## September 20 2018

### Business Cycle Index

The BCI at 250.3 is above last week's downward revised level of 248.9, and formed a new high for this business cycle indicated by the BCIp of 100. Also, the 6-month smoothed annualized growth BCIg at 14.6 is above last week's 14.4.

No recession is signaled.

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## September 21, 2018

### Market Signals Summary:

The MAC-US model is invested. [/iM] [iM level="3" ages="28"] The "3-mo Hi-Lo Index of the S&P500" generated a buy signal on 6/12/2018 and is invested in the markets. The monthly updated S&P500 Coppock indicator is also invested. The MAC-AU is also invested. 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 flattening and signaled buy FLAT end March 2018. The gold Coppock model is invested, however the silver model is in cash since early August 2018. The iM-Gold Timer is in gold since 7/10/2017..

### Stock-markets:

The MAC-US model generated a buy-signal 4/5/2016 and thus is invested in the stock-markets. The sell-spread (red graph) is above last week's level and has to fall below zero to signal a sell.

The 3-mo Hi-Lo Index of the S&P500 is above last week's level at 10.62% (last week 9.81%) and is invested in the market since 6/12/2018..

The MAC-AU model is invested in the markets after it generated a buy signal on March 21, 2016. The sell-spread is remains below last week's level and has to fall below zero to signal a sell.

### Recession:

Figure 3 shows the **COMP** down from last week's upward revised level. No recession is indicated. COMP can be used for stock market exit timing as discussed in this article The Use of Recession Indicators in Stock Market Timing.

Figure 3.1 shows the **recession indicator iM-BCIg** above 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 down from last week's level and is not signaling a recession. The FRR2-10 general trend is downwards.

The **iM-Low Frequency Timer** is invested in the markets

### 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 flattening and signaled a buy FLAT end March 2018. 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 May 2018 2017 and is invested in gold.

The iM GOLD-TIMER Rev-1 is invested in gold since 7/10/2017.

### Silver:

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

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# Monthly Updates (next update 10/5/2018)

## September 7, 2018

### Unemployment

The unemployment rate recession model (article link), has been updated with the August UER of 3.9%. Based on the historic patterns of the unemployment rate indicators prior to recessions one can reasonably conclude that the U.S. economy is not likely to go into recession anytime soon. The growth rate UERg is at minus 9.43% (last month minus 11.2%) and EMA spread of the UER is at minus 0.17% (last month minus 0.19%).

## The Dynamic Linearly Detrended Enhanced Aggregate Spread:

The updated level of this indicator, -203bps, is above last months -191bps, confirms the January 20, 2017 signal.. Based on past history a recession could have started at the earliest in October 2017, but not later than May 2019. The average lead time to previous recessions provided by DAGS was 15 months which would indicate a recession start for April 2018. (Note: All our other recession indicators are far from signal a recession.)

## Coppock Indicator for the S&P500

The Coppock indicator for the S&P500 entered the market end May 2017 and generated a new buy signal in mid February 2018 This model is in stocks.   This indicator is described here.

## CAPE-Cycle-ID

Fig 9a depicts the CAPE-Cycle-ID and the year-on-year rate-of-change of the Shiller CAPE.  A model using this indicator invests in the market when the Cycle-ID is +2 or 0, and when the Cycle-ID equals -2 the model is in cash. This indicator is described here.

## Trade Weighted USD

The Trade Weighted $ value continues to strengthen.

## TIAA Real Estate Account

The  1-year rolling return for the end of last month is 5.42%.   A sell signal is not imminent.

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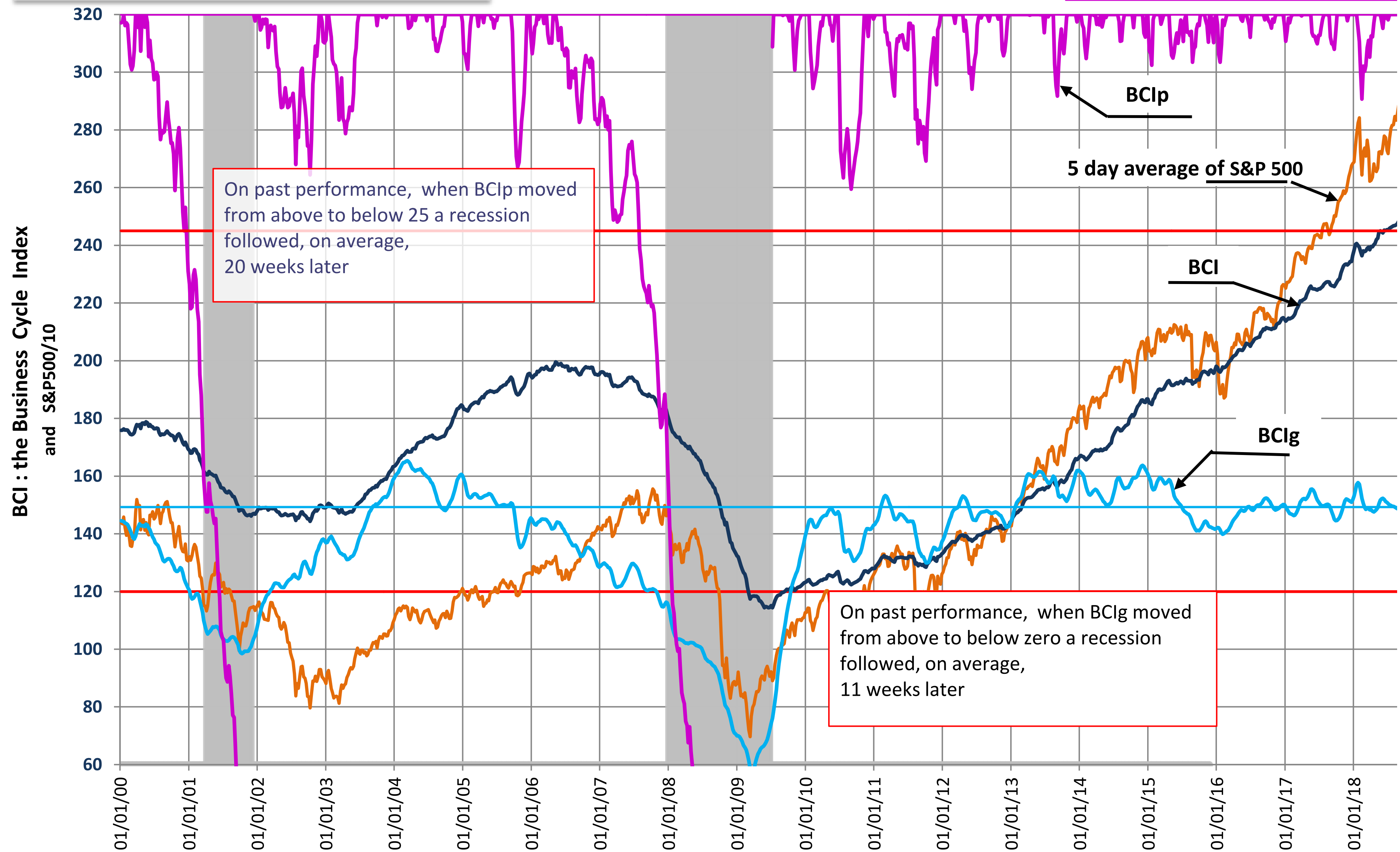
# iM's Business Cycle Index (BCI)

