December 5, 2019

Business Cycle Index

his business cycle indicated by the BCIp of 97.4.   However, the 6-month smoothed annualized growth BCIg at 12.3 is up from last week's 12.2.

Both BCIp and BCIg are not signaling a recession.

December 6, 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 near last week's level at 8.95% (last 8.33%), 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 upward revised 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 near 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 near 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 curveis near last weeks level and may have formed a peak and signaled a buy STPP late October. 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

December 6, 2019 (next update January 10, 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, -259bps, near last months -261bps, 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.
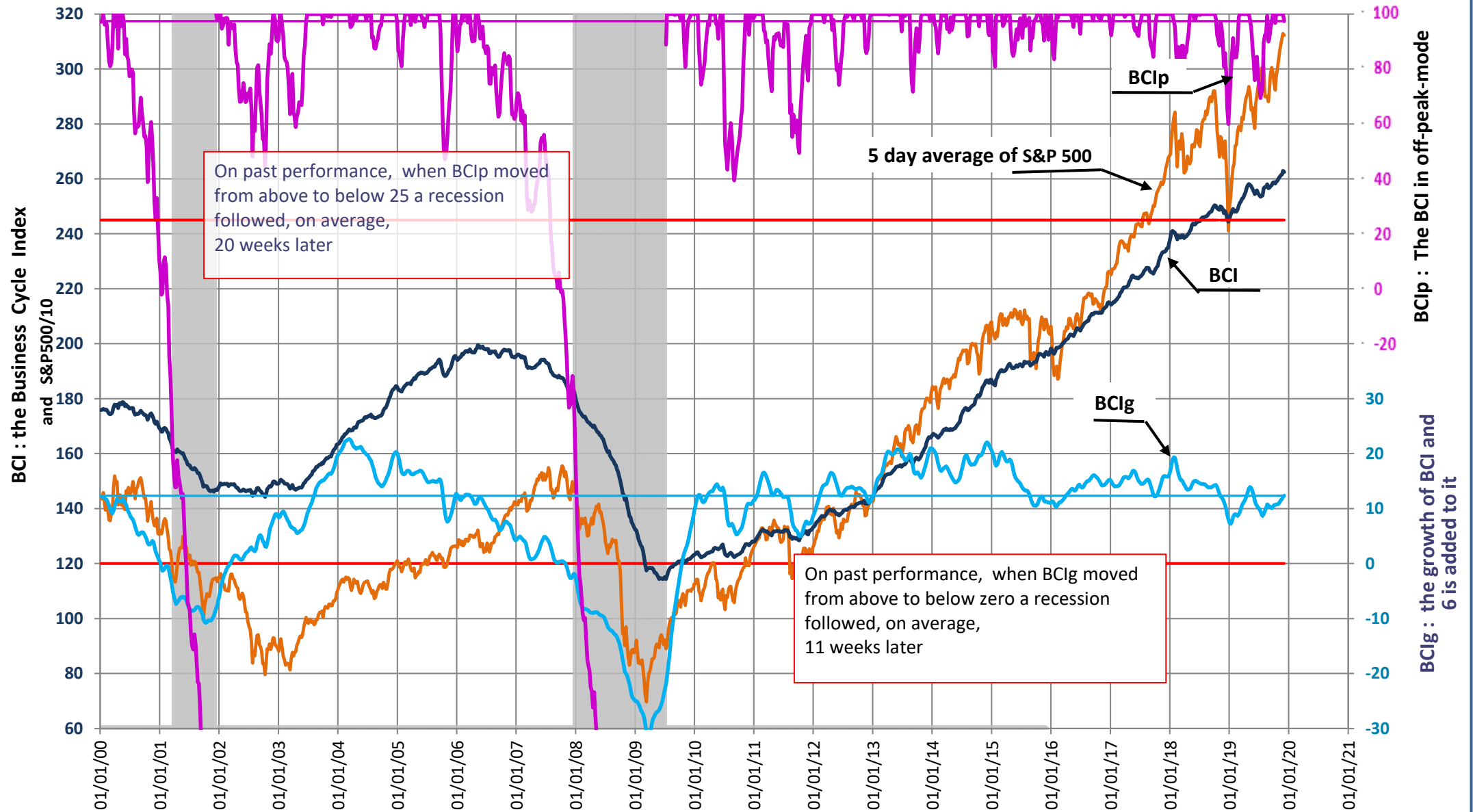
TIAA Real Estate Account

The 1-year rolling return for the end of last month is 4.94%, down from last month. A sell signal is not imminent.

iM's Business Cycle Index (BCI)

iM imarketsignals.com

BCIp, BCI and BCIg
updated to December 05, 2019

Date	11/07	11/14	11/21	11/28	12/05
BCIp	100.0	100.0	100.0	100.0	97.4
BCI	260.8	261.3	261.6	262.9	262.5
BCIg	11.2	11.5	11.8	12.2	12.3

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

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

BCIp
5 day average of S&P 500
BCI
BCIg

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

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TIAA Real Estate Account vs. Vanguard REIT Index Fund (VGSIX) 2000 - 2019
updated to 11/29/19, TIAAreal current 1-year rolling return= 4.94%

TIMING RULES:
TIIAreal is sold when the 1-year rolling return falls below 0% and replaced with CREFbond. CREFbond is sold and TIAAreal is bought again when the 1-year rolling return rises above 0%.

current TIAAreal-timed= 537.68
current TIAAreal= 306.23

Recession
TIAA Real Estate norm.
Value - timed
Vang REIT Index Fund VGSIX norm.
Sell TIAA Real Estate
Buy TIAA Real Estate
1-yr Rolling Return TIAA Real Estate

REIT VGSIX norm.

TIAA Real Estate timed

1-yr Rolling Return TIAA Real Estate

TIAA Real Estate norm.

Sell TIAA Real Estate

Buy TIAA Real Estate

TIAA Real Estate & VGSIX normalized to 100 (1/1/2000)

1-yr Rolling Return TIAA Real Estate %

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

iM imarketsignals.com

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

updated to…12/5/19

last buy spread= 137.4

last sell spread= 130.7

Legend:
- 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 (left axis): 1000, 1100, 1200, 1300, 1400, 1500, 1600, 1700, 1800, 1900, 2000, 2100, 2200, 2300, 2400, 2500, 2600, 2700, 2800, 2900, 3000, 3100, 3200

