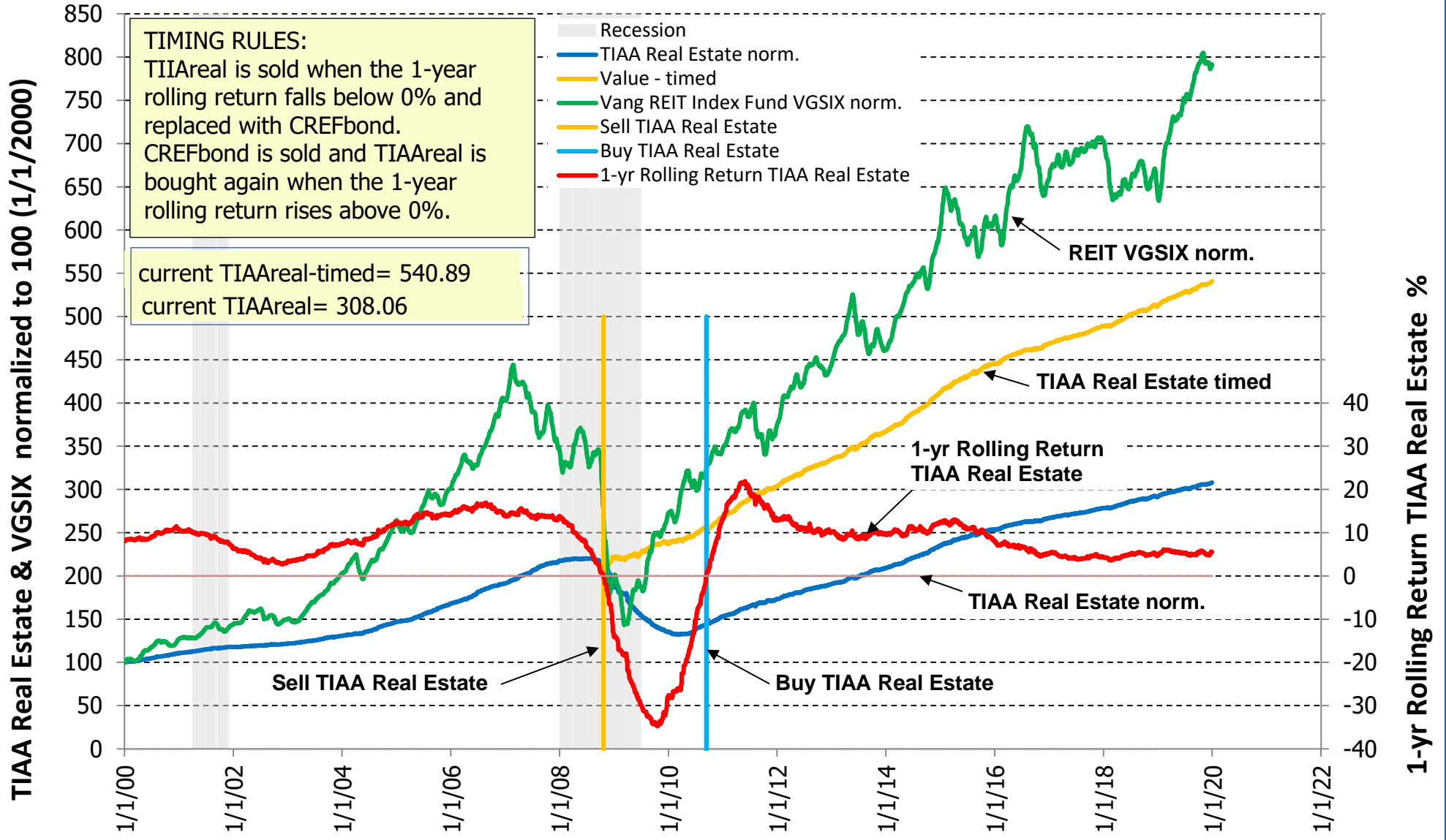
On past performance, BCIp = 100 can be interpreted as an average one year "time-to-live" to a recession.





## TIAA Real Estate Account vs. Vanguard REIT Index Fund (VGSIX) 2000 - 2019

updated to 12/31/19, TIAAreal current 1-year rolling return= 5.51%



Please note: Past performance does not guarantee future returns, investments may increase or decrease in value and you may lose money using this model.

### Figure 2: Buy and Sell signals for S&P 500 from the modified golden-cross MAC-System



updated to... 1/9/20

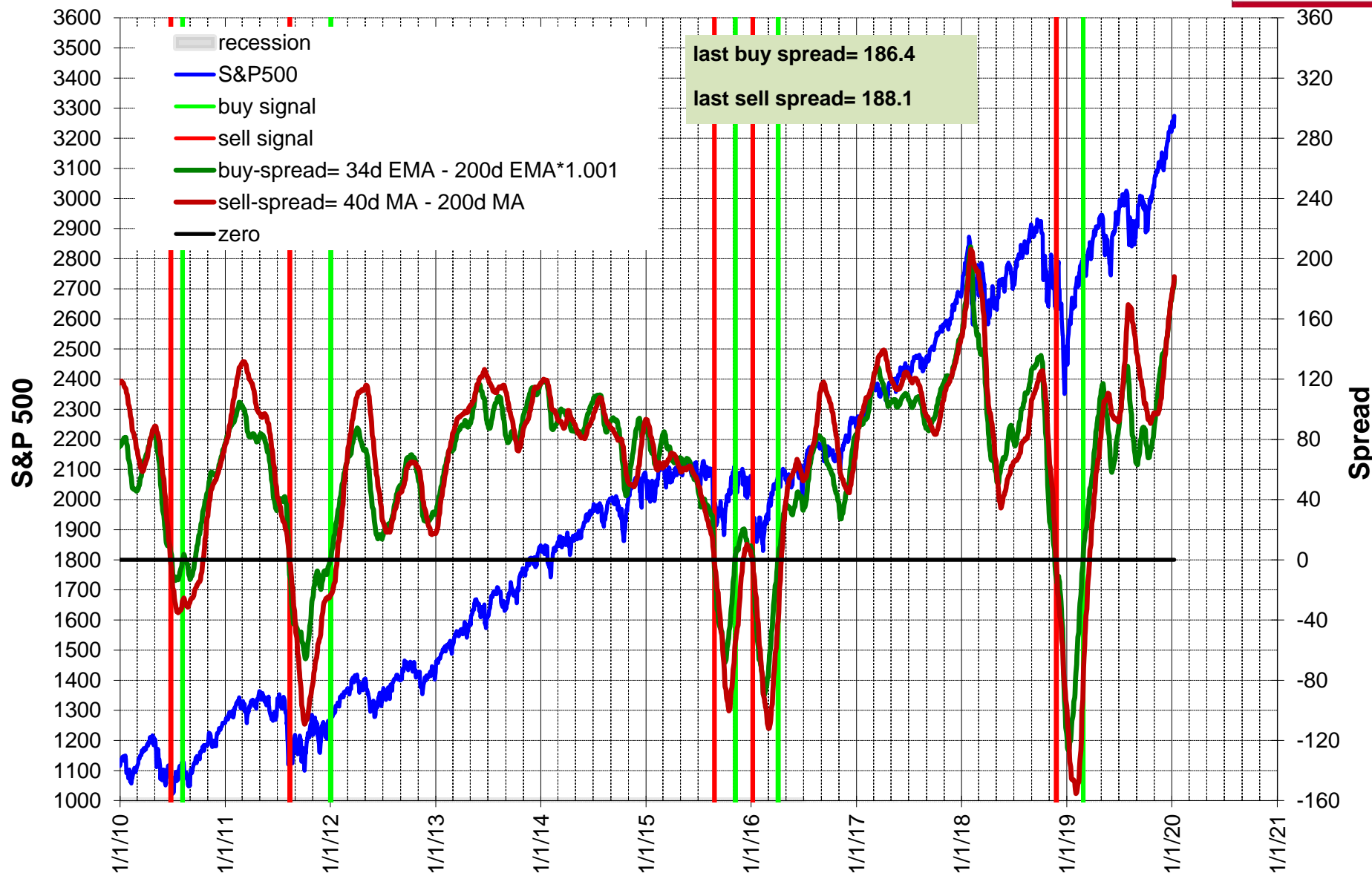


Fig 2.1: Buy and Sell signals for the Australia All Ordinaries Index from the MAC-AU System



