

Milton W. Berg, CFA | MB Advisors, LLC. | info@miltonberg.com



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Summary

- At major turning points, specifically during the first 7 days off a market low into a new bull market, the S&P 500 and other major market indexes generate rarely seen extremes in underlying technical data.
- Those rare signals can be used as building blocks for the creation of viable technical indications. Those indications are then used as an information analog to determine the likelihood of gains occurring in future similar market environments.
- We chose the August 12, 1982 low, and the 7 following days through August 23, 1982.
- During those 8 market days we have uncovered 118 individual data points to generate 55 separate Buy signals which apply to 133 distinct Buy signal dates.
- We use precise as well as lagging indicators as a means of encompassing a broader range of days.
- An important component of our analysis is the rarity or frequency of signals. The less frequent a signal is, the less likely it is that it will prove to be a random event. By tracking data during the first 7 days of a bull market, we have found the rare data that the market generates early in a bull market. This data is not distributed randomly.
- For example, the August 12 signal “Russell 2000 Down 13 of 14 days” has occurred 15 times since 1982 out of 9,828 dates available for a 0.15% frequency.
- We list the frequency for each individual data point in a separate table titled “Frequency of Signals Observed at the August 12, 1982 Low”.
- A table titled “All Signal Dates” lists the maximum returns within 12-months of each signal, the median of those maximum returns for all dates on which that signal is in effect, drawdowns to the maximum gain in the S&P 500 within 12 months of each signal, the median of those drawdowns, and the maximum gain before the next market correction of -15% materializes as well as the median of those maximum gains.
- The median return within 12 months of the 133 buys signal dates is 26.28%. The median drawdown is a nominal -1.22%.
- Those unfamiliar with statistical analysis may look at these signals and returns with astonishment. Markets generate non-random information at important turning points. We have uncovered some of that data. The rarer the signal, the more statistically significant. The greater the momentum, the greater the potential future gain. The stronger the volume, the stronger the associated signal. The deeper the oversold, the higher the upside reversal.
- We believe we have uncovered many “new” indicators that were hiding in plain sight. We hope this paper opens new possibilities for those who work in our mystifying discipline of technical analysis.

Model Building Using Data Extremes

In this paper we will demonstrate how, at major turning points, specifically during the first 7 days off a market low into a new bull market, the S&P 500 and other major market indexes generate rarely seen extremes in underlying technical data.

We will demonstrate how those rare signals may be used as building blocks for the creation of viable technical indications. Those indications can then be used as an information analog to determine the likelihood of gains occurring in similar market environments should they take place at a future date.

We will use the exact August 12, 1982 low, and the 7 following days through August 23, 1982, for this demonstration. We are using August 12, 1982 for this presentation of model building because that date marks the low of a great bear market. It also marks the start of one of the greatest long-term bull markets in US history.

Into August 12, 1982, the S&P 500 had declined -27.11% off its nominal all-time high of November 28, 1980. The August 1982 market low was one of the deepest bear market bottoms in history. That is because the CPI-adjusted all-time high in the S&P 500 had occurred way back on November 29, 1968. The inflation-adjusted decline from the 1968 peak to the 1982 bottom was a steep -65.80%. The August 1982 low did indeed mark the low of a great bear market, one that lasted 14 years. Moreover, at the 1982 low, the inflation-adjusted S&P 500 had declined back to a price level last seen in May of 1954. This great bear market had given up all gains generated over the previous 28 years.

The S&P 500 in its current form was introduced on March 4, 1957. For this study we will use the 64-year period from March 4, 1957 through December 1, 2021, when analyzing the viability of the signals and indicators generated.

We use current signals (generated on a given market day) as well as lagging signals. For example, on August 12, 1982, we note this current signal: **“Number of 52-week highs within the S&P 500 are 2 or fewer.”** On August 18, Day-4 past the low, we use this lagging signal: **“Number of 52-week highs within the S&P 500 are 2 or fewer, 4-7 days ago.”** We use lagging indicators as a means of encompassing a broader range of days. This concept is similar to but more efficient than using moving averages as a means of broadening the data horizon.

We will begin by listing data generated from August 12 through August 23, 1982, the last day of the bear market and the first seven days of the nascent bull market. We will use individual data points as well as combinations of signals to generate 55 distinct Buy signals which will apply to 133 distinct market dates.

8/12/1982 Day-0. Day of the low. Data used in constructing Buy Indications:

- S&P 500 closed -18% or greater off its latest high. Today is the lowest close since that high.
- Ned Davis Research Overbought-Oversold Oscillator Davis 265 closed @17.50 or lower (Range 0-100).
- Number of 52-week highs within the S&P 500 are 2 or fewer.
- Russell 2000 Down 13 of 14 days.

8/13/1982 Day-1 Past the Low. Data used in constructing Buy Indications:

- S&P 500 closed at a new 2-year low 1 day ago.
- S&P 500 closed at a 5-day high, 1 day past a 5-day low.

8/17/1982 Day-3 Past the Low. Data used in constructing Buy Indications:

- Net Up Volume as % of Total NYSE Volume (5-Day Smoothing) Above 35%.
- S&P 500 1-Day Volume at a 2000-day High.
- Upside Volume to Downside Volume Ratio for the S&P 500 greater than 100 to 1.
- S&P 500 closed -7% or greater off its latest high. Has held the low for three days.
- Net Up Volume as % of total NYSE Volume (5-Day Smoothing) -45%, 6 days ago.
- S&P 100 (OEX) gained 5.5% on the day.
- S&P 100 (OEX) 5-day ROC > 6%.
- S&P 500 5-day ROC > 6%.
- S&P 500 4-Day Upside to Downside Volume Breadth >3.5 to 1.
- S&P 500 closed -18% or greater off its latest high. Has held the low for three days.
- S&P 500 Percent of Stocks Lower than 60 Days Ago > 80%, 3 days ago.
- S&P 500 gained 4.0% on the day.
- S&P 500 closed -15% or greater off its latest high. Has held the low for three days.
- Upside Volume to Downside Volume Ratio for the NYSE greater than 12 to 1.
- NASDAQ closed -20% or greater off its latest high. Has held the low for two days.
- S&P 500 Closed up on the day on an increase in volume and volume is the highest of the Last 250 Days on which the S&P 500 closed up on higher volume.

8/18/1982 Day-4 Past the Low. Data used in constructing Buy Indications:

- Ned Davis Research Overbought-Oversold Oscillator Davis 265 @17.50 or lower (Range 0-100) 4-7 days ago.
- S&P 500 4-Day Upside to Downside Volume Breadth >3.5 to 1.
- S&P 500 closed -18% or greater off its latest high. Has held the low for four days.

- NASDAQ Greatest daily gain in last 120 Days.
- S&P 500 Closed -7% or greater off its latest high. Has held the low for four days.
- NASDAQ Gained +1.60% 2 days in a row.
- Russell 2000 Up on the day and volume Increased by 50%.
- Russell 2000 Down 12 of the last 13 days, 4-7 days ago.
- NASDAQ Closed -20% or greater off its latest high. Has held the low for three days.
- NASDAQ Composite A/D Reverse Thrust (10-Day Advances / 10-Day Declines) ≤ 0.50 6 days ago.
- NASDAQ gained 1.5% on the day.
- Value Line Geometric Index closed 4.5% below its 19-Day MA, 4-7 days ago.
- S&P 500 Percent of Stocks Lower than 60 Days Ago $> 80\%$, 4-7 days ago.
- Number of 52-week highs within the S&P 500 are 2 or fewer, 4-7 days ago.
- Net Up Volume as % of Total NYSE Volume (5-Day Smoothing) -40% , 4-7 days ago.
- S&P 500 declined on the day and volume increased on the day. The ratio of today's S&P 500 volume to the Last 90 Days in which the S&P 500 closed lower on higher volume is 2.27 to 1 or greater.
- S&P 500 volume increased on the day. The ratio of today's S&P 500 volume to the Last 250 Days in which the S&P closed on higher volume is 2.70 to 1 or greater.
- S&P 500 volume increased on the day. The ratio of today's S&P 500 volume to the Last 60 Days in which the S&P closed on higher volume is 2.33 to 1.
- Dow Jones Industrial Average 1-Day Volume at 500-day New High.