Spread (right axis): -160, -120, -80, -40, 0, 40, 80, 120, 160, 200, 240, 280

X-axis: 1/1/10, 1/1/11, 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

2-MAC rev8-27-15.xlsb

Fig 2.1: Buy and Sell signals for the Australia All Ordinaries Index from the MAC-AU System
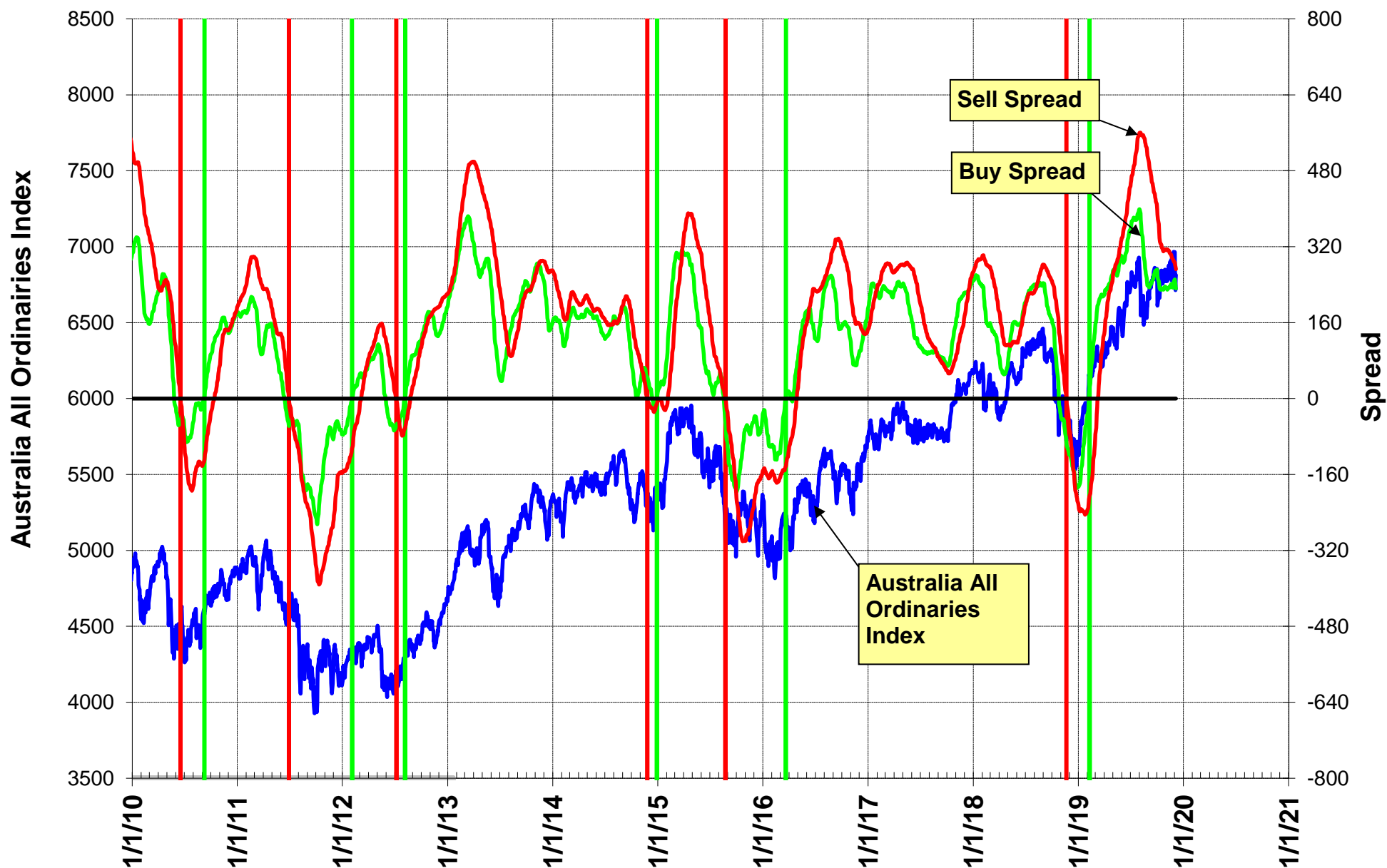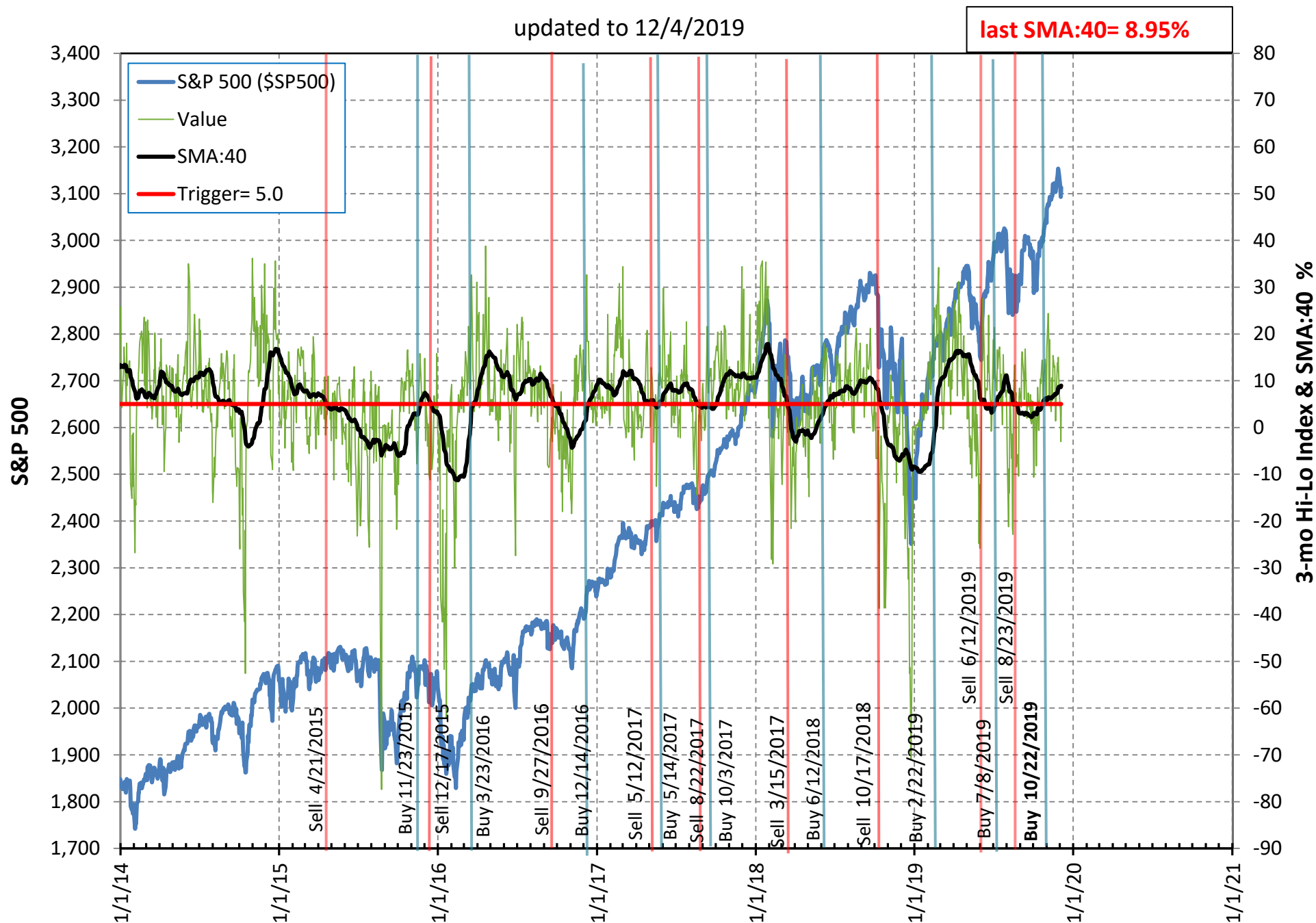
Fig 2.2   3-mo Hi-Lo Index of the S&P500 & 40-day SMA of Index

Fig-2.3 Modified Coppock Indicator for S&P500
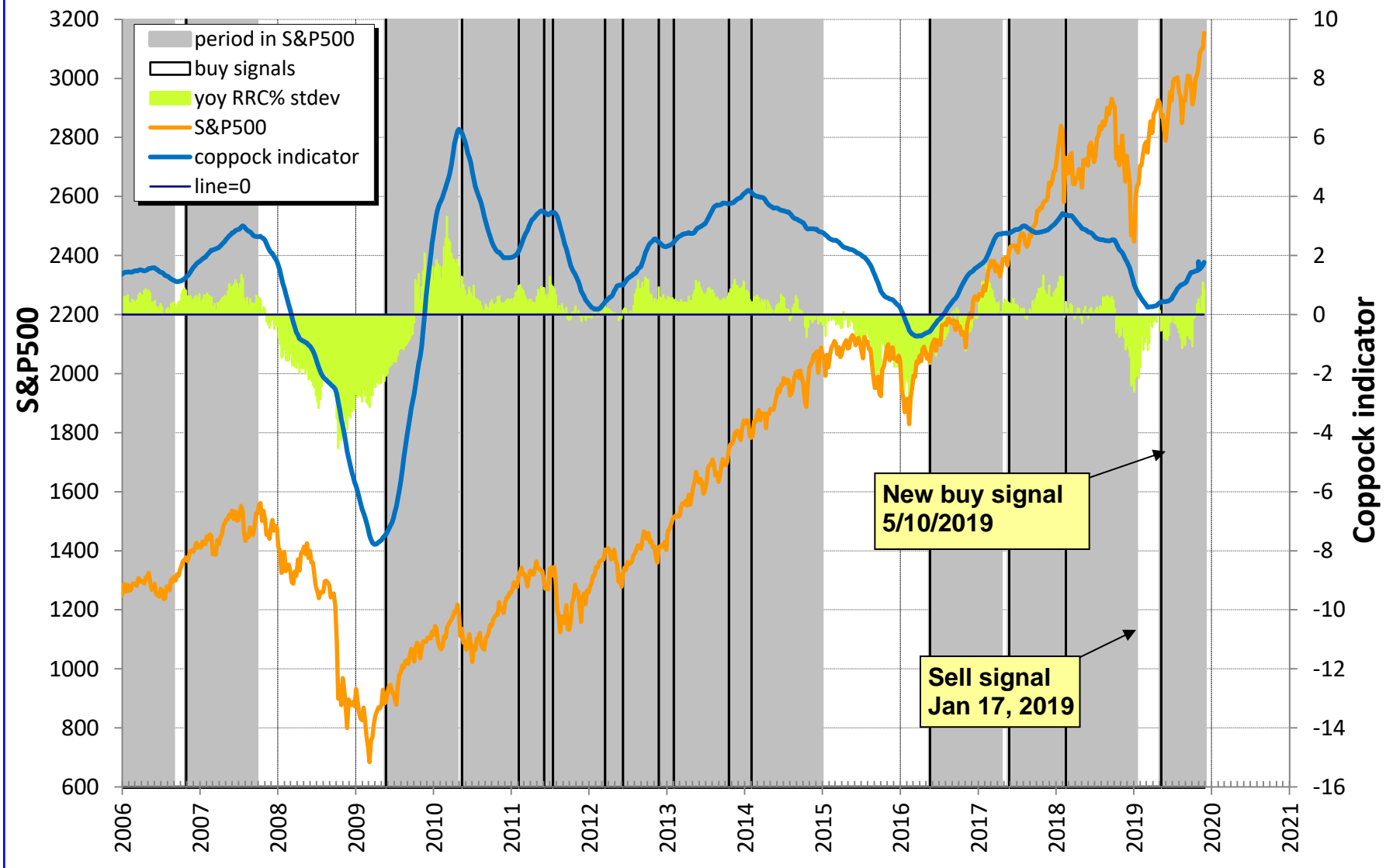
Fig. 3: COMP Leading Indicator of US Economy