updated to Jan-10-20  
last sell spread= 265.9

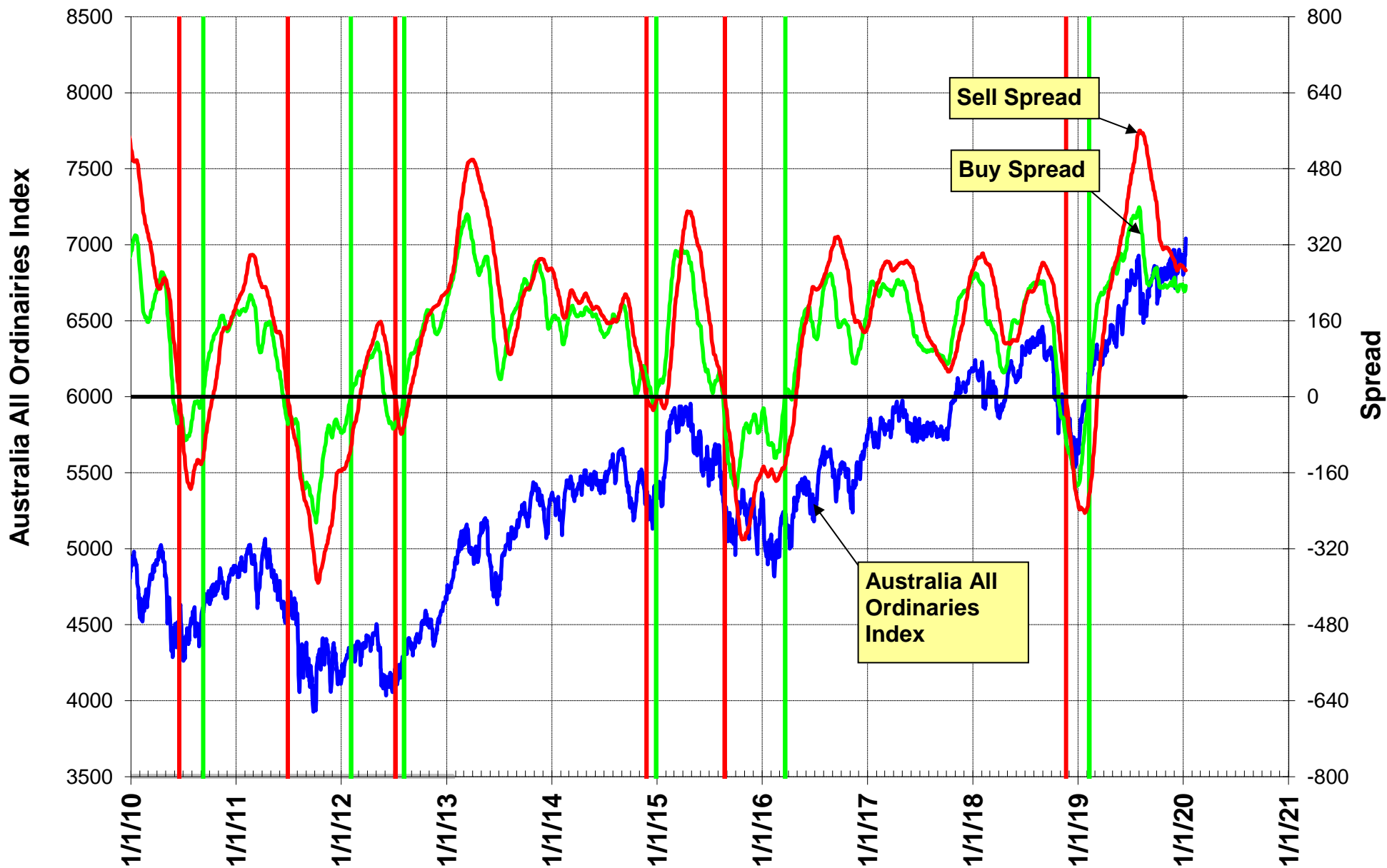
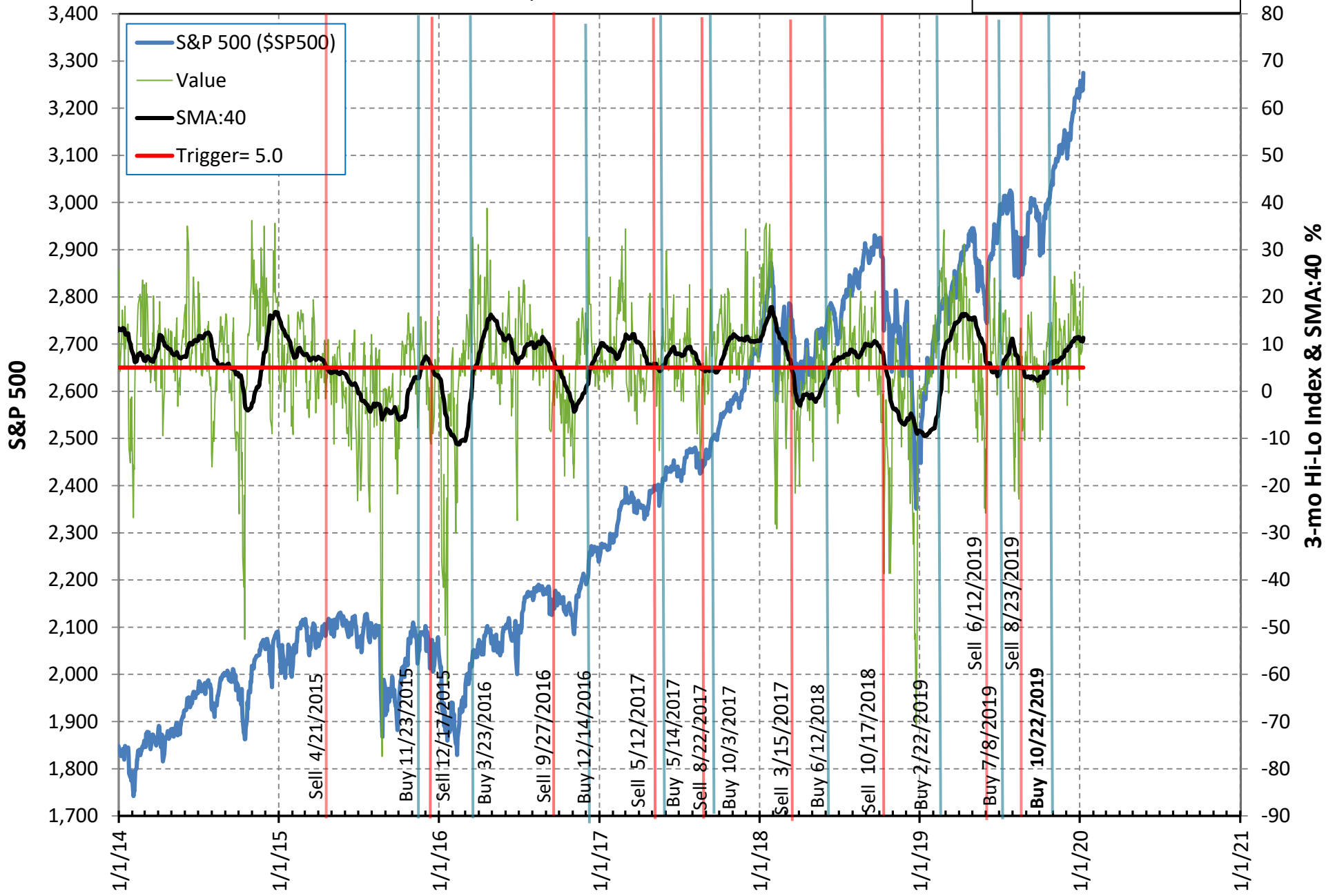


