iM's Business Cycle Index (BCI)

BCIp, BCI and BCIg
updated to January 23, 2020

Date	12/26	01/02	01/09	01/16	01/23
BCIp	98.0	98.3	90.4	92.5	**99.4**
BCI	261.9	262.0	260.7	261.1	**262.1**
BCIg	11.4	11.3	10.8	10.4	**10.2**

On past performance, BCIp = 100 can be interpreted as an average one year "time-to-live" to a recession.
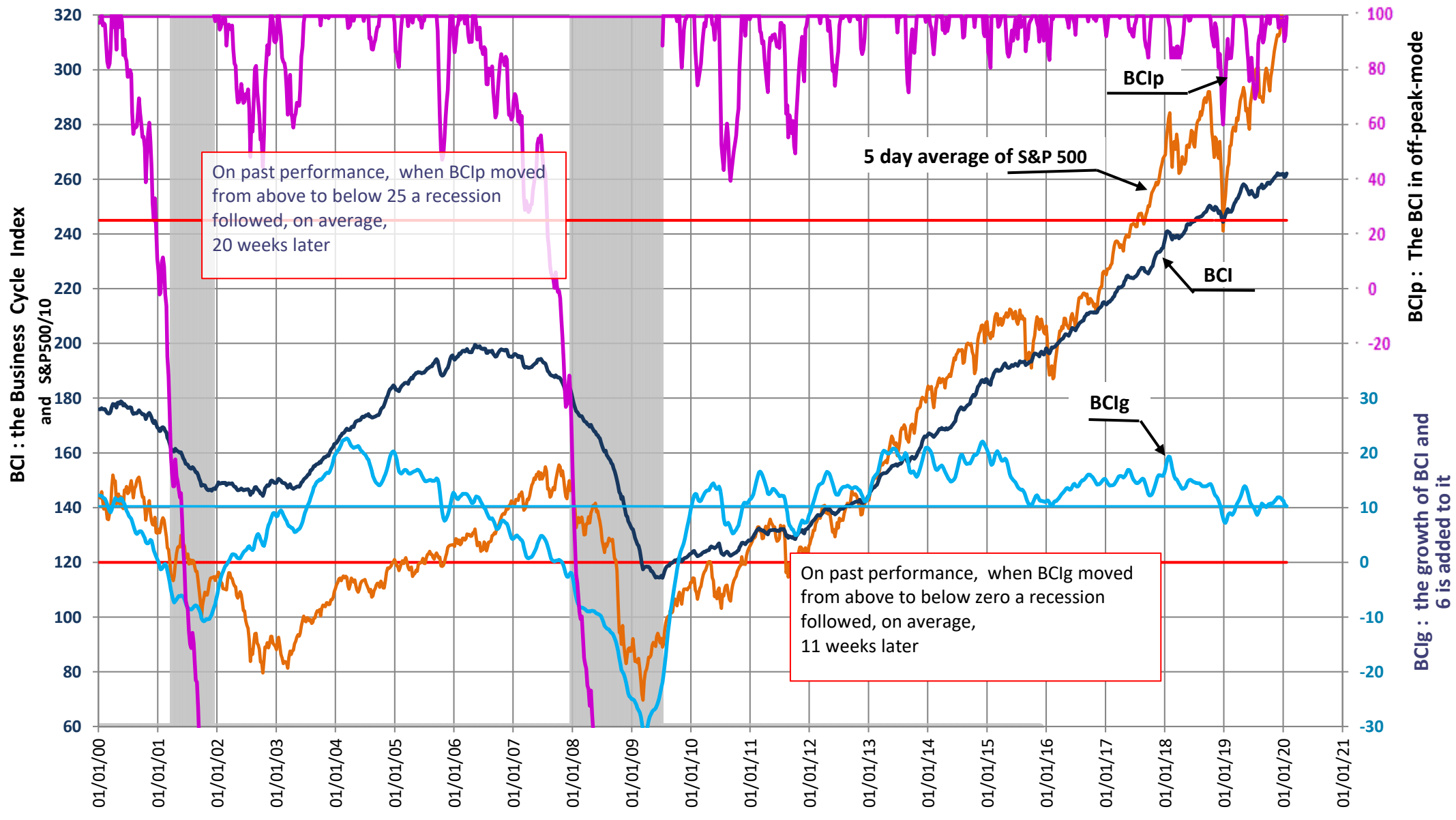
On past performance, when BCIp moved from above to below 25 a recession followed, on average, 20 weeks later

5 day average of S&P 500

BCIp

BCI

BCIg

On past performance, when BCIg moved from above to below zero a recession followed, on average, 11 weeks later

BCI : the Business Cycle Index and S&P500/10

BCIp : The BCI in off-peak-mode

BCIg : the growth of BCI and 6 is added to it

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

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

updated to…1/23/20

last buy spread= 209.9

last sell spread= 212.4

- recession
- S&P500
- buy signal
- sell signal
- buy-spread= 34d EMA - 200d EMA*1.001
- sell-spread= 40d MA - 200d MA
- zero

