

May 2, 2019

### Business Cycle Index

The BCI at 258.6 is above last week's 257.9, and formed a new high for this business cycle indicated by the BCIP of 100. Also, the 6-month smoothed annualized growth BCIG at 13.7 is above last week's 12.9. Both BCIP and BCIG are not signaling a recession.

May 3, 2019

### Market Signals Summary:

The MAC-US model, iM-Low Frequency Timer and the "3-mo Hi-Lo Index of the S&P500" are invested in the markets. However, the S&P500 Coppock is out of the markets. The MAC-AU is 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 and a buy STPP signal being generated. The gold Coppock model generated a new buy signal on 3/28/2019 and remains invested in gold, however the silver model is in cash. The iM-Gold Timer is in cash. Stock-markets:

#### MAC-US

The MAC-US model switched into the markets on 2/26/2019. The sell-spread (red line) 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 below last week's level at 15.41% (last week 15.45%), and is in the market since 2/27/2019.

#### Coppock Indicator for the S&P500

The Coppock indicator for the S&P500 exited the market on 1/29/2019 and is in cash.

#### MAC-AU

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

### Recession:

#### COMP

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

#### iM-BCIG

Figure 3.1 shows the recession indicator iM-BCIG above 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. The FRR2-10 general trend is downwards.

## 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 and is possibly entering an upward trending phase. It signaled a buy STPP this week. 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

May 3, 2019 (next update June 7, 2019)

### Unemployment

The unemployment rate recession model (article link), has been updated with the April UER of 3.6%. The model does not signal a recession.

### The Dynamic Linearly Detrended Enhanced Aggregate Spread:

The updated level of this indicator, -212bps, below last months -199bps, confirms the January 20, 2017 signal. Based on past history a recession could have started as early as October 2017, but not later than January 2019. The average lead time to previous recessions provided by DAGS was 15 months which would indicate a recession start for 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 moved from 0 to +2 end of April-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 are estimated at 5.9% with a 95% confidence interval : 4.5% to 7.3%, which are down 0.1% from last month.

#### iM-GT Timer

Fig-10.-2-1-2019The iM-GT Timer, based on Google Search Trends volume switched to cash on 11/1/2018 and remains out of the market.

#### Trade Weighted USD

The Trade Weighted \$ value is on a moderate rising trend

#### TIAA Real Estate Account

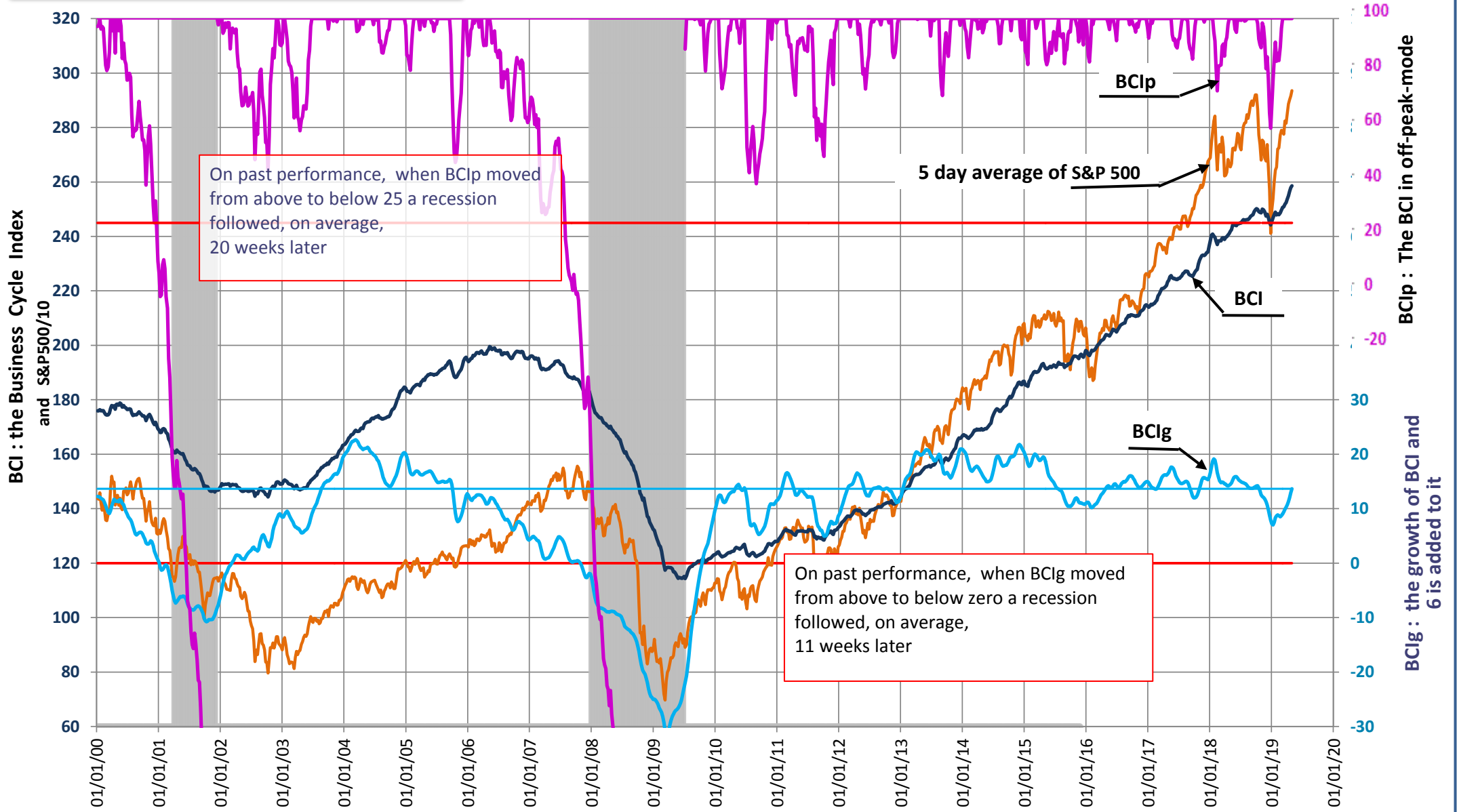
The 1-year rolling return for the end of last month is 5.58%. A sell signal is not imminent.

# iM's Business Cycle Index (BCI)

Date	04/04	04/11	04/18	04/25	05/02
BCIp	100.0	100.0	100.0	100.0	<b>100.0</b>
BCI	253.7	254.9	256.5	257.9	<b>258.6</b>
BCIg	10.7	11.3	12.0	12.9	<b>13.7</b>

**BCIp, BCI and BCIG**  
updated to May 02, 2019

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



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 2010-18 from the modified golden-cross MAC-System



updated to...5/2/19

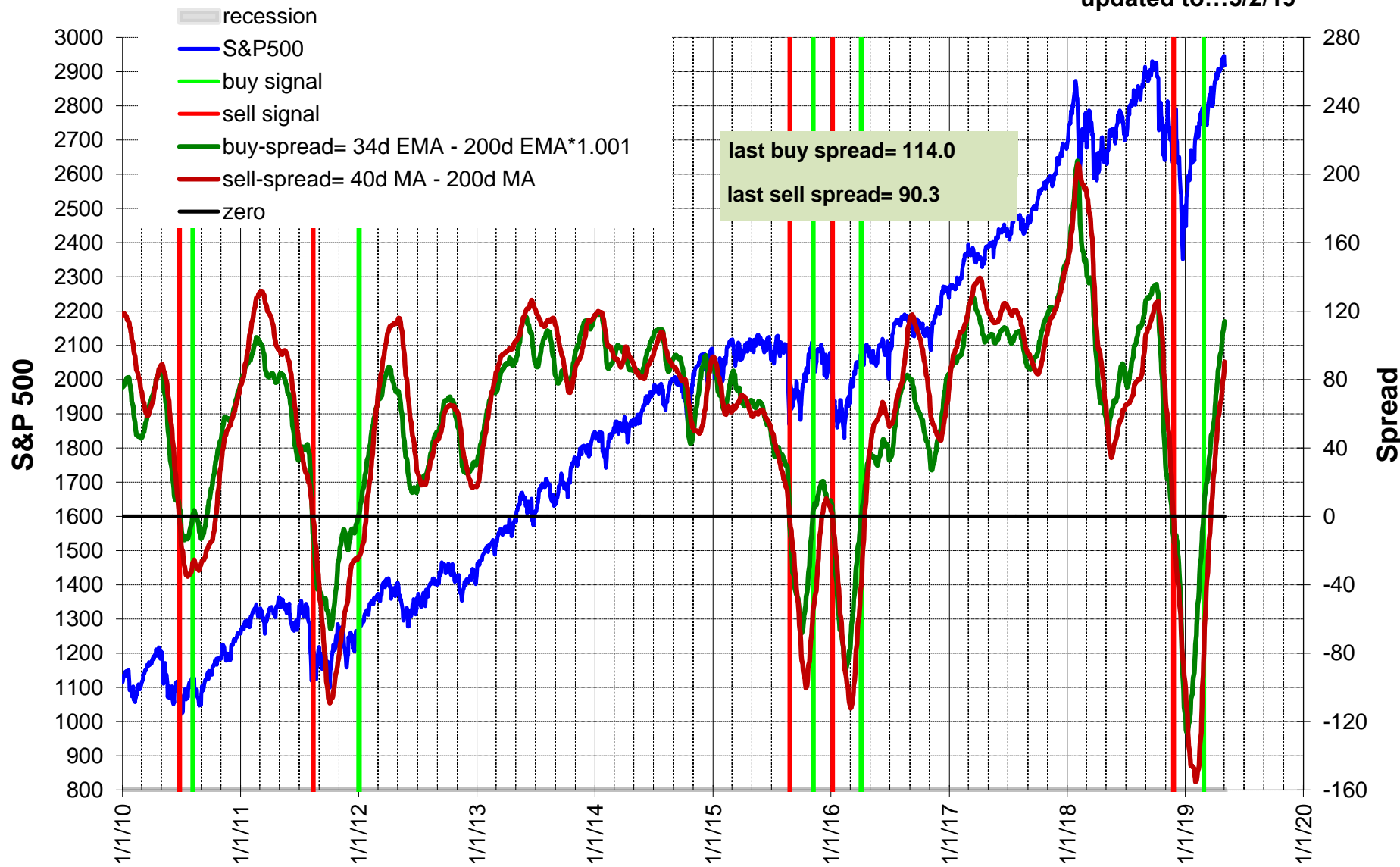


Fig 2.1: Buy and Sell signals for the Australia All Ordinaries Index from the MAC-AU System