8/19/1982 Day-5 Past the Low. Data used in constructing Buy Indications:

- S&P 500 closed -18% or greater off its latest high. Has held the low for five days.
- S&P 500 Volume 5-Day average 2nd Highest in the Last 5 Years.
- S&P 500 5-day Advances / 5 Day Declines > 2.7 .
- S&P 500 closed -7% or greater off its latest high. Has held the low for five days.

8/20/1982 Day-6 Past the Low. Data used in constructing Buy Indications:

- NYSE Upside to Downside Volume Ratio greater than 30/1 second time in 4 days.
- S&P 500 closed -18% or greater off its latest high. Has held the low for six days.
- S&P 500 5-Day ROC Highest in 1260-Days.
- S&P 500 gains 10% from its latest 10% Correction with no intervening higher days.
- Net Up Volume as % of Total NYSE Volume (5-Day Smoothing) Above 45%.
- S&P 500 gained 9% from its latest 10% Correction with no intervening higher days
- NYSE Closed up on the day on an increase in volume and volume is the Highest of the Last 15 Days in which NYSE closed up on higher volume.
- S&P 500 Advances / Declines > 6.0 .
- S&P 500 TRIN ≤ 0.5 .

- S&P 500 5-Day Advances / 5-Day Declines > 2.80.
- S&P 500 Upside to Downside Volume Ratio greater than 65 to 1.
- S&P 500 Upside Volume to Downside Volume 17 to 1 for the second time in 10 days.
- S&P 500 closed -7% or greater off its latest high. Has held the low for six days.
- NYSE Upside to Downside Volume > 15 to 1.
- NASDAQ 7-Day MA of the Adv/Dec 1.52/1.
- S&P 500 gains 3.5% on the day.
- S&P 500 10-Day ROC Highest in 180-Days.
- S&P 500 10-Day ROC > 8%.
- S&P 500 5-Day ROC > 8%.
- S&P 500 Number of 252-Day New Highs > 50.
- S&P 500 5-Day ROC > 7%.
- NYSE Upside Volume to Downside Volume Ratio greater than 9 to 1.
- S&P 500 closed -14% or greater off its latest high. Has held the low for six days.
- S&P 500 closed -15% or greater off its latest high. Has held the low for six days.
- S&P 500 closed -5% or greater off its latest high. Has held the low for six days.
- S&P 500 gained 1.0% on the day during days 4-7 off the low.
- S&P 500 closes -18% or greater off its latest high. Has held the low for six days.
- S&P 500 closed at New 30-Day High.
- S&P 500 gained 9% from its latest 10% correction with no intervening higher days.

8/23/1982 Day-7 Past the Low. Data used in constructing Buy Indications:

- S&P 500 closed -7% or greater off its latest high. Has held the low for seven days.
- S&P 500 Number of 252-Day New Highs > 50.
- S&P 500 declines -15% from a high with no intervening lower days. Has held the low for 1-11 days .
- NYSE 5-day average total daily volume highest in 126 days within the last 20 days.
- NDR Multi-Cap Equity Series 10-Day Advancing Volume / (10-Day Advancing + Declining Volume) > 70.
- S&P 500 closed -12% or greater off its latest high. Has held the low for seven days.
- S&P 500 closed at New 30-Day High.
- S&P 500 gained 6% off. its latest 10% Correction with no intervening higher days.
- S&P 500 TRIN <= 0.5.
- NYSE Upside to Downside Volume > 10 to 1.
- Net Up Volume as % of Total NYSE Volume (5-Day Smoothing) Above 45%.
- S&P 500 TRIN <= 0.5 2 days in a row.
- NYSE Closes up on the day. Volume rises on the day. Volume is Greatest of the Last 250 days when NYSE closed up on higher volume.
- NYSE Closes up on the day on an increase in volume and Volume is the Greatest of the Last 15 Days in which NYSE closed up on higher volume.
- S&P 500 Five-Day Rate of Change > 7.4%.
- S&P 500 7-Day Advances / 7-Day Declines Ratio > 3.25.

- S&P 500 closed -18% or greater off its latest high. Has held the low for seven days.
- S&P 500 gained 12% from its latest 10% Correction with no intervening higher days.
- NASDAQ 10-Day Upside to Downside Volume Greater than 1.89/1.
- NASDAQ 5-Day ROC Highest in 504-Days.
- Russell 2000 5-Day ROC Highest in 504-Days.
- NDR Multi-Cap Equity Series (s55a) 10-Day Advancing Volume / (10-Day Advancing + Declining Volume) ≥ 70.00 .
- S&P 500 TRIN ≤ 0.3 1 day ago.
- NYSE 10-Day Advances/10-Day Declines > 1.9 .
- S&P 500 10-Day ROC Highest in 180-Days.
- S&P 500 gained 1.0% on the day.
- NYSE Daily Upside to Downside Volume > 10 to 1 in the prior 1-3 days.

An important component of our analysis is the rarity or frequency of signals. The less frequent a signal is, the less likely it is that it will prove to be a random event. By tracking data during the first 7 days of a bull market, we are attempting to find the rare data that the market generates early in a bull market. This data is not generated randomly.

We also look for combinations of data points that are generated exclusively at early-stage bull moves.

For example, the August 12 signal **“Russell 2000 Down 13 of 14 days”** has occurred 15 times since 1982 out of 9,828 dates available for a 0.15% frequency.

The August 13 signal **“S&P 500 closed at a 5-day high 1-day past a 5-day low”** has occurred 200 times since 1957 out of 16,128 dates available for a 1.24% frequency.

The August 17 signal **“S&P 500 5-day ROC $> 6\%$ ”** has occurred 123 times since 1957 out of 16,128 dates available for a 0.76% frequency.

The August 18 signal **“S&P 500 4-Day Upside to Downside Volume Breadth > 3.5 to 1”** has occurred 103 times since 1957 out of 16,128 dates available for a 0.64% frequency.

The August 19 signal **“S&P 500 Volume 5-Day average 2nd Highest in the Last 5.0 Years”** has occurred 250 times since 1957 out of 16,128 dates available for a 1.55% frequency.

The August 20 signal **“S&P 500 10-day ROC $> 8\%$ ”** has occurred 143 times since 1957 out of 16,128 dates available for a 0.89% frequency.

The August 23 signal **“Net Up Volume as % of Total NYSE Volume (5-Day Smoothing) Above 45%”** has occurred 104 times since 1957 out of 16,128 dates available for a 0.64% frequency.

We have included a full table of signals and frequencies.

The following 55 Buy Signals were uncovered using market generated data from the last day of the 1968-1982 (CPI Adjusted) bear market through the first seven days of the new bull market. We are confident that these signals are not reflecting random events. When these non-random bullish indicators present again in the future, we are confident that the S&P 500 will follow through with strong bull market action.