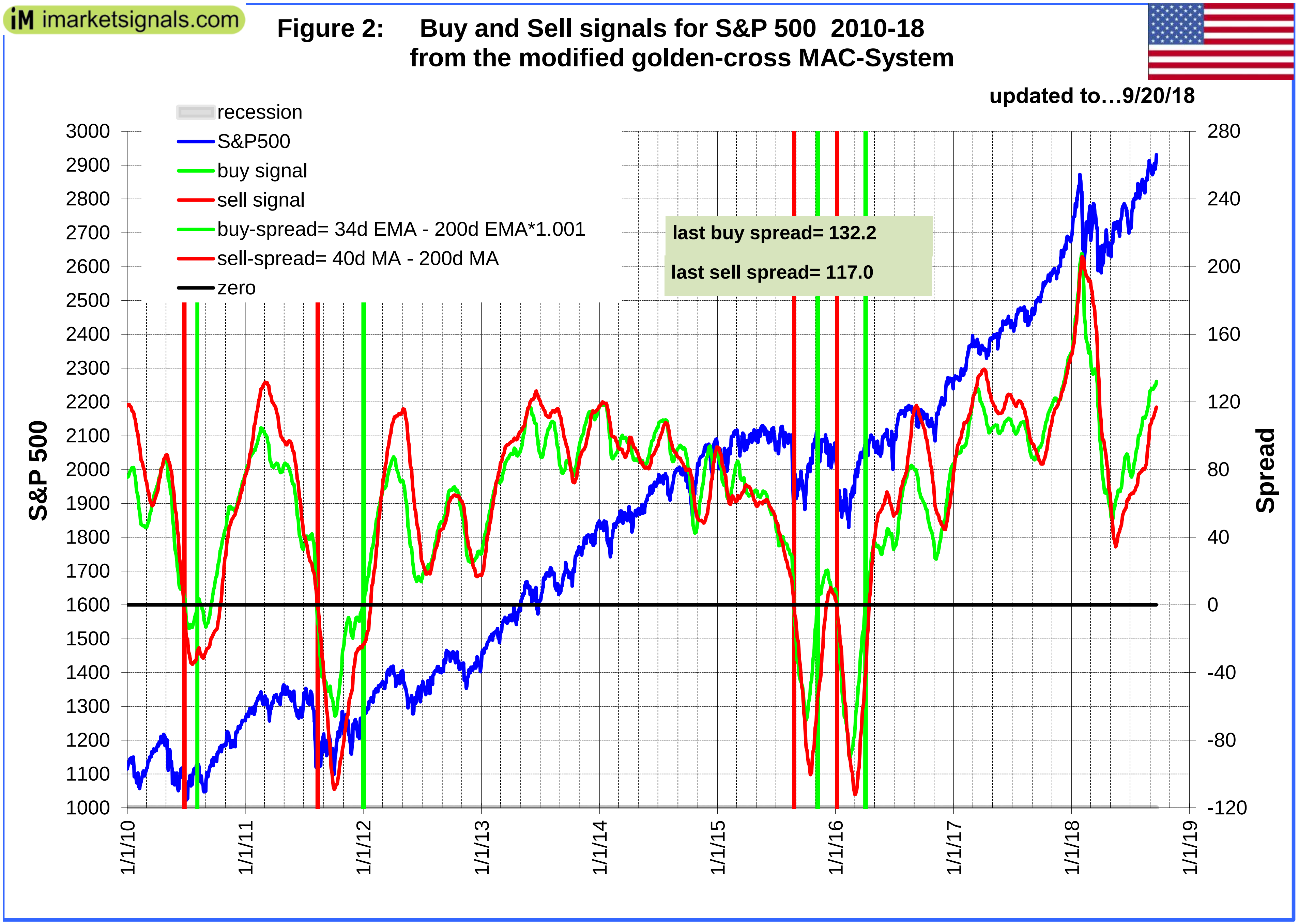
**BCIp, BCI and BCIg**
**updated to September 20, 2018**

| Date | 08/23 | 08/30 | 09/06 | 09/13 | **09/20** |
|---|---|---|---|---|---|
| BCIp | 100.0 | 100.0 | 100.0 | 100.0 | **100.0** |
| BCI | 247.5 | 248.3 | 248.7 | 248.9 | **250.3** |
| BCIg | 14.4 | 14.4 | 14.4 | 14.4 | **14.6** |

On past performance, BCIp = 100 can interpreted as an average one year "t 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.




2-MAC rev8-27-15.xlsm

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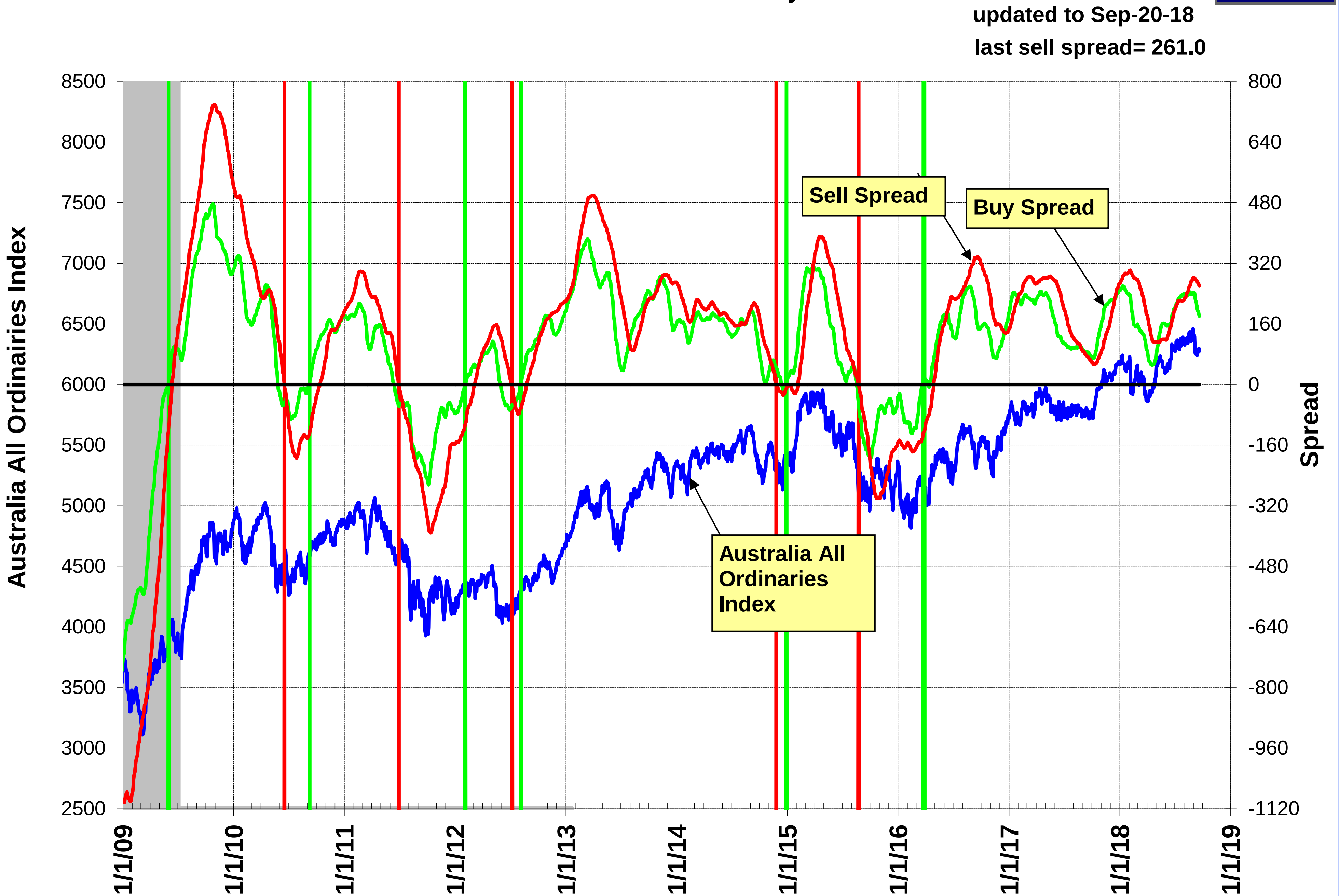
**Fig 2.1: Buy and Sell signals for the Australia All Ordinaries Index from the MAC-AU System**