updated to May-3-19  
last sell spread= 274.0

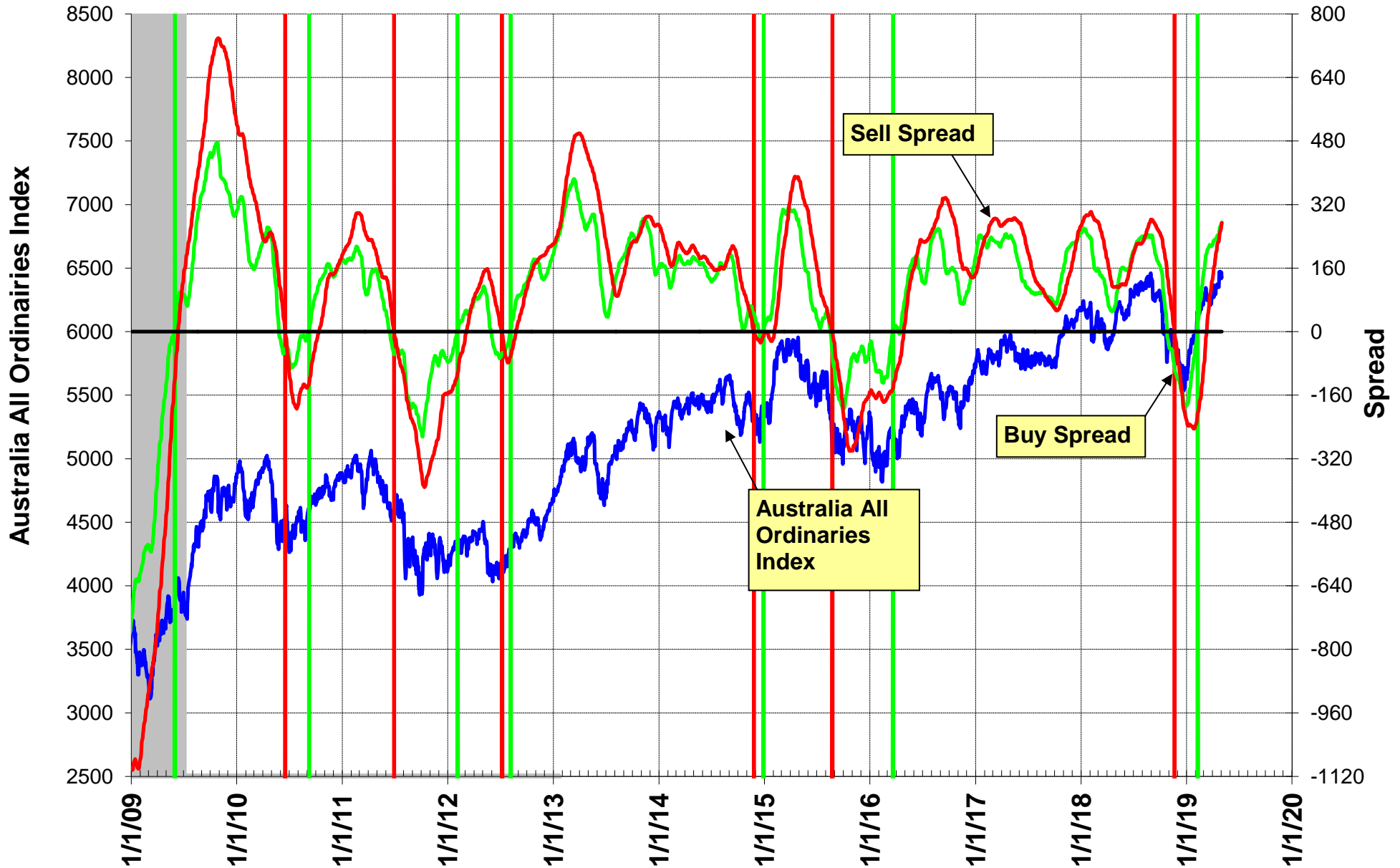
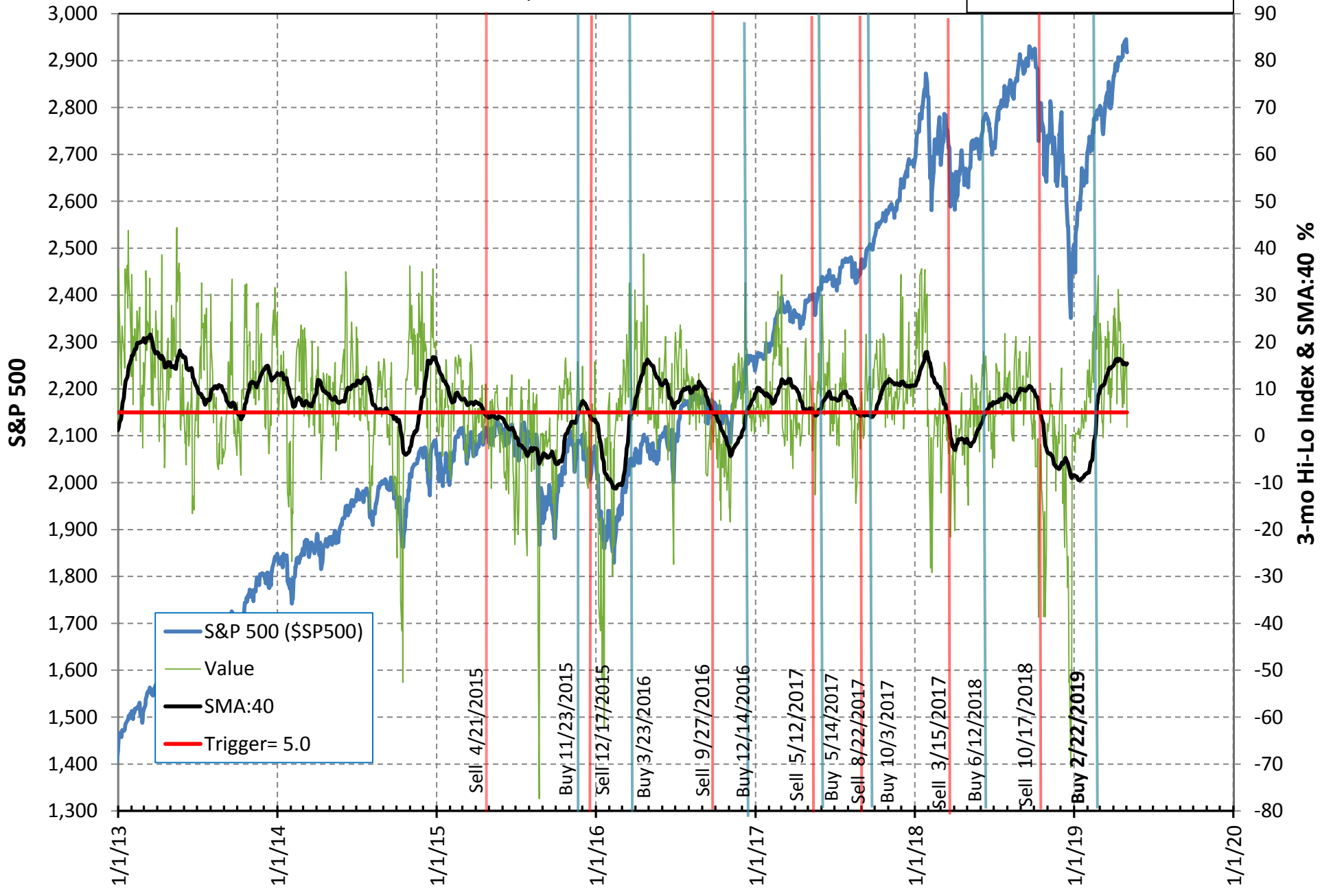


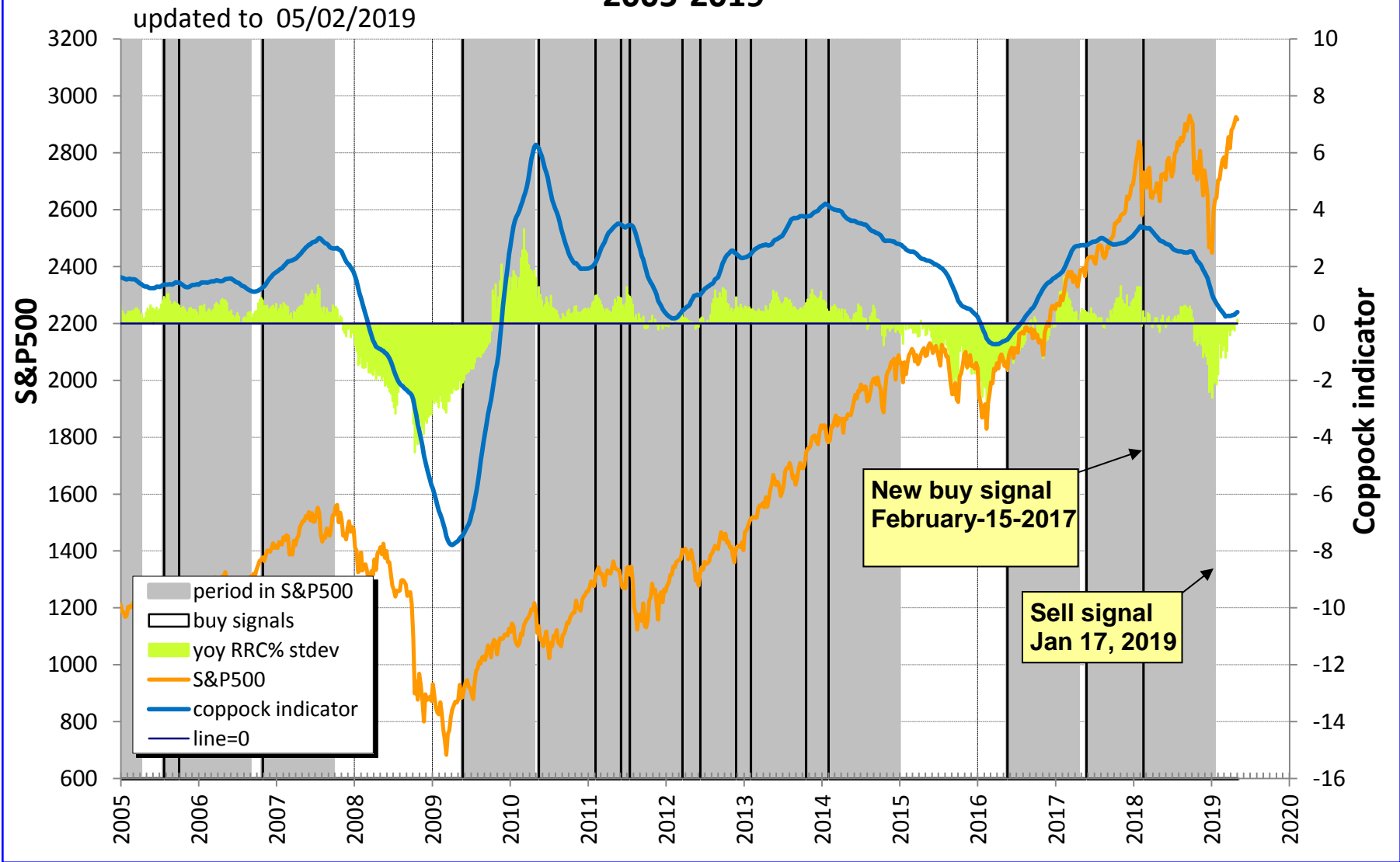
Fig 2.2 3-mo Hi-Lo Index of the S&P500 & 40-day SMA of Index