S&P 500

Spread

2-MAC rev8-27-15.xlsb
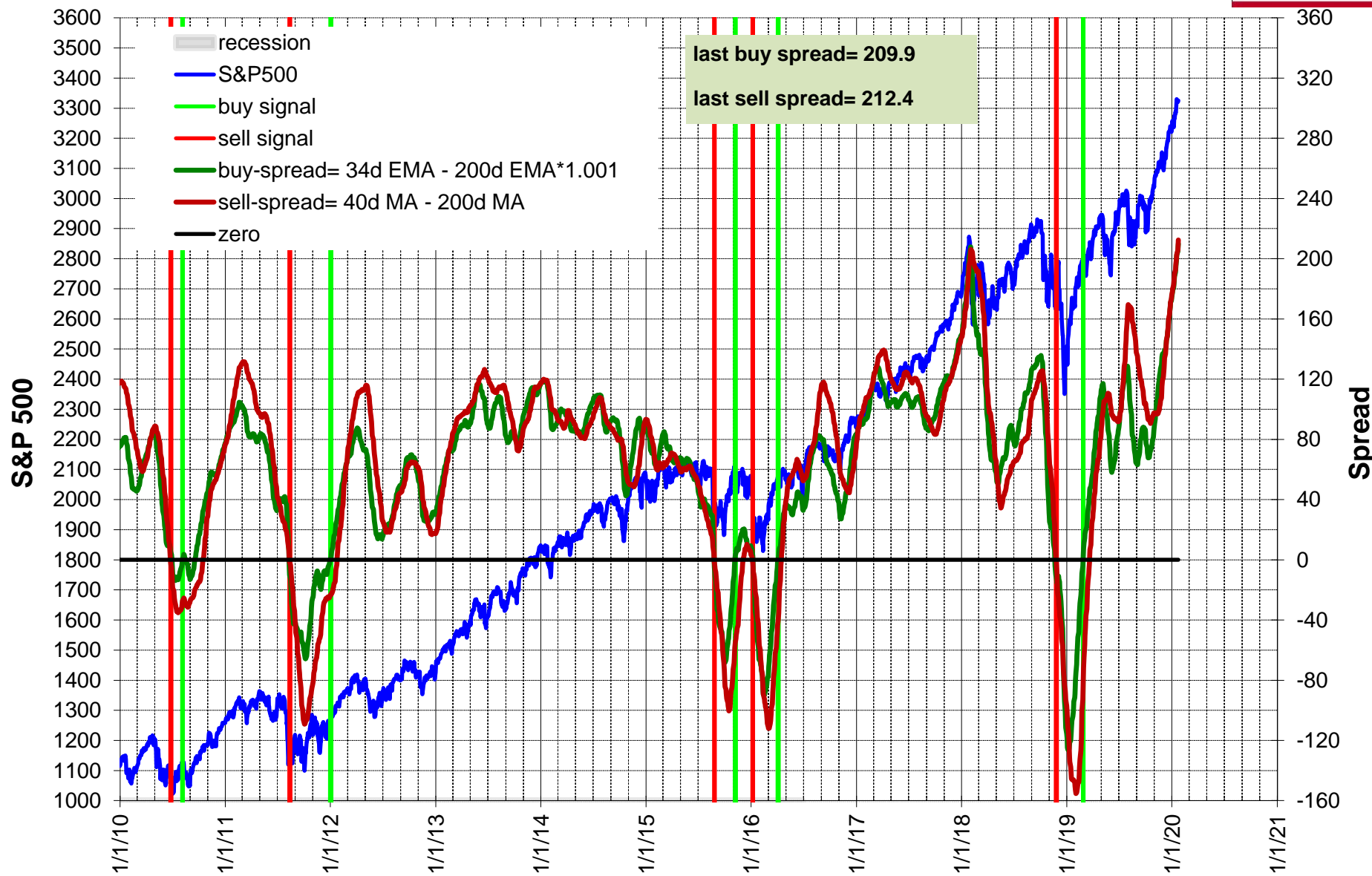
Fig 2.1: Buy and Sell signals for the Australia All Ordinaries Index from the MAC-AU System
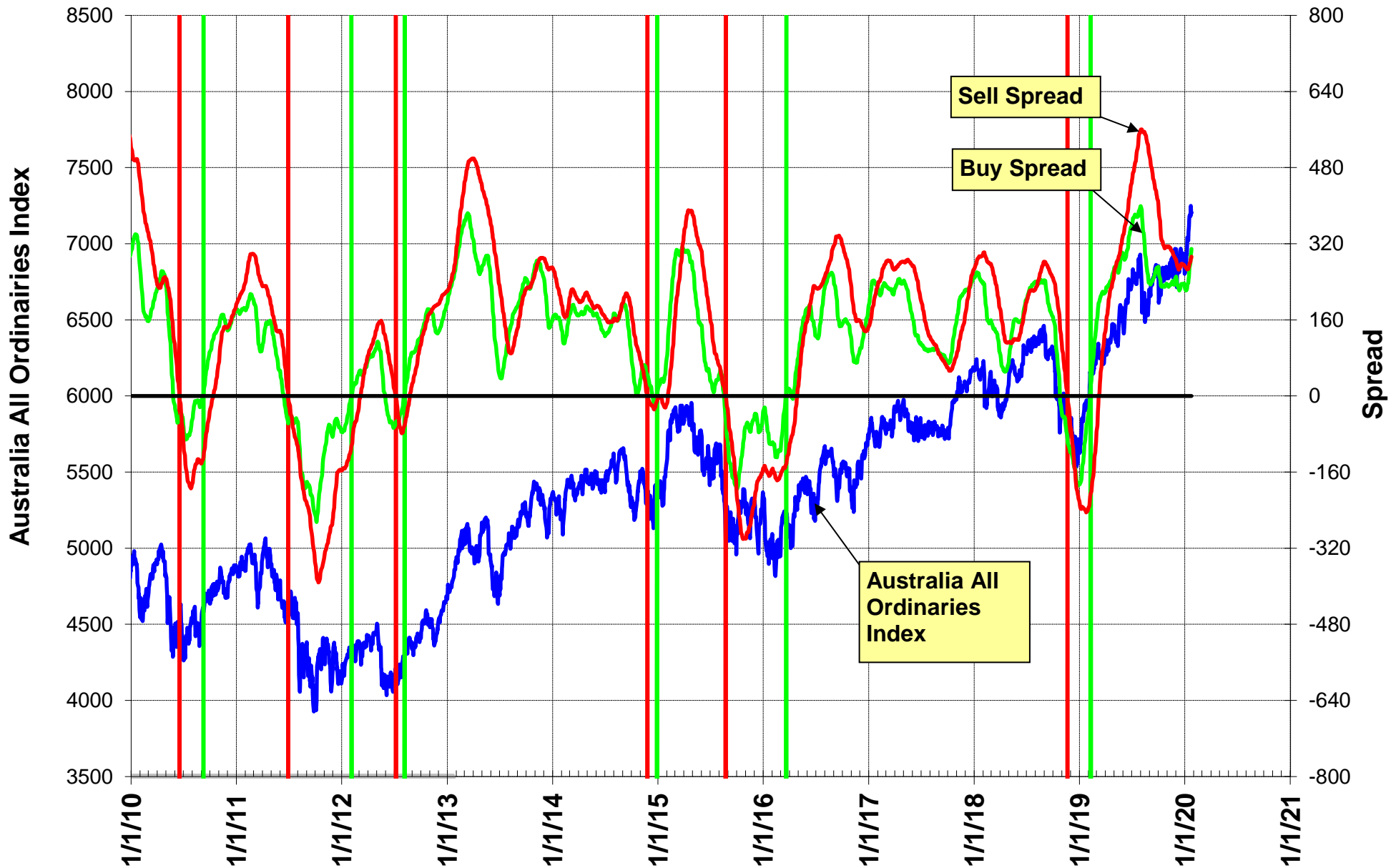
Fig 2.2   3-mo Hi-Lo Index of the S&P500 & 40-day SMA of Index
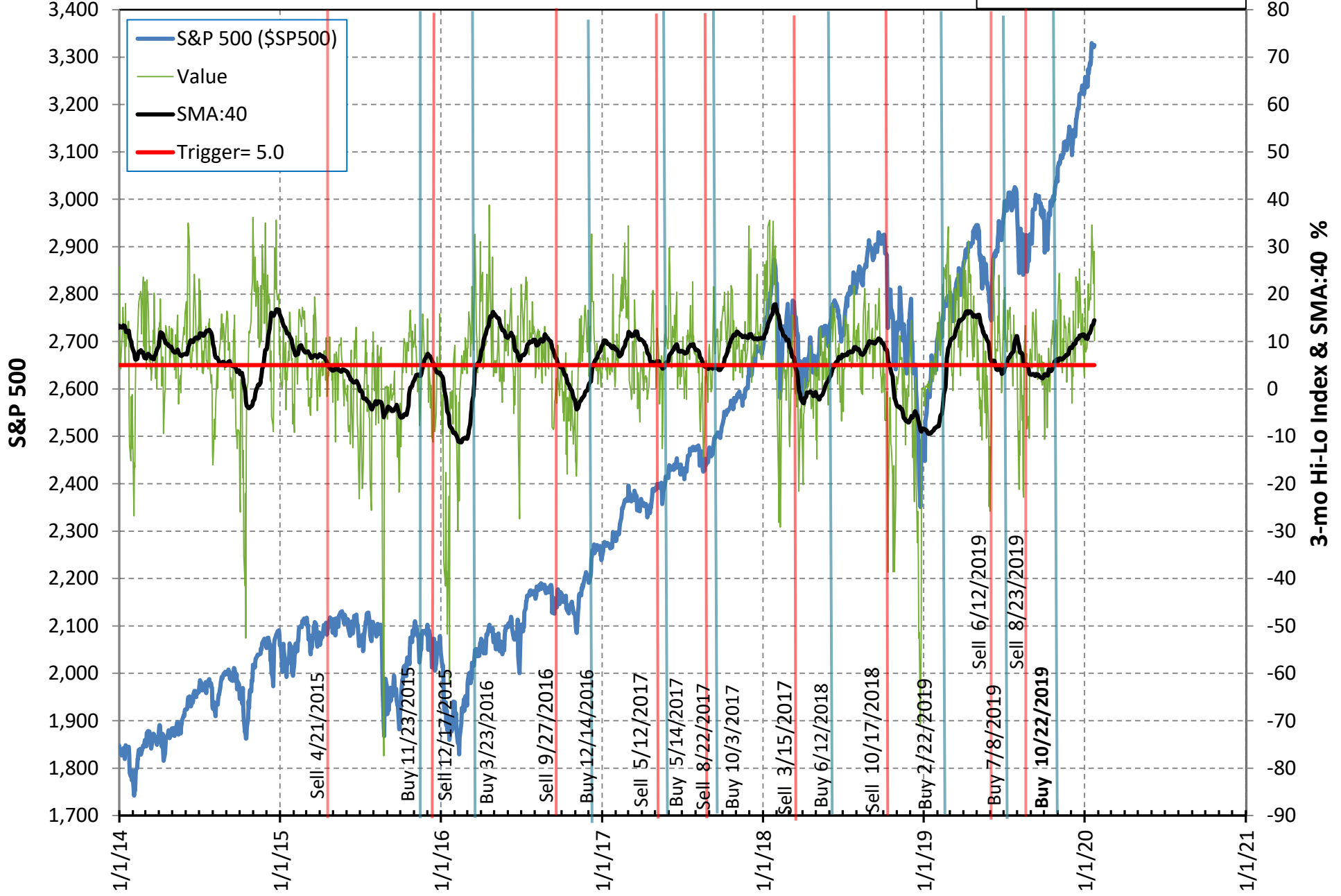
Fig-2.3 Modified Coppock Indicator for S&P500
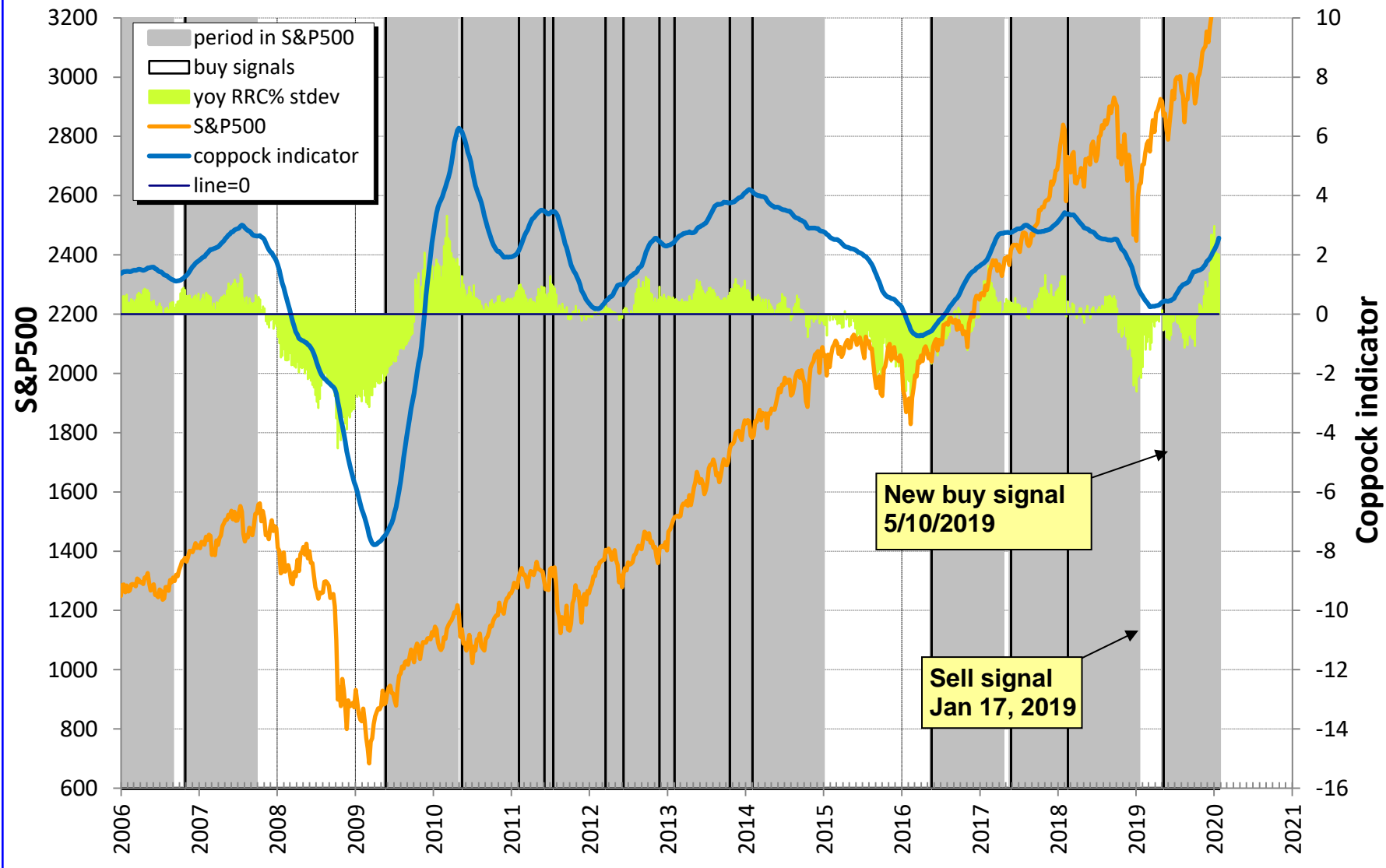
Fig. 3: COMP Leading Indicator of US Economy