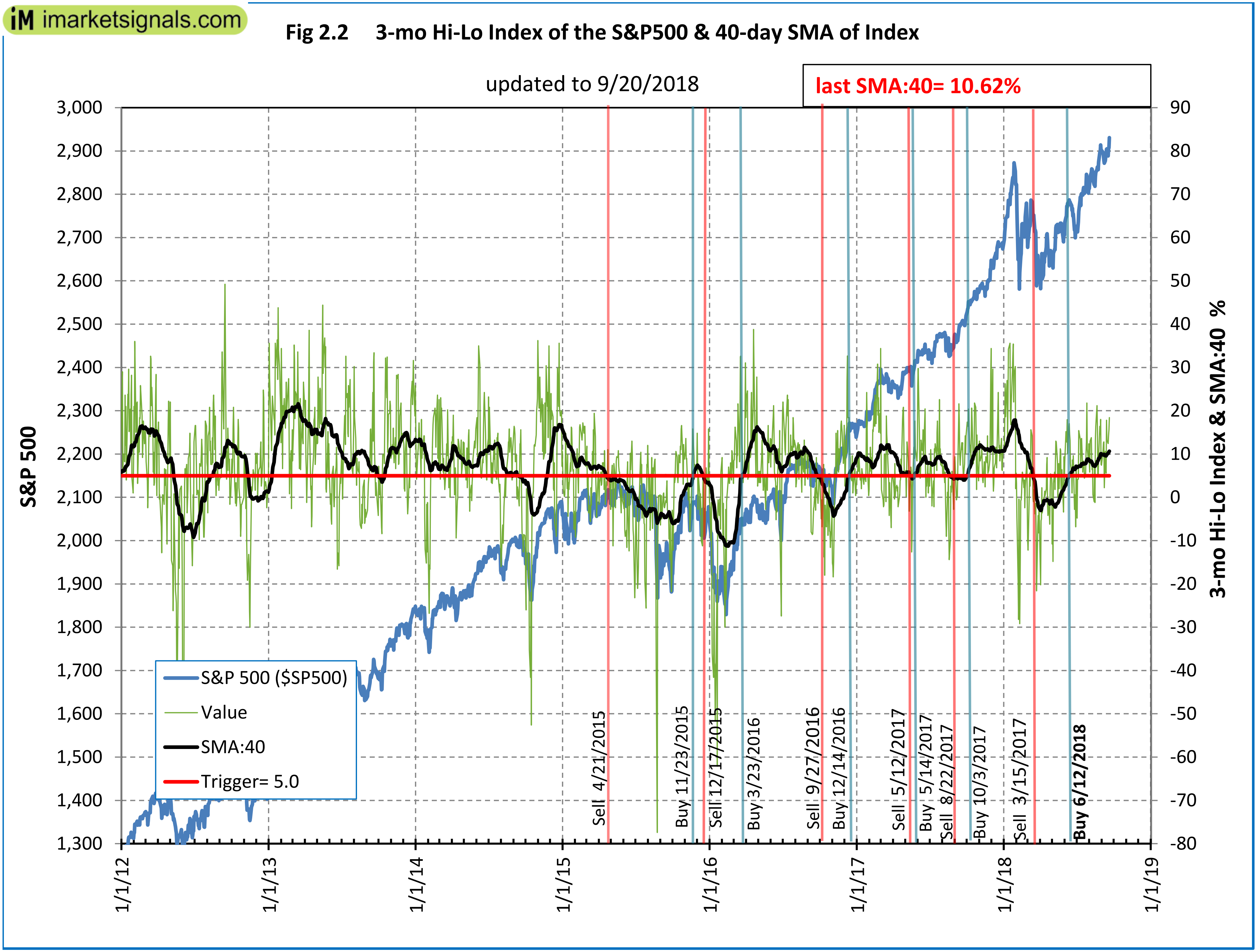


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Fig 2.2 3-mo Hi-Lo Index of the S&P500 & 40-day SMA of Index
updated to 9/20/2018
last SMA:40= 10.62%
S&P 500
3-mo Hi-Lo Index & SMA:40 %
S&P 500 ($SP500)
Value
SMA:40
Trigger= 5.0
Sell 4/21/2015
Buy 11/23/2015
Sell 12/17/2015
Buy 3/23/2016
Sell 9/27/2016
Buy 12/14/2016
Sell 5/12/2017
Buy 5/14/2017
Sell 8/22/2017
Buy 10/3/2017
Sell 3/15/2017
Buy 6/12/2018
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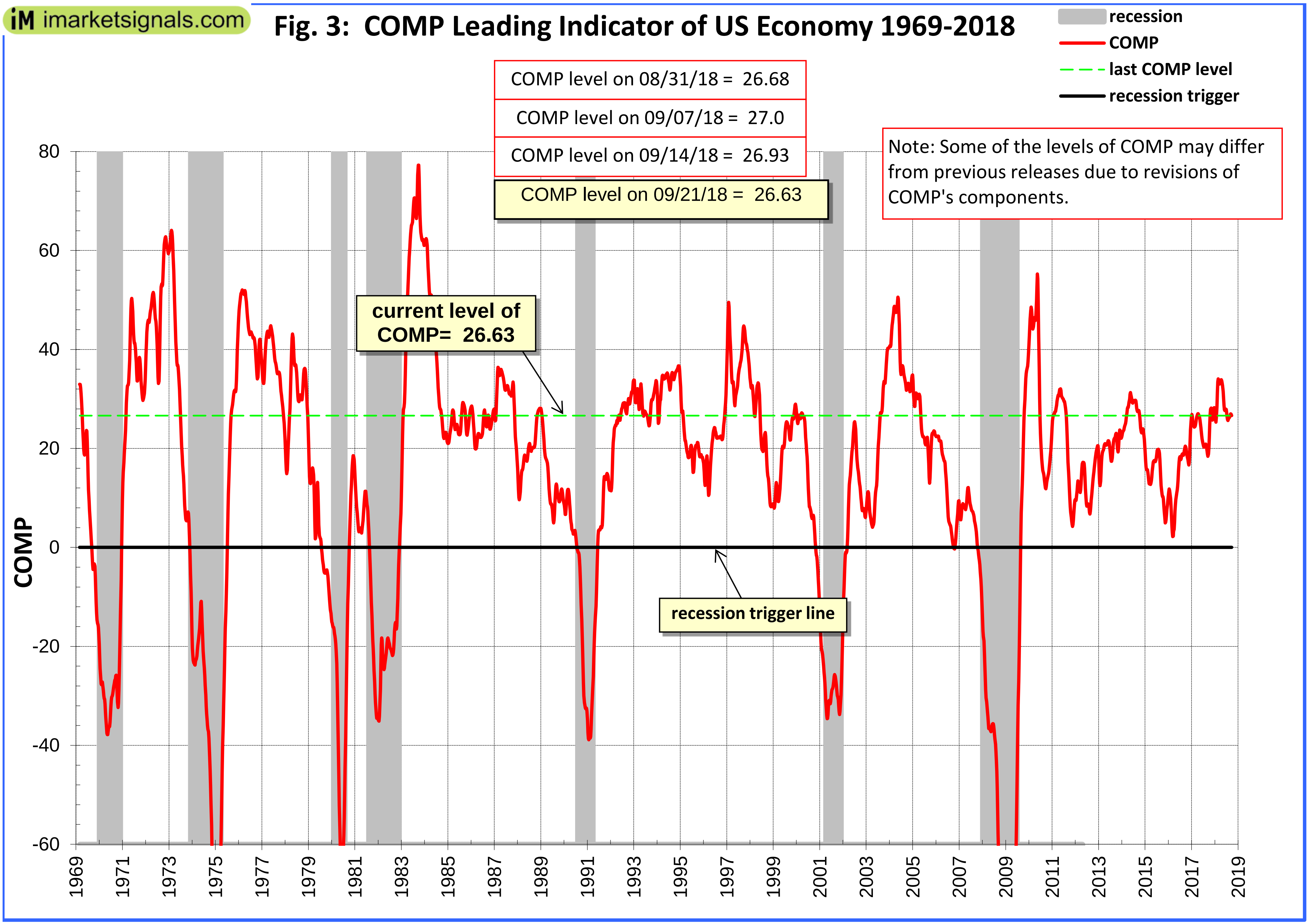
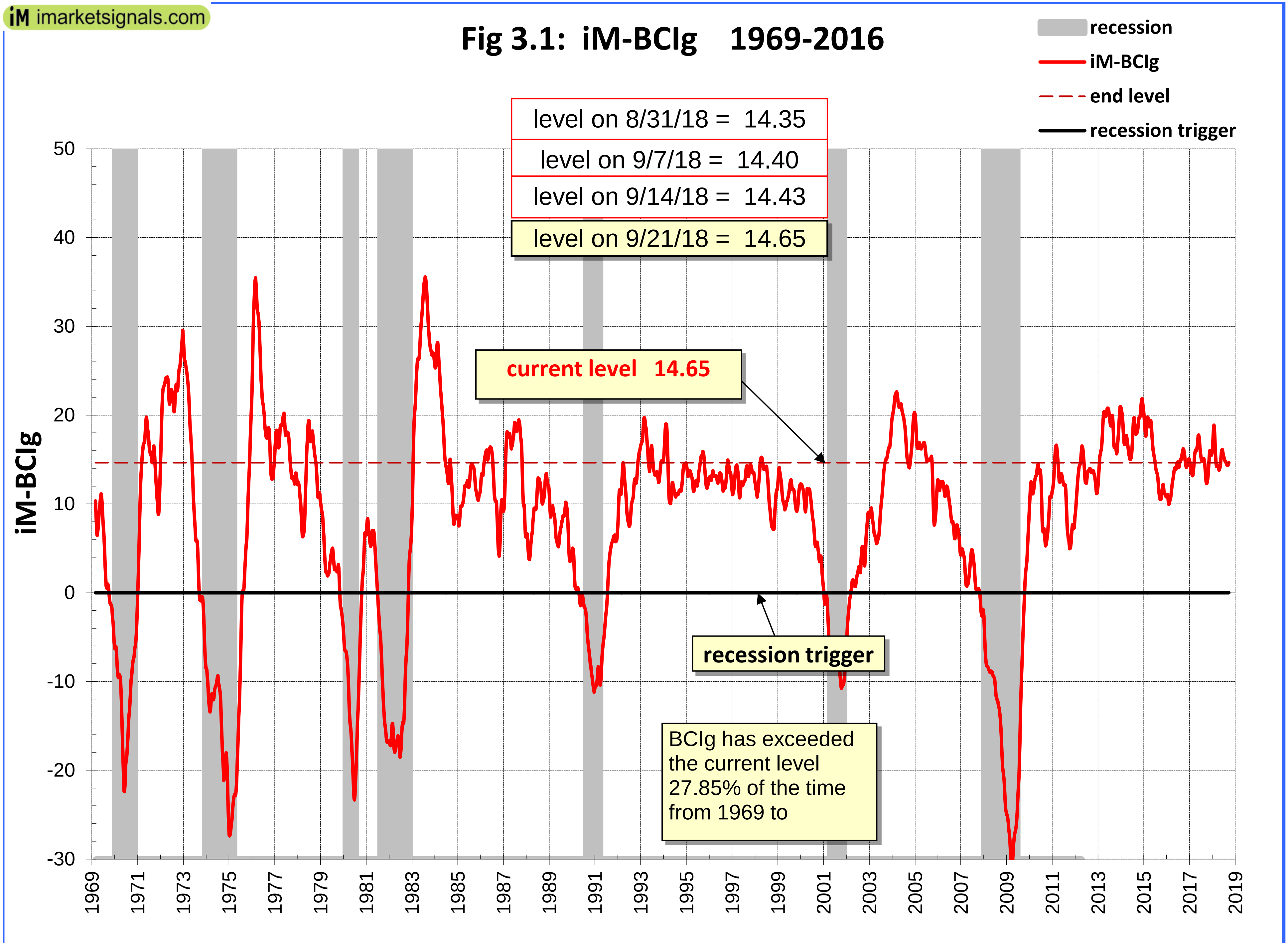
1/1/17
1/1/18
1/1/19


imarketsignals.com
Fig. 3: COMP Leading Indicator of US Economy 1969-2018
recession
COMP
last COMP level
recession trigger
COMP level on 08/31/18 = 26.68
COMP level on 09/07/18 = 27.0
COMP level on 09/14/18 = 26.93
COMP level on 09/21/18 = 26.63
Note: Some of the levels of COMP may differ from previous releases due to revisions of COMP's components.
current level of COMP= 26.63
recession trigger line
COMP
80
60
40
20
0
-20
-40
-60
1969
1971
1973
1975
1977
1979
1981
1983
1985
1987
1989
1991
1993
1995
1997
1999
2001
2003
2005
2007
2009
2011
2013
2015
2017
2019

3-COMP.xlsm



iM imarketsignals.com
Fig 3.1: iM-BCIg 1969-2016
recession
iM-BCIg
end level
recession trigger
level on 8/31/18 = 14.35
level on 9/7/18 = 14.40
level on 9/14/18 = 14.43
level on 9/21/18 = 14.65
current level 14.65
recession trigger
BCIg has exceeded the current level 27.85% of the time from 1969 to
iM-BCIg
50
40
30
20
10
0
-10
-20
-30
1969
1971
1973
1975
1977
1979
1981
1983
1985
1987
1989
1991
1993
1995
1997
1999
2001
2003
2005
2007
2009
2011
2013
2015
2017
2019