Fig 2.2 3-mo Hi-Lo Index of the S&P500 & 40-day SMA of Index

updated to 1/9/2020

last SMA:40= 11.34%



### Fig-2.3 Modified Coppock Indicator for S&P500

updated to 01/02/2020

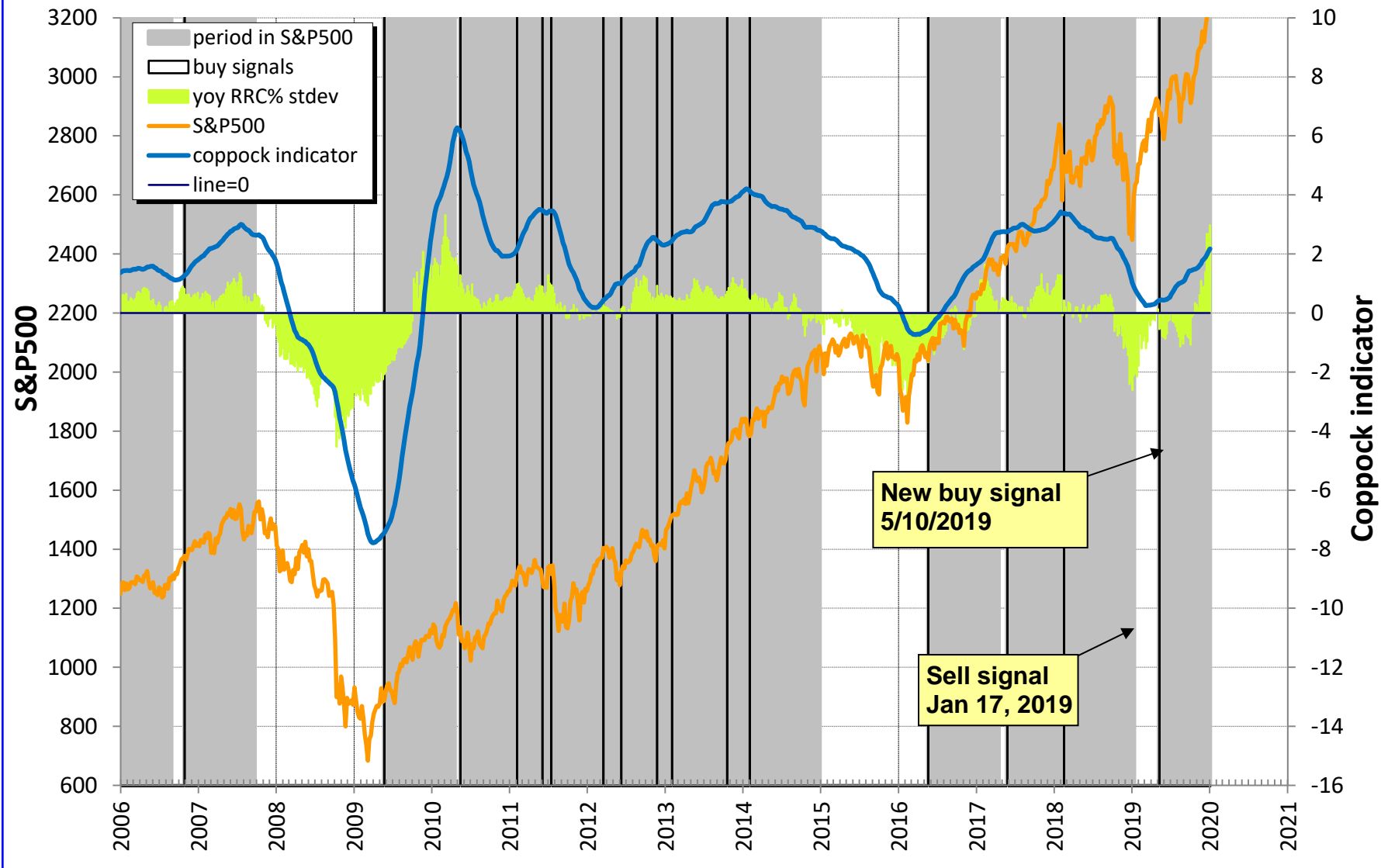
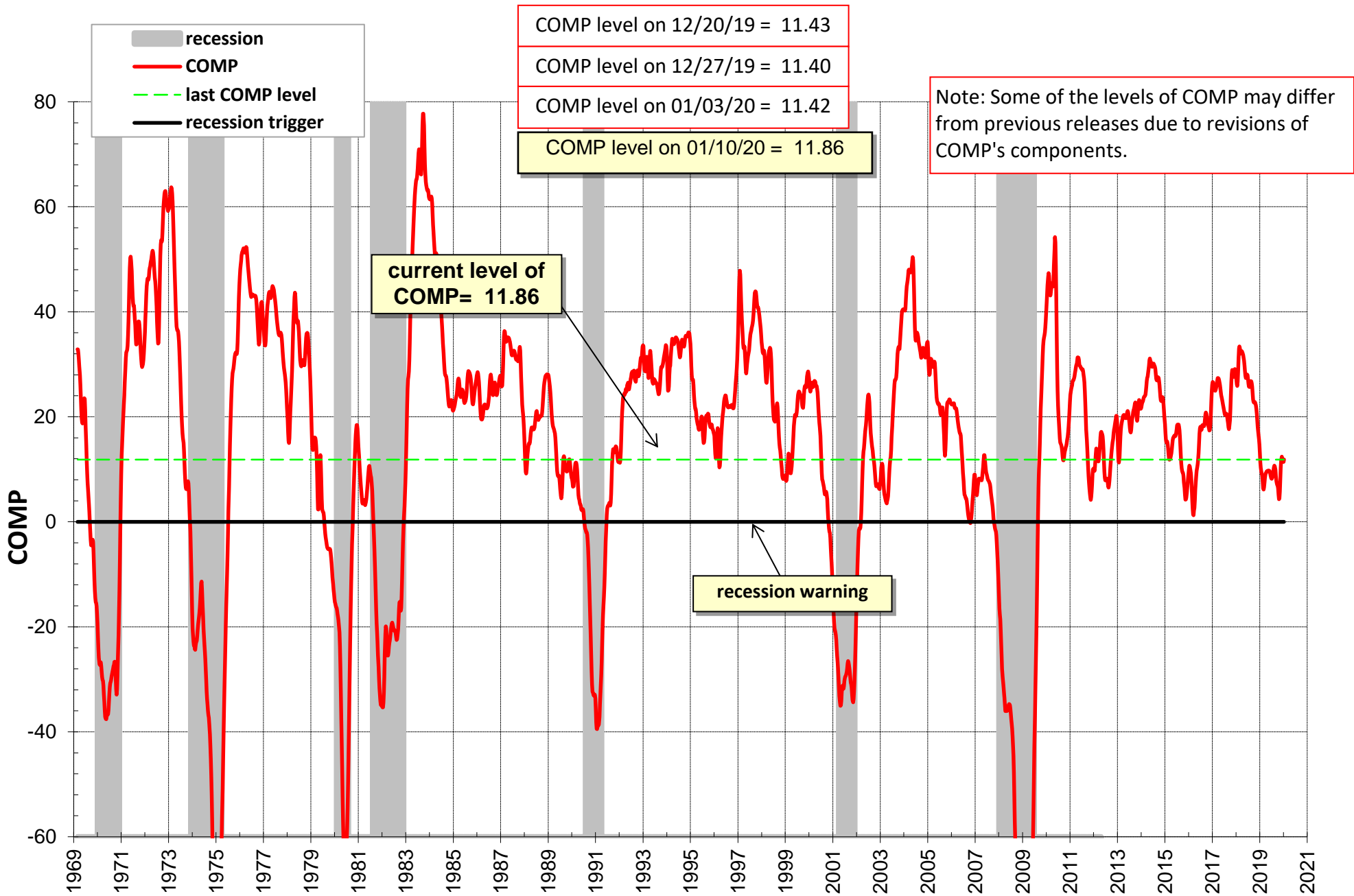
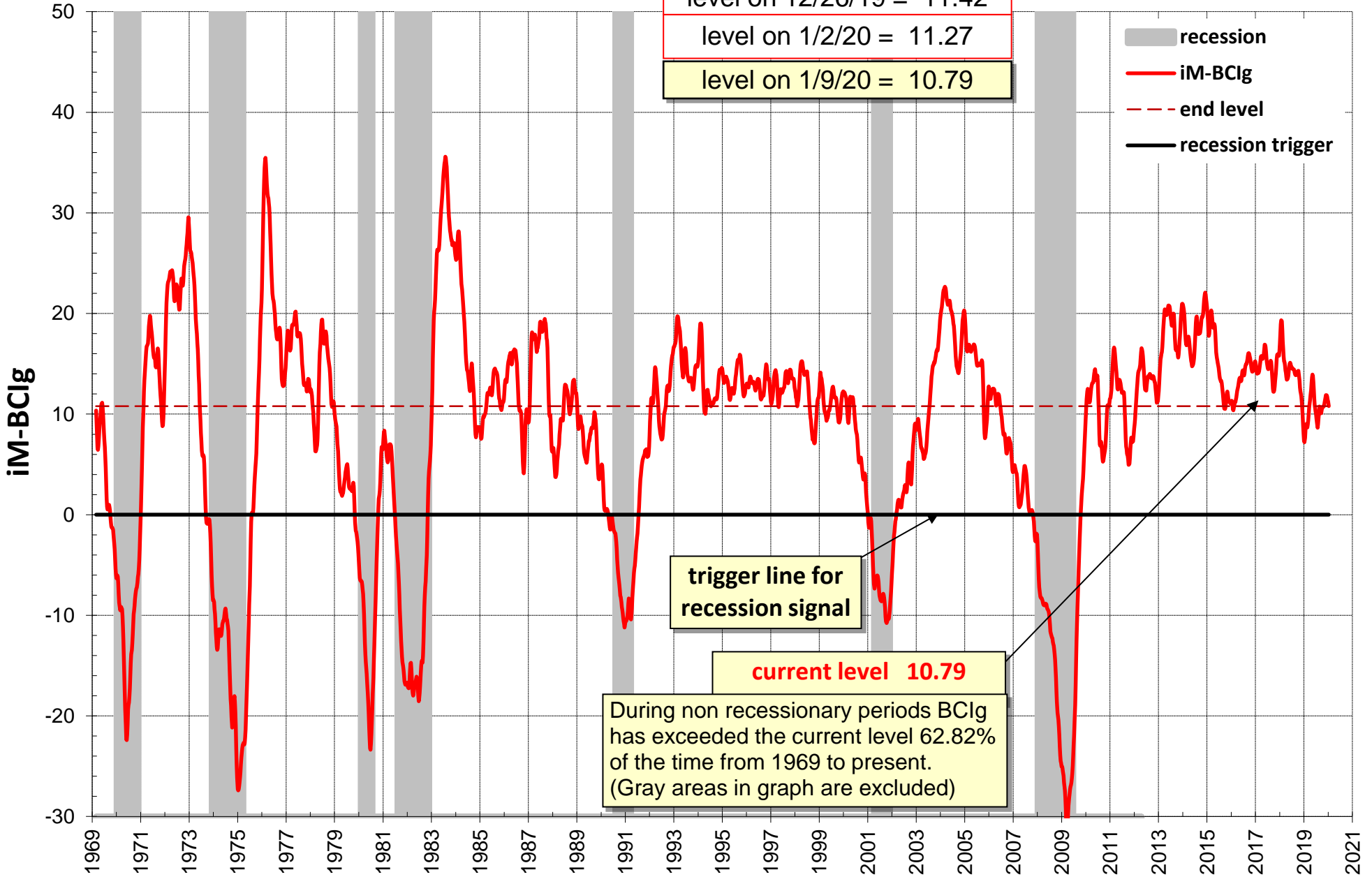


Fig. 3: COMP Leading Indicator of US Economy



**Fig 3.1: iM-BCIg**

level on 12/19/19 = 11.71  
level on 12/26/19 = 11.42  
level on 1/2/20 = 11.27  
level on 1/9/20 = 10.79



**Figure 3.2: Forward Rate Ratio FRR2-10 - leads to Recessions**

FRR2-10 is the ratio of the rate at which one can lock in borrowing for the eight year period starting two years from now, and the ten-year rate itself.