Those unfamiliar with statistical analysis may look at these signals with astonishment and suspect some sort of data mining. Markets generate non-random information at important turning points. We attempt to uncover that data. The greater the momentum, the greater the potential future gains. The stronger the volume, the stronger the associated signal. The deeper the oversold, the higher the upside reversal. The rarer the signal, the more statistically significant.

In this report, we list the frequency for each individual data point in a separate table titled "Frequency of Signals Observed at the August 12, 1982 Low.

We state the median gain for the S&P 500 within 12 months of the full signal.

We present a table which lists drawdowns to the maximum gain in the S&P 500 within 12 months of the signal and the maximum gain before the next -15% decline materializes. Some signals are followed by a comment.

Additionally, we attach charts that display each of our buy indications.

Signal 1. August 12. Day-0.

1. S&P 500 closed -18% or greater off its latest high. Today is the lowest close since that high.
2. Ned Davis Research Overbought -Oversold Oscillator Davis 265 @17.50 or lower (Range 0-100).
3. Number of 52-week highs within the 500 S&P issues are 2 or fewer.
4. Number of Instances 4. Median Gain within 12 months 40.30%.

Buy Signal 1								
S&P 500 closed -18% or greater off its latest high. Today is the lowest close since that high.								
Ned Davis Research Overbought -Oversold Oscillator Davis 265 @17.50 or lower (Range 0-100).								
Number of 52-week highs within the 500 S&P issues are 2 or fewer.								
S&P 500 Cumulative Returns								
# of	Date	Max Gain within	# of Days to	Max Drawdown To Max	# of Days to	Max Gain to next	Max Decline within	# of Days to
Signals		252-Days	252-Day Gain	252-Day Gain	Max Drawdown	-15.00% Correction	252-Days	252-Day Decline
1	10/7/2002	32.38%	239	-1.08%	2	99.31%	-1.08%	2
2	9/21/2001	21.40%	72	0.00%	0	21.40%	-17.41%	209
3	8/31/1998	48.21%	220	0.00%	0	59.56%	0.00%	0
4	8/12/1982	66.95%	218	0.00%	0	228.81%	0.00%	0
Median		40.30%	219	0.00%	0	79.44%	-0.54%	1

Comment. 9-21-2001 the exact day of a low, this indicator signaled before a rally of 21.40% within a bear market. 10-07-2002 signaled 2 days before the final low.

Comment. We have used Ned Davis Research Davis 265 Oscillator as one component for this exact low day signal. This oscillator was not available in 1982 so this signal could not have uncovered in real time. Nevertheless, this is a viable oversold indicator to utilize in research. Nearly any oscillator would have generated extreme oversold readings in real time on August 12, 1982.

Signal 2. August 12. Day-0.

1. S&P 500 closed -18% or greater off its latest high. Today is the lowest close since that high.
2. Ned Davis Research Overbought -Oversold Oscillator Davis 265 @17.50 or lower (Range 0-100).
3. Russell 2000 Down 13 of 14 days
4. Number of Instances 4. Median Gain within 12 months 29.27%

Buy Signal 2								
S&P 500 closed -18% or greater off its latest high. Today is the lowest close since that high. Ned Davis Research Overbought -Oversold Oscillator Davis 265 @17.50 or lower (Range 0-100). Russell 2000 Down 13 of 14 days S&P 500 Cumulative Returns								
# of	Date	Max Gain within	# of Days to	Max Drawdown To Max	# of Days to	Max Gain to next	Max Decline within	# of Days to
Signals		252-Days	252-Day Gain	252-Day Gain	Max Drawdown	-15.00% Correction	252-Days	252-Day Decline
1	12/24/2018	37.13%	251	0.00%	0	44.02%	0.00%	0
2	9/21/2001	21.40%	72	0.00%	0	21.40%	-17.41%	209
3	9/20/2001	19.09%	73	-1.90%	1	19.09%	-18.98%	210
4	8/12/1982	66.95%	218	0.00%	0	228.81%	0.00%	0
Median		29.27%	146	0.00%	0	32.71%	-8.70%	105

Comment. 9-20-2001, 9-21-2001 signaled before a rally of 19.09% and 21.40% within a bear market.

Signal 3. August 13. Day-1.

1. S&P 500 closed at a new 2-year low 1 day ago.
2. S&P 500 closed at a 5-day high 1 day past a 5-day low.
3. Number of Instances 2. Median Gain within 12 months 62.25%.

Buy Signal 3								
S&P 500 closed at a new 2-year low 1 day ago. S&P 500 closed at a 5-day high 1 day past a 5-day low. S&P 500 Cumulative Returns								
# of	Date	Max Gain within	# of Days to	Max Drawdown To Max	# of Days to	Max Gain to next	Max Decline within	# of Days to
Signals		252-Days	252-Day Gain	252-Day Gain	Max Drawdown	-15.00% Correction	252-Days	252-Day Decline
1	3/10/2009	59.84%	217	0.00%	0	69.16%	0.00%	0
2	8/13/1982	64.65%	217	0.00%	0	224.29%	0.00%	0
Median		62.25%	217	0.00%	0	146.72%	0.00%	0

Comment. Signaled Day-1 past a Major bear market low on August 13, 1982 and March 10, 2009.

Signal 4. August 17 Day-3.

1. Net Up Volume as % of Total NYSE Volume (5-Day Smoothing) Above 35%.
2. S&P 500 1-Day Volume at a 2000-day High.
3. Number of Instances 5. Median Gain within 12 months 32.76%.

Buy Signal 4								
Net Up Volume as % of Total NYSE Volume (5-Day Smoothing) Above 35%.								
S&P 500 1-Day Volume at a 2000-day High.								
S&P 500 Cumulative Returns								
# of	Date	Max Gain within	# of Days to	Max Drawdown To Max	# of Days to	Max Gain to next	Max Decline within	# of Days to
Signals		252-Days	252-Day Gain	252-Day Gain	Max Drawdown	-15.00% Correction	252-Days	252-Day Decline
1	8/3/1984	20.51%	240	-0.42%	46	107.43%	-0.42%	46
2	8/2/1984	23.84%	241	0.00%	0	113.16%	0.00%	0
3	10/7/1982	32.76%	179	0.00%	0	161.47%	0.00%	0
4	8/26/1982	44.23%	208	-1.21%	1	184.07%	-1.21%	1
5	8/17/1982	56.81%	215	-0.47%	1	208.85%	-0.47%	1
Median		32.76%	215	-0.42%	1	161.47%	-0.42%	1

Signal 5. August 17 Day-3.

1. Upside Volume to Downside Volume Ratio for the S&P 500 greater than 100 to 1.
2. Number of Instances 4. Median Gain within 12 months 30.45%.

Buy Signal 5								
Upside Volume to Downside Volume Ratio for the S&P 500 greater than 100 to 1.								
S&P 500 Cumulative Returns								
# of	Date	Max Gain within	# of Days to	Max Drawdown To Max	# of Days to	Max Gain to next	Max Decline within	# of Days to
Signals		252-Days	252-Day Gain	252-Day Gain	Max Drawdown	-15.00% Correction	252-Days	252-Day Decline
1	12/26/2018	31.29%	252	-0.80%	5	37.22%	-0.80%	5
2	12/31/2012	29.60%	252	0.00%	0	105.50%	0.00%	0
3	11/28/2011	22.91%	201	0.00%	0	145.75%	0.00%	0
4	8/17/1982	56.81%	215	-0.47%	1	208.85%	-0.47%	1
Median		30.45%	234	-0.23%	1	125.62%	-0.23%	1

Signal 6. August 17 Day-3.