BCIg Toni

# 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);

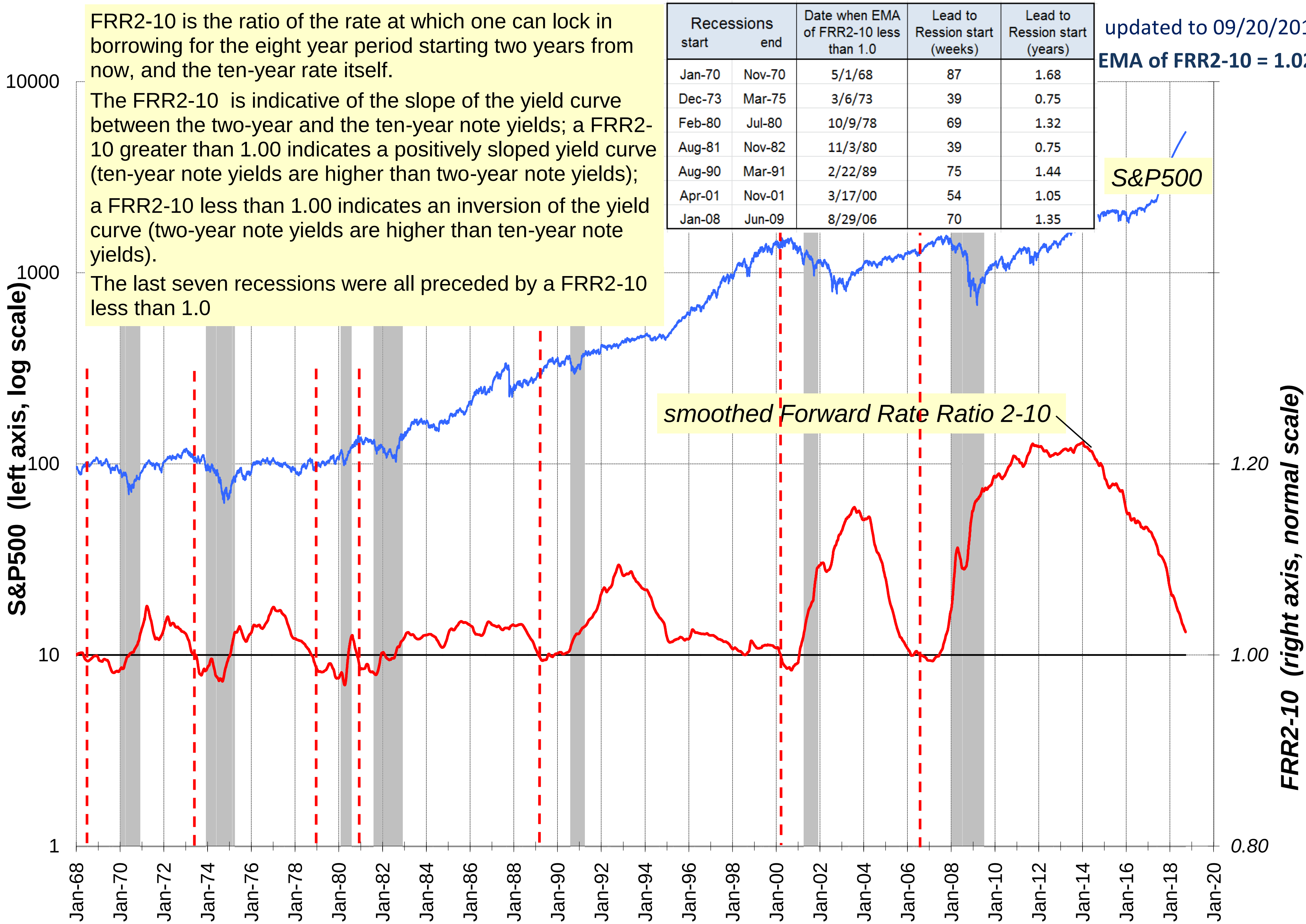
a FRR2-10 less than 1.00 indicates an inversion of the yield curve (two-year note yields are higher than ten-year note yields).