Fig 3.1: iM-BCIg

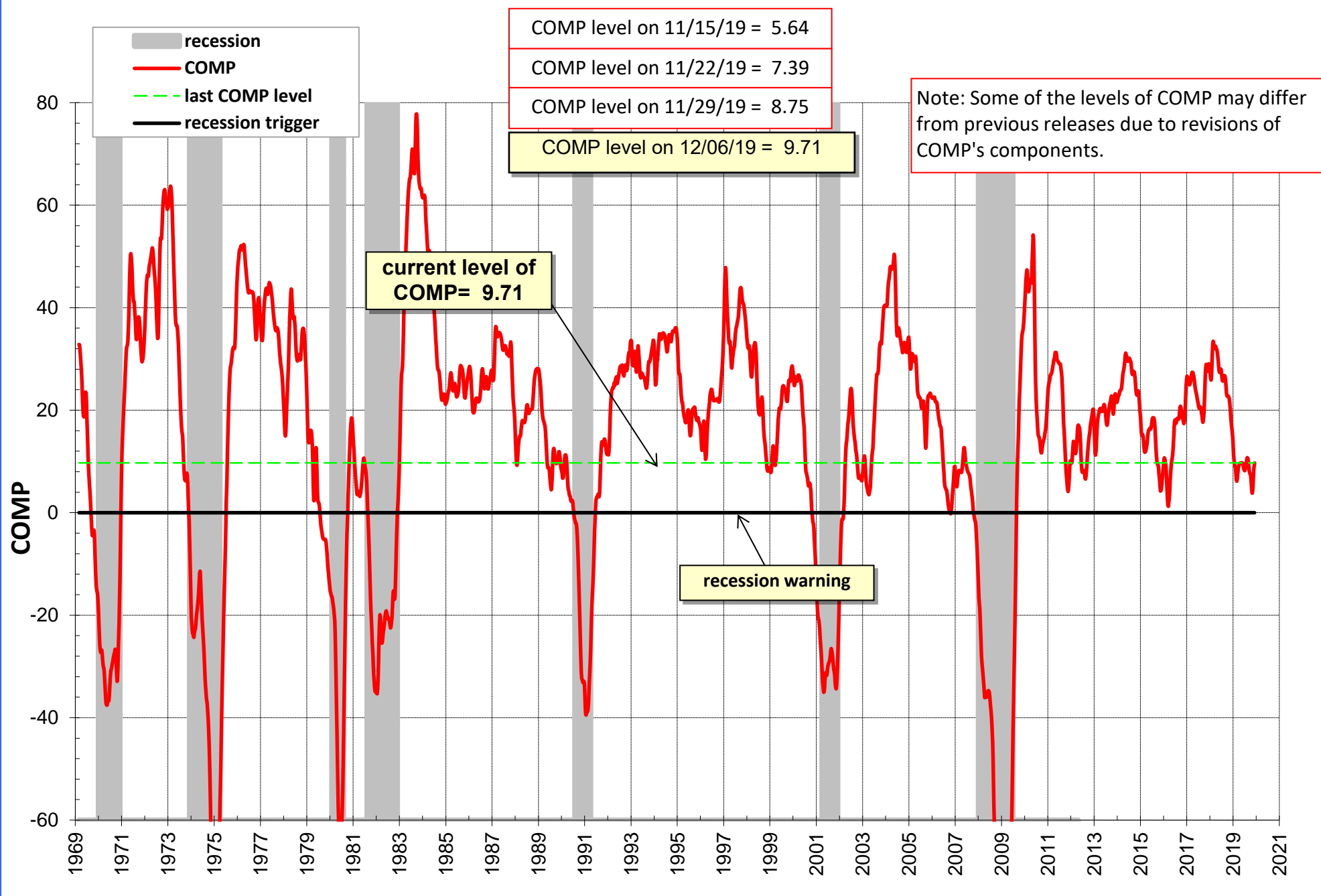level on 11/14/19 = 11.51
level on 11/21/19 = 11.81
level on 11/28/19 = 12.19
level on 12/5/19 = 12.34

recession
iM-BCIg
end level
recession trigger

trigger line for recession signal

current level 12.34

During non recessionary periods BCIg has exceeded the current level 50.72% of the time from 1969 to present. (Gray areas in graph are excluded)

BCIg Toni.xlsb
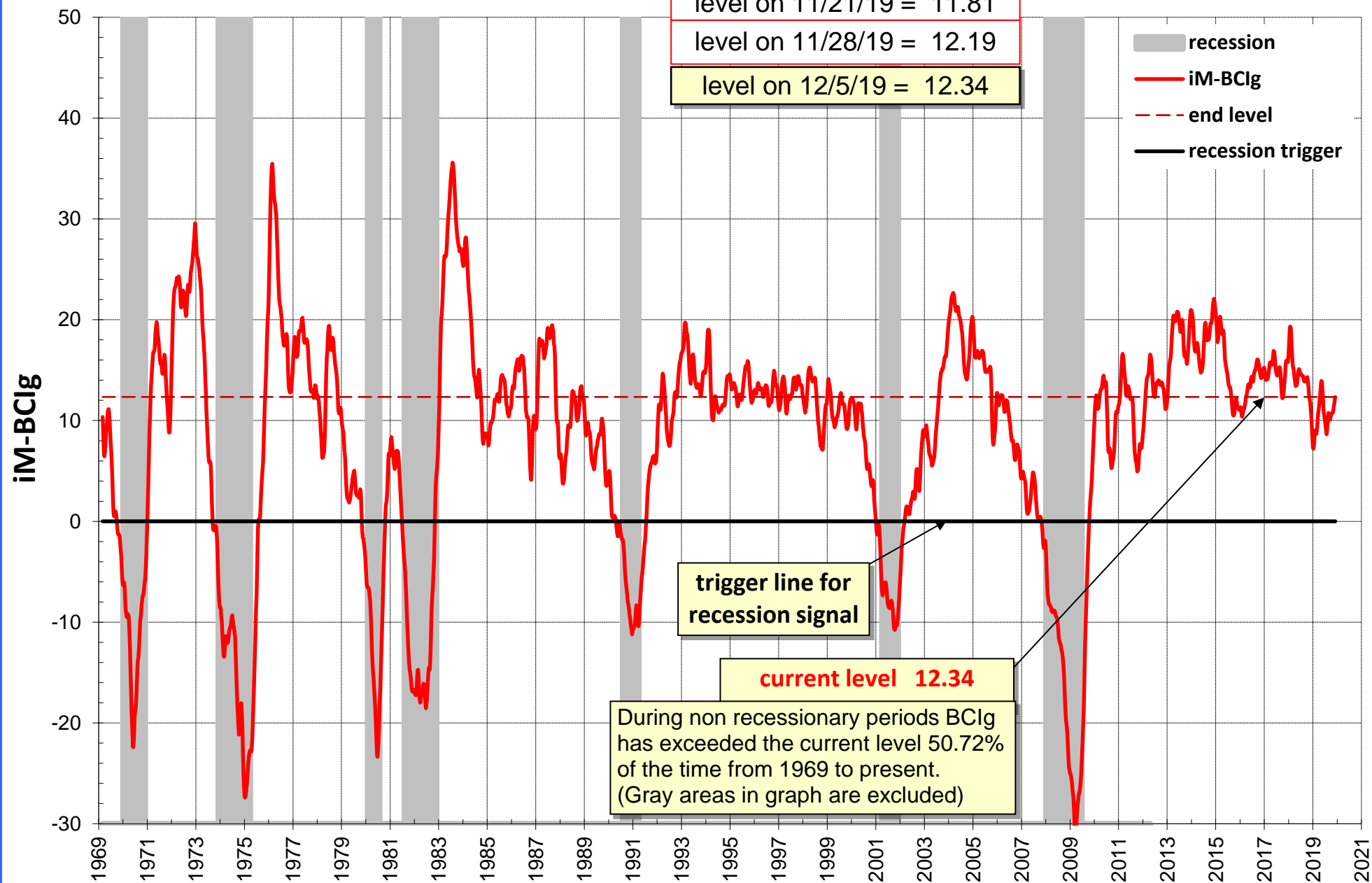
Figure 3.2: Forward Rate Ratio FRR2-10 - leads to Recessions