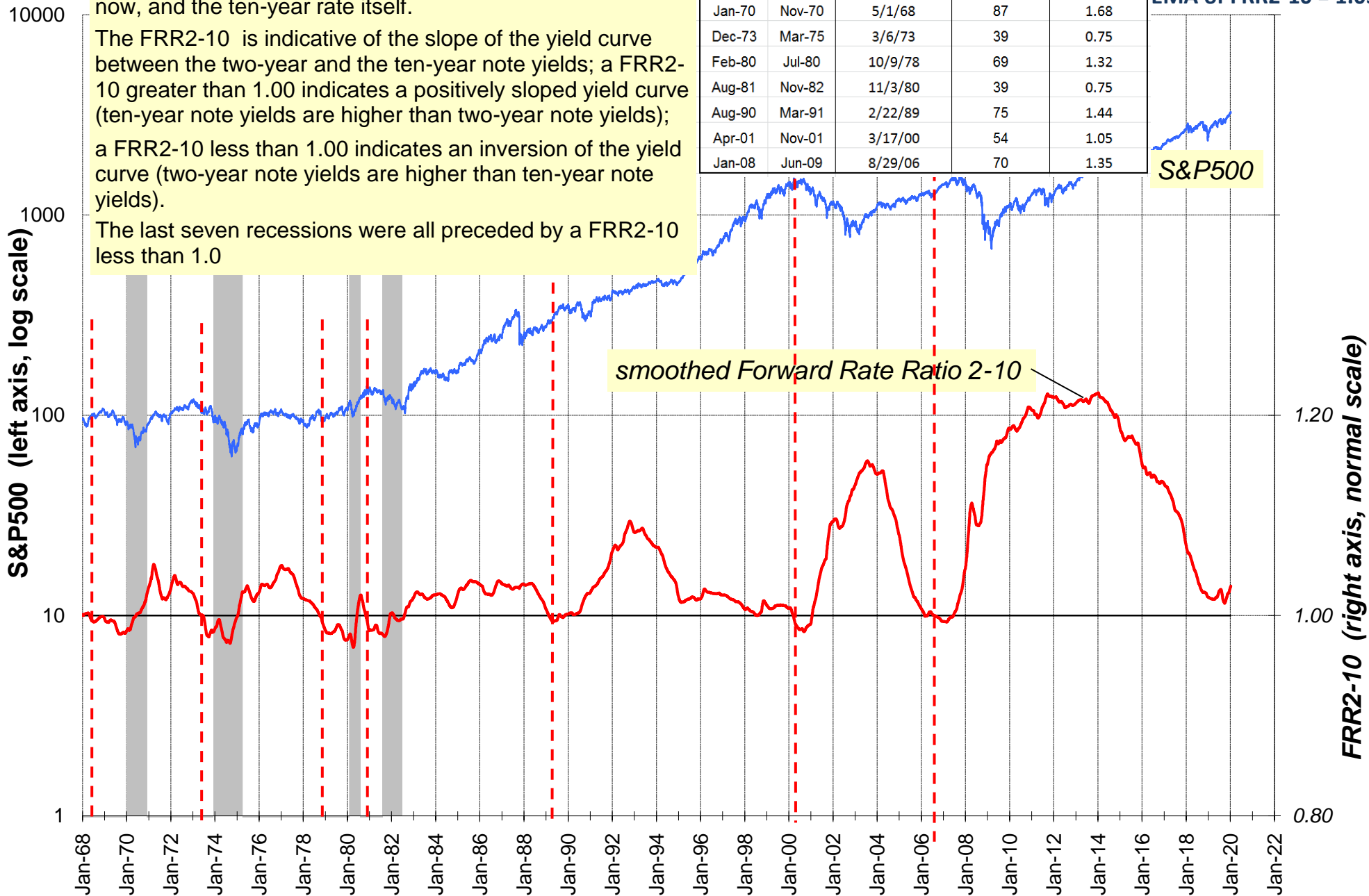
The FRR2-10 is indicative of the slope of the yield curve between the two-year and the ten-year note yields; a FRR2-10 greater than 1.00 indicates a positively sloped yield curve (ten-year note yields are higher than two-year note yields); a FRR2-10 less than 1.00 indicates an inversion of the yield curve (two-year note yields are higher than ten-year note yields).

The last seven recessions were all preceded by a FRR2-10 less than 1.0

Recessions start	Recessions end	Date when EMA of FRR2-10 less than 1.0	Lead to Ression start (weeks)	Lead to Ression start (years)
Jan-70	Nov-70	5/1/68	87	1.68
Dec-73	Mar-75	3/6/73	39	0.75
Feb-80	Jul-80	10/9/78	69	1.32
Aug-81	Nov-82	11/3/80	39	0.75
Aug-90	Mar-91	2/22/89	75	1.44
Apr-01	Nov-01	3/17/00	54	1.05
Jan-08	Jun-09	8/29/06	70	1.35