updated to 5/2/2019

last SMA:40= 15.41%

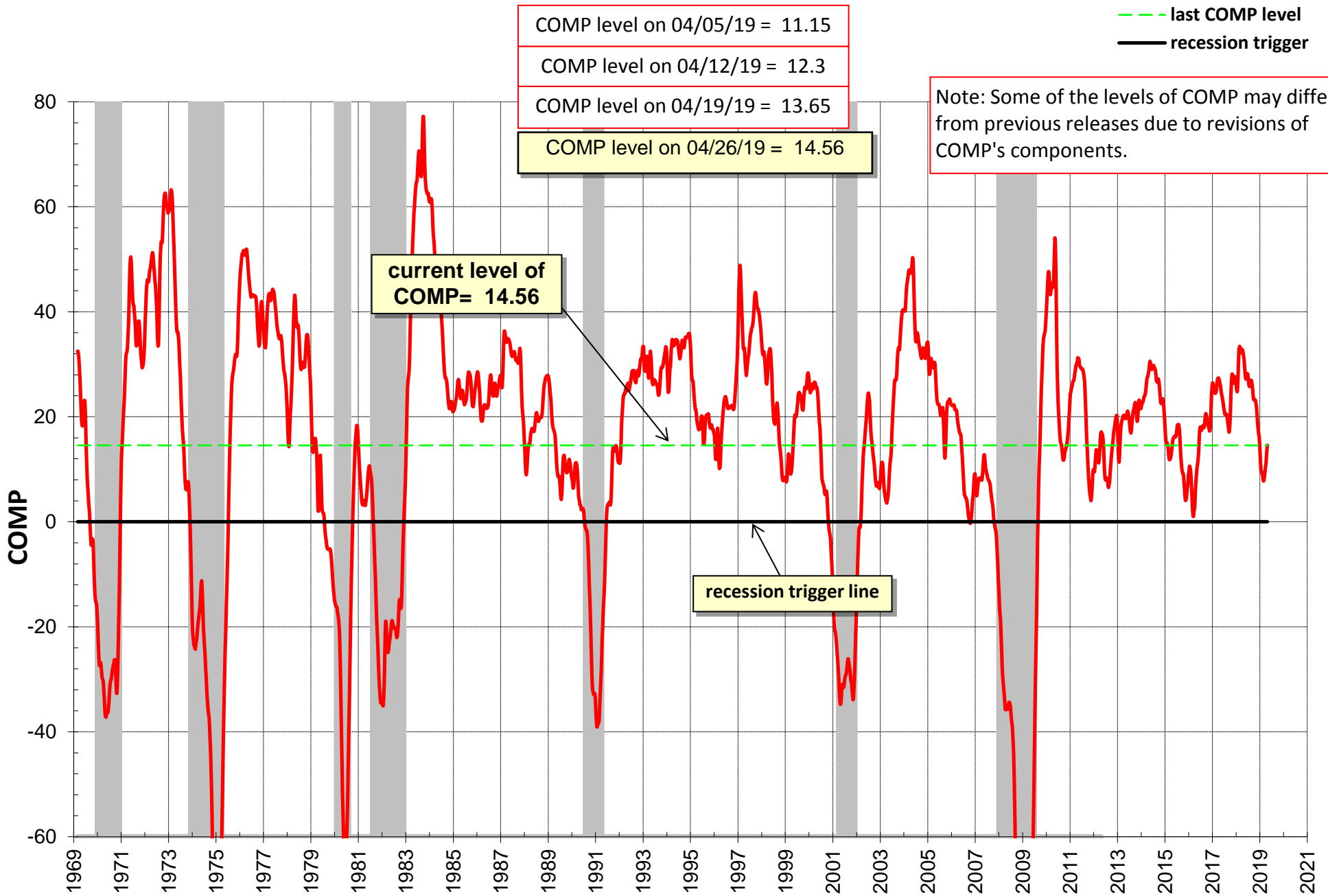


### Fig-2.3 Modified Coppock Indicator for S&P500 2005-2019



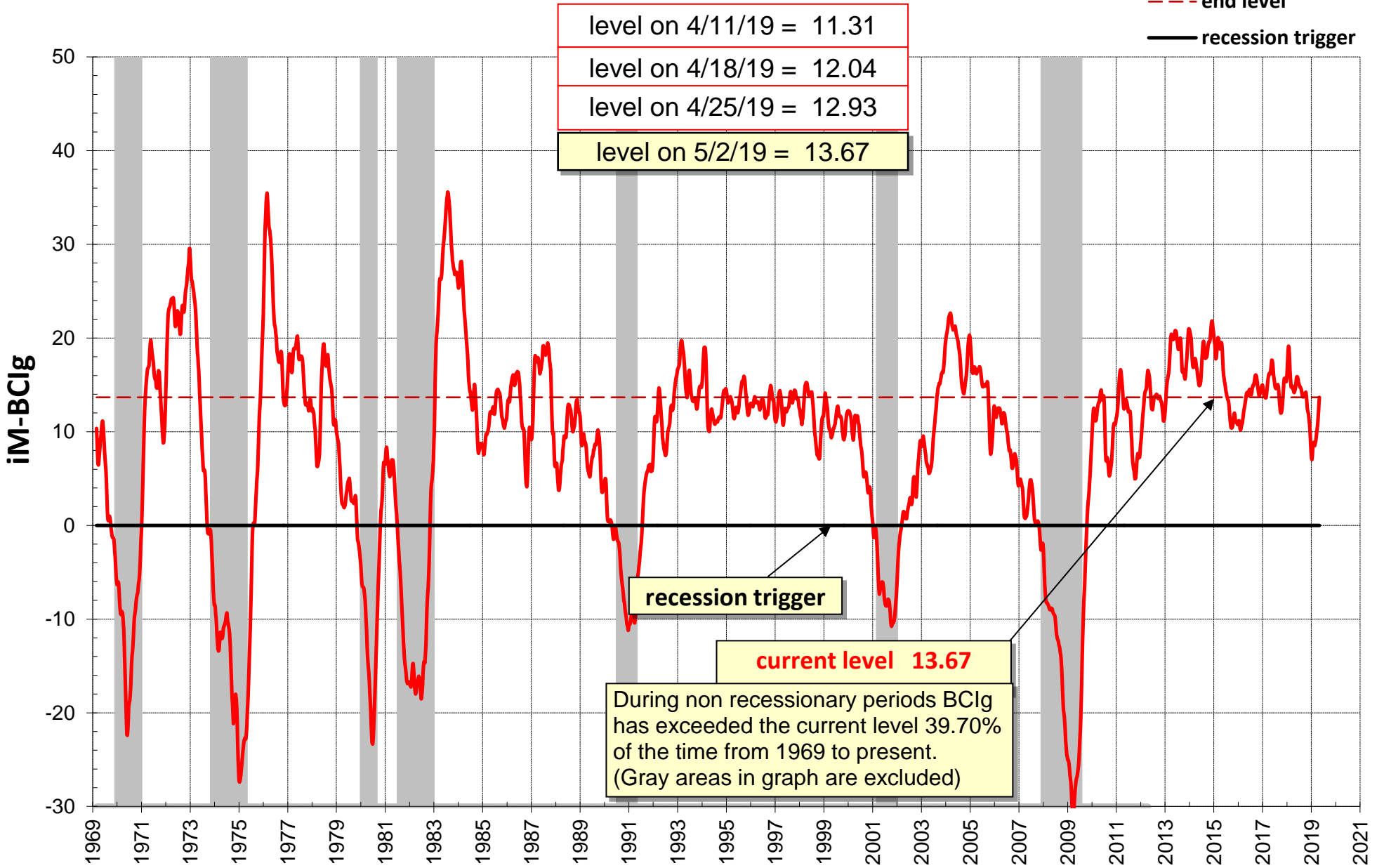
### Fig. 3: COMP Leading Indicator of US Economy 1969-2019