1. S&P 500 closed -7% or greater off its latest high. Has held the low for three days.
2. Net Up Volume as % of Total NYSE Volume (5-Day Smoothing) Above 35%.
3. Number of Instances 3. Median Gain within 12 months 53.21%.

Buy Signal 6								
S&P 500 closed -7% or greater off its latest high. Has held the low for three days.								
Net Up Volume as % of Total NYSE Volume (5-Day Smoothing) Above 35%.								
S&P 500 Cumulative Returns								
# of	Date	Max Gain within	# of Days to	Max Drawdown To Max	# of Days to	Max Gain to next	Max Decline within	# of Days to
Signals		252-Days	252-Day Gain	252-Day Gain	Max Drawdown	-15.00% Correction	252-Days	252-Day Decline
1	7/15/2009	30.51%	195	0.00%	0	30.51%	0.00%	0
2	3/12/2009	53.21%	251	0.00%	0	62.14%	0.00%	0
3	8/17/1982	56.81%	215	-0.47%	1	208.85%	-0.47%	1
Median		53.21%	215	0.00%	0	62.14%	0.00%	0

Signal 7. August 17 Day-3.

1. S&P 500 closed -7% or greater off its latest high. Has held the low for three days.
2. S&P 100 (OEX) gained 5.5% on the day.
3. Number of Instances 2. Median Gain within 12 months 53.99%.

Buy Signal 7								
S&P 500 closed -7% or greater off its latest high. Has held the low for three days.								
S&P 100 (OEX) gained 5.5% on the day.								
S&P 500 Cumulative Returns								
# of	Date	Max Gain within	# of Days to	Max Drawdown To Max	# of Days to	Max Gain to next	Max Decline within	# of Days to
Signals		252-Days	252-Day Gain	252-Day Gain	Max Drawdown	-15.00% Correction	252-Days	252-Day Decline
1	3/26/2020	51.16%	251	-6.07%	4	78.88% TD	-6.07%	4
2	8/17/1982	56.81%	215	-0.47%	1	208.85%	-0.47%	1
Median		53.99%	233	-3.27%	3	208.85%	-3.27%	3

Comment. Signaled Day-3 after the major low in 1982 and 2020.

Signal 8. August 17 Day-3.

1. S&P 500 Percent of Stocks Lower than 60 Days Ago > 80%, 3 days ago.
2. Net Up Volume as % of Total NYSE Volume (5-Day Smoothing) -45% 6 days ago.
3. Number of Instances 3. Median Gain within 12 months 52.07%.

Buy Signal 8								
S&P 500 Percent of Stocks Lower than 60 Days Ago > 80%, 3 days ago.								
Net Up Volume as % of Total NYSE Volume (5-Day Smoothing) -45% 6 days ago.								
S&P 500 Cumulative Returns								
# of	Date	Max Gain within	# of Days to	Max Drawdown To Max	# of Days to	Max Gain to next	Max Decline within	# of Days to
Signals		252-Days	252-Day Gain	252-Day Gain	Max Drawdown	-15.00% Correction	252-Days	252-Day Decline
1	3/13/2009	52.07%	252	-0.35%	1	60.90%	-0.35%	1
2	10/1/2001	12.90%	66	0.00%	0	12.90%	-23.19%	203
3	8/17/1982	56.81%	215	-0.47%	1	208.85%	-0.47%	1
Median		52.07%	215	-0.35%	1	60.90%	-0.47%	1

Comment. 10-01 2001 signaled before a +12.90% Bear market rally.

Signal 9. August 17 Day-3.

1. S&P 500 closed -7% or greater off its latest high. Has held the low for three days.
2. S&P 100 (OEX) 5-day ROC > 6%.
3. Number of Instances 4. Median Gain within 12 months 52.19%

Buy Signal 9								
S&P 500 closed -7% or greater off its latest high. Has held the low for three days.								
S&P 100 (OEX) 5-day ROC > 6%.								
S&P 500 Cumulative Returns								
# of	Date	Max Gain within	# of Days to	Max Drawdown To Max	# of Days to	Max Gain to next	Max Decline within	# of Days to
Signals		252-Days	252-Day Gain	252-Day Gain	Max Drawdown	-15.00% Correction	252-Days	252-Day Decline
1	3/26/2020	51.16%	251	-6.07%	4	78.88% TD	-6.07%	4
2	3/12/2009	53.21%	251	0.00%	0	62.14%	0.00%	0
3	10/14/2002	24.72%	252	-4.84%	101	86.01%	-4.84%	101
4	8/17/1982	56.81%	215	-0.47%	1	208.85%	-0.47%	1
Median		52.19%	251	-2.65%	3	86.01%	-2.65%	3

Comment. Signaled Day-3 after the major low in 1982, 2002, 2009 and 2020.

Signal 10. August 17 Day-3.

1. S&P 500 closed -7% or greater off its latest high. Has held the low for three days.
2. S&P 500 (SPX) 5-day ROC > 6%.
3. Number of Instances 5. Median Gain within 12 months 51.16%

Buy Signal 10								
S&P 500 closed -7% or greater off its latest high. Has held the low for three days.								
S&P 500 (SPX) 5-day ROC > 6%.								
S&P 500 Cumulative Returns								
# of	Date	Max Gain within	# of Days to	Max Drawdown To Max	# of Days to	Max Gain to next	Max Decline within	# of Days to
Signals		252-Days	252-Day Gain	252-Day Gain	Max Drawdown	-15.00% Correction	252-Days	252-Day Decline
1	3/26/2020	51.16%	251	-6.07%	4	78.88% TD	-6.07%	4
2	7/15/2009	30.51%	195	0.00%	0	30.51%	0.00%	0
3	3/12/2009	53.21%	251	0.00%	0	62.14%	0.00%	0
4	10/14/2002	24.72%	252	-4.84%	101	86.01%	-4.84%	101
5	8/17/1982	56.81%	215	-0.47%	1	208.85%	-0.47%	1
Median		51.16%	251	-0.47%	1	74.08%	-0.47%	1

Comment. Signaled Day-3 after the major low in 1982, 2002, 2009 and 2020 and after the -7.09% corrective low in July 2009.

Signal 11. August 17 Day-3.

1. Net Up Volume as % of Total NYSE Volume (5-Day Smoothing) Above 35%.
2. S&P 500 4-Day Up to Down Volume Breadth >3.5 to 1.
3. Number of Instances 5. Median Gain within 12 months 51.29%

Buy Signal 11								
Net Up Volume as % of Total NYSE Volume (5-Day Smoothing) Above 35%.								
S&P 500 4-Day Up to Down Volume Breadth > 3.5 to 1.								
S&P 500 Cumulative Returns								
# of	Date	Max Gain within	# of Days to	Max Drawdown To Max	# of Days to	Max Gain to next	Max Decline within	# of Days to
Signals		252-Days	252-Day Gain	252-Day Gain	Max Drawdown	-15.00% Correction	252-Days	252-Day Decline
1	1/4/2013	26.04%	249	-0.64%	2	99.85%	-0.64%	2
2	12/1/2011	17.77%	198	-3.15%	12	135.48%	-3.15%	12
3	8/20/1982	51.29%	212	0.00%	0	197.97%	0.00%	0
4	8/19/1982	56.64%	213	0.00%	0	208.51%	0.00%	0
5	8/17/1982	56.81%	215	-0.47%	1	208.85%	-0.47%	1
Median		51.29%	213	-0.47%	1	197.97%	-0.47%	1

Comment: The median return before the next -15% correction is 197.97%.