updated to 01/09/2020

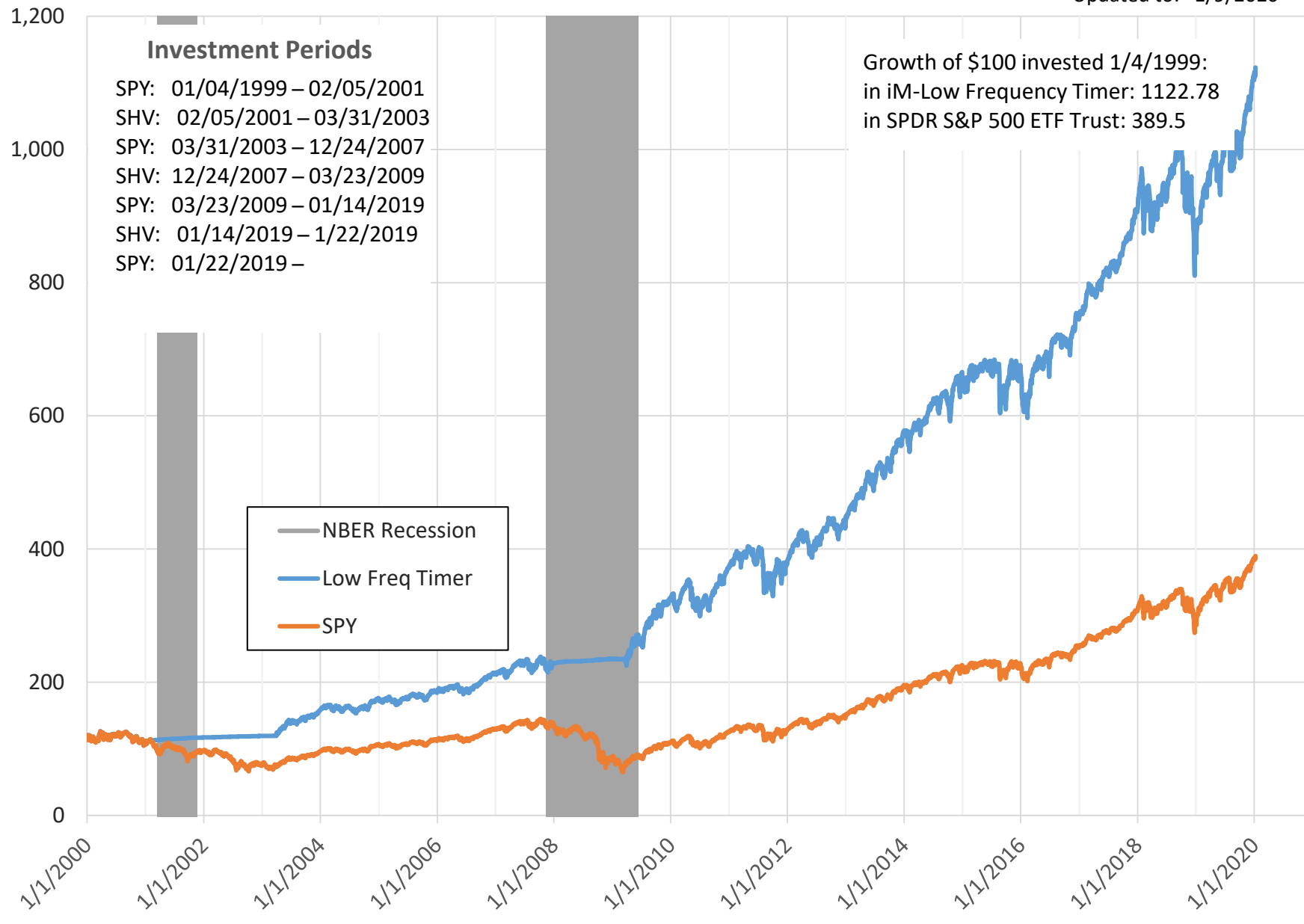
EMA of FRR2-10 = 1.030





### Fig.3.3 iM-Low Frequency Timer

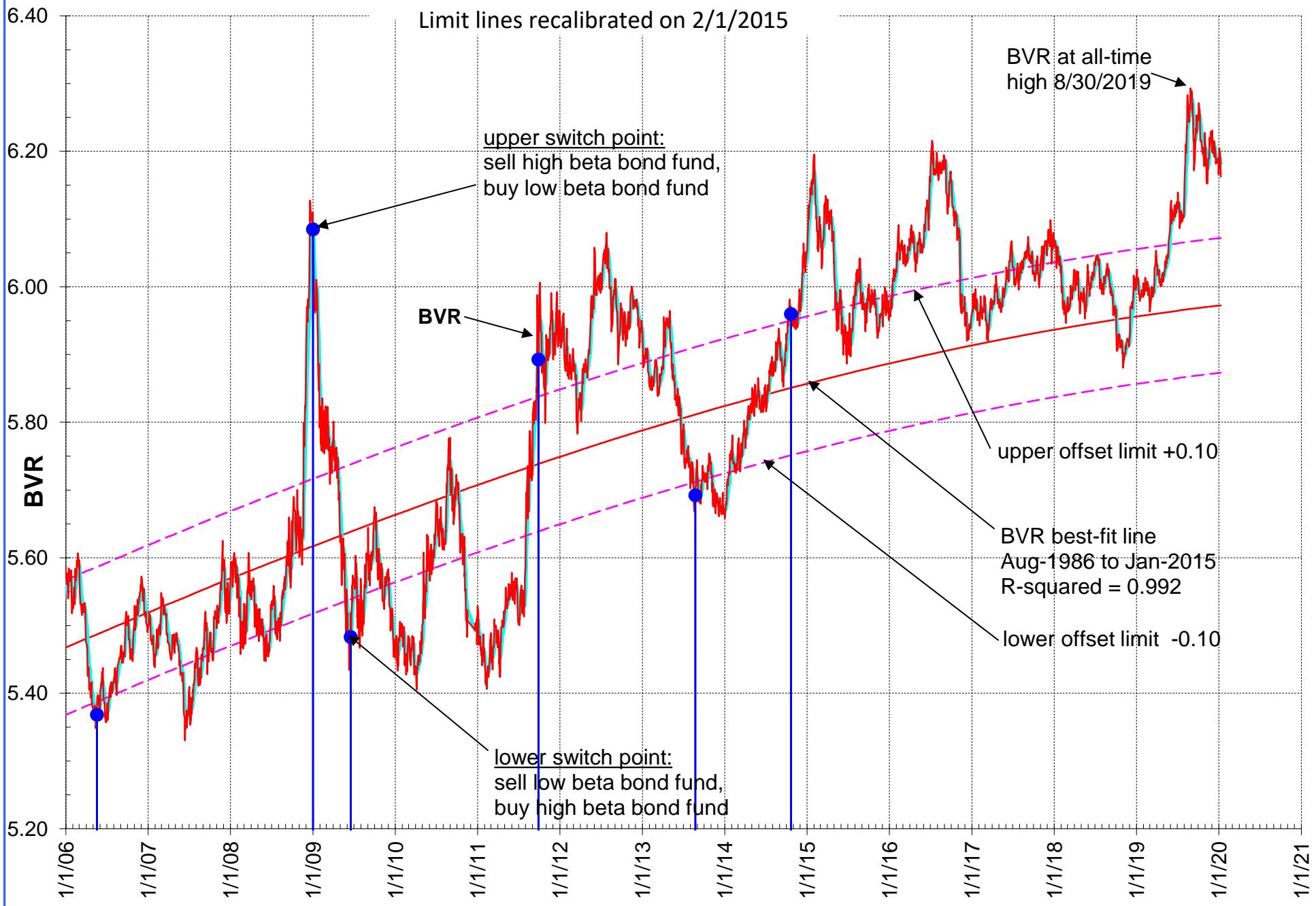
Updated to: 1/9/2020



### Figure 4: Bond Value Ratio (BVR)

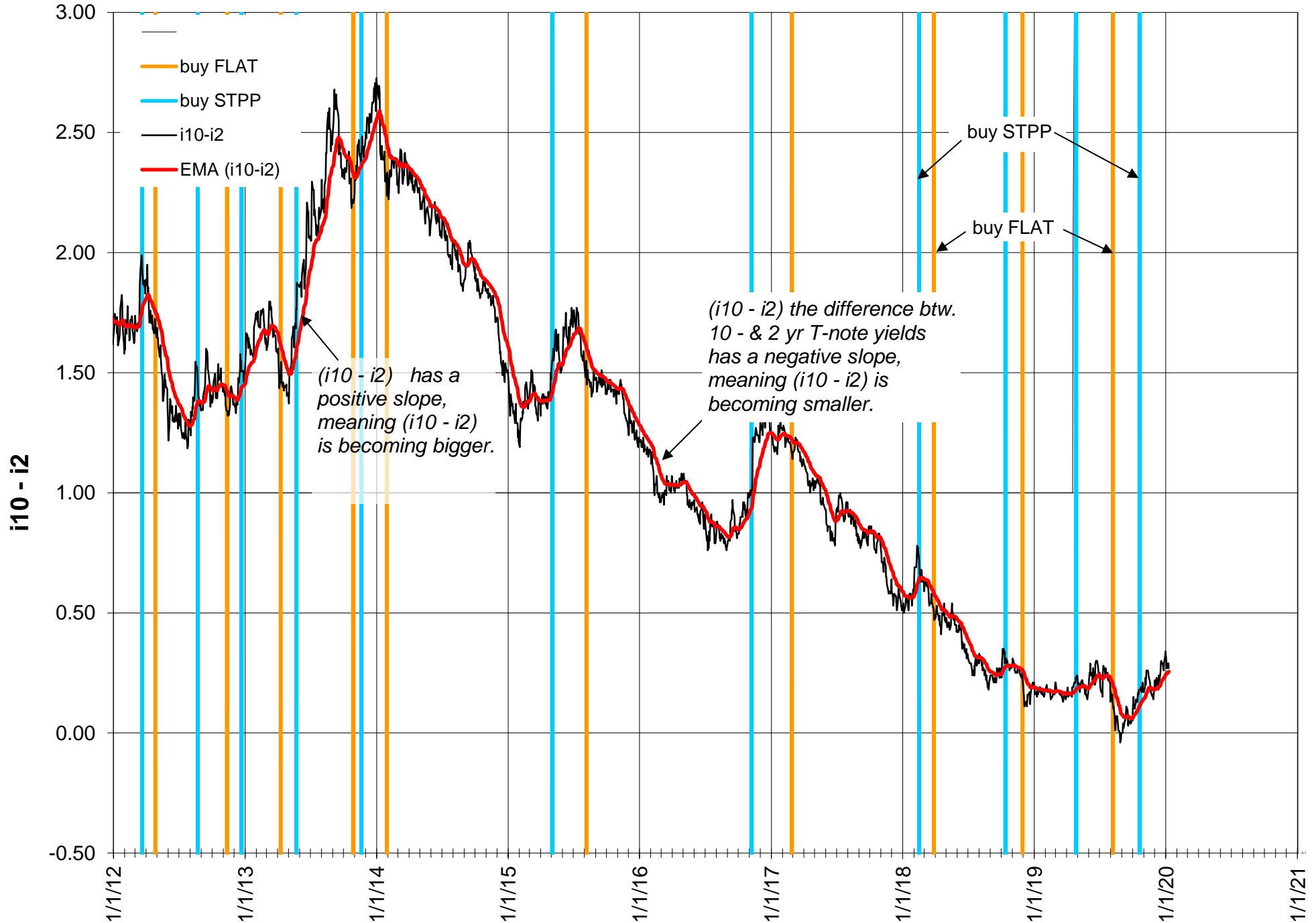