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

updated to 12/05/2019
EMA of FRR2-10 = 1.023

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

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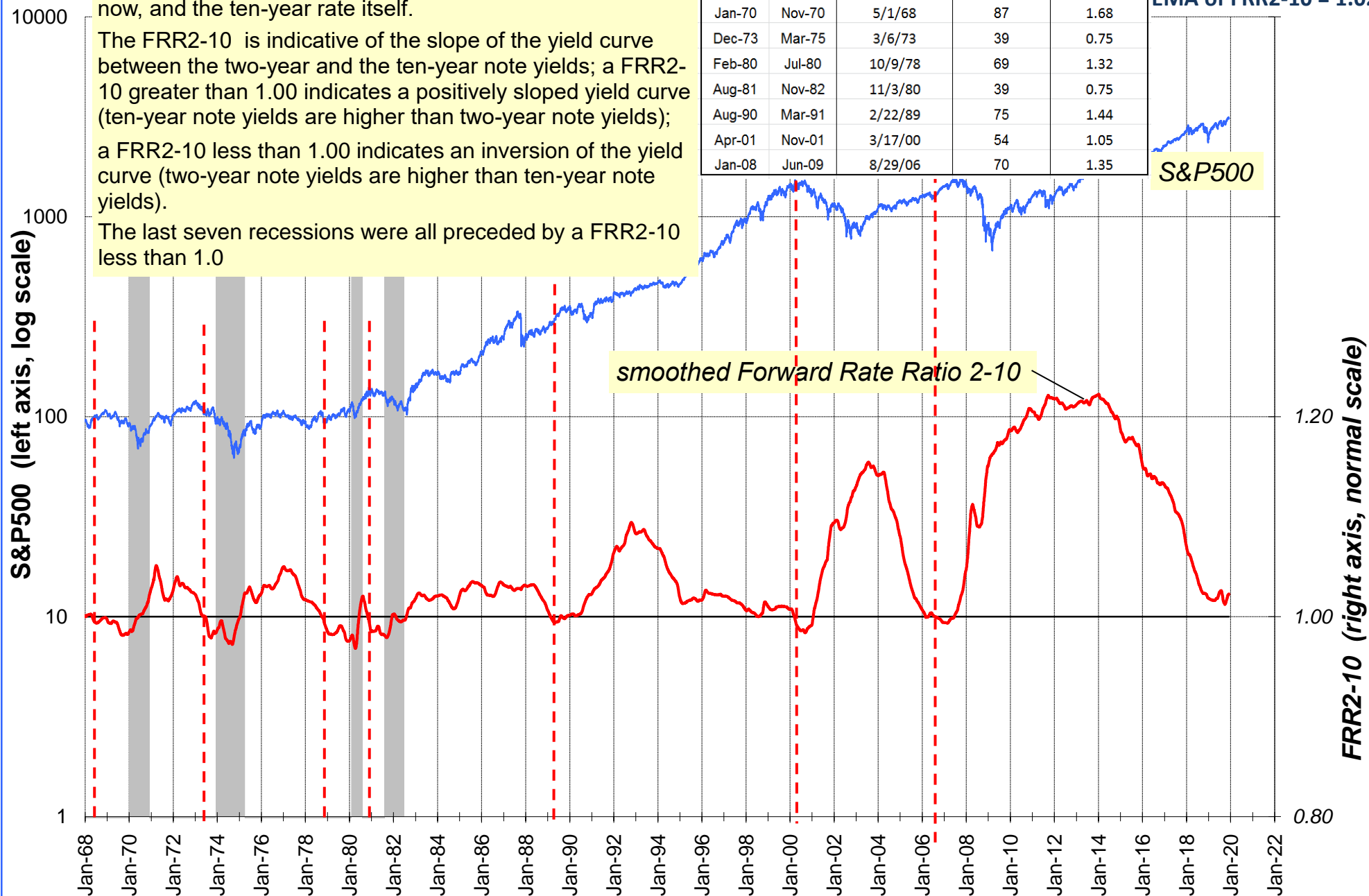
Fig.3.3   iM-Low Frequency Timer

Updated to: 12/5/2019

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: 1067.87
in SPDR S&P 500 ETF Trust: 370.24

NBER Recession
Low Freq Timer
SPY
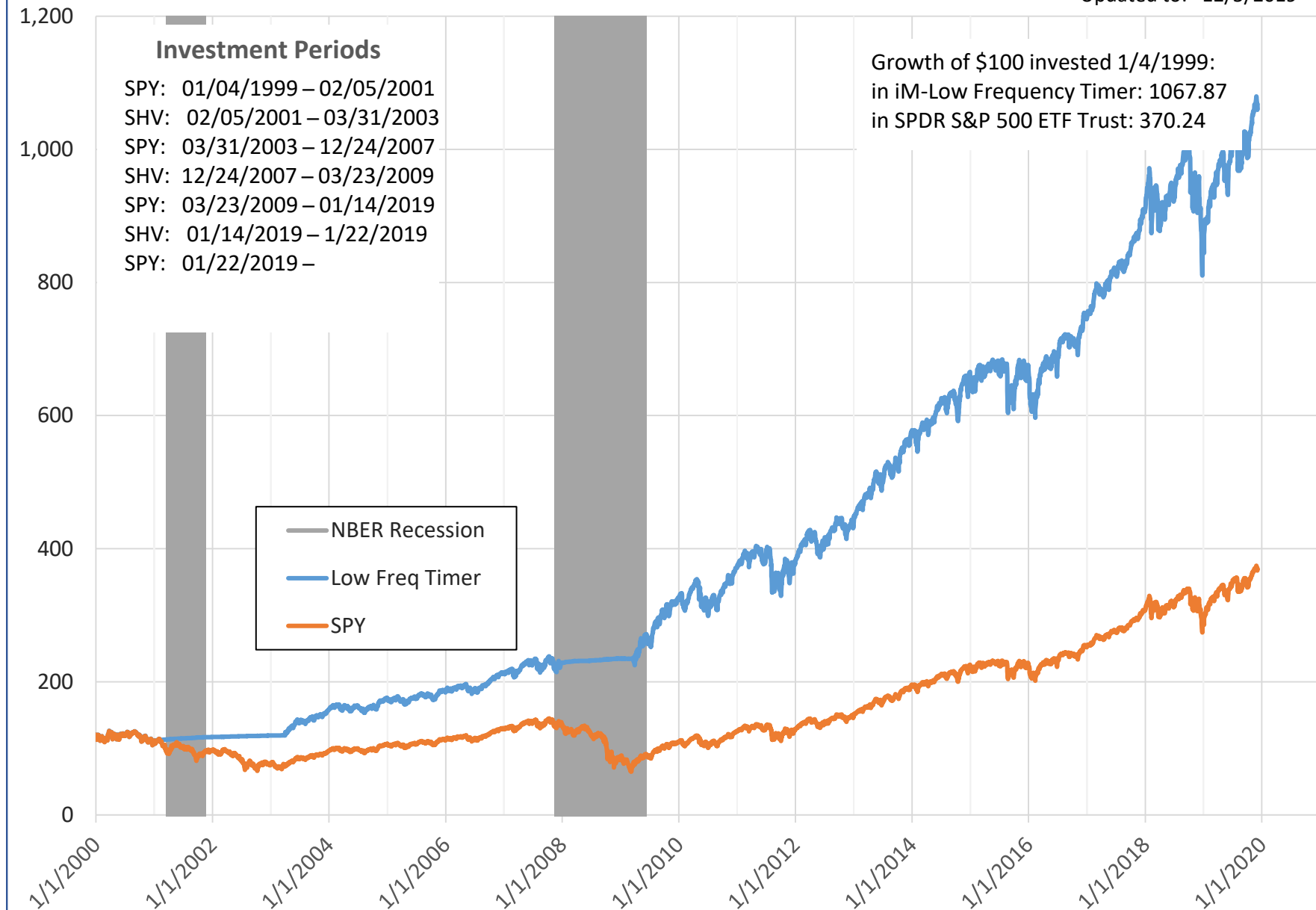
Figure 4: Bond Value Ratio (BVR)
Model updated to: 12/5/2019   BVR = 6.212
Limit lines recalibrated on 2/1/2015