Legend:
- recession
- COMP
- last COMP level
- recession trigger

COMP level on 01/03/20 = 9.19
COMP level on 01/10/20 = 9.90
COMP level on 01/17/20 = 11.22
COMP level on 01/24/20 = 12.21

Note: Some of the levels of COMP may differ from previous releases due to revisions of COMP's components.

current level of COMP= 12.21

recession warning

3-COMP.xlsb
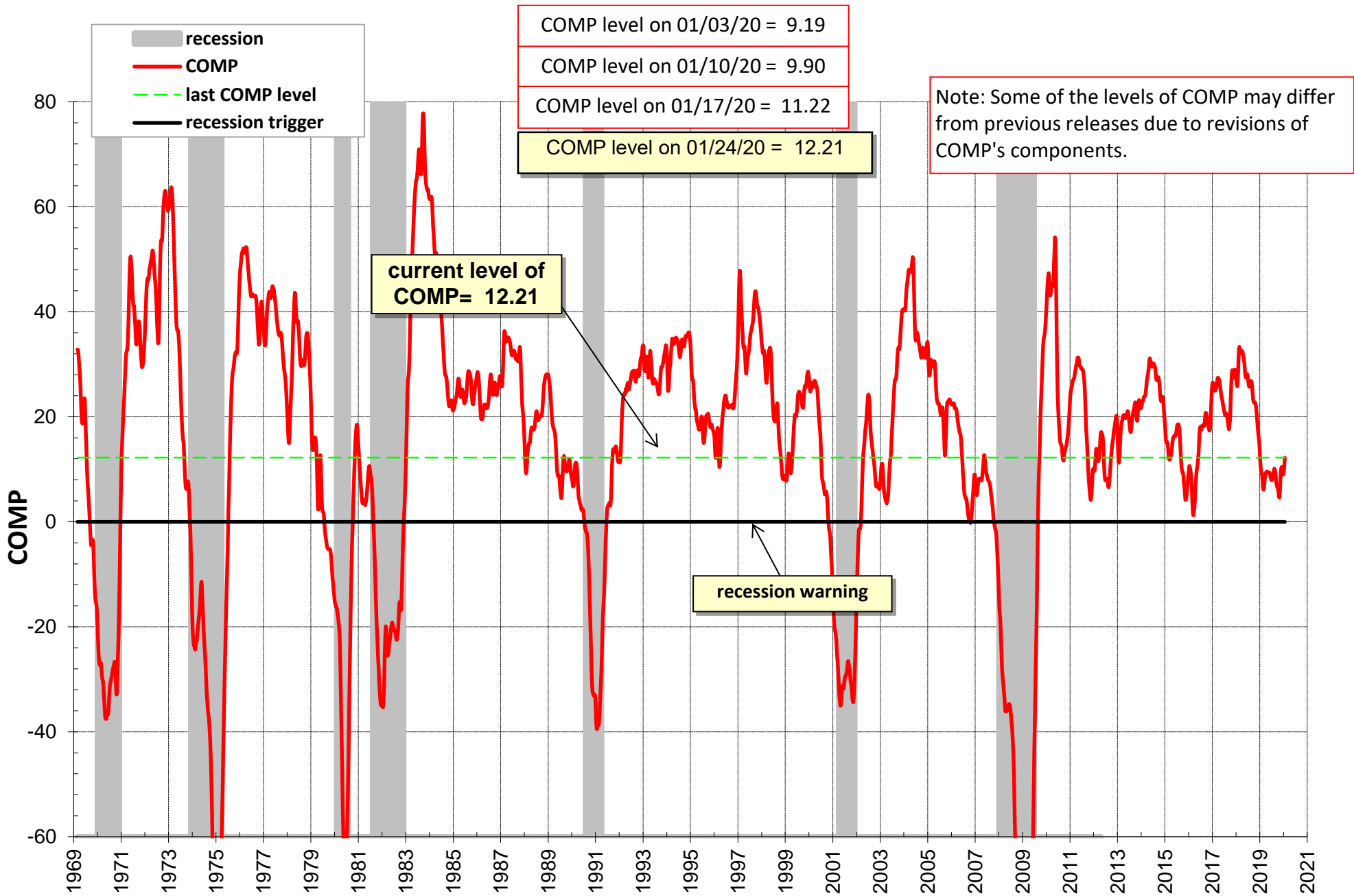
Fig 3.1: iM-BCIg

level on 1/2/20 = 11.27	
level on 1/9/20 = 10.78	
level on 1/16/20 = 10.43	

level on 1/23/20 = 10.24

recession

iM-BCIg

end level

recession trigger

iM-BCIg

trigger line for recession signal

current level 10.24

During non recessionary periods BCIg has exceeded the current level 66.00% of the time from 1969 to present. (Gray areas in graph are excluded)