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 09/20/2018

**EMA of FRR2-10 = 1.024**



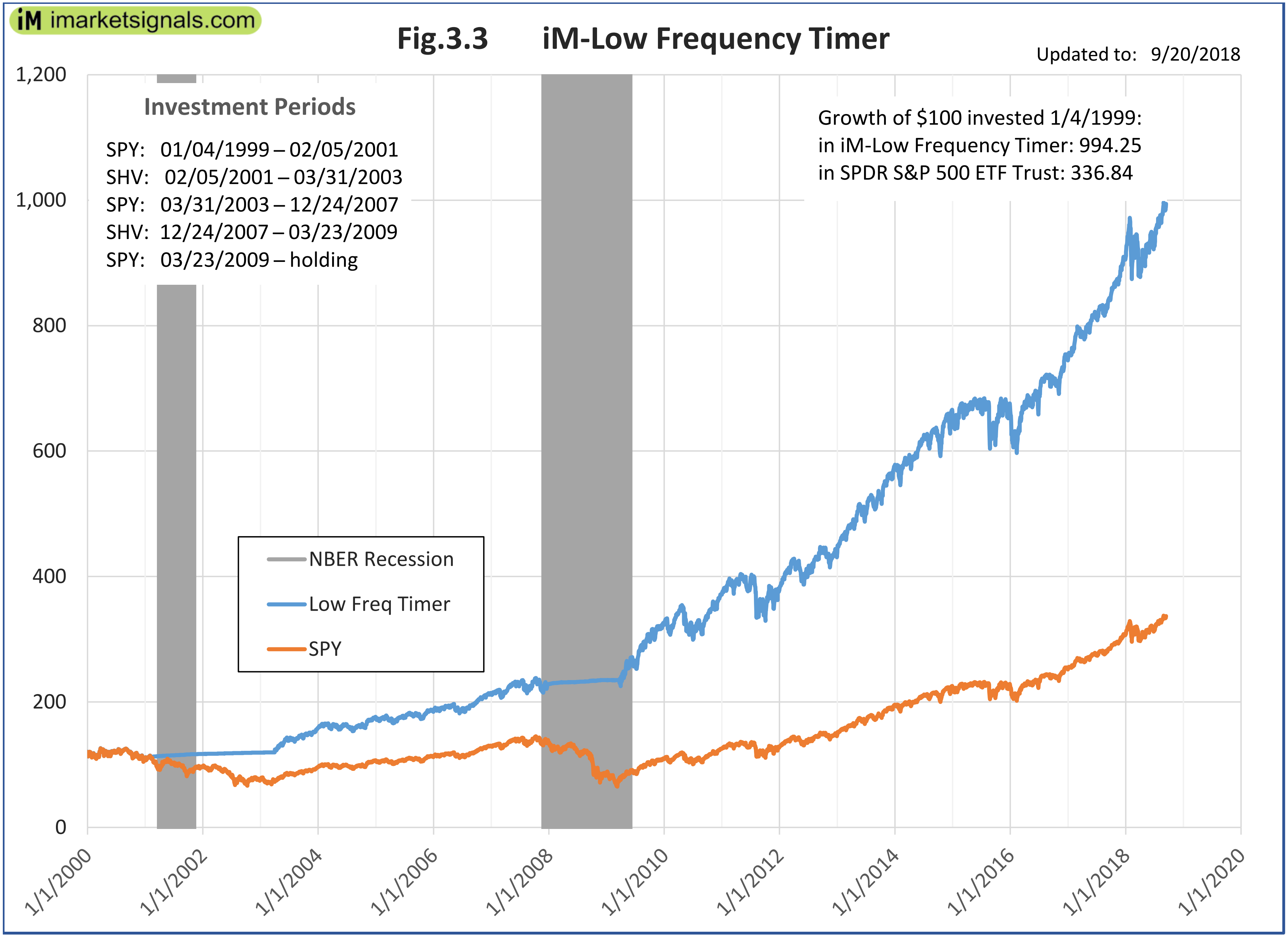


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Fig.3.3 iM-Low Frequency Timer
Updated to: 9/20/2018
Investment Periods
SPY: 01/04/1999 – 02/05/2001
SHV: 02/05/2001 – 03/31/2003
SPY: 03/31/2003 – 12/24/2007
SHV: 12/24/2007 – 03/23/2009
SPY: 03/23/2009 – holding
Growth of $100 invested 1/4/1999:
in iM-Low Frequency Timer: 994.25
in SPDR S&P 500 ETF Trust: 336.84
NBER Recession
Low Freq Timer
SPY
1,200
1,000
800
600
400
200
0
1/1/2000
1/1/2002
1/1/2004
1/1/2006
1/1/2008
1/1/2010
1/1/2012
1/1/2014
1/1/2016
1/1/2018
1/1/2020

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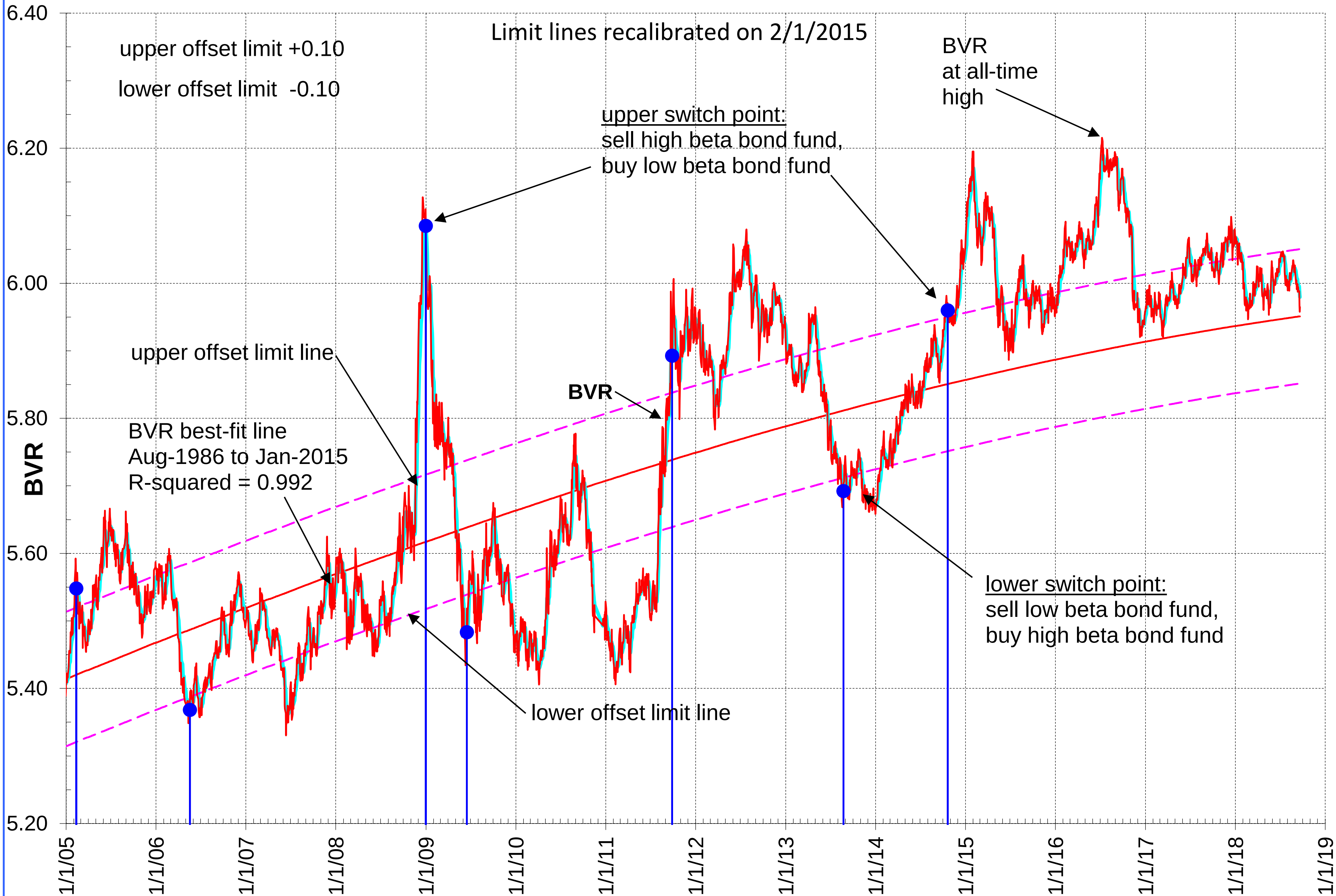
**Figure 4: Bond Value Ratio (BVR) from 2005 to 2018**