- recession
- COMP
- last COMP level
- recession trigger



### Fig 3.1: iM-BCI<sub>g</sub> 1969-2019

- recession
- iM-BCI<sub>g</sub>
- end level
- recession trigger



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

updated to 05/02/2019

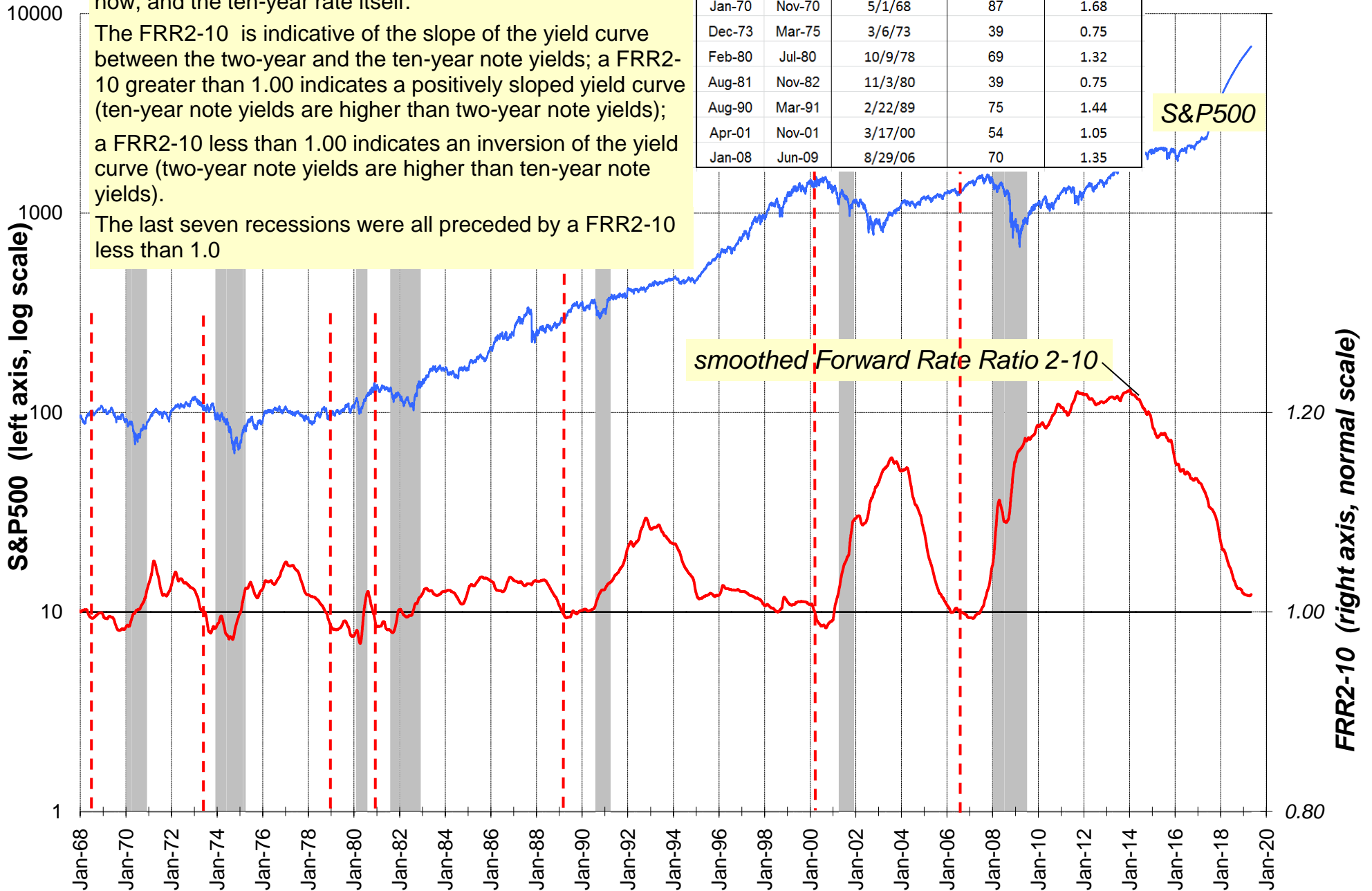
EMA of FRR2-10 = 1.018

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).

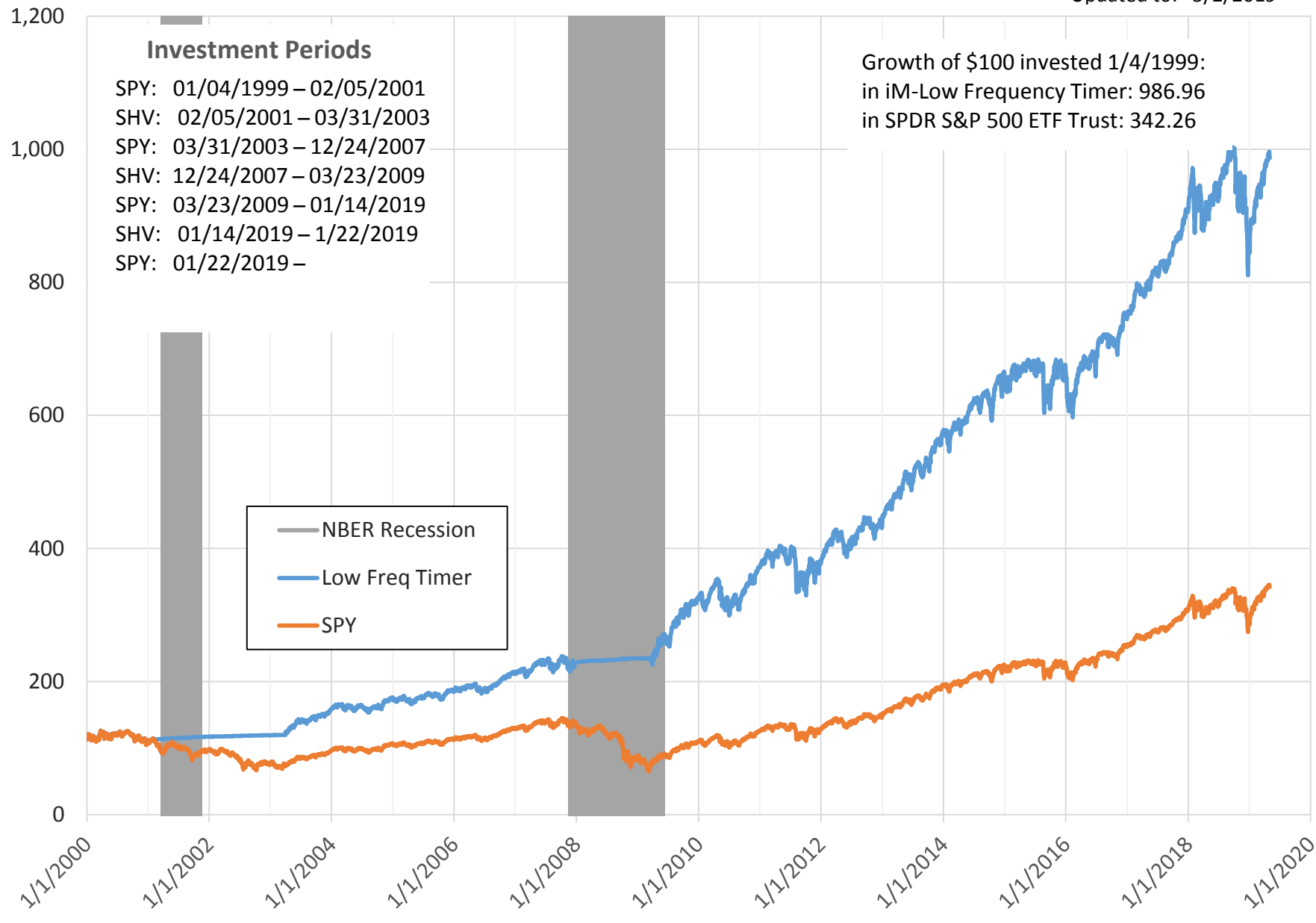
The last seven recessions were all preceded by a FRR2-10 less than 1.0