Model updated to: 1/9/2020 BVR = 6.162

Limit lines recalibrated on 2/1/2015



**Fig. 5: Yield Curve: i10 - i2**

Updated to.....1/9/2020



# Figure 6: Modified Coppock Indicator for Gold

updated to 01/09/2020

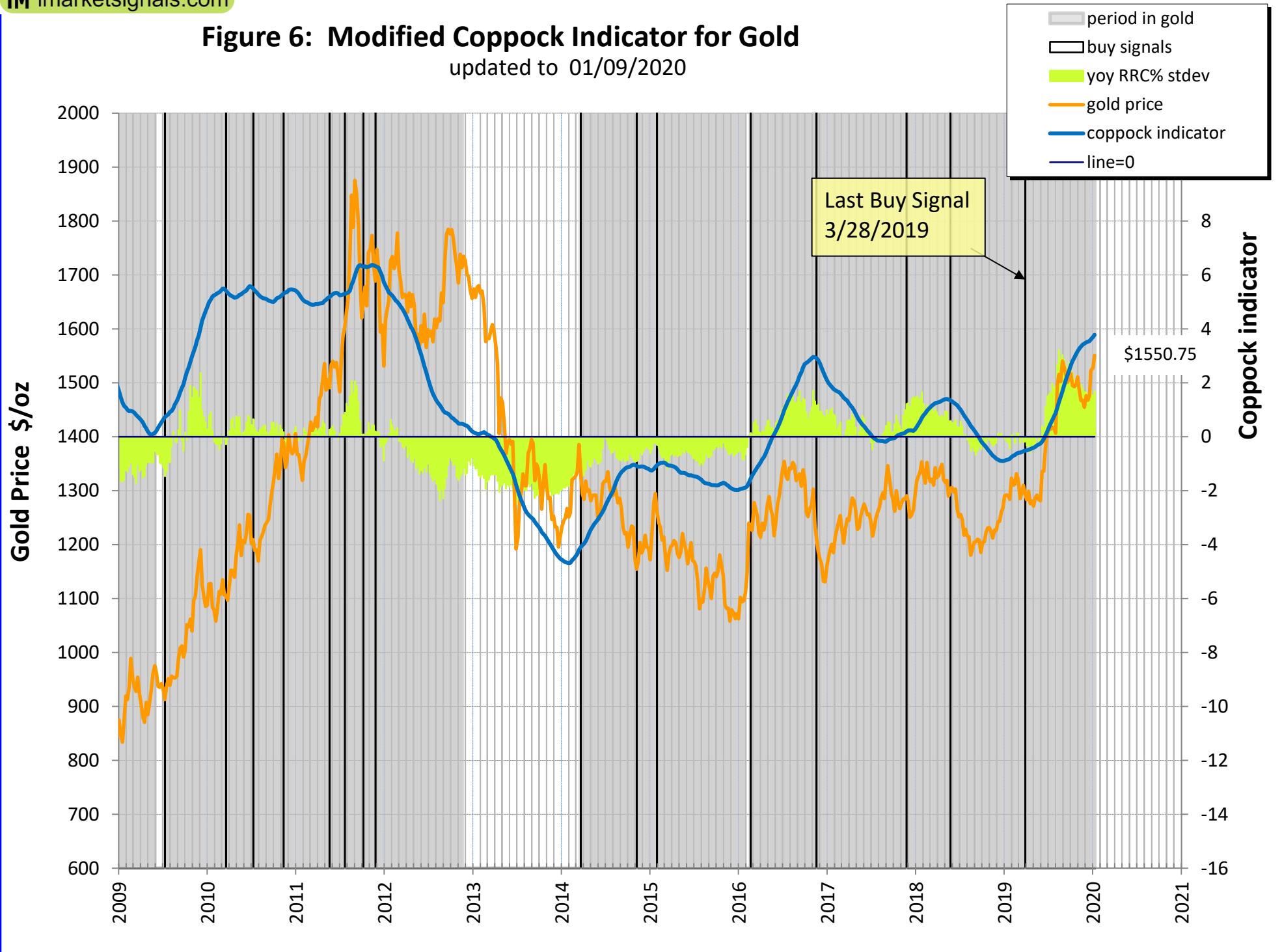
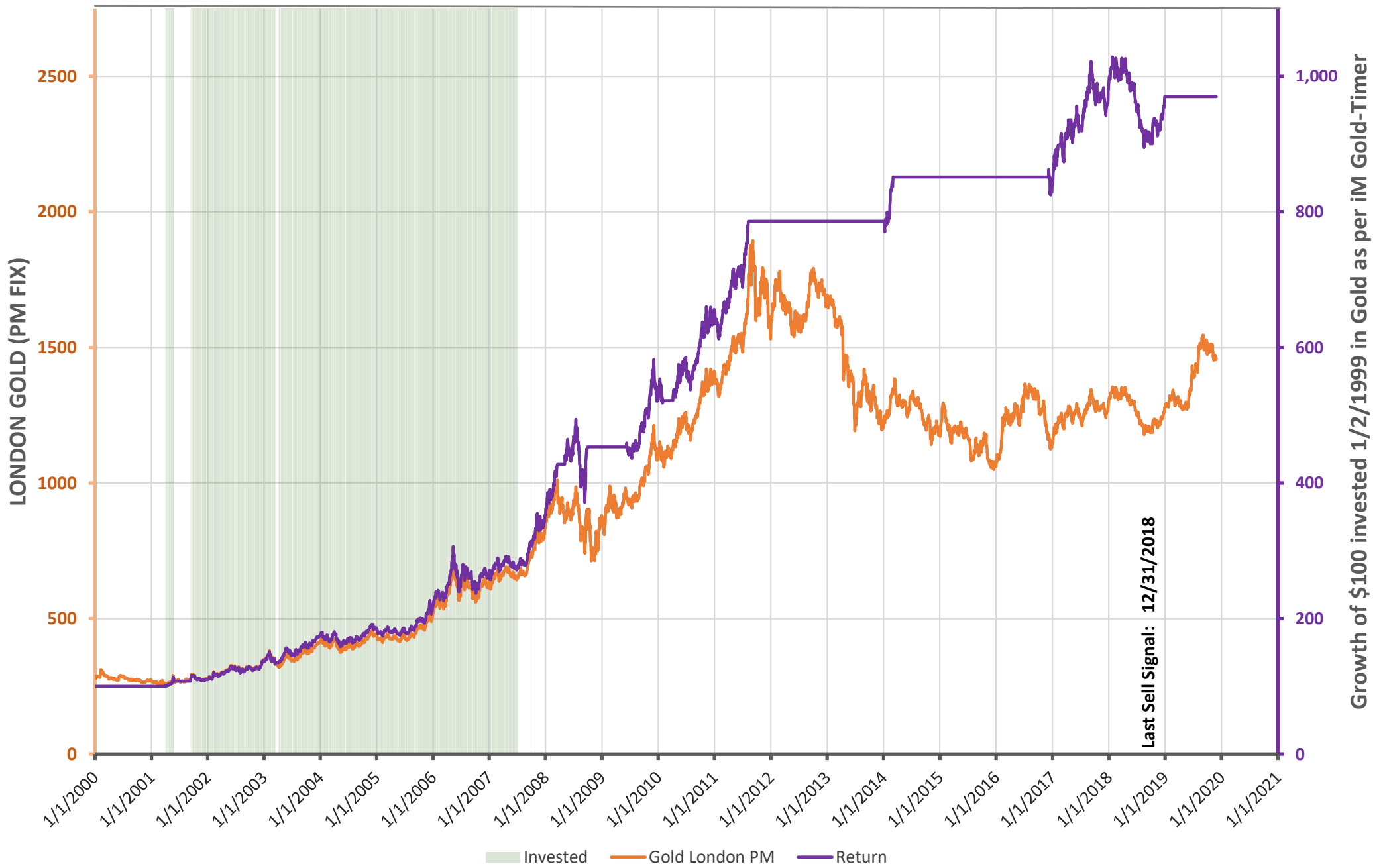