**Model updated to: 9/20/2018 BVR = 5.965**




4-BVR recalibrated.xlsm fig4BVR06-14

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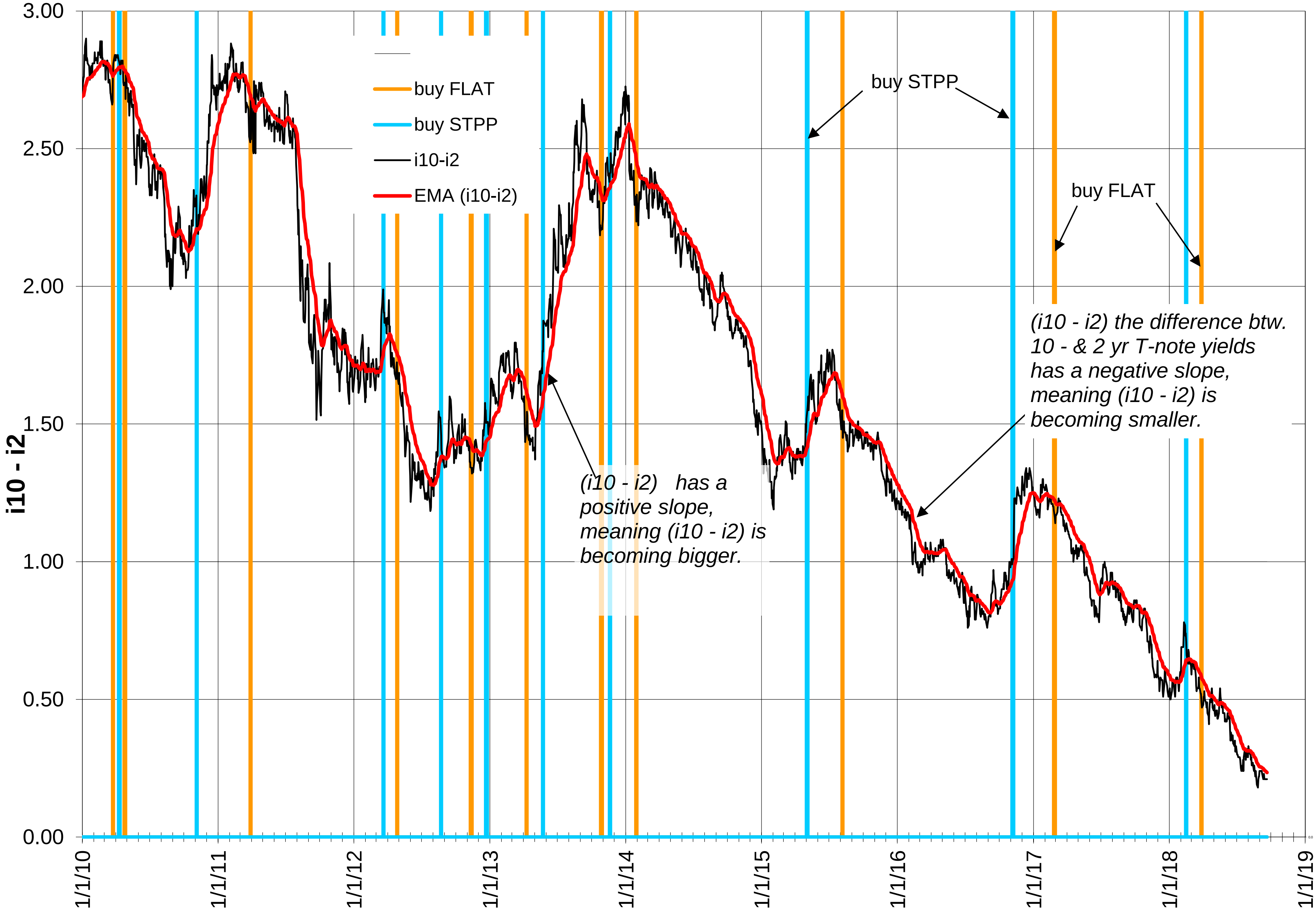
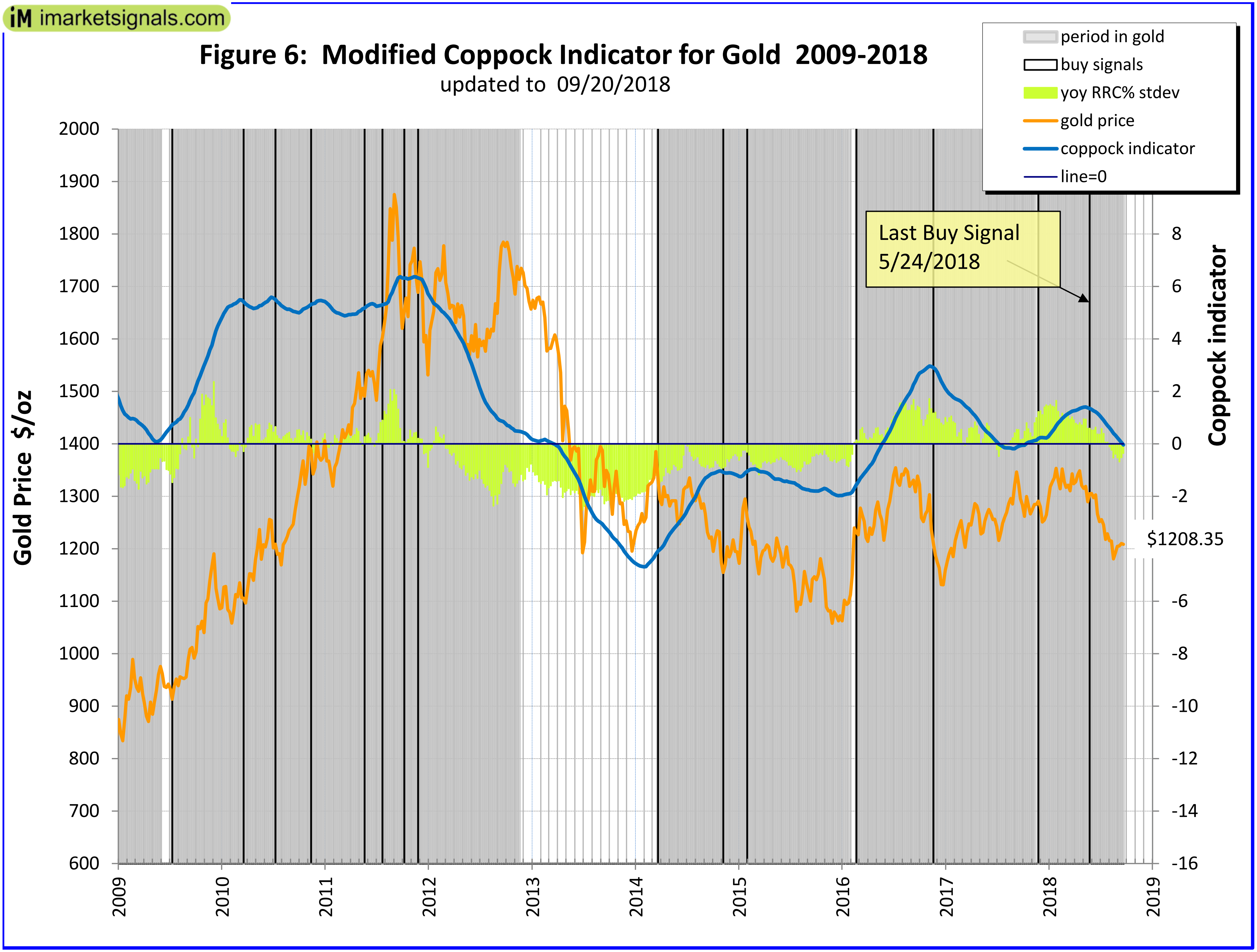
# Figure 5: i10 - i2