Fig. 5: Yield Curve: i10 - i2

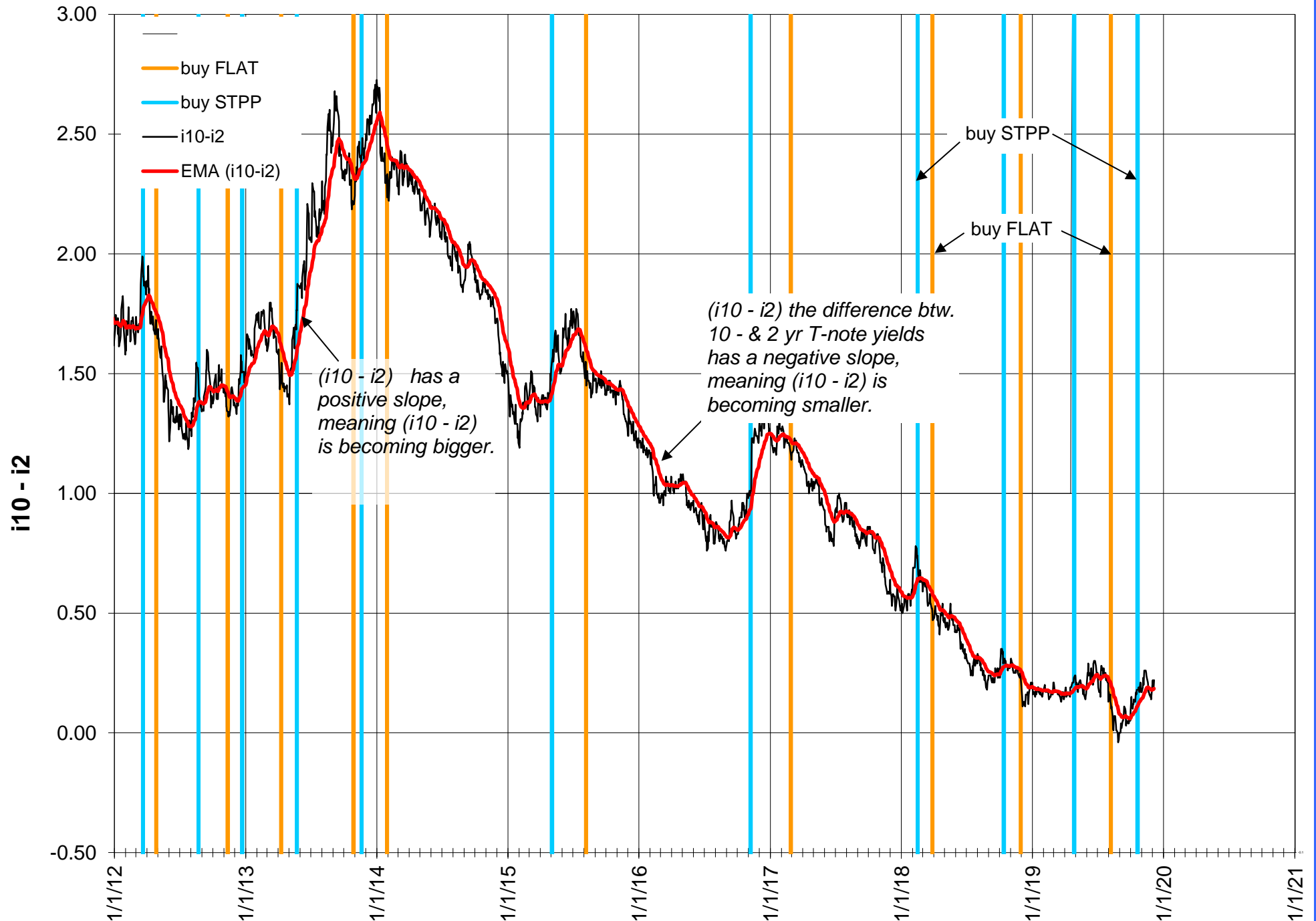Note: Past performance does not guarantee future returns, investments may increase or decrease in value and you may lose money using this model.

iM imarketsignals.com

Updated to…..12/5/2019

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

(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.