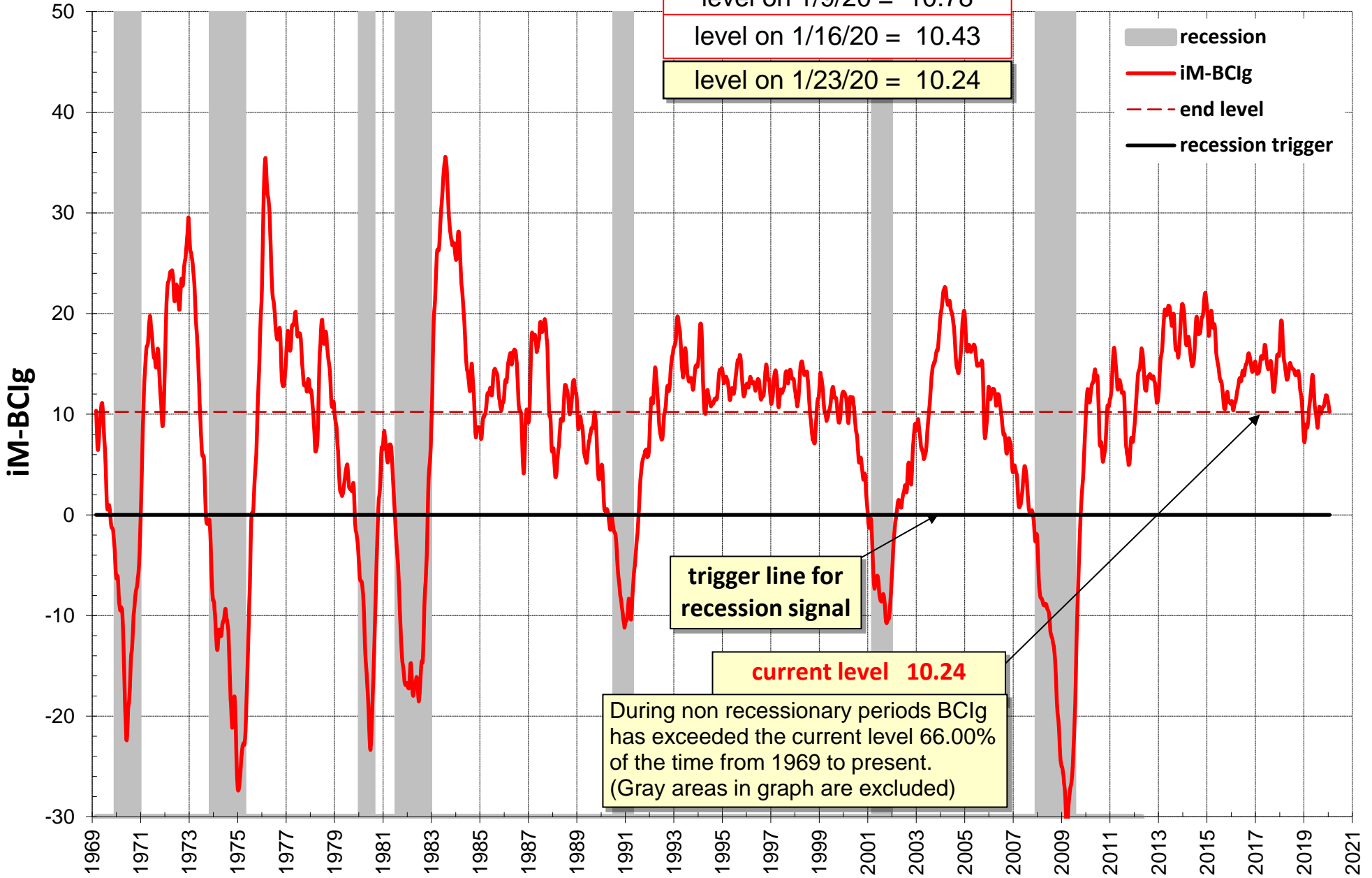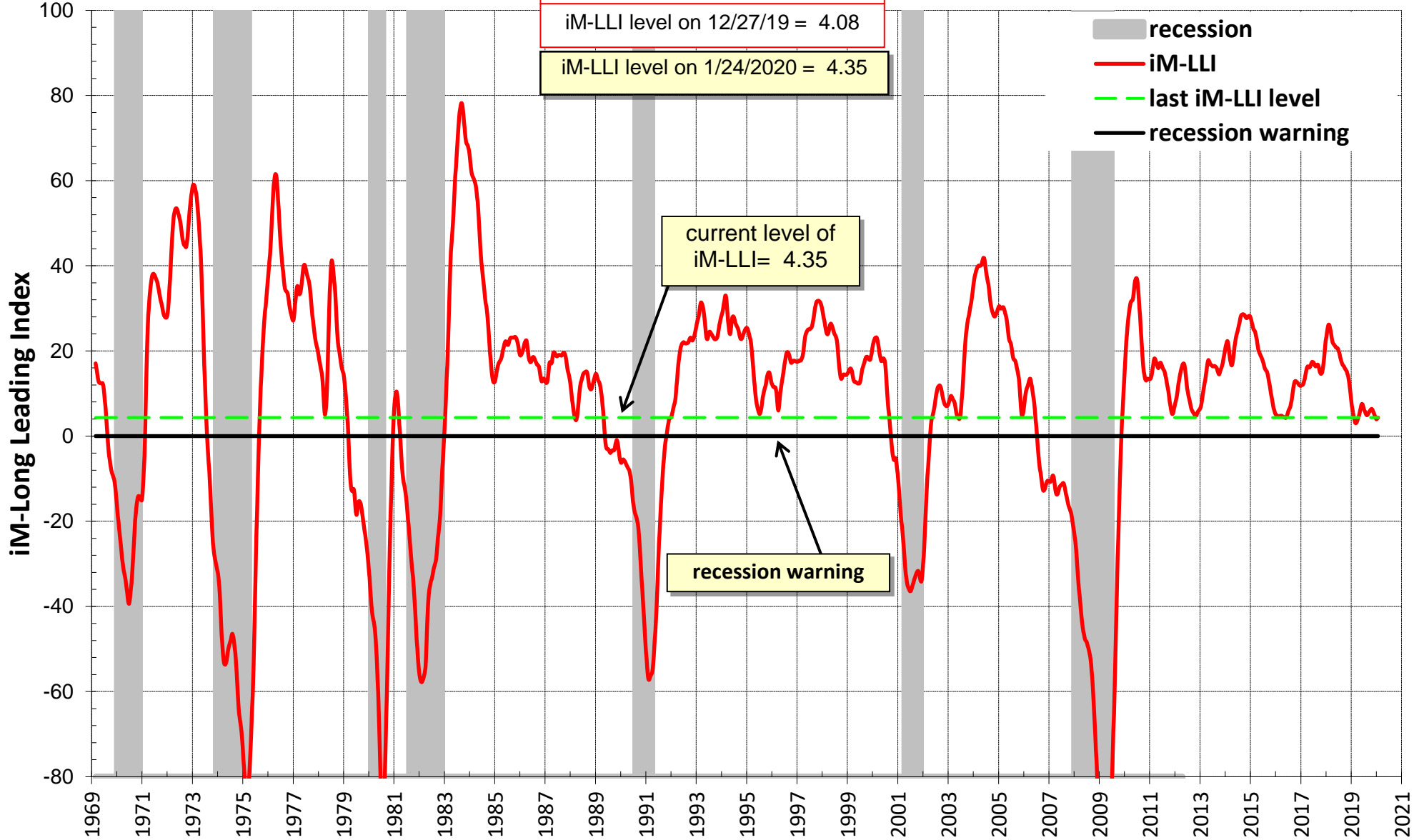iM imarketsignals.com