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

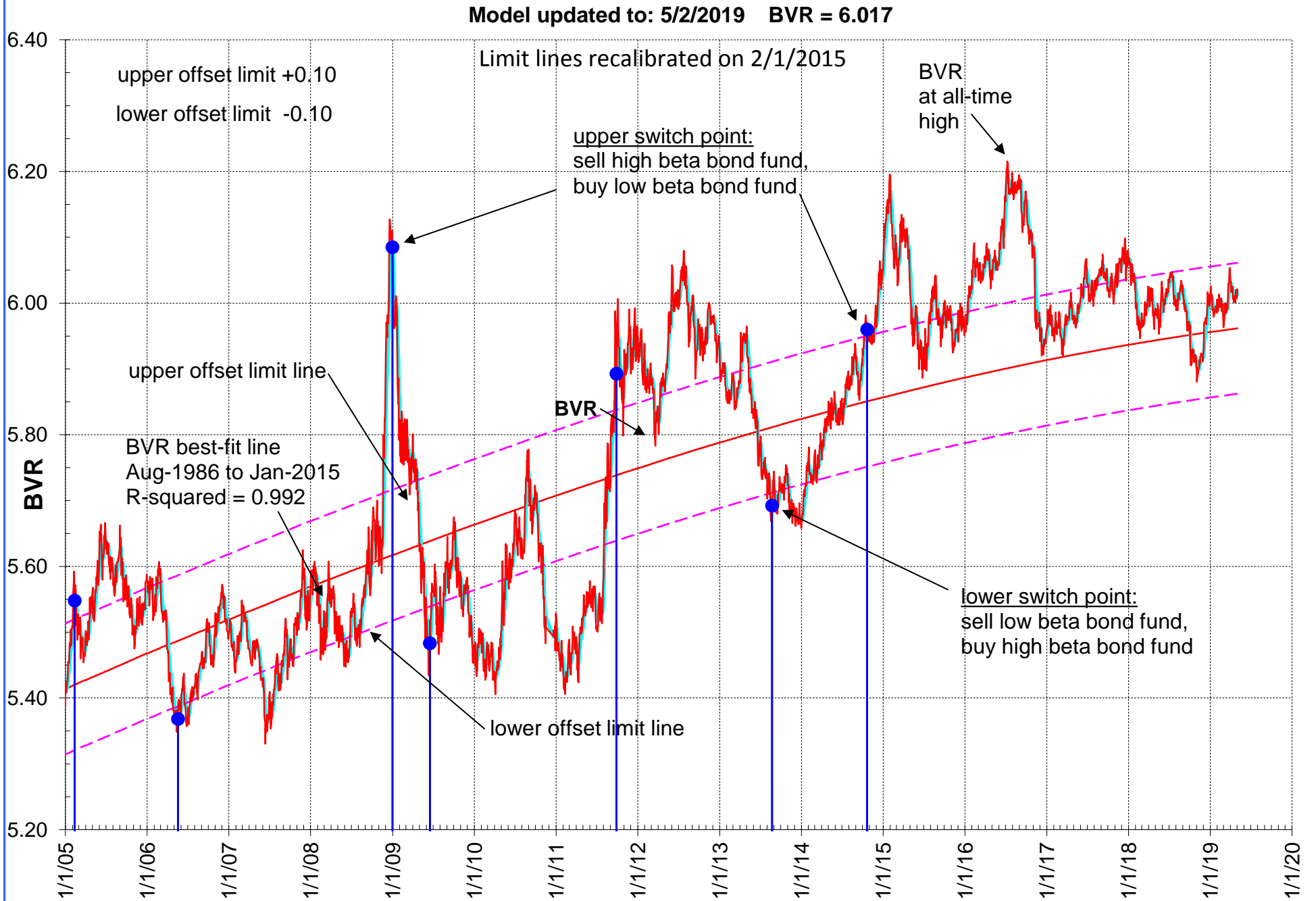


### Fig.3.3 iM-Low Frequency Timer

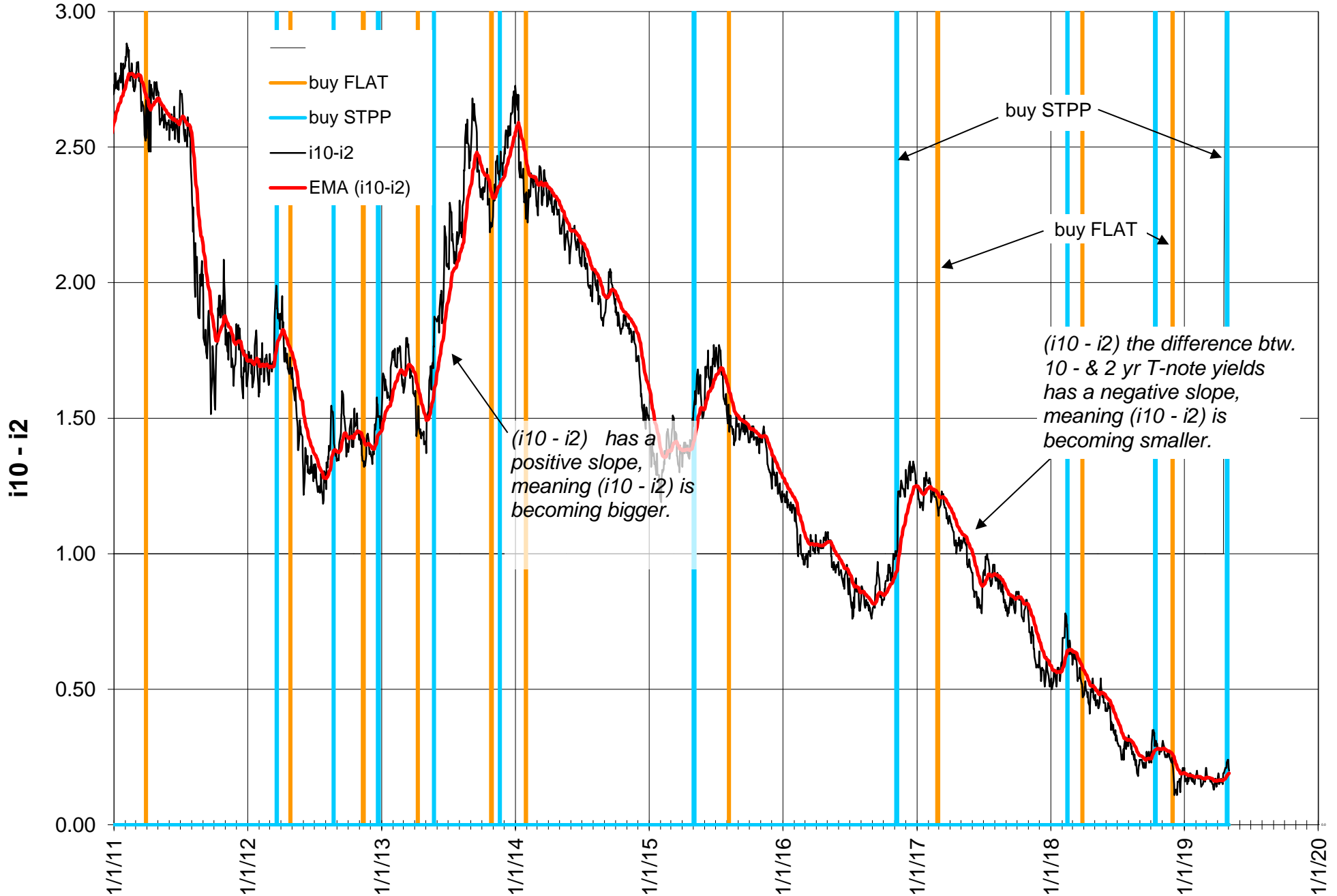
Updated to: 5/2/2019



### Figure 4: Bond Value Ratio (BVR) from 2005 to 2018



**Figure 5: i10 - i2 Updated to.....5/2/2019**



# Figure 6: Modified Coppock Indicator for Gold 2009-2019

updated to 05/02/2019

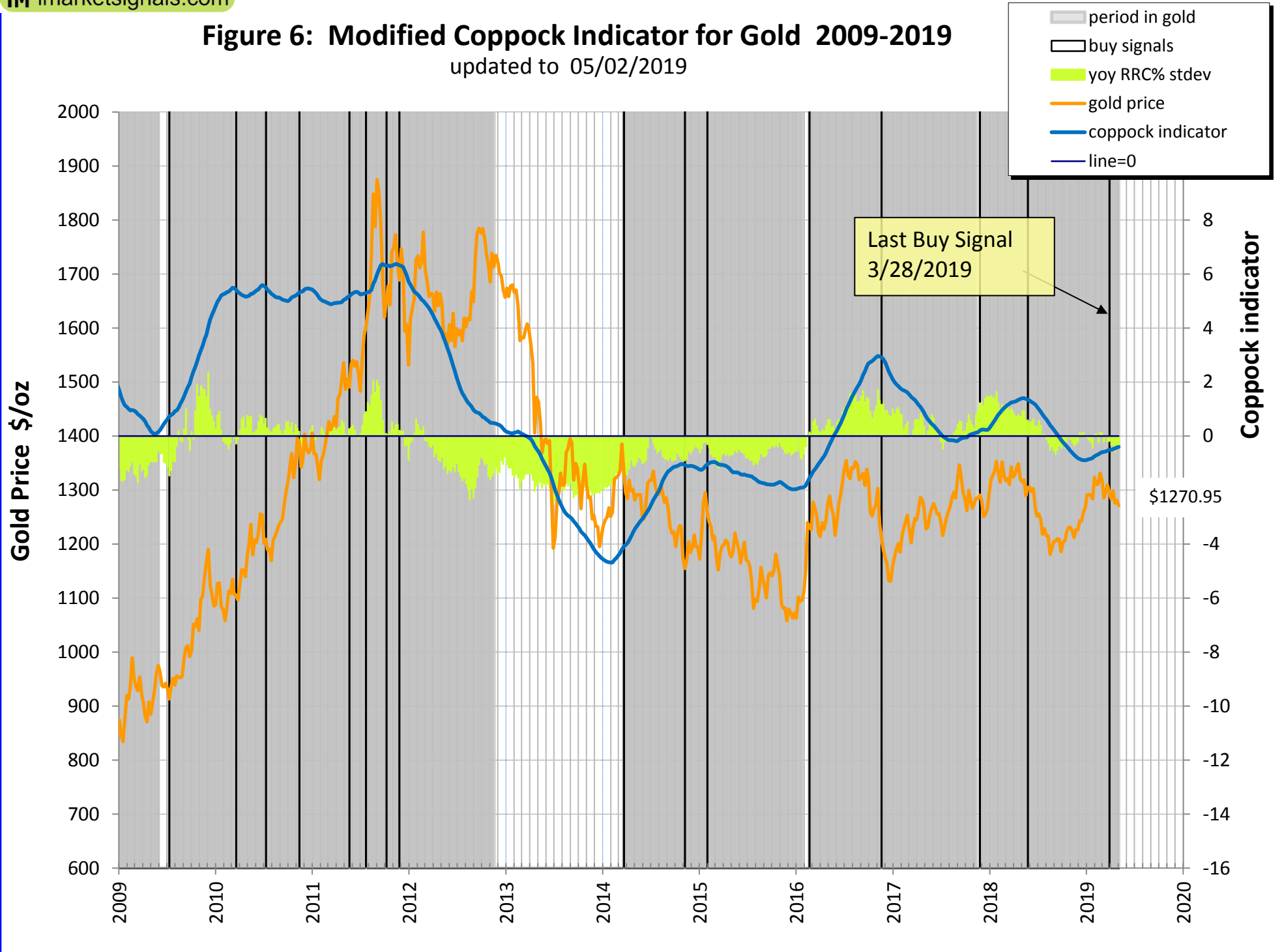
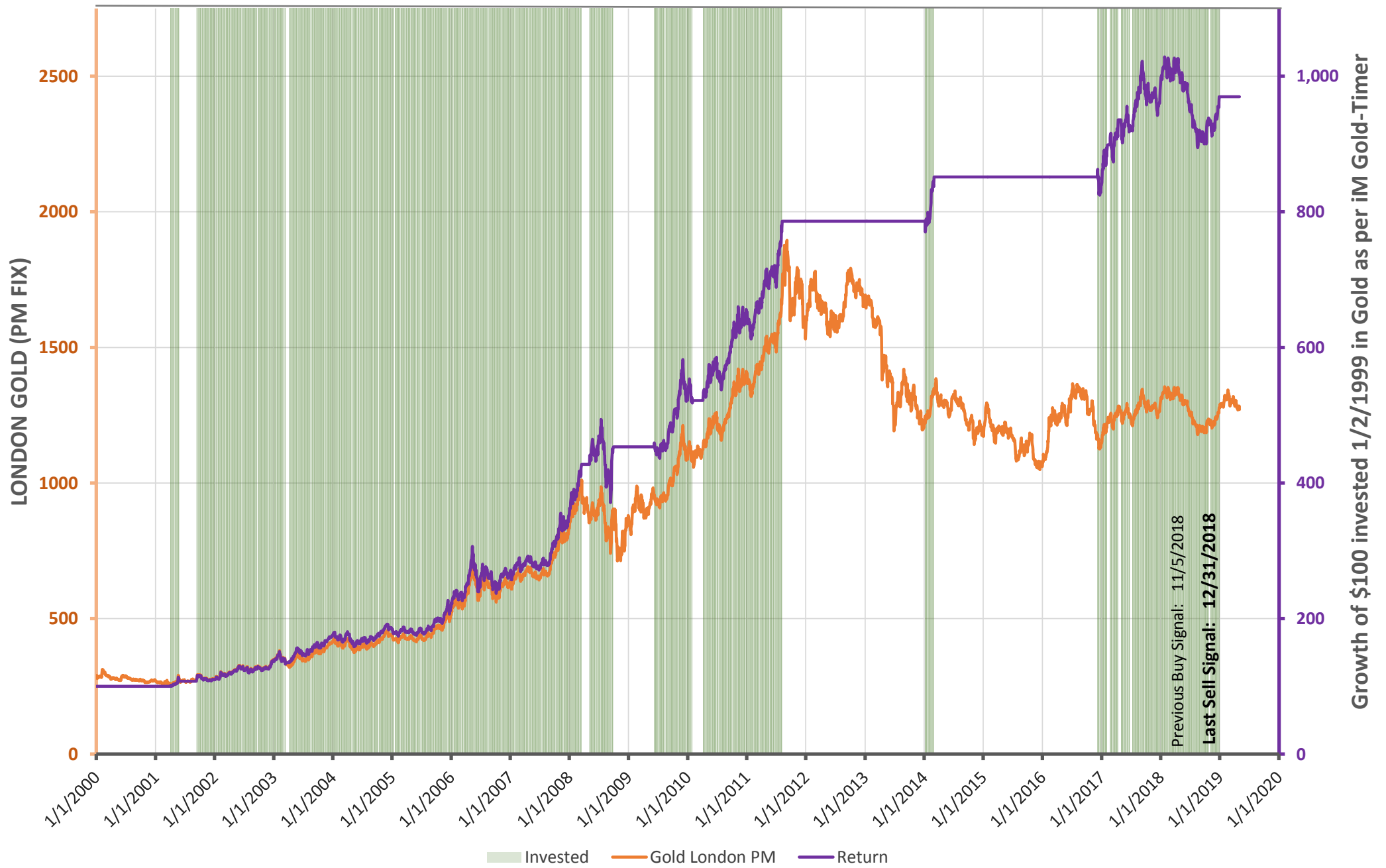