Signal 12. August 17 Day-3.

1. Net Up Volume as % of Total NYSE Volume (5-Day Smoothing) Above 35%.
2. S&P 100 (OEX) gained 5.5% on the day.
3. Number of Instances 2. Median Gain within 12 months 49.75%.

Buy Signal 12								
Net Up Volume as % of Total NYSE Volume (5-Day Smoothing) Above 35%.S&P 100 (OEX) gained 5.5% on the day. S&P 500 Cumulative Returns								
# of	Date	Max Gain within	# of Days to	Max Drawdown To Max	# of Days to	Max Gain to next	Max Decline within	# of Days to
Signals		252-Days	252-Day Gain	252-Day Gain	Max Drawdown	-15.00% Correction	252-Days	252-Day Decline
1	3/23/2009	42.68%	252	-4.30%	5	47.92%	-4.30%	5
2	8/17/1982	56.81%	215	-0.47%	1	208.85%	-0.47%	1
Median		49.75%	234	-2.38%	3	128.39%	-2.38%	3

Comment: Signaled on Day-3 in 1982, on Day 10 in 2009

Signal 13. August 17 Day-3.

1. S&P 500 closed -18% or greater off its latest high. Has held the low for three days.
2. S&P 500 Percent of Stocks Lower than 60 Days Ago > 80%, 3 days ago.
3. Number of Instances 2. Median Gain within 12 months 40.77%.

Buy Signal 13								
S&P 500 closed -18% or greater off its latest high. Has held the low for three days. S&P 500 Percent of Stocks Lower than 60 Days Ago > 80%, 3 days ago. S&P 500 Cumulative Returns								
# of	Date	Max Gain within	# of Days to	Max Drawdown To Max	# of Days to	Max Gain to next	Max Decline within	# of Days to
Signals		252-Days	252-Day Gain	252-Day Gain	Max Drawdown	-15.00% Correction	252-Days	252-Day Decline
1	10/14/2002	24.72%	252	-4.84%	101	86.01%	-4.84%	101
2	8/17/1982	56.81%	215	-0.47%	1	208.85%	-0.47%	1
Median		40.77%	234	-2.65%	51	147.43%	-2.65%	51

Comment. We use a 3-Day lag in order to filter for those instances when the oversold condition is immediately followed by a further oversold.

Signal 14. August 17 Day-3.

1. S&P 500 closed -18% or greater off its latest high. Has held the low for three days.
2. S&P 500 gained 4.0% on the day.
3. Number of Instances 3. Median Gain within 12 months 53.21%

Buy Signal 14								
S&P 500 closed -18% or greater off its latest high. Has held the low for three days.								
S&P 500 gained 4.0% on the day.								
S&P 500 Cumulative Returns								
# of	Date	Max Gain within	# of Days to	Max Drawdown To Max	# of Days to	Max Gain to next	Max Decline within	# of Days to
Signals		252-Days	252-Day Gain	252-Day Gain	Max Drawdown	-15.00% Correction	252-Days	252-Day Decline
1	3/26/2020	51.16%	251	-6.07%	4	78.88% TD	-6.07%	4
2	3/12/2009	53.21%	251	0.00%	0	62.14%	0.00%	0
3	8/17/1982	56.81%	215	-0.47%	1	208.85%	-0.47%	1
Median		53.21%	251	-0.47%	1	135.50%	-0.47%	1

Comment. Signaled Day-3 after the major low in 1982, 2009 and 2020

Signal 15. August 17 Day-3.

1. S&P 500 closed -15% or greater off its latest high. Has held the low for three days.
2. Upside Volume to Downside Volume Ratio for the NYSE greater than 12 to 1.
3. Number of Instances 4. Median Gain within 12 months 39.52%.

Buy Signal 15								
S&P 500 closed -15% or greater off its latest high. Has held the low for three days.								
Upside Volume to Downside Volume Ratio for the NYSE greater than 12 to 1.								
S&P 500 Cumulative Returns								
# of	Date	Max Gain within	# of Days to	Max Drawdown To Max	# of Days to	Max Gain to next	Max Decline within	# of Days to
Signals		252-Days	252-Day Gain	252-Day Gain	Max Drawdown	-15.00% Correction	252-Days	252-Day Decline
1	10/6/2011	25.82%	237	-0.82%	1	151.57%	-0.82%	1
2	8/11/2011	21.01%	161	-6.26%	36	149.93%	-6.26%	36
3	3/12/2009	53.21%	251	0.00%	0	62.14%	0.00%	0
4	8/17/1982	56.81%	215	-0.47%	1	208.85%	-0.47%	1
Median		39.52%	226	-0.64%	1	150.75%	-0.64%	1

Comment. The signal on August 11, 2011, captured the area of the final low, though the final low occurred on October 3 -1.81% below the initial low on August 8. The October 6, 2011, signal was generated 3 days past the final low.

Signal 16. August 17 Day-3.

1. NASDAQ closed -20% or greater off its latest high. Has held the low for two days.
2. S&P 500 Closed up on the day on an increase in volume and Volume is the Highest of the Last 250 Days in which the S&P closed up on higher volume.
3. Number of Instances 2. Median Gain within 12 months 58.70%

Buy Signal 16								
NASDAQ closed -20% or greater off its latest high. Has held the low for two days.								
S&P 500 Closed up on the day on an increase in volume and Volume is the Highest of the Last 250 Days in which the S&P closed up on higher volume.								
S&P 500 Cumulative Returns								
# of	Date	Max Gain within	# of Days to	Max Drawdown To Max	# of Days to	Max Gain to next	Max Decline within	# of Days to
Signals		252-Days	252-Day Gain	252-Day Gain	Max Drawdown	-15.00% Correction	252-Days	252-Day Decline
1	3/25/2020	60.59%	252	-0.20%	5	90.04% TD	-0.20%	5
2	8/17/1982	56.81%	215	-0.47%	1	208.85%	-0.47%	1
Median		58.70%	234	-0.34%	3	208.85%	-0.34%	3

Signal 17. August 18 Day-4.

1. S&P 500 closed -18% or greater off its latest high. Has held the low for four days.
2. NASDAQ Highest daily Gain in Last 120 Days
3. Number of Instances 2. Median Gain within 12 months 49.26%

Buy Signal 17								
S&P 500 closed -18% or greater off its latest high. Has held the low for four days.								
NASDAQ Highest daily Gain in Last 120 Days								
S&P 500 Cumulative Returns								
# of	Date	Max Gain within	# of Days to	Max Drawdown To Max	# of Days to	Max Gain to next	Max Decline within	# of Days to
Signals		252-Days	252-Day Gain	252-Day Gain	Max Drawdown	-15.00% Correction	252-Days	252-Day Decline
1	8/18/1982	57.55%	214	0.00%	0	210.30%	0.00%	0
2	10/9/1974	40.98%	192	-4.14%	41	58.99%	-4.14%	41
Median		49.26%	203	-2.07%	21	134.65%	-2.07%	21

Signal 18. August 18 Day-4.