BCIg Toni.xlsb

Fig-3: The iMarketSignals Long Leading Index (iM-LLI) for the US Economy

iM imarketsignals.com

max, min, & average leads to recessions = 77, 18, & 36 weeks

iM-LLI level on 10/25/19 = 6.41

iM-LLI level on 11/29/19 = 5.16

iM-LLI level on 12/27/19 = 4.08

iM-LLI level on 1/24/2020 = 4.35

Note: Some of the levels of the iM-LLI may differ from previous releases due to revisions.

recession
iM-LLI
last iM-LLI level
recession warning

current level of iM-LLI= 4.35

recession warning

iM-LEI & COI.xlsm

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

iM imarketsignals.com

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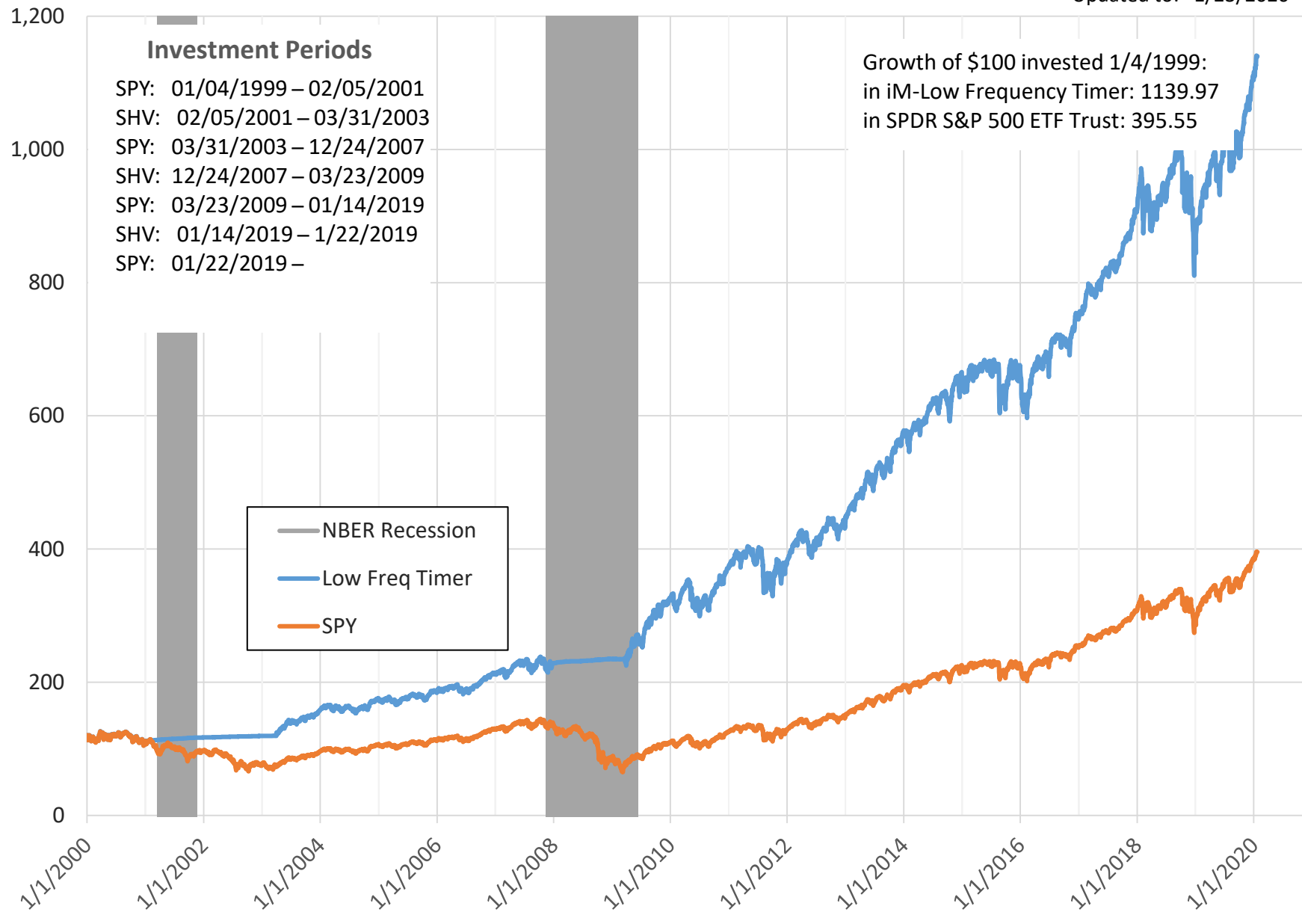
The last seven recessions were all preceded by a FRR2-10 less than 1.0

updated to 01/23/2020
EMA of FRR2-10 = 1.031

Recessions start	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

S&P500

smoothed Forward Rate Ratio 2-10

S&P500 (left axis, log scale)

FRR2-10 (right axis, normal scale)

iM-Fig3.2 3.2 FRR2-10.xlsm Page 1

iM imarketsignals.com
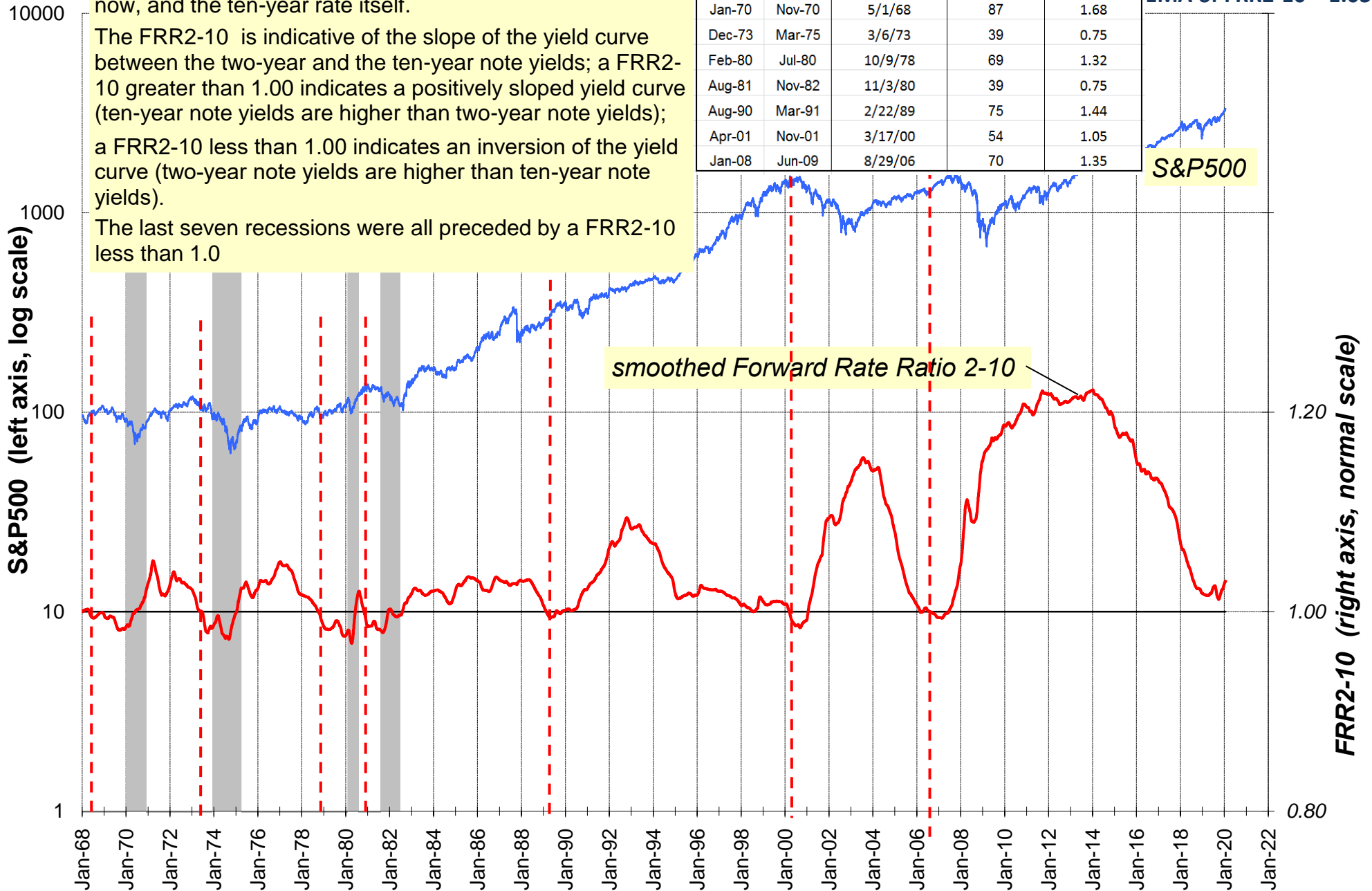
Fig.3.3   iM-Low Frequency Timer