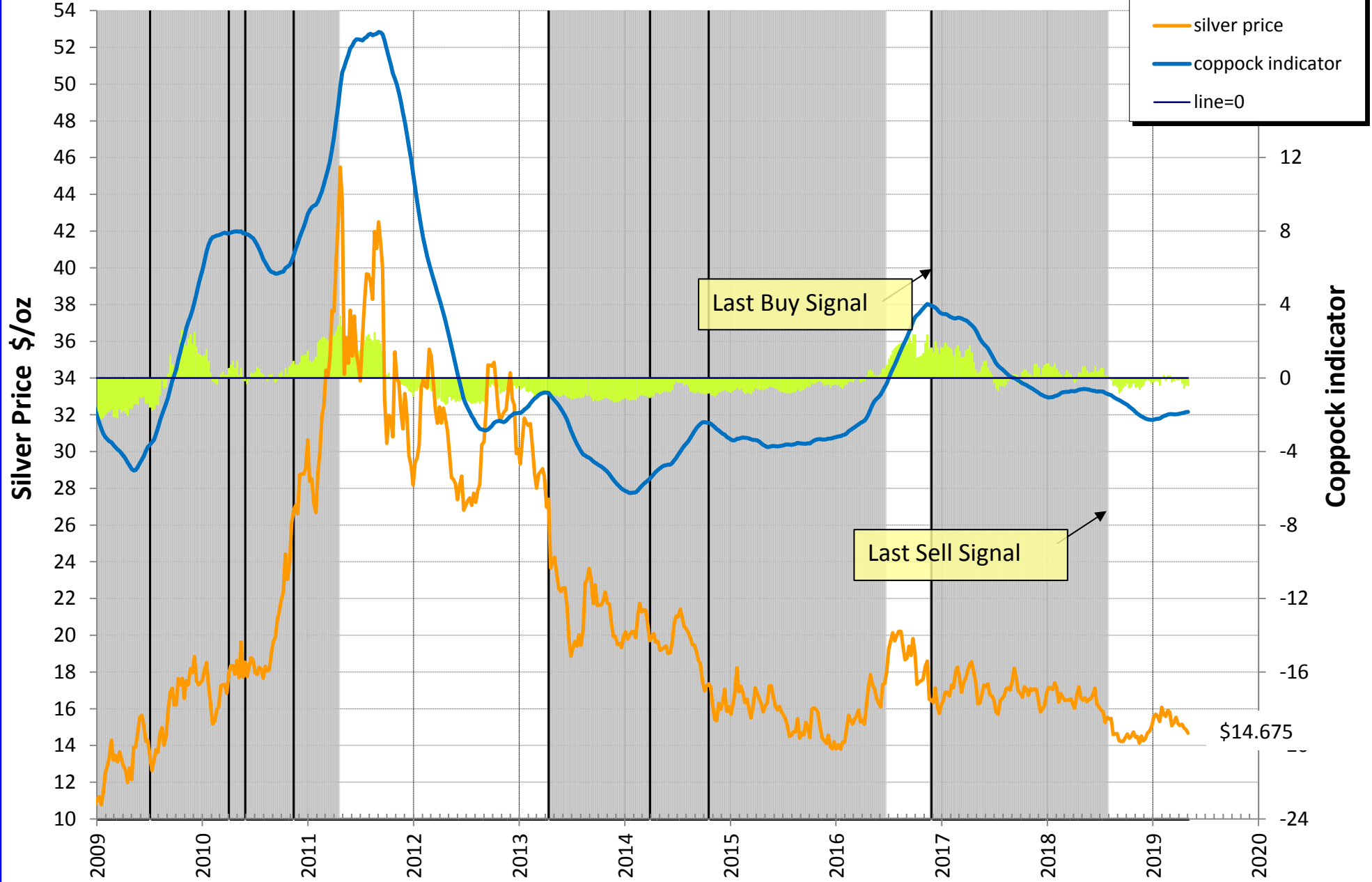
Fig. 6.1a iM GOLD-TIMER - Rev 1

Updated to: 5/2/2019



### Figure 7: Modified Coppock Indicator for Silver 2009-2018

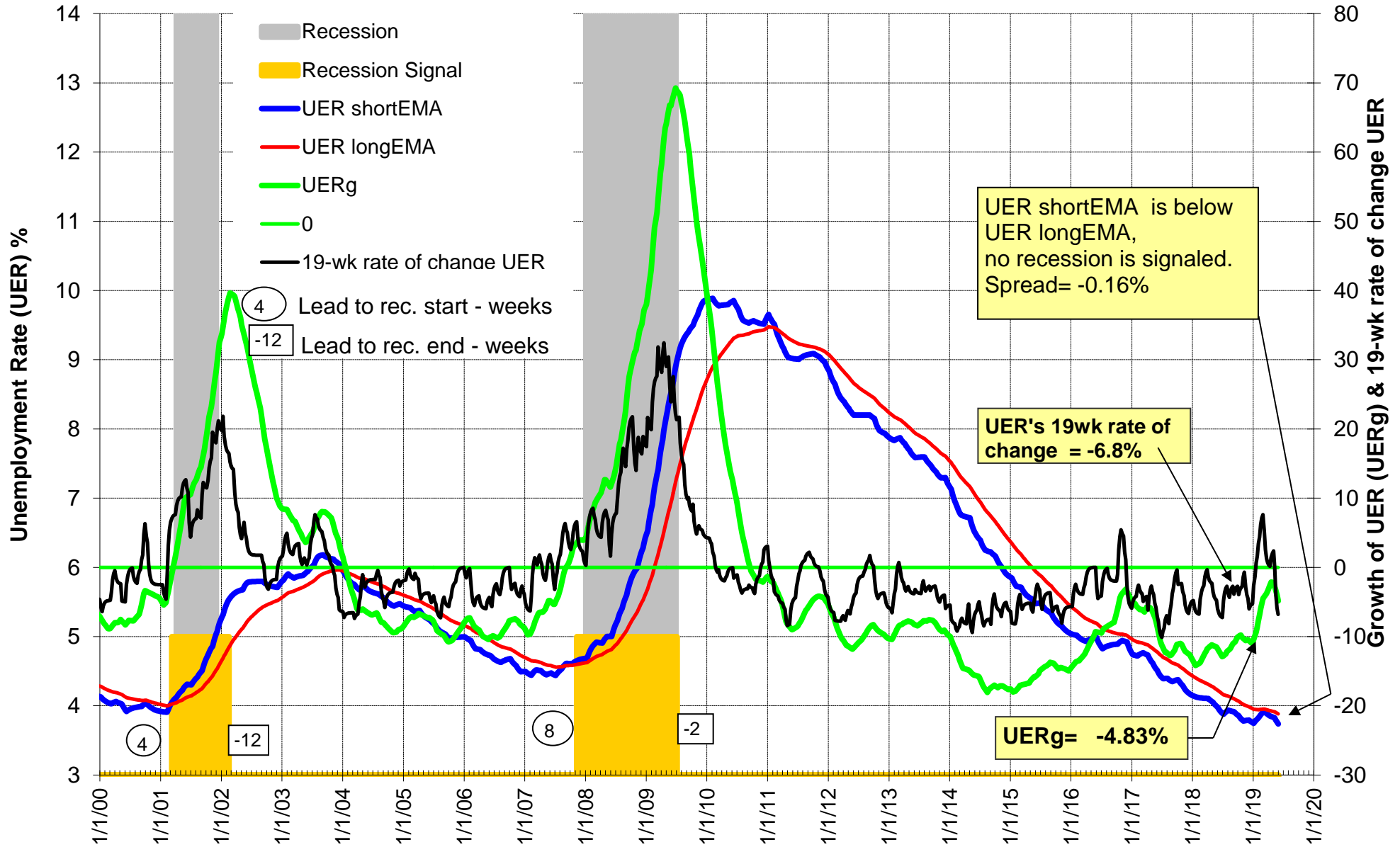
updated to 05/02/2019