1. **S&P 500 closed -7% or greater off its latest high. Has held the low for four days.**
2. **NASDAQ Gained +1.60% for 2 days in a row.**
3. **Number of Instances 5. Median Gain within 12 months 33.82%**

Buy Signal 18								
S&P 500 closed -7% or greater off its latest high. Has held the low for four days.								
NASDAQ Gained +1.60% for 2 days in a row.								
S&P 500 Cumulative Returns								
# of	Date	Max Gain within	# of Days to	Max Drawdown To Max	# of Days to	Max Gain to next	Max Decline within	# of Days to
Signals		252-Days	252-Day Gain	252-Day Gain	Max Drawdown	-15.00% Correction	252-Days	252-Day Decline
1	11/5/2020	33.82%	252	-0.03%	1	34.02% TD	-0.03%	1
2	7/29/2002	12.54%	223	-13.59%	51	7.09%	-13.59%	51
3	10/30/1987	12.66%	247	-11.07%	24	46.53%	-11.07%	24
4	8/18/1982	57.55%	214	0.00%	0	210.30%	0.00%	0
5	4/2/1980	36.85%	166	-2.80%	12	36.85%	-2.80%	12
Median		33.82%	223	-2.80%	12	41.69%	-2.80%	12

Comment. This indicator signaled immediately after final or corrective lows in 1980, 1982 and 2020. The 1987 and 2002 signals were generated after lows that were ultimately tested. In 1987 the test took the S&P 500 to a lower -0.41% low and in 2002 the ultimate low was -2.63% below initial low.

Signal 19. August 18 Day-4.

1. **S&P 500 closed -7% or greater off its latest high. Has held the low for four days.**
2. **Russell 2000 Up on Day and Volume Increased by 50%.**
3. **Number of Instances 2. Median Gain within 12 months 38.32%**

Buy Signal 19								
S&P 500 closed -7% or greater off its latest high. Has held the low for four days.								
Russell 2000 Up on Day and Volume Increased by 50%.								
S&P 500 Cumulative Returns								
# of	Date	Max Gain within	# of Days to	Max Drawdown To Max	# of Days to	Max Gain to next	Max Decline within	# of Days to
Signals		252-Days	252-Day Gain	252-Day Gain	Max Drawdown	-15.00% Correction	252-Days	252-Day Decline
1	10/15/2002	19.09%	251	-9.14%	100	77.60%	-9.14%	100
2	8/18/1982	57.55%	214	0.00%	0	210.30%	0.00%	0
Median		38.32%	233	-4.57%	50	143.95%	-4.57%	50

Signal 20. August 18 Day-4.

1. S&P 500 closed -18% or greater off its latest high. Has held the low for four days.
2. Russell 2000 down 12 out of the last 13 days, 4-7 days ago.
3. Number of Instances 3. Median Gain within 12 months 29.25%

Buy Signal 20								
S&P 500 closed -18% or greater off its latest high. Has held the low for four days.								
Russell 2000 down 12 out of the last 13 days, 4-7 days ago.								
S&P 500 Cumulative Returns								
# of	Date	Max Gain within	# of Days to	Max Drawdown To Max	# of Days to	Max Gain to next	Max Decline within	# of Days to
Signals		252-Days	252-Day Gain	252-Day Gain	Max Drawdown	-15.00% Correction	252-Days	252-Day Decline
1	12/31/2018	29.25%	250	-2.35%	2	35.08%	-2.35%	2
2	9/27/2001	15.11%	68	0.00%	0	15.11%	-21.69%	205
3	8/18/1982	57.55%	214	0.00%	0	210.30%	0.00%	0
Median		29.25%	214	0.00%	0	35.08%	-2.35%	2

Signal 21. August 18 Day-4.

1. NASDAQ closed -20% or greater off its latest high. Has held the low for three days.
2. NASDAQ Composite A/D Reverse Thrust (10-Day Advances / 10-Day Declines) <= 0.50 6 days ago.
3. Number of Instances 2. Median Gain within 12 months 35.91%.

Buy Signal 21								
NASDAQ closed -20% or greater off its latest high. Has held the low for three days.								
NASDAQ Composite A/D Reverse Thrust (10-Day Advances / 10-Day Declines) ≤ 0.50 6 days ago.								
S&P 500 Cumulative Returns								
# of	Date	Max Gain within	# of Days to	Max Drawdown To Max	# of Days to	Max Gain to next	Max Decline within	# of Days to
Signals		252-Days	252-Day Gain	252-Day Gain	Max Drawdown	-15.00% Correction	252-Days	252-Day Decline
1	3/26/2020	51.16%	251	-6.07%	4	78.88% TD	-6.07%	4
2	8/18/1982	57.55%	214	0.00%	0	210.30%	0.00%	0
Median		54.35%	233	-3.03%	2	210.30%	-3.03%	2

Signal 22. August 18 Day-4.

1. NASDAQ gained 1.5% on the day.
2. S&P 500 Percent of Stocks Lower than 60 Days Ago > 80%, 4-7 days ago.
3. Value Line Geometric Index closed 4.5% below its 19-Day MA 4-7 days ago.
4. Number of 52-week highs within the 500 S&P issues 2 or fewer, 4-7 days ago.
5. Net Up Volume as % of Total NYSE Volume (5-Day Smoothing) -40%, 4-7 days ago.
6. Ned Davis Research Overbought -Oversold Oscillator Davis 265 @17.50 or lower (Range 0-100) 4-7 days ago.
7. Number of Instances 8. Median Gain within 12 months 31.56%

Buy Signal 22 NASDAQ gained 1.5% on the day. S&P 500 Percent of Stocks Lower than 60 Days Ago > 80%, 4-7 days ago. Value Line Geometric Index closed 4.5% below its 19-Day MA 4-7 days ago. Number of 52-week highs within the 500 S&P issues 2 or fewer, 4-7 days ago. Net Up Volume as % of Total NYSE Volume (5-Day Smoothing) -40%, 4-7 days ago. Ned Davis Research Overbought -Oversold Oscillator Davis 265 @17.50 or lower (Range 0-100) 4-7 days ago. S&P 500 Cumulative Returns								
# of	Date	Max Gain within	# of Days to	Max Drawdown To Max	# of Days to	Max Gain to next	Max Decline within	# of Days to
Signals		252-Days	252-Day Gain	252-Day Gain	Max Drawdown	-15.00% Correction	252-Days	252-Day Decline
1	3/19/2020	64.94%	250	-7.14%	2	95.26% TD	-7.14%	2
2	7/13/2010	24.49%	202	-4.39%	32	24.49%	-4.39%	32
3	3/12/2009	53.21%	251	0.00%	0	62.14%	0.00%	0
4	10/17/2002	19.43%	251	-8.93%	98	78.02%	-8.93%	98
5	10/15/2002	19.09%	251	-9.14%	100	77.60%	-9.14%	100
6	9/28/2001	12.64%	67	-0.23%	1	12.64%	-23.37%	204
7	9/8/1998	38.63%	215	-6.26%	22	49.24%	-6.26%	22
8	8/18/1982	57.55%	214	0.00%	0	210.30%	0.00%	0
Median		31.56%	233	-5.32%	12	62.14%	-6.70%	27

Comment: A gain of 1.5% or greater in NASDAQ on the day, preceded by this cluster of 5 oversold indications, has led to 8 great market rallies. 7 of those 8 gains occurred after a market low, while the 2001 signal occurred after a corrective low within a bear market which led to a +12.64% gain. The March 19, 2020, signal occurred 2 days before the final market low.

Signal 23. August 18 Day-4.