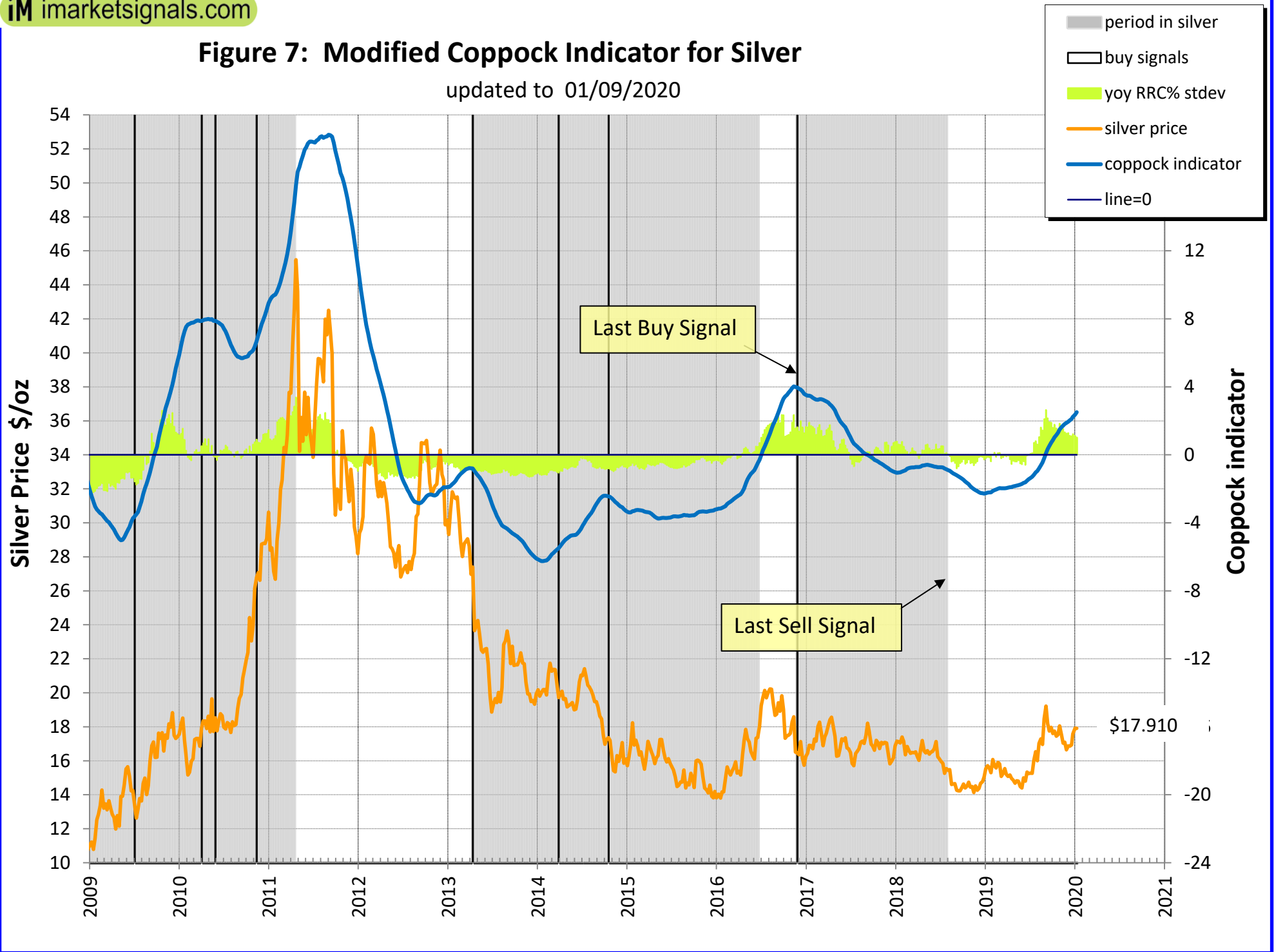
Fig. 6.1a iM GOLD-TIMER - Rev 1

Updated to: 1/9/2020



### Figure 7: Modified Coppock Indicator for Silver

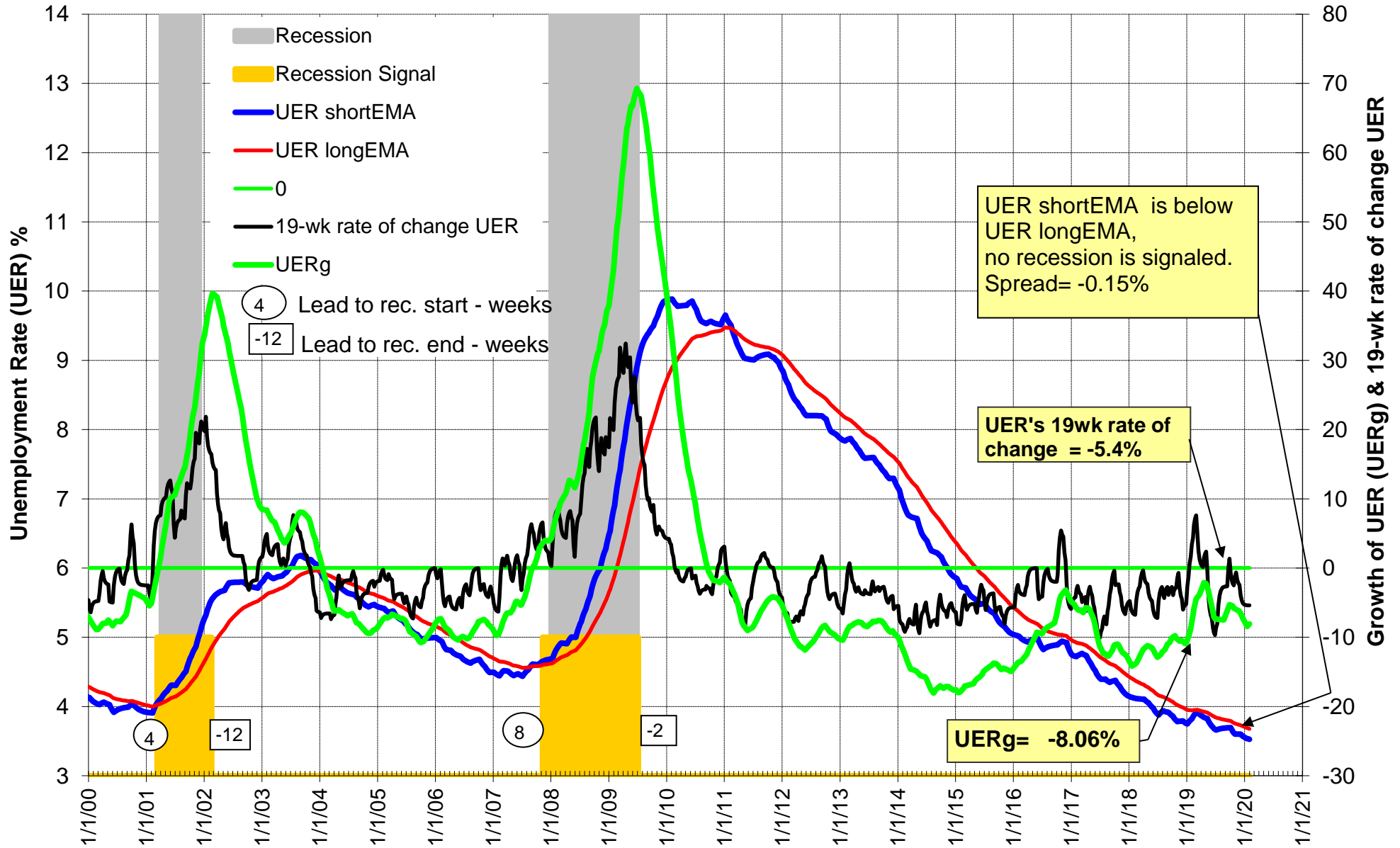
updated to 01/09/2020



### Fig-8 Unemployment Rate and Recessions (real-time) 2000-2019

Leads to recession starts and to recession ends are positive numbers in weeks, lags are negative numbers.

updated to 1-31-2020 with December UER= 3.5%



# Long Leading Recession Indicator DAGS: shifted forward in time by 40 weeks

<http://imarketsignals.com/2016/the-dynamic-linearly-detrended-aggregate-spread-a-long-leading-recession-indicator/>

- recession
- DAGS
- recession warning line
- last level of DAGS

recession eligible months Oct-2017 to Sep-2020

updated on Jan-10-2020, last level of DAGS = -264 bps

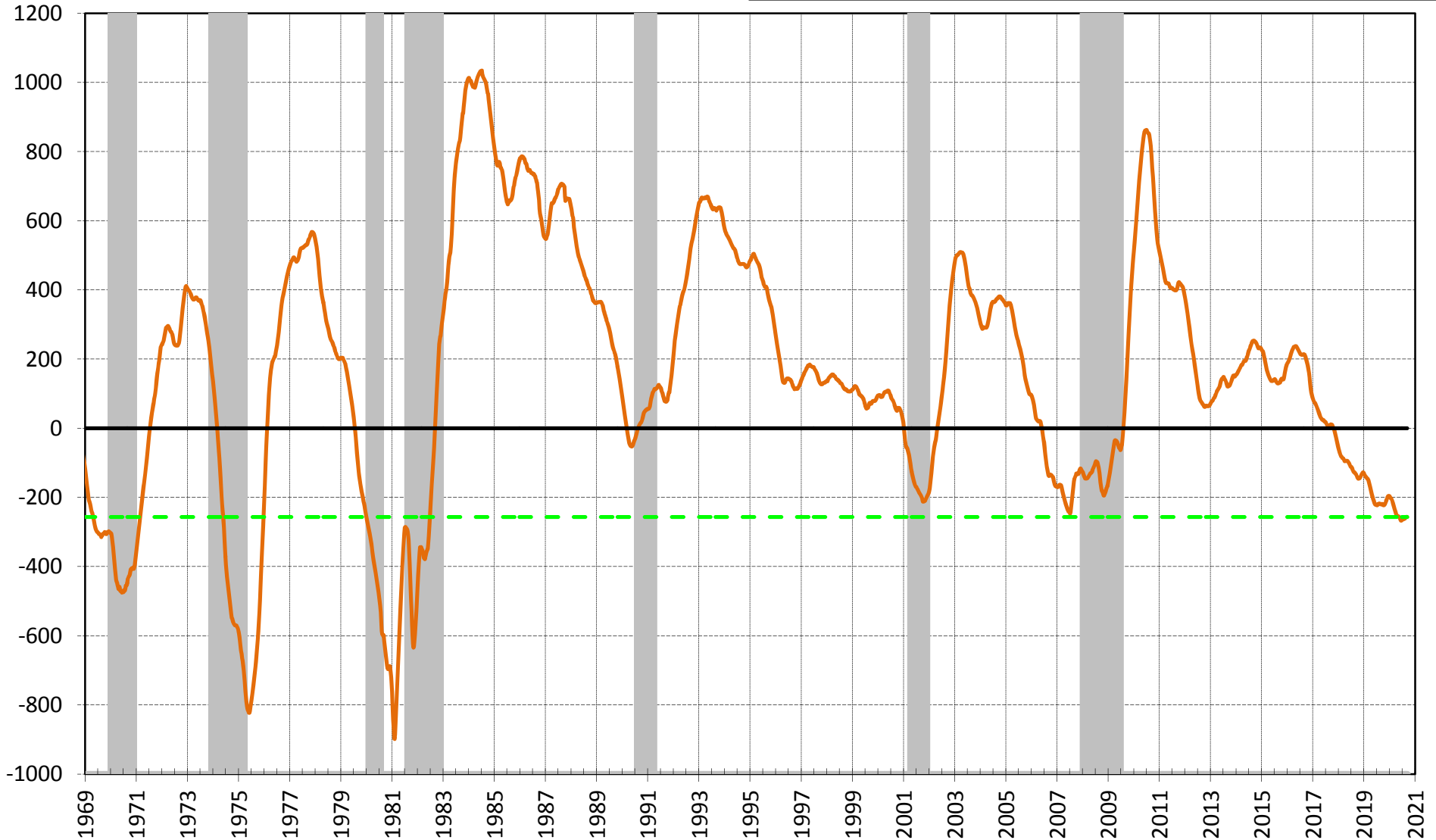
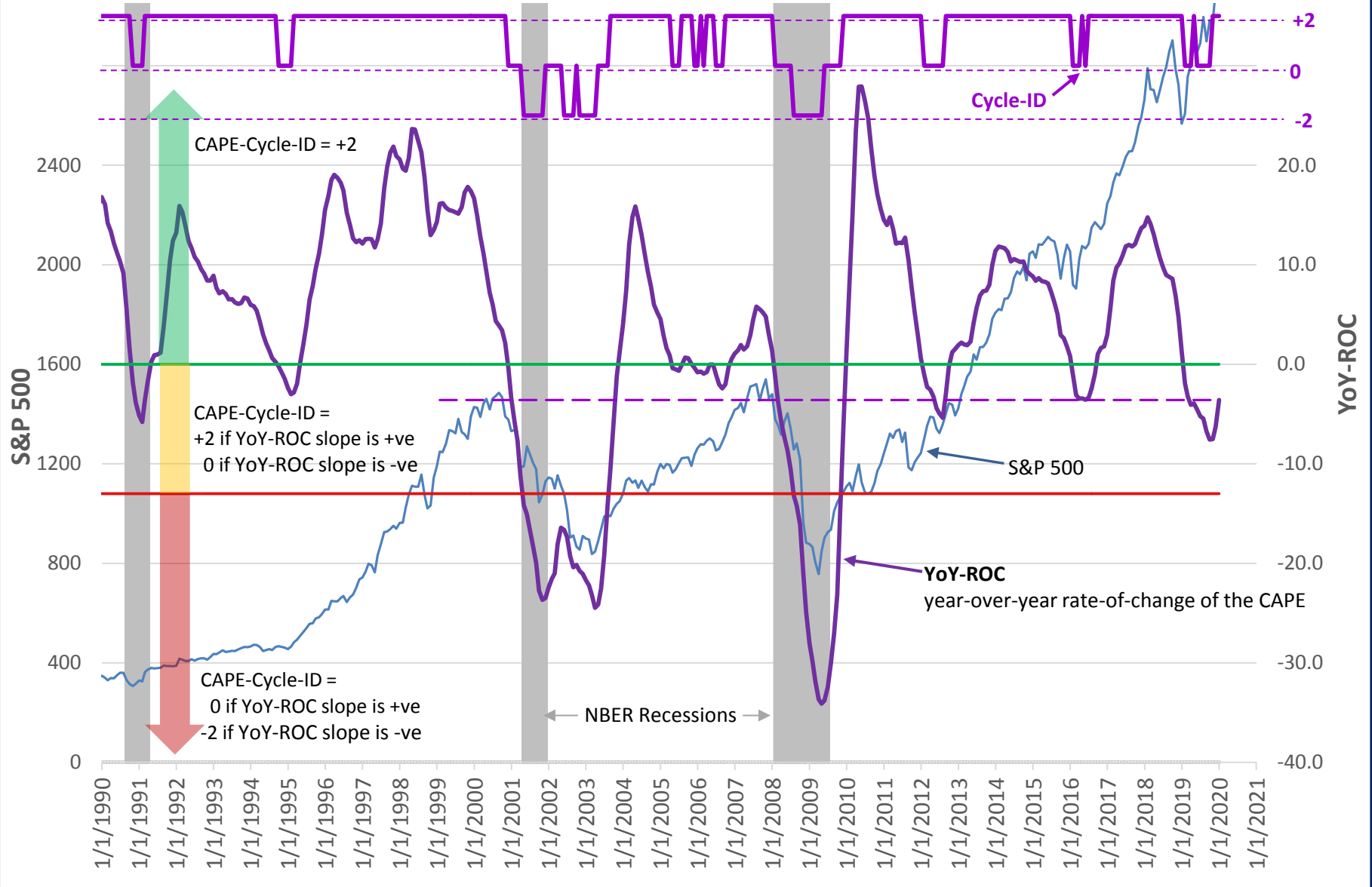