Updated to: 1/23/2020

Investment Periods

SPY: 01/04/1999 – 02/05/2001
SHV: 02/05/2001 – 03/31/2003
SPY: 03/31/2003 – 12/24/2007
SHV: 12/24/2007 – 03/23/2009
SPY: 03/23/2009 – 01/14/2019
SHV: 01/14/2019 – 1/22/2019
SPY: 01/22/2019 –

Growth of $100 invested 1/4/1999:
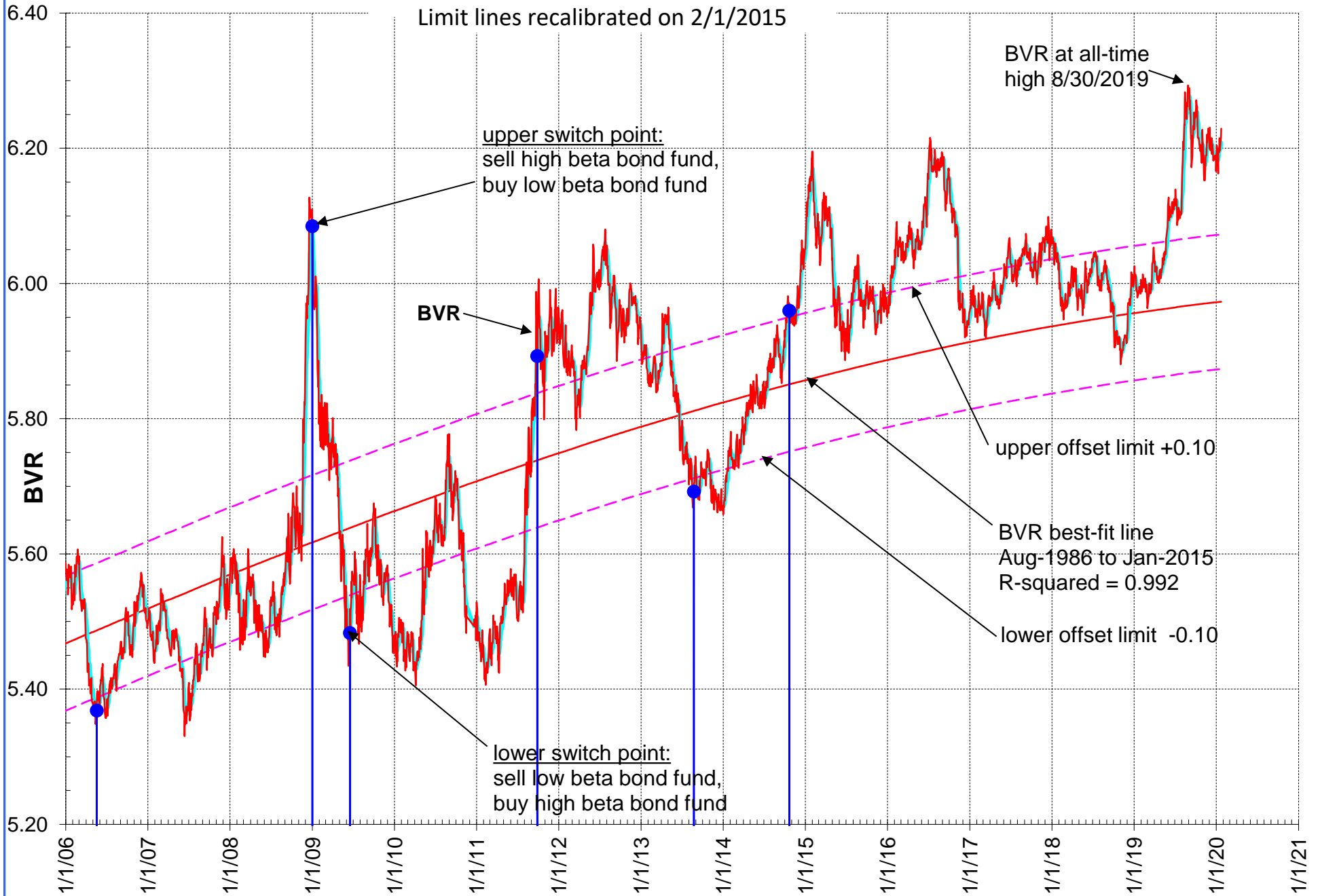in iM-Low Frequency Timer: 1139.97
in SPDR S&P 500 ETF Trust: 395.55

NBER Recession

Low Freq Timer

SPY

Figure 4: Bond Value Ratio (BVR)
Model updated to: 1/23/2020   BVR = 6.229
Limit lines recalibrated on 2/1/2015

iM imarketsignals.com

Updated to…..1/23/2020

Fig. 5: Yield Curve: i10 - i2

Legend:
- buy FLAT
- buy STPP
- i10-i2
- EMA (i10-i2)

buy STPP

buy FLAT

(i10 - i2)   has a positive slope, meaning (i10 - i2) is becoming bigger.

(i10 - i2) the difference btw. 10 - & 2 yr T-note yields has a negative slope, meaning (i10 - i2) is becoming smaller.

i10 - i2

y-axis: 3.00, 2.50, 2.00, 1.50, 1.00, 0.50, 0.00, -0.50

x-axis: 1/1/12, 1/1/13, 1/1/14, 1/1/15, 1/1/16, 1/1/17, 1/1/18, 1/1/19, 1/1/20, 1/1/21