1. S&P 500 declined on the day and volume increased on the day.
2. The ratio of today's SP 500 volume to the Last 90 Days in which the S&P closed lower on higher volume is 2.27 to 1 or greater.
3. S&P 500 volume increased on the day. The ratio of today's SP 500 volume to the Last 250 Days in which the S&P closed on higher volume is 2.70 to 1 or greater.
4. S&P 500 volume increased on the day. The ratio of today's SP 500 volume to the Last 60 Days in which the S&P closed on higher volume is 2.33 to 1.
5. Number of Instances 2. Median Gain within 12 months 40.65%

Buy Signal 23								
S&P 500 declined on the day and volume increased on the day.								
The ratio of today's SP 500 volume to the Last 90 Days in which the S&P closed lower on higher volume is 2.27 to 1 or greater.								
S&P 500 volume increased on the day. The ratio of today's SP 500 volume to the Last 250 Days in which the S&P closed on higher volume is 2.70 to 1 or greater.								
S&P 500 volume increased on the day. The ratio of today's SP 500 volume to the Last 60 Days in which the S&P closed on higher volume is 2.33 to 1.								
S&P 500 Cumulative Returns								
# of	Date	Max Gain within	# of Days to	Max Drawdown To Max	# of Days to	Max Gain to next	Max Decline within	# of Days to
Signals		252-Days	252-Day Gain	252-Day Gain	Max Drawdown	-15.00% Correction	252-Days	252-Day Decline
1	10/19/1987	23.75%	247	-0.41%	33	64.09%	-0.41%	33
2	8/18/1982	57.55%	214	0.00%	0	210.30%	0.00%	0
Median		40.65%	231	-0.20%	17	137.20%	-0.20%	17

Comment: This signal which is generated only on a day in which the S&P 500 declines was generated on Day-4 after the 1982 low and on the day of the 1987 crash low.

Signal 24. August 18 Day-4.

1. S&P 500 closed -7% or greater off its latest high. Has held the low for four days.
2. S&P 500 4-Day upside to downside Volume Breadth >3.5 to 1.
3. Number of Instances 4. Median Gain within 12 months 24.81%

Buy Signal 24								
S&P 500 closed -7% or greater off its latest high. Has held the low for four days.								
S&P 500 4-Day upside to downside Volume Breadth >3.5 to 1.								
S&P 500 Cumulative Returns								
# of	Date	Max Gain within	# of Days to	Max Drawdown To Max	# of Days to	Max Gain to next	Max Decline within	# of Days to
Signals		252-Days	252-Day Gain	252-Day Gain	Max Drawdown	-15.00% Correction	252-Days	252-Day Decline
1	12/31/2018	29.25%	250	-2.35%	2	35.08%	-2.35%	2
2	12/1/2011	17.77%	198	-3.15%	12	135.48%	-3.15%	12
3	8/12/2011	20.38%	160	-6.75%	35	148.62%	-6.75%	35
4	8/18/1982	57.55%	214	0.00%	0	210.30%	0.00%	0
Median		24.81%	206	-2.75%	7	142.05%	-2.75%	7

Signal 25. August 18 Day-4.

1. S&P 500 closed -7% or greater off its latest high. Has held the low for four days.
2. Dow Jones Industrial Average 1-Day Volume at 500-day New High.
3. Number of Instances 2. Median Gain within 12 months 38.27%

Buy Signal 25								
S&P 500 closed -7% or greater off its latest high. Has held the low for four days.								
Dow Jones Industrial Average 1-Day Volume at 500-day New High.								
S&P 500 Cumulative Returns								
# of	Date	Max Gain within	# of Days to	Max Drawdown To Max	# of Days to	Max Gain to next	Max Decline within	# of Days to
Signals		252-Days	252-Day Gain	252-Day Gain	Max Drawdown	-15.00% Correction	252-Days	252-Day Decline
1	10/21/1999	19.00%	107	-0.13%	3	19.00%	-0.13%	3
2	8/18/1982	57.55%	214	0.00%	0	210.30%	0.00%	0
Median		38.27%	161	-0.07%	2	114.65%	-0.07%	2

Comment. This indicator signaled on 10-21-1999 as the final run up to the March 2000 top began. The S&P 500 gained 19% in 107 days to the final bull market peak.

Signal 26. August 19 Day-5.

1. S&P 500 closed -18% or greater off its latest high. Has held the low for five days.
2. S&P 500 Volume 5-Day average 2nd Highest in the Last 5.0 Years.
3. Number of Instances 3. Median Gain within 12 months 24.59%

Buy Signal 26								
S&P 500 closed -18% or greater off its latest high. Has held the low for five days.								
S&P 500 Volume 5-Day average 2nd Highest in the Last 5.0 Years.								
S&P 500 Cumulative Returns								
# of	Date	Max Gain within	# of Days to	Max Drawdown To Max	# of Days to	Max Gain to next	Max Decline within	# of Days to
Signals		252-Days	252-Day Gain	252-Day Gain	Max Drawdown	-15.00% Correction	252-Days	252-Day Decline
1	10/10/2011	22.67%	235	-3.03%	33	145.27%	-3.03%	33
2	10/26/1987	24.59%	251	-1.65%	28	62.05%	-1.65%	28
3	8/19/1982	56.64%	213	0.00%	0	208.51%	0.00%	0
Median		24.59%	235	-1.65%	28	145.27%	-1.65%	28

Comment. Signaled Day-5 after the low in 1982, 1987 and 2011.

Signal 27. August 19 Day-5.

1. S&P 500 closed -7% or greater off its latest high. Has held the low for five days.
2. S&P 500 5-day Advances / 5 Day Declines > 2.7.
3. Number of Instances 9. Median Gain within 12 months 23.92%

Buy Signal 27								
S&P 500 closed -7% or greater off its latest high. Has held the low for five days.								
S&P 500 5-day Advances / 5 Day Declines > 2.7.								
S&P 500 Cumulative Returns								
# of	Date	Max Gain within	# of Days to	Max Drawdown To Max	# of Days to	Max Gain to next	Max Decline within	# of Days to
Signals		252-Days	252-Day Gain	252-Day Gain	Max Drawdown	-15.00% Correction	252-Days	252-Day Decline
1	2/15/2018	7.31%	150	-5.47%	30	7.31%	-13.92%	215
2	11/23/2012	28.07%	252	-0.72%	2	107.98%	-0.72%	2
3	10/10/2011	22.67%	235	-3.03%	33	145.27%	-3.03%	33
4	7/12/2010	26.41%	203	-2.92%	33	26.41%	-2.92%	33
5	12/8/2008	22.09%	244	-25.63%	61	2.75%	-25.63%	61
6	11/28/2008	23.92%	250	-24.51%	67	4.29%	-24.51%	67
7	11/2/1987	10.91%	246	-12.45%	23	44.26%	-12.45%	23
8	8/19/1982	56.64%	213	0.00%	0	208.51%	0.00%	0
9	10/10/1974	37.00%	191	-6.85%	40	54.51%	-6.85%	40
Median		23.92%	235	-5.47%	33	44.26%	-6.85%	33

Comment: When measured against the S&P 500, the signals on November 28 and December 8, 2008, failed. S&P 500 declined -10.09% below its November 20, 2008, low. However, NASDAQ did not decline much below its November 20 low as it tested that low by -3.61%. NDX however held that low and did not trade below the close on November 20.

Signal 28. August 20 Day-6.