### 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 5-31-2019 with April UER= 3.6%



# 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 Feb-2020

updated on May-3-2019, last level of DAGS = -212 bps

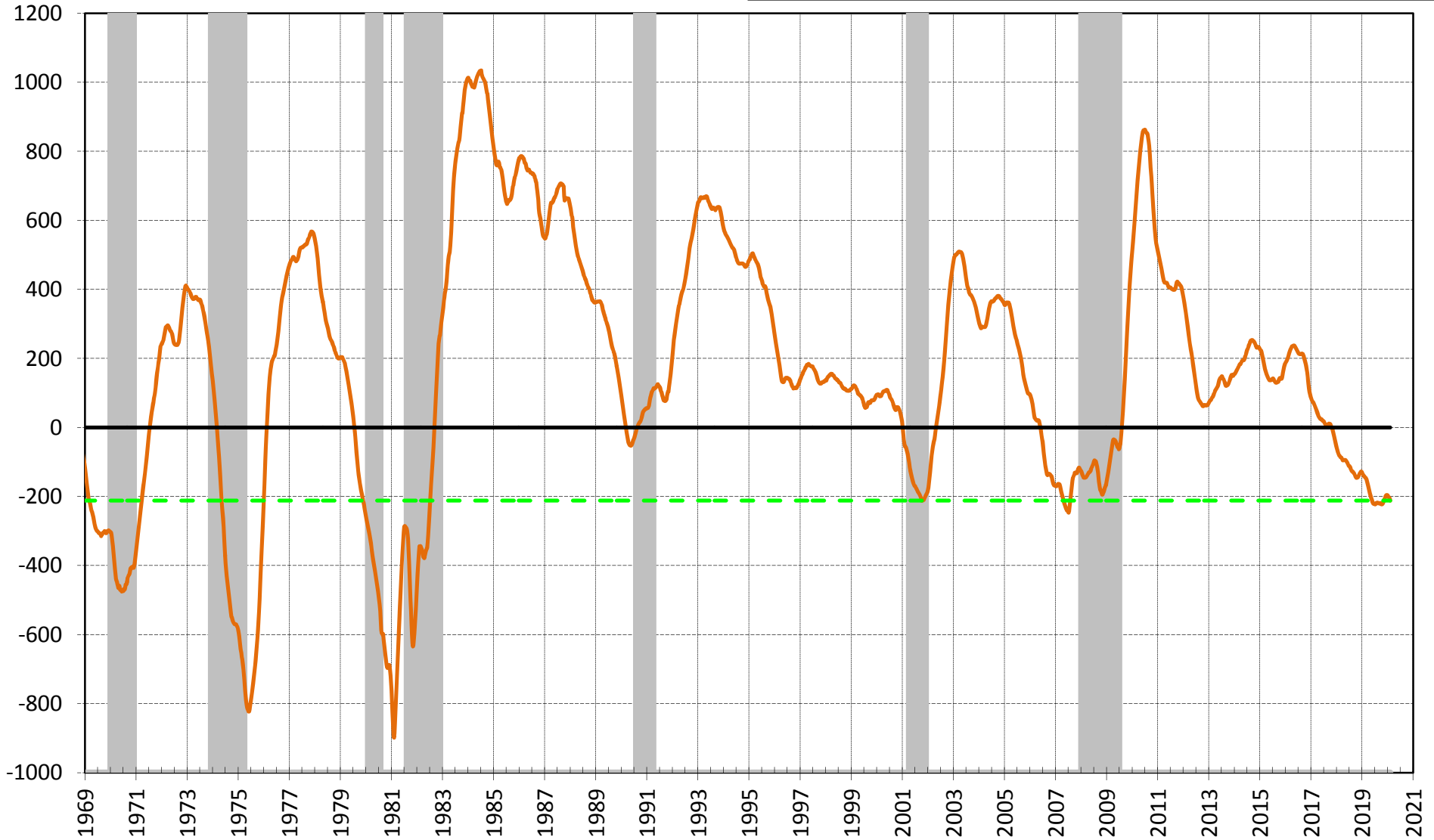
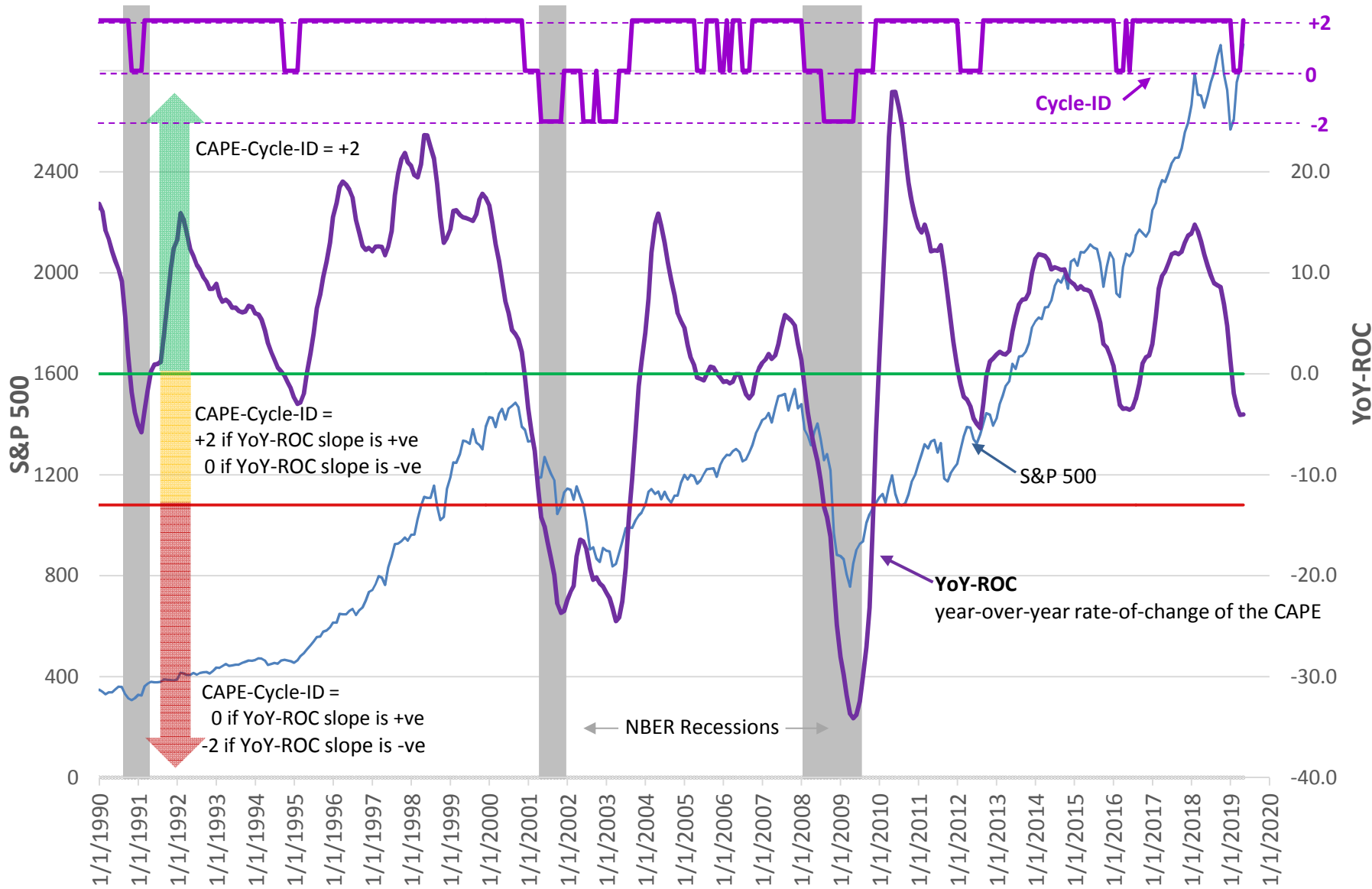