buy STPP

buy FLAT

5-Yield Curve.xlsm 09-15

Figure 6: Modified Coppock Indicator for Gold
updated to 12/05/2019

imarketsignals.com

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

Last Buy Signal 3/28/2019

$1475.95

Gold Price $/oz

Coppock indicator

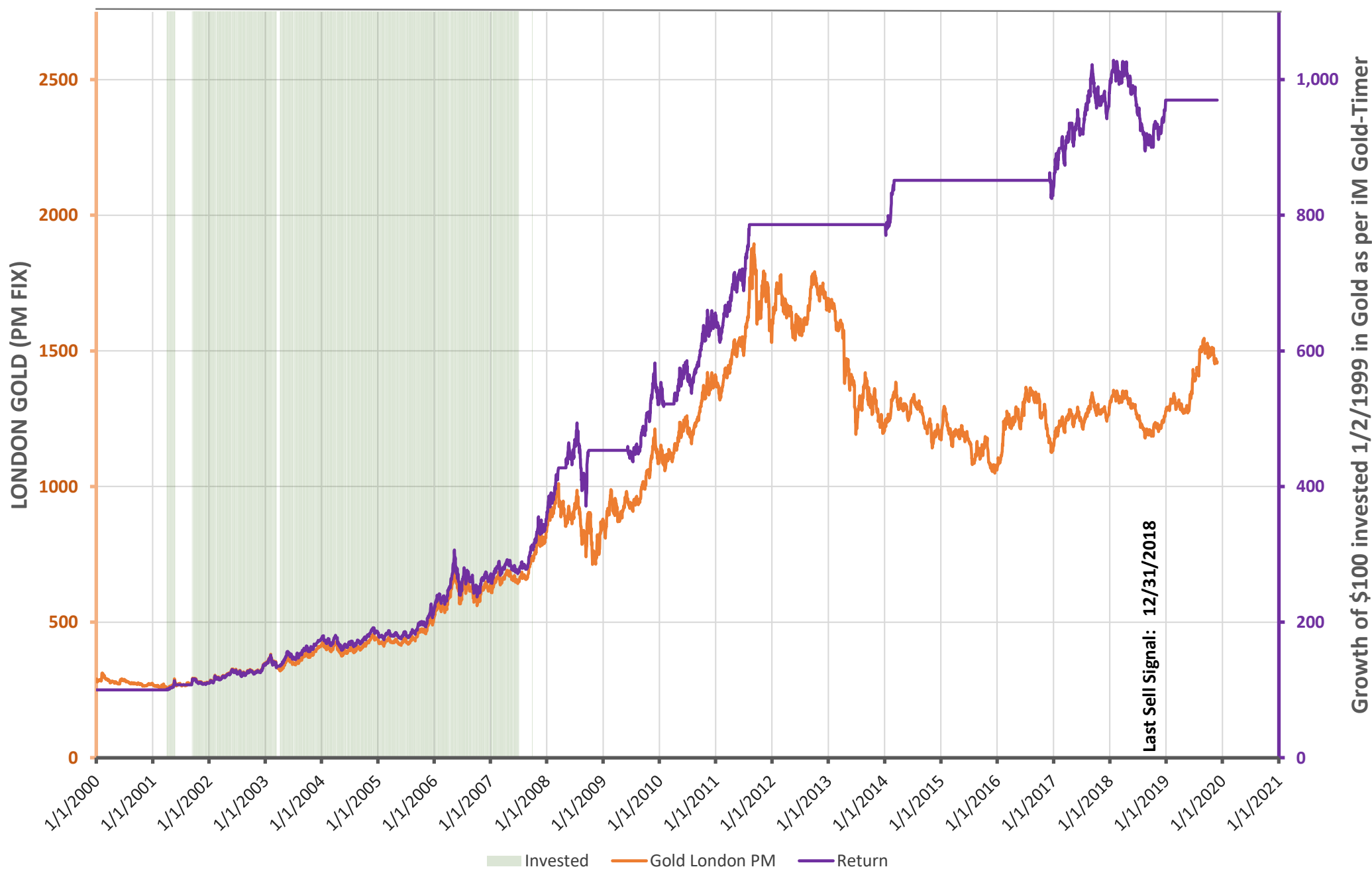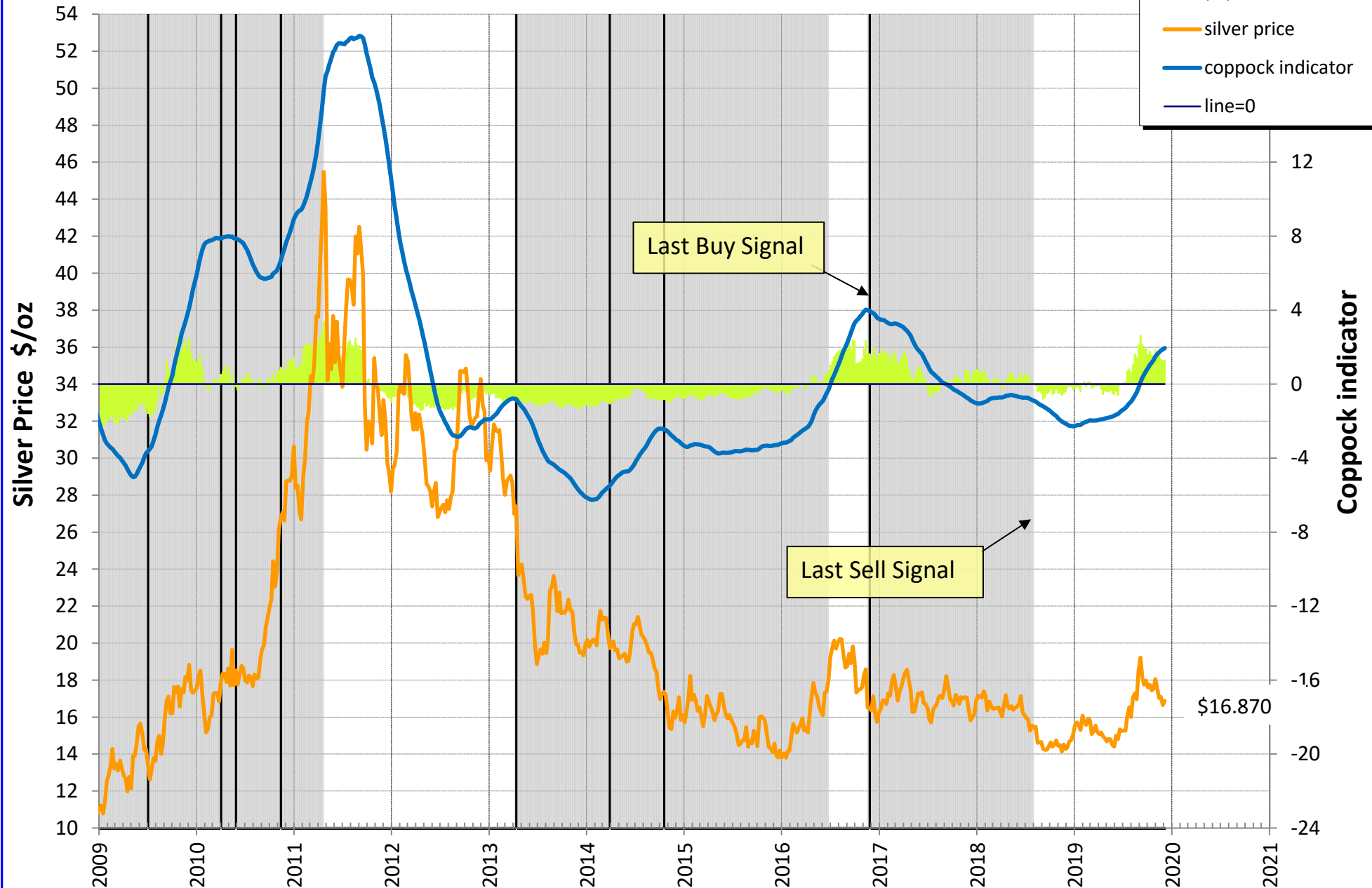6-COPPOCK GOLD for updates.xlsm
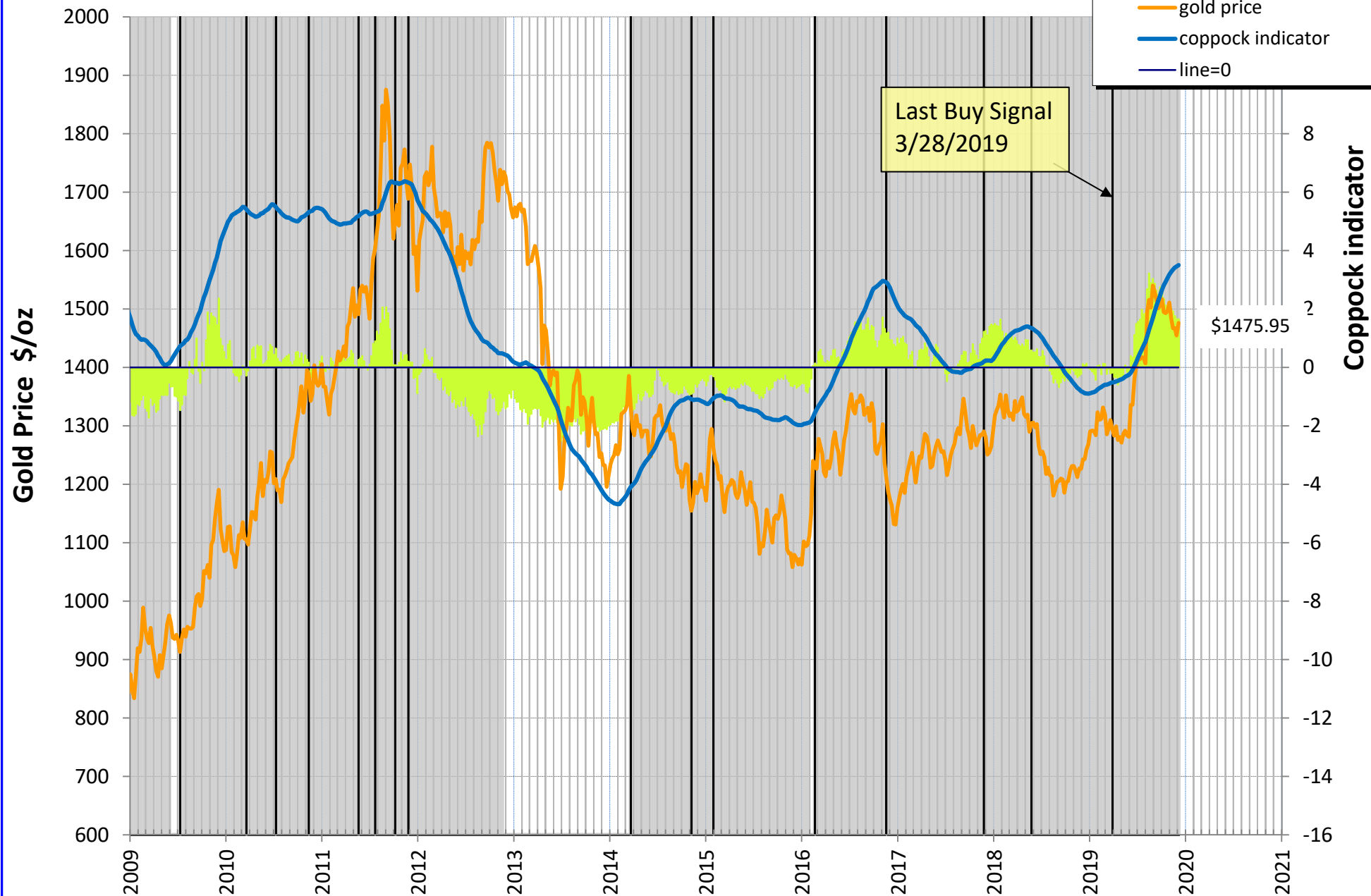
Fig. 6.1a   iM GOLD-TIMER - Rev 1

Figure 7: Modified Coppock Indicator for Silver
updated to 12/05/2019

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 12-27-2019 with November UER= 3.5%

iM imarketsignals.com
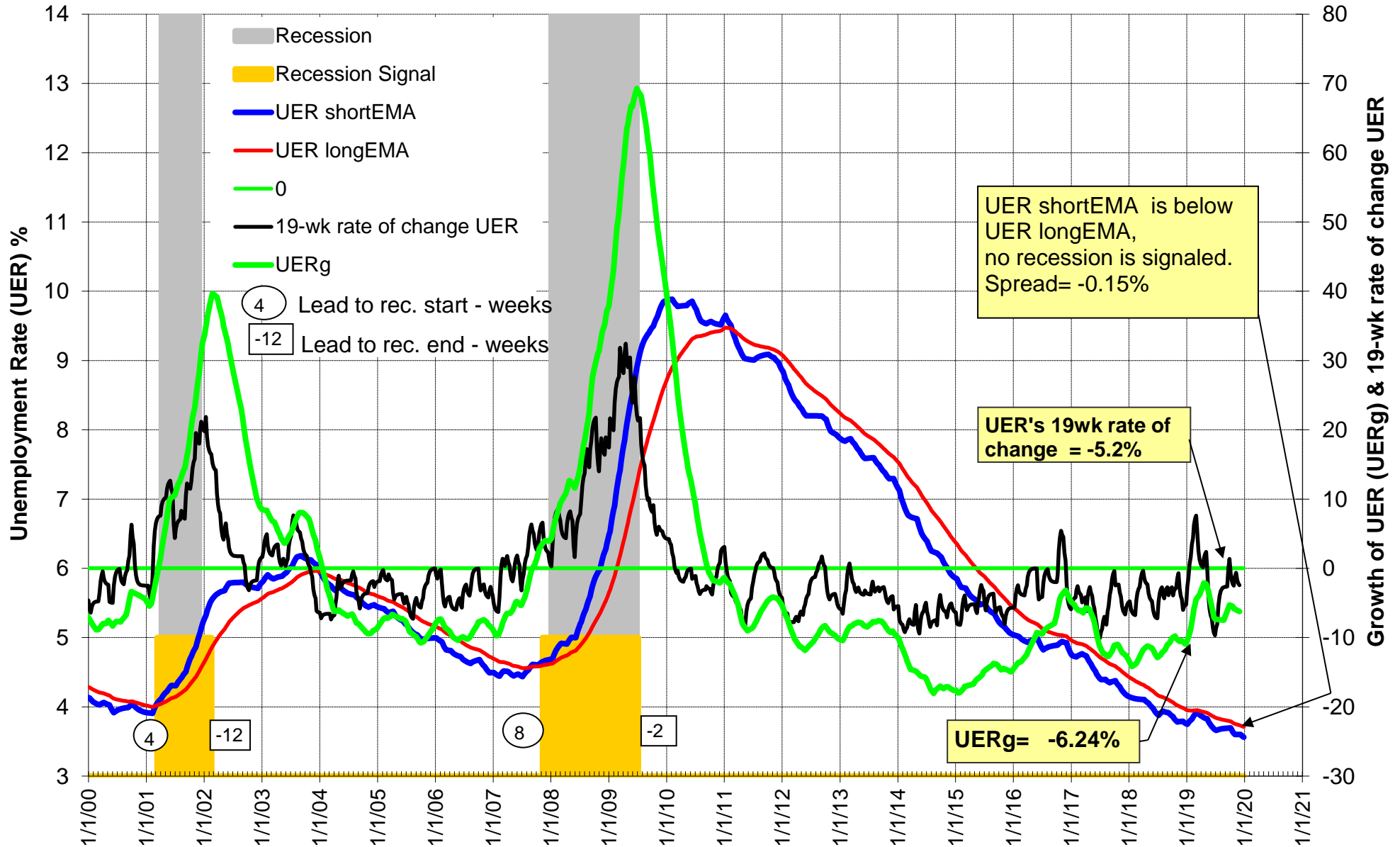
Long Leading Recession Indicator DAGS: shifted forward in time by 40 weeks