5-Yield Curve.xlsm 09-15
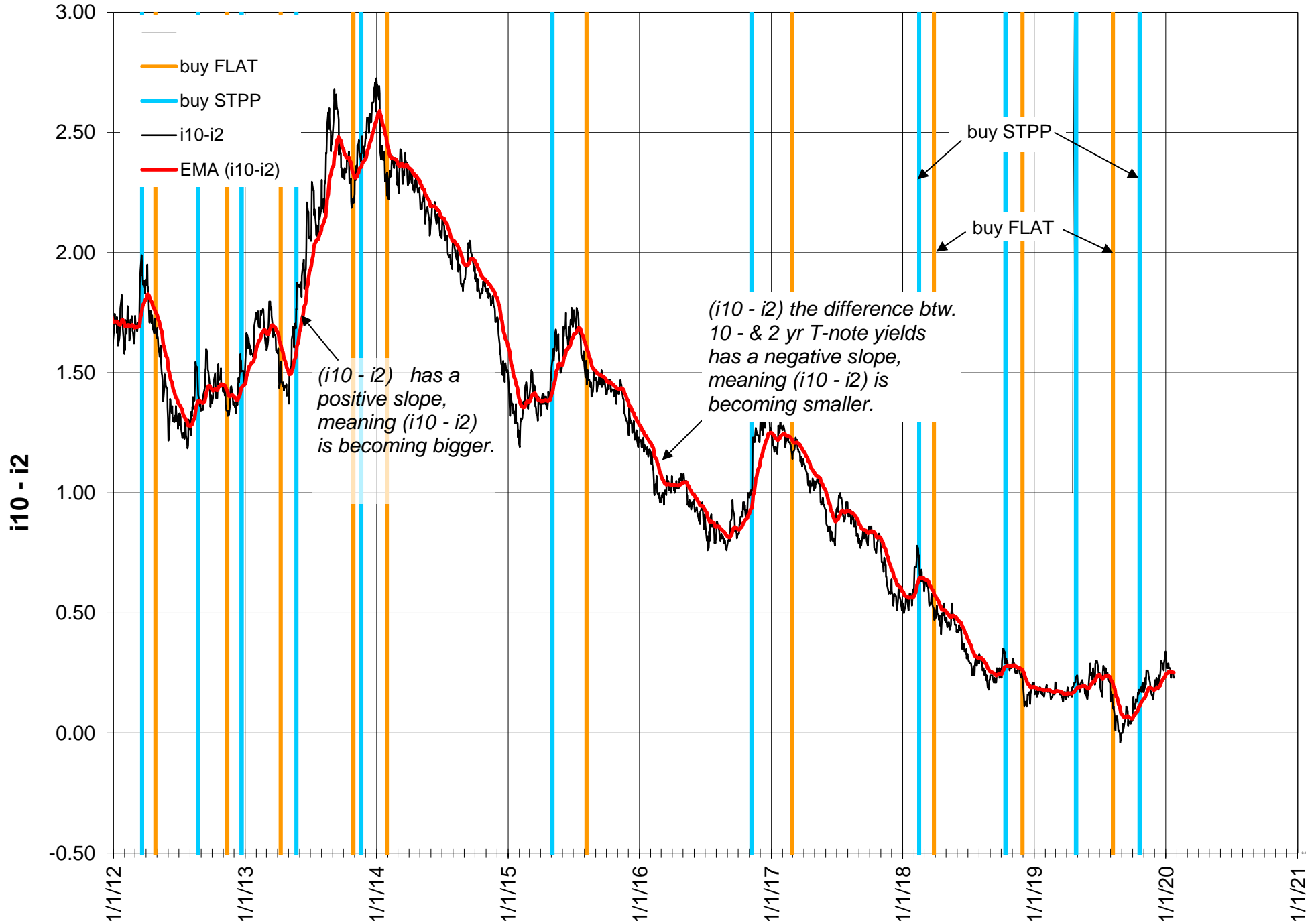
Figure 6: Modified Coppock Indicator for Gold
updated to 01/23/2020

imarketsignals.com

Legend:
- period in gold
- buy signals
- yoy RRC% stdev
- gold price
- coppock indicator
- line=0