**Updated to.....9/20/18**






6-COPPOCK GOLD for updates.xlsm

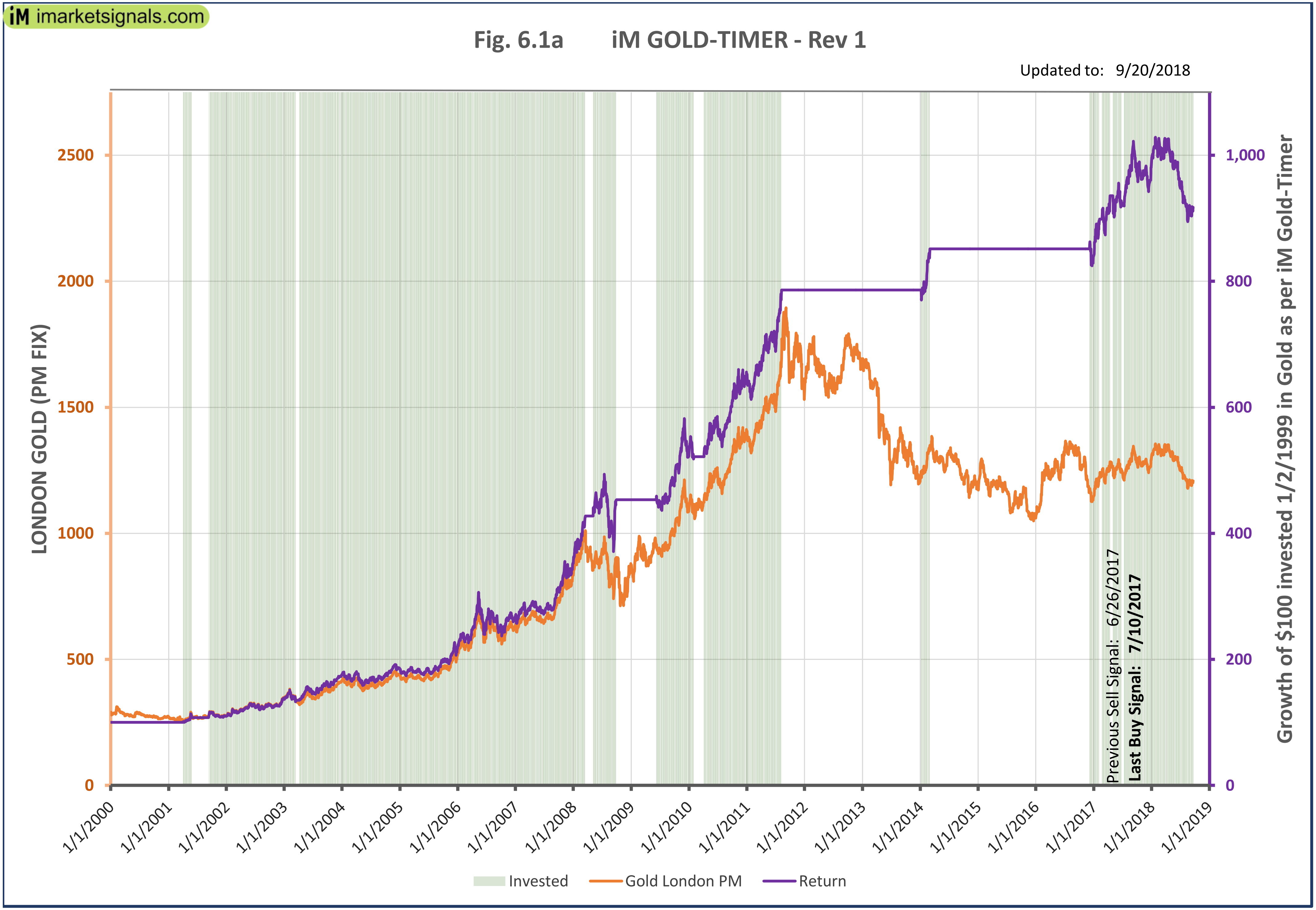


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Fig. 6.1a iM GOLD-TIMER - Rev 1
Updated to: 9/20/2018
LONDON GOLD (PM FIX)
Growth of $100 invested 1/2/1999 in Gold as per iM Gold-Timer
0
500
1000
1500
2000
2500
0
200
400
600
800
1,000
1/1/2000
1/1/2001
1/1/2002
1/1/2003
1/1/2004
1/1/2005
1/1/2006
1/1/2007
1/1/2008
1/1/2009
1/1/2010
1/1/2011
1/1/2012
1/1/2013
1/1/2014
1/1/2015
1/1/2016
1/1/2017
1/1/2018
1/1/2019
Previous Sell Signal: 6/26/2017
Last Buy Signal: 7/10/2017
Invested
Gold London PM
Return

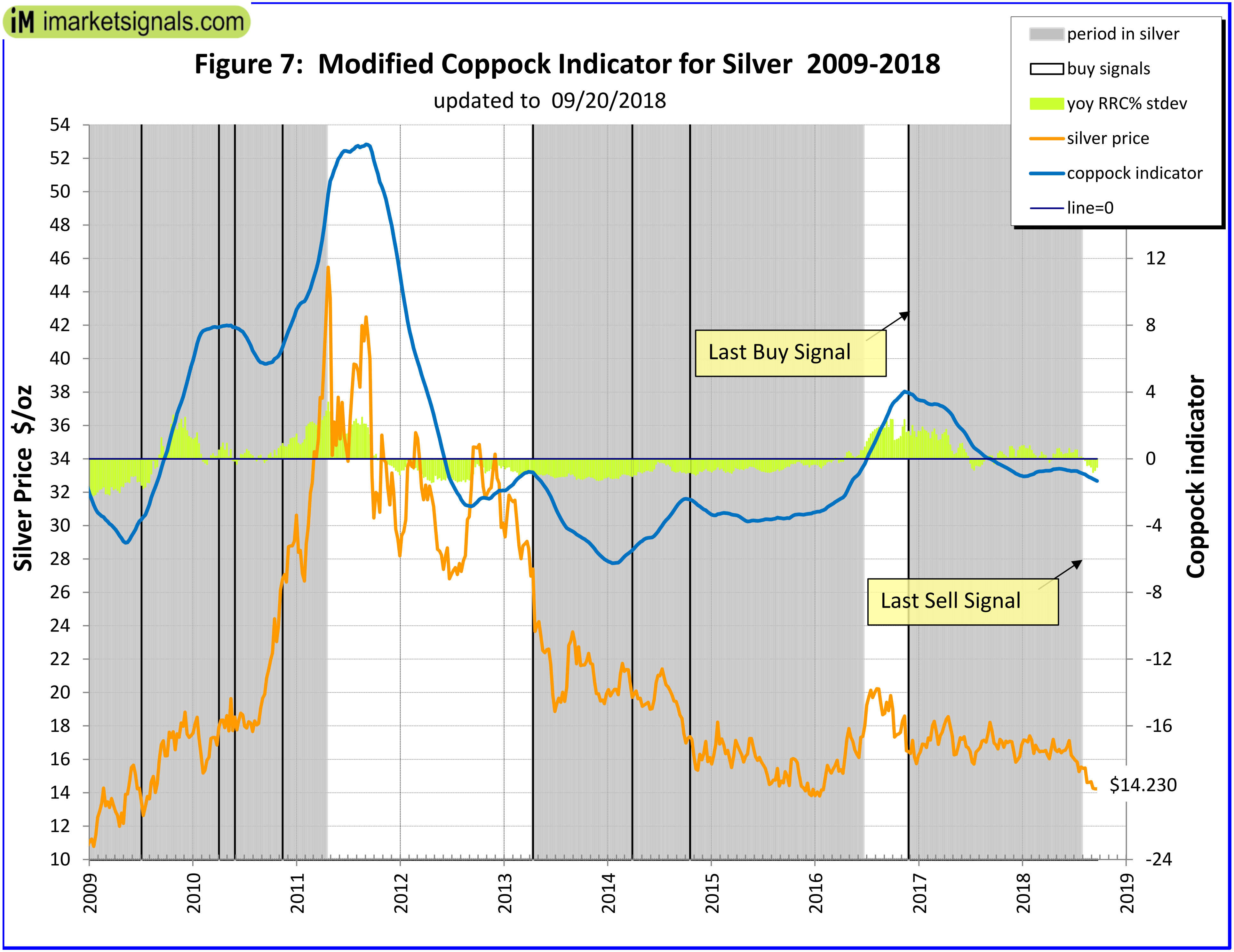


**Figure 7: Modified Coppock Indicator for Silver 2009-2018**