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 Dec-6-2019, last level of DAGS = -259 bps
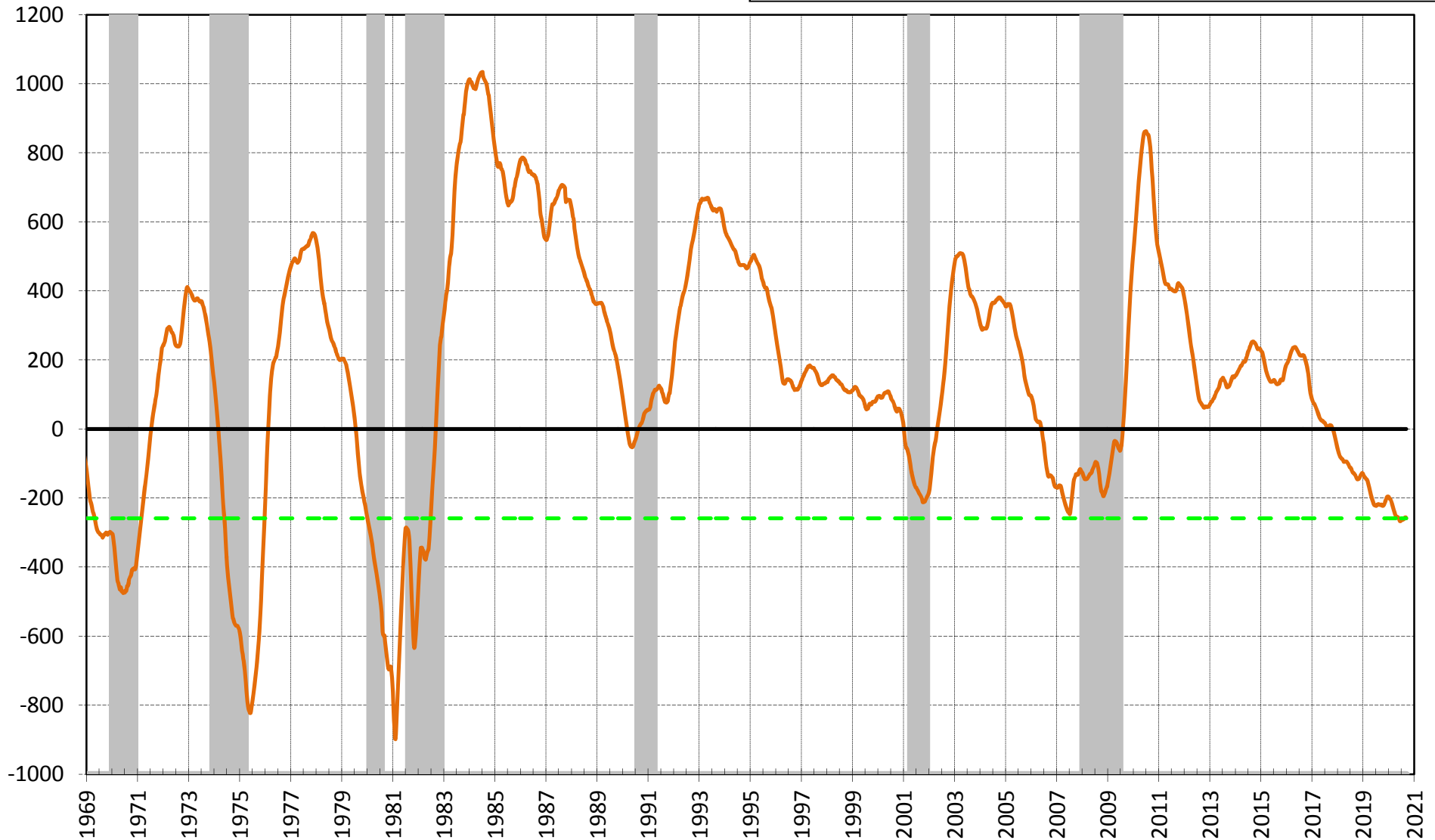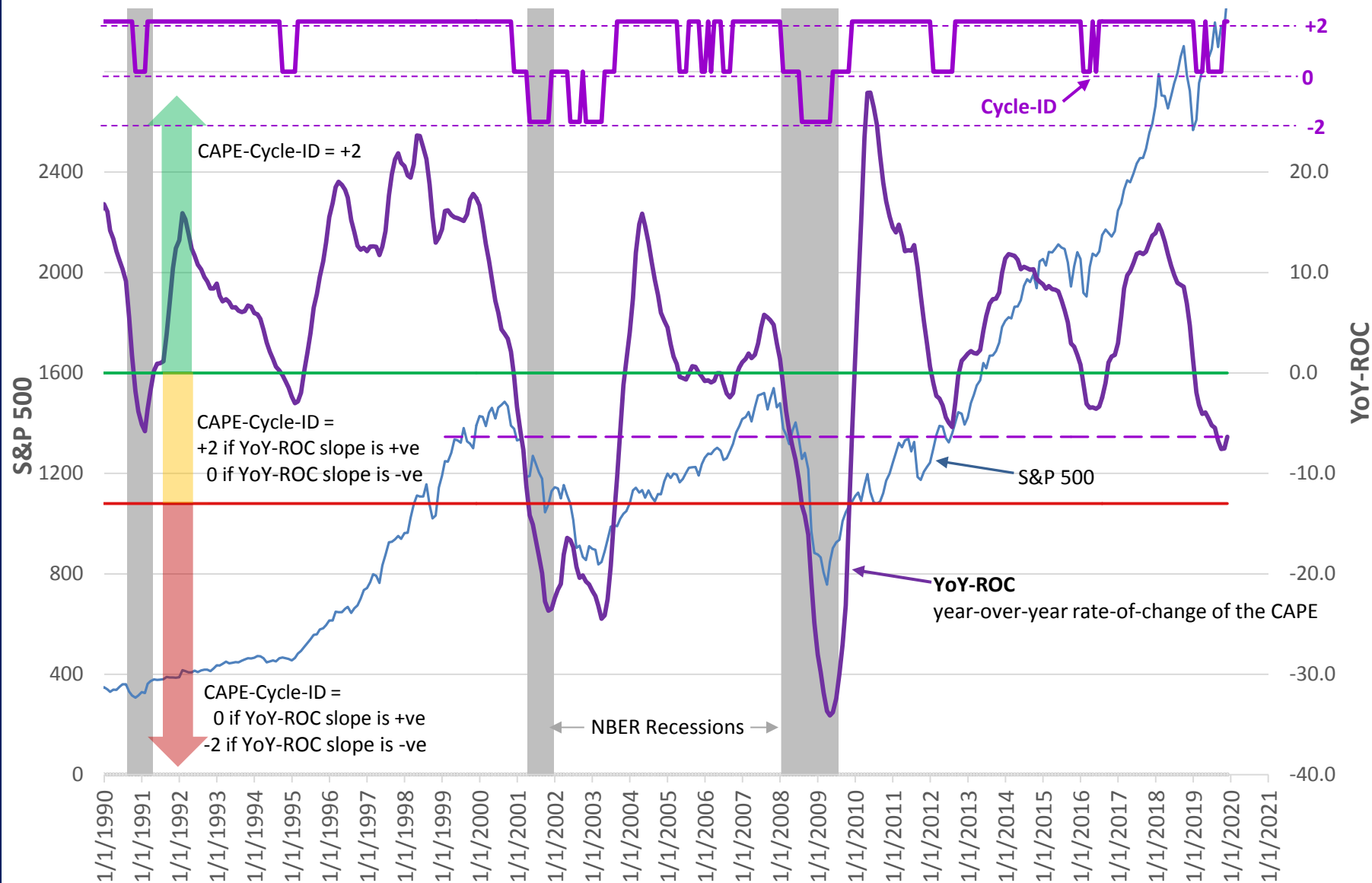
iM-DAGS.xlsm

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

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

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Estimated Forward 10-yr Returns are calculated from yearly regression equations, regressed on monthly data from Jan-1917 onward.