Fig. 9a CAPE-Cycle-ID and the YoY-ROC from 1990

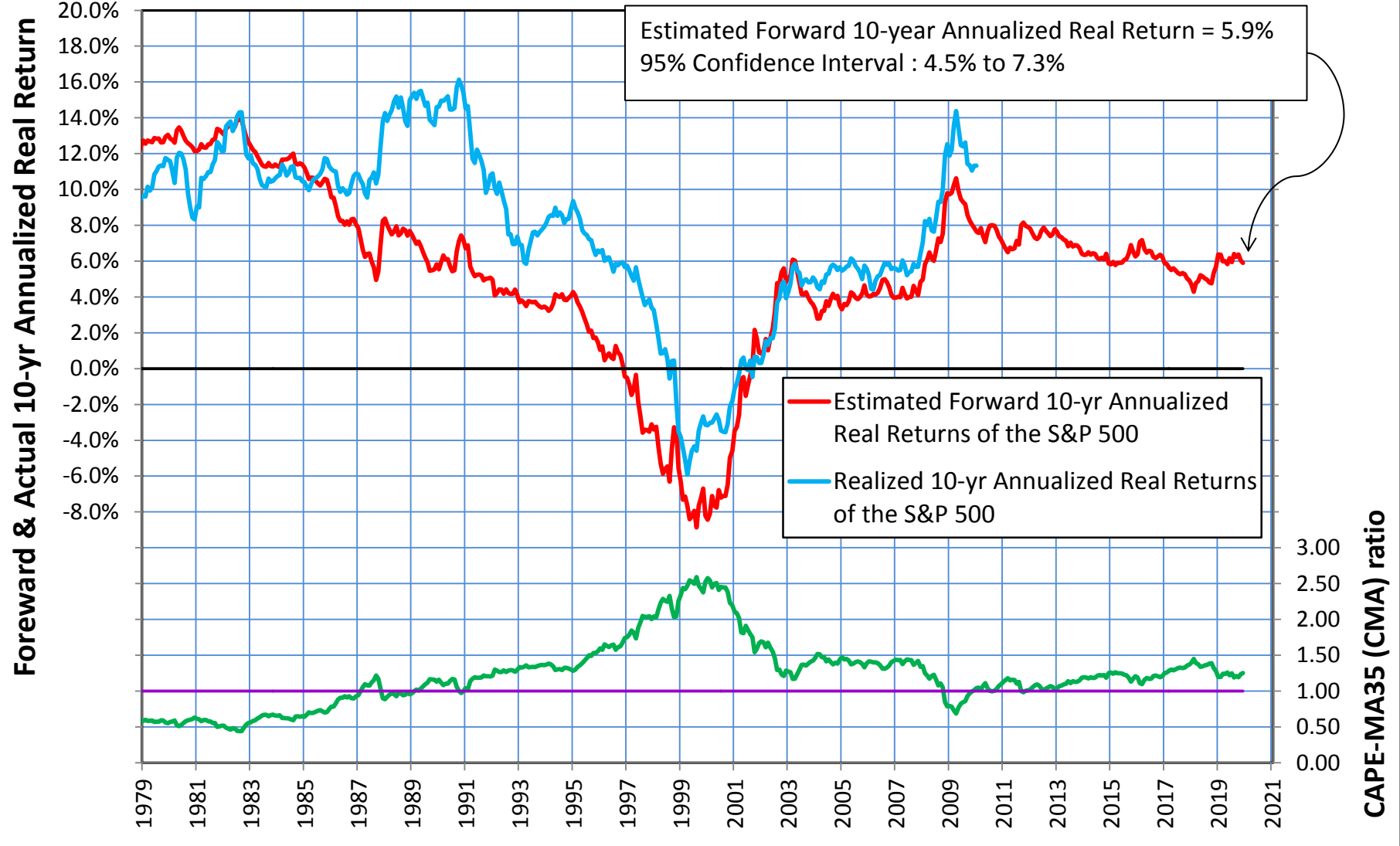
updated to 12/31/2019  
Shiller CAPE= 30.16

Spread btw 5-mo and 25-mo Moving Avg of S&P-real: (2019.09= 77,995), (2019.10= 81,050), (2019.11= 94,443), (2019.12= 103,580)

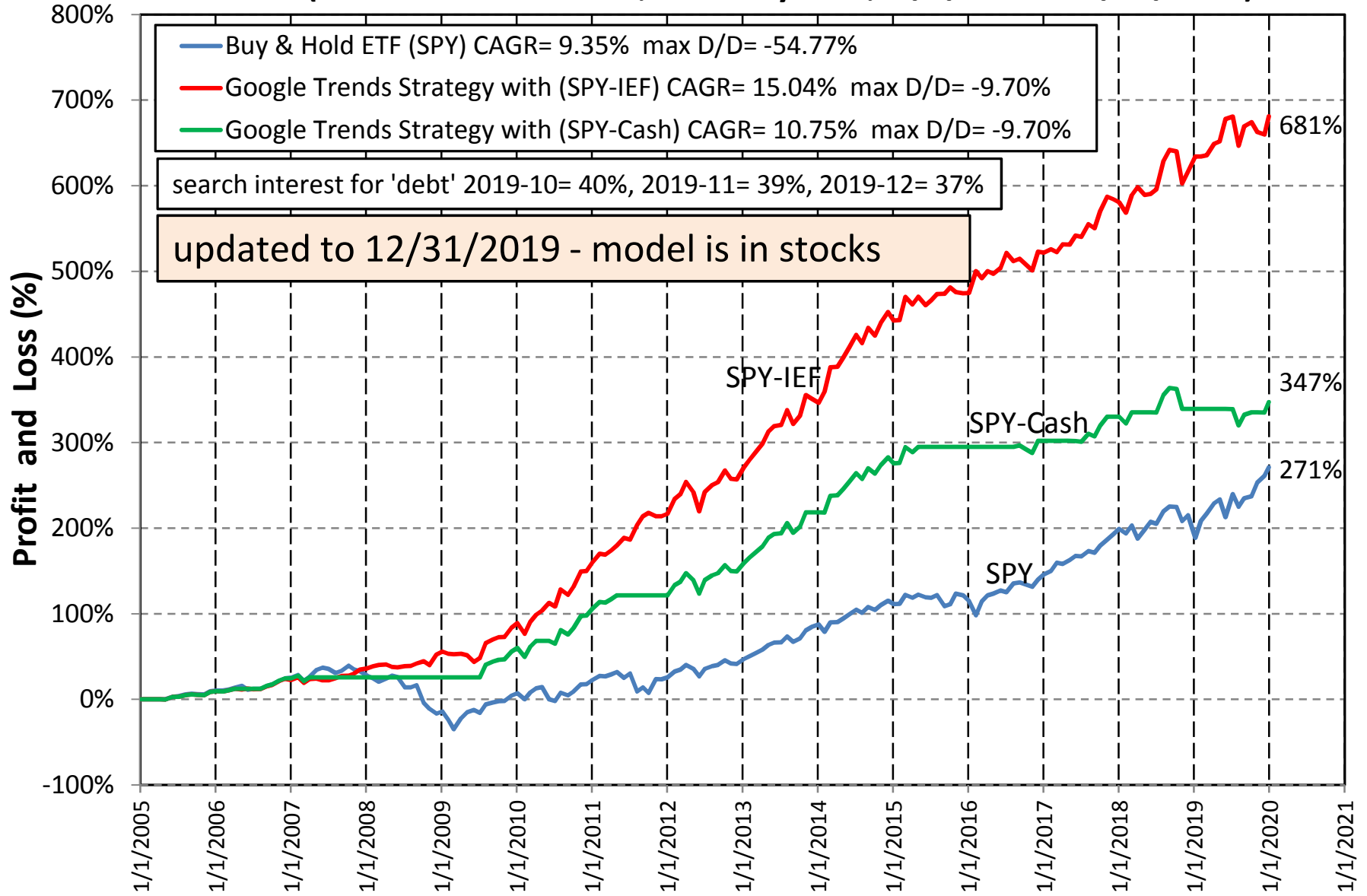


**Fig 9.b Realized vs. Estimated Forward 10-year Annualized Real Returns of the S&P 500 from the CAPE-MA35 (CMA) Ratio Method**

Estimated Forward 10-yr Returns are calculated from yearly regression equations, regressed on monthly data from Jan-1917 onward. updated to 12/31/2019 Last CAPE-MA35 ratio= 1.25, previous month= 1.23



**Figure-10: Cumulative Performance iM-GT Timer**  
(Search Term = "debt", monthly data, 5/2/2005 - 12/31/2019)



Updated to Jan 2, 2020

# Trade Weighted US Dollar and Interest Rates