Last Buy Signal
3/28/2019

$1562.90

Gold Price $/oz
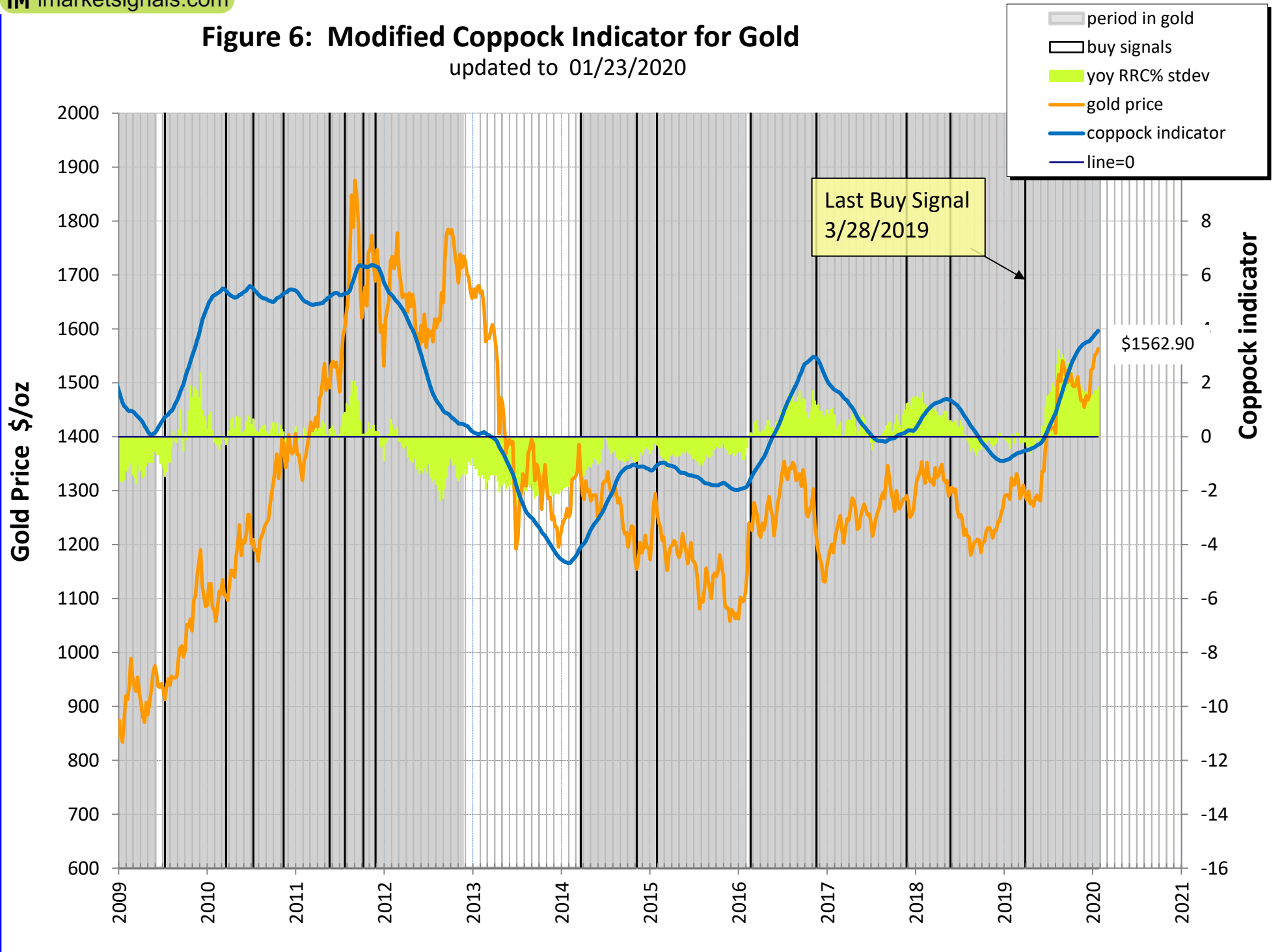
Coppock indicator

Fig. 6.1a   iM GOLD-TIMER - Rev 1
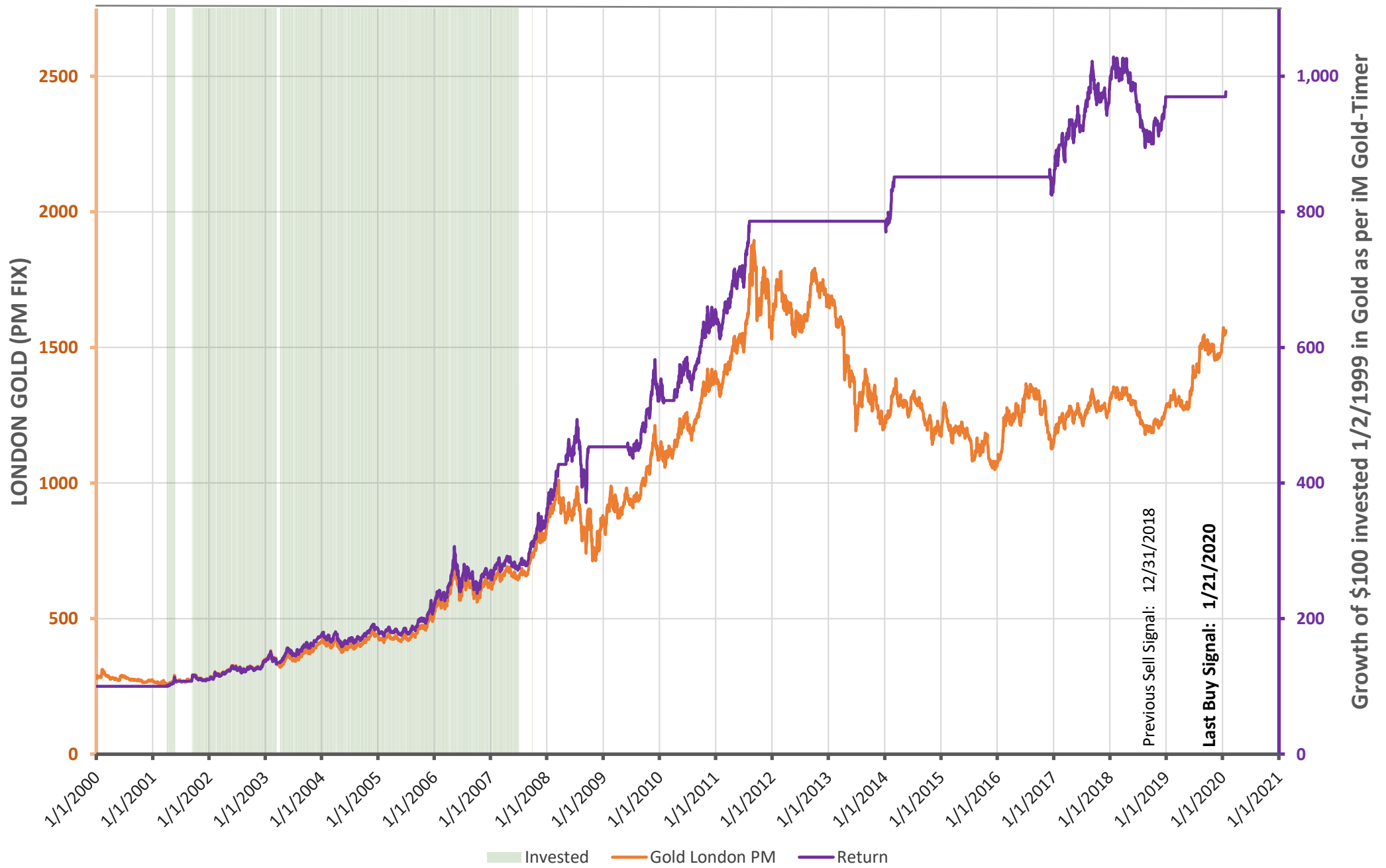
Figure 7: Modified Coppock Indicator for Silver
updated to 01/23/2020

iM imarketsignals.com

Legend:
- period in silver
- buy signals
- yoy RRC% stdev
- silver price
- coppock indicator
- line=0

Last Buy Signal

Last Sell Signal

$17.015
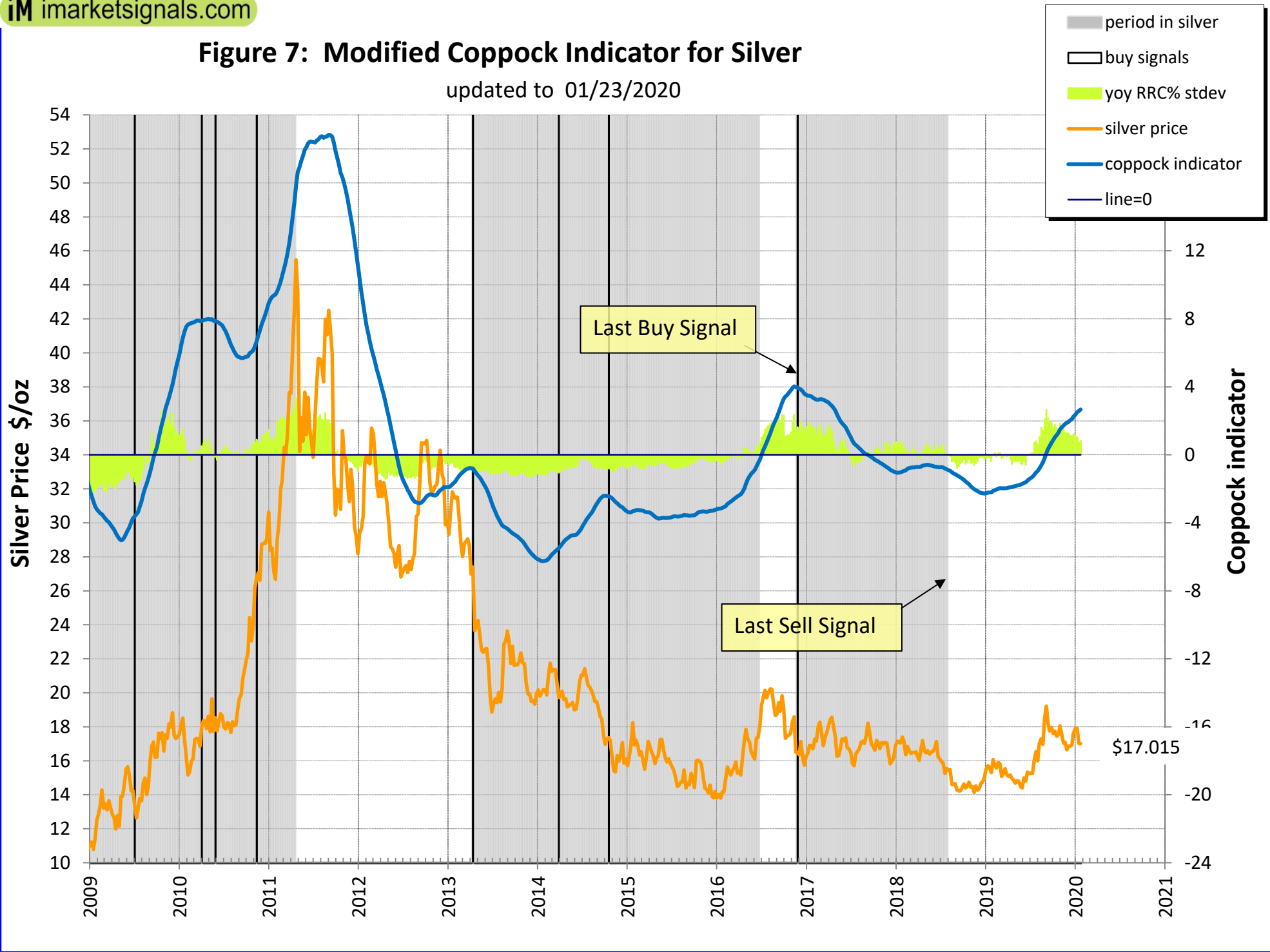
January 23, 2020

Business Cycle Index

The BCI at 262.1 is up from last week's 261.1, and is near the previous   high for this business cycle indicated by the BCIp of 99.4.   However, the 6-month smoothed annualized growth BCIg at 10.2 is below last week's 10.4. Both BCIp and BCIg are not signaling a recession.

January 24, 2020

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 ivested in gold since 1/21/2020.

The monthly iM-Google Trend Timer is invested since 12/1/2019.

Stock-markets:

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

The 3-mo Hi-Lo Index Index of the S&P500 is above last week's level at 14.48% (last 12.76%), and is invested in the stock market since 10/22/2019.

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

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

Recession:

The COMP indicator will be discontinued and replaced by the new iM-Long Leading Idicator, see next entry. Figure 3 shows the COMP above last week's revised level. No recession is indicated.

The current level of iM-LLI is plus 4.35, as indicated by the green dashed line in the figure. It is evident that the business cycle is near a cycle peak, in the "Boom" phase of the cycle, but a

recession is not yet indicated. Therefore it is not likely, absent of a "black swan" event, that there will be a business cycle peak (recession start) during the next six months

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

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

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 above 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 near last weeks level. 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:

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

The [iM GOLD-TIMER Rev-1](#) is invested in gold since 1/21/2020.

Silver:

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