Fig. 9a CAPE-Cycle-ID and the YoY-ROC from 1990

updated to 4/30/2019

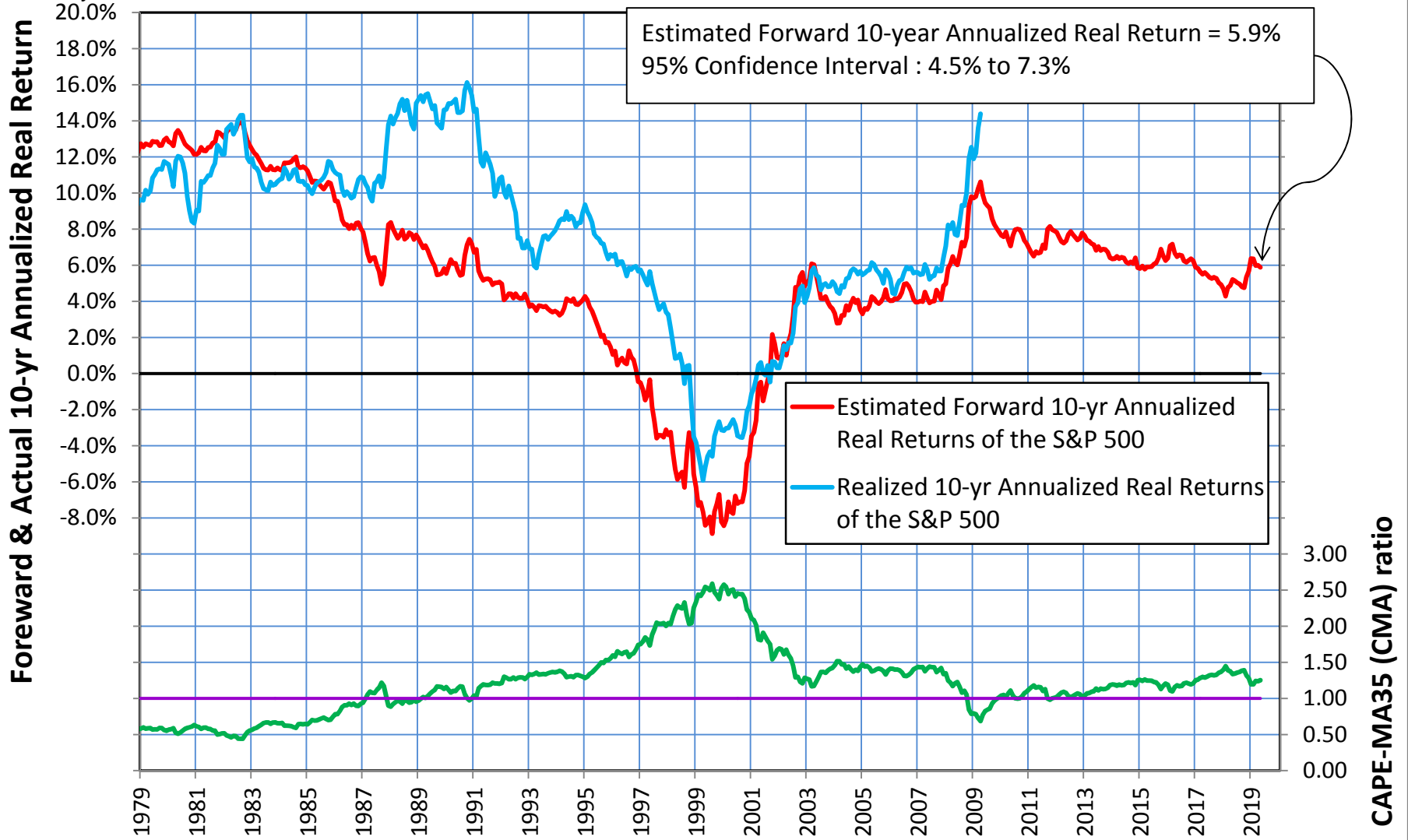
Shiller CAPE= 29.76

Spread btw 5-mo and 25-mo Moving Avg of S&P-real: (2019.01= 76,628), (2019.02= 49,149), (2019.03= 40,065), (2019.04= 41,114)

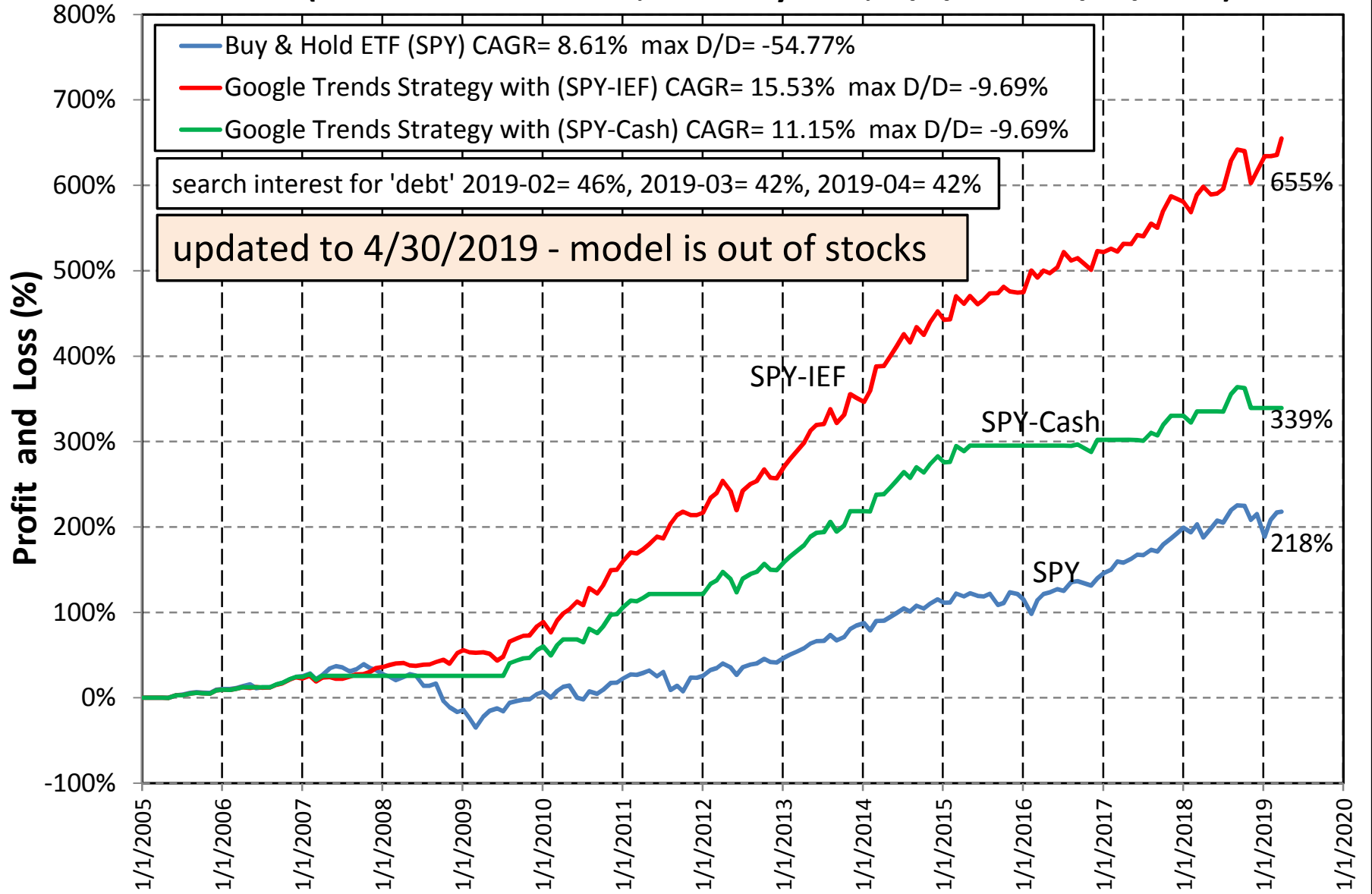


### Fig 9.b Realized vs. Estimated Forward 10-year Annualized Real Returns of the S&P 500 from the CAPE-MA35 (CMA) Ratio Method

Estimated Forward 10-yr Returns are calculated from yearly regression equations, regressed on monthly data from Jan-1917 onward. updated to 4/30/2019 Last CAPE-MA35 ratio= 1.25, previous month= 1.24

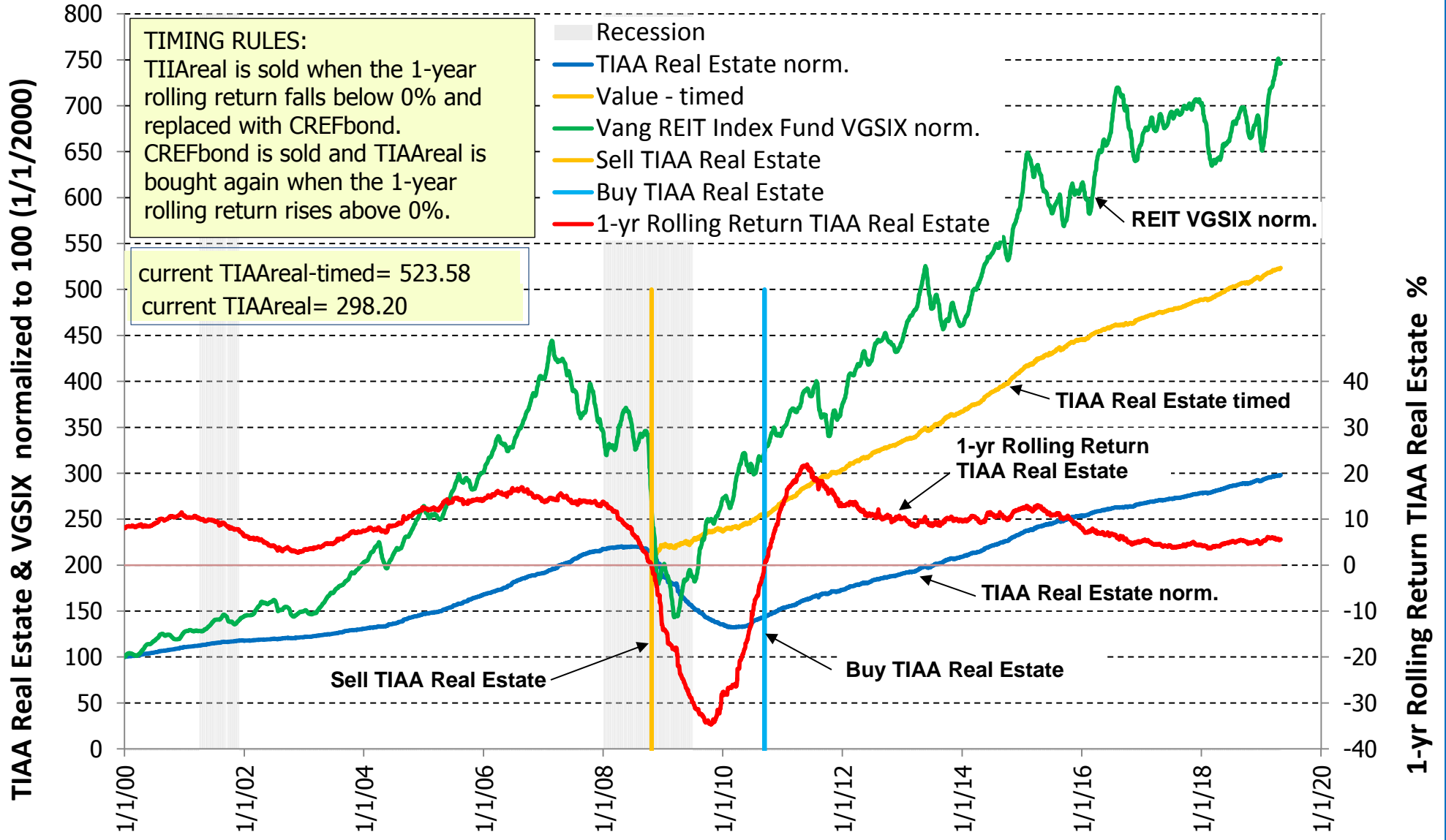


**Figure-10: Cumulative Performance iM-GT Timer**  
(Search Term = "debt", monthly data, 5/2/2005 - 4/30/2019)



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

updated to 4/30/19, TIAAreal current 1-year rolling return= 5.58%



Updated to Apr 25, 2019

# Trade Weighted US Dollar and Interest Rates