updated to 11/30/2019 Last CAPE-MA35 ratio= 1.23, previous month= 1.19

Estimated Forward 10-year Annualized Real Return = 6.1%
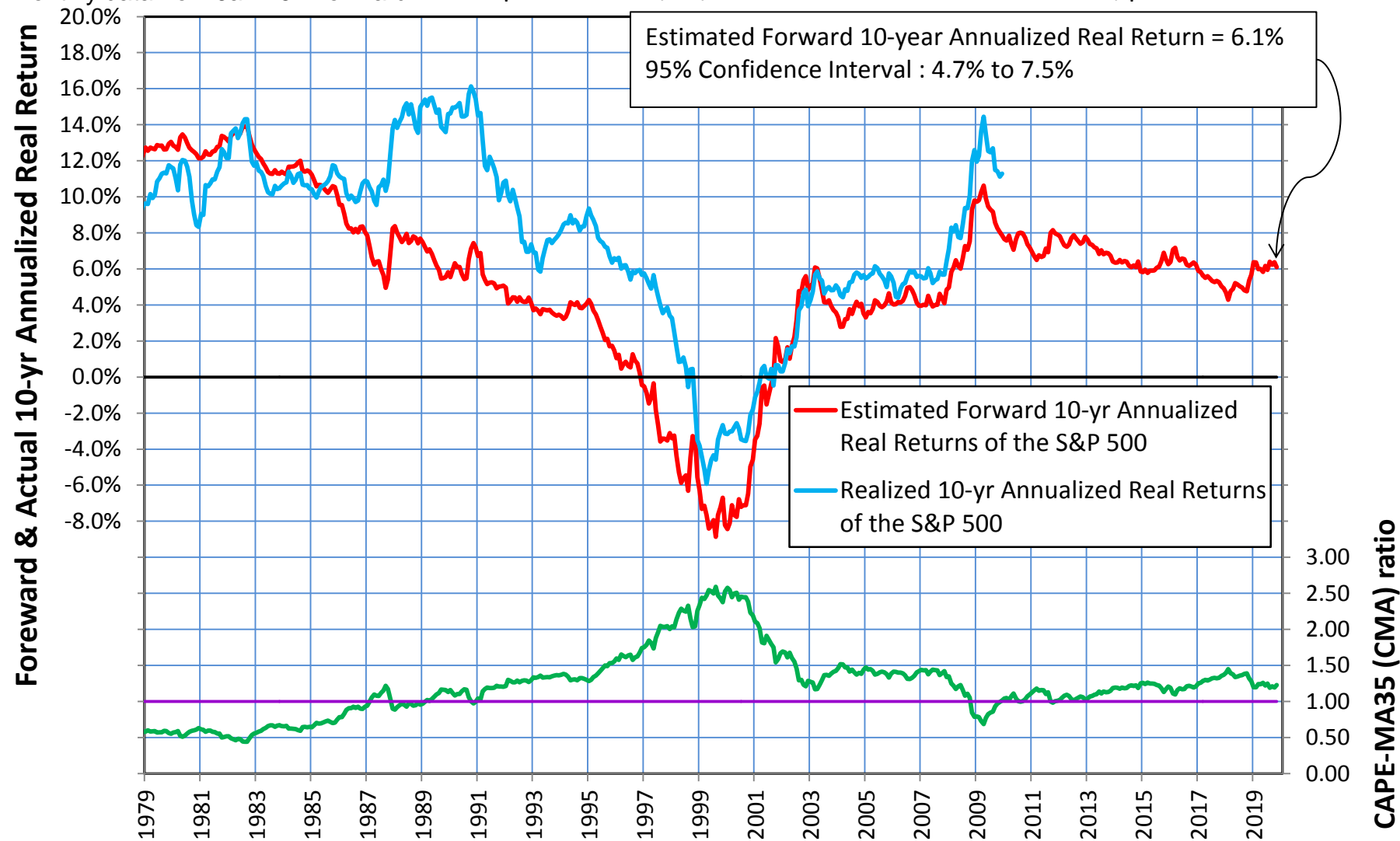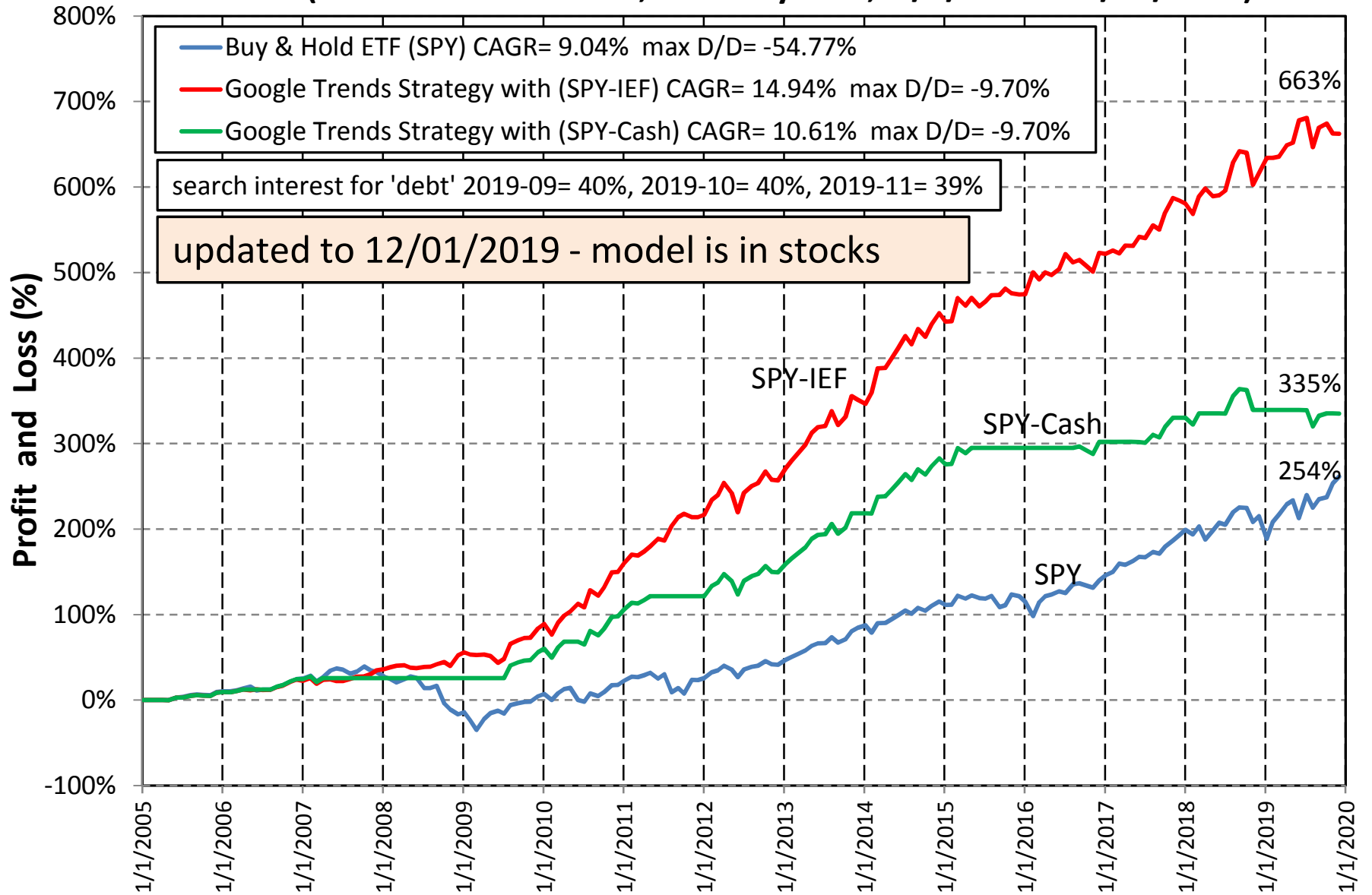95% Confidence Interval : 4.7% to 7.5%

Estimated Forward 10-yr Annualized Real Returns of the S&P 500

Realized 10-yr Annualized Real Returns of the S&P 500

Foreward & Actual 10-yr Annualized Real Return

CAPE-MA35 (CMA) ratio

iM imarketsignals.com

Figure-10: Cumulative Performance iM-GT Timer
(Search Term = "debt", monthly data, 5/2/2005 - 12/01/2019)

— Buy & Hold ETF (SPY) CAGR= 9.04% max D/D= -54.77%
— Google Trends Strategy with (SPY-IEF) CAGR= 14.94% max D/D= -9.70%
— Google Trends Strategy with (SPY-Cash) CAGR= 10.61% max D/D= -9.70%

search interest for 'debt' 2019-09= 40%, 2019-10= 40%, 2019-11= 39%

updated to 12/01/2019 - model is in stocks

663%
335%
254%

SPY-IEF
SPY-Cash
SPY

Profit and Loss (%)

Trade Weighted US Dollar and Interest Rates

Updated to Nov 28, 2019