1. NYSE Upside to Downside Volume Ratio greater than 30/1 the second time in 4 days
2. Number of Instances 2. Median Gain within 12 months 34.42%

Buy Signal 28								
NYSE Upside to Downside Volume Ratio greater than 30/1 the second time in 4 days								
S&P 500 Cumulative Returns								
# of	Date	Max Gain within	# of Days to	Max Drawdown To Max	# of Days to	Max Gain to next	Max Decline within	# of Days to
Signals		252-Days	252-Day Gain	252-Day Gain	Max Drawdown	-15.00% Correction	252-Days	252-Day Decline
1	11/30/2011	17.55%	199	-3.34%	13	135.03%	-3.34%	13
2	8/20/1982	51.29%	212	0.00%	0	197.97%	0.00%	0
Median		34.42%	206	-1.67%	7	166.50%	-1.67%	7

Signal 29. August 20 Day-6.

1. S&P 500 closes -18% or greater off its latest high. Has held the low for six days.
2. S&P 500 5-Day ROC Highest in 1260-Days.
3. Number of Instances 3. Median Gain within 12 months 34.40%

Buy Signal 29								
S&P 500 closes -18% or greater off its latest high. Has held the low for six days.								
S&P 500 5-Day ROC Highest in 1260-Days.								
S&P 500 Cumulative Returns								
# of	Date	Max Gain within	# of Days to	Max Drawdown To Max	# of Days to	Max Gain to next	Max Decline within	# of Days to
Signals		252-Days	252-Day Gain	252-Day Gain	Max Drawdown	-15.00% Correction	252-Days	252-Day Decline
1	8/20/1982	51.29%	212	0.00%	0	197.97%	0.00%	0
2	10/11/1974	34.40%	190	-8.62%	39	51.57%	-8.62%	39
3	7/5/1962	24.63%	228	-5.84%	77	65.57%	-5.84%	77
Median		34.40%	212	-5.84%	39	65.57%	-5.84%	39

Signal 30. August 20 Day-6.

1. S&P 500 closed -18% or greater off its latest high. Has held the low for six days.
2. Net Up Volume as % of Total NYSE Volume (5-Day Smoothing) Above 45%.
3. Number of Instances 5. Median Gain within 12 months 34.40%

Buy Signal 30								
S&P 500 closed -18% or greater off its latest high. Has held the low for six days.								
Net Up Volume as % of Total NYSE Volume (5-Day Smoothing) Above 45%.								
S&P 500 Cumulative Returns								
# of	Date	Max Gain within	# of Days to	Max Drawdown To Max	# of Days to	Max Gain to next	Max Decline within	# of Days to
Signals		252-Days	252-Day Gain	252-Day Gain	Max Drawdown	-15.00% Correction	252-Days	252-Day Decline
1	3/17/2009	49.88%	252	-1.23%	3	56.44%	-1.23%	3
2	8/20/1982	51.29%	212	0.00%	0	197.97%	0.00%	0
3	10/11/1974	34.40%	190	-8.62%	39	51.57%	-8.62%	39
4	6/3/1970	33.43%	228	-9.28%	23	53.13%	-9.28%	23
5	7/5/1962	24.63%	228	-5.84%	77	65.57%	-5.84%	77
Median		34.40%	228	-5.84%	23	56.44%	-5.84%	23

Signal 31. August 20 Day-6.

1. S&P 500 closed at New 30-Day High.
2. S&P 500 gained 9% from its latest 10% correction with no intervening higher days.
3. S&P 500 gained 2% on the day.
4. NYSE Closed up on the day on an increase in volume and volume is the Highest of the Last 15 Days in which NYSE closed up on higher volume
5. S&P 500 Advances / Declines > 6.0.
6. Number of Instances 8. Median Gain within 12 months 30.46%

Buy Signal 31 S&P 500 closed at New 30-Day High. S&P 500 gained 9% from its latest 10% correction with no intervening higher days. S&P 500 gained 2% on the day. NYSE Closed up on the day on an increase in volume and volume is the Highest of the Last 15 Days in which NYSE closed up on higher volume S&P 500 Advances / Declines > 6.0. S&P 500 Cumulative Returns								
# of	Date	Max Gain within	# of Days to	Max Drawdown To Max	# of Days to	Max Gain to next	Max Decline within	# of Days to
Signals		252-Days	252-Day Gain	252-Day Gain	Max Drawdown	-15.00% Correction	252-Days	252-Day Decline
1	3/21/2003	29.24%	225	-5.31%	6	74.72%	-5.31%	6
2	5/12/1989	14.64%	103	0.00%	0	17.56%	0.00%	0
3	10/7/1988	29.03%	252	-5.12%	28	32.68%	-5.12%	28
4	8/3/1984	20.51%	240	-0.42%	46	107.43%	-0.42%	46
5	10/7/1982	32.76%	179	0.00%	0	161.47%	0.00%	0
6	8/20/1982	51.29%	212	0.00%	0	197.97%	0.00%	0
7	1/27/1975	32.25%	252	0.00%	0	43.07%	0.00%	0
8	1/10/1975	31.68%	128	-2.63%	7	48.51%	-2.63%	7
Median		30.46%	219	-0.21%	3	61.61%	-0.21%	3

Comment. This momentum combination signal is generated after large declines as well as after minor declines. The drawdown of -0.21% against a median gain of 30.46% over 8 instances is superb.

Signal 32. August 20 Day-6.

1. S&P 500 TRIN ≤ 0.5 .
2. NYSE Daily Upside to Downside Volume > 10 to 1 one to three days ago.
3. Net Up Volume as % of Total NYSE Volume (5-Day Smoothing) Above 45%.
4. Number of Instances 10. Median Gain within 12 months 36.75%

Buy Signal 32 S&P 500 TRIN ≤ 0.5 . NYSE Daily Upside to Downside Volume > 10 to 1 one to three days ago. Net Up Volume as % of Total NYSE Volume (5-Day Smoothing) Above 45%. S&P 500 Cumulative Returns								
# of	Date	Max Gain within	# of Days to	Max Drawdown To Max	# of Days to	Max Gain to next	Max Decline within	# of Days to
Signals		252-Days	252-Day Gain	252-Day Gain	Max Drawdown	-15.00% Correction	252-Days	252-Day Decline
1	11/23/2012	28.07%	252	-0.72%	2	107.98%	-0.72%	2
2	8/5/2009	21.40%	180	-2.29%	8	21.40%	-2.29%	8
3	3/18/2009	46.81%	251	-3.25%	2	53.24%	-3.25%	2
4	3/17/2009	49.88%	252	-1.23%	3	56.44%	-1.23%	3
5	6/1/1988	20.73%	246	-3.64%	57	38.34%	-3.64%	57
6	8/3/1984	20.51%	240	-0.42%	46	107.43%	-0.42%	46
7	8/2/1984	23.84%	241	0.00%	0	113.16%	0.00%	0
8	8/25/1982	45.42%	209	-0.40%	2	186.42%	-0.40%	2
9	8/23/1982	47.27%	211	-0.66%	1	190.04%	-0.66%	1
10	8/20/1982	51.29%	212	0.00%	0	197.97%	0.00%	0
Median		36.75%	241	-0.69%	2	107.71%	-0.69%	2

Signal 33. August 20 Day-6.

1. S&P 500 closed -5% or greater off its latest high. Has held the low 4-7 days.
2. S&P 500 gained 1.0% on the day
3. NDR Multi cap (s241) 252 new Highs and Lows <25% on the day of the low.
4. S&P 500 5-day Advances / 5 Day Declines > 2.8.
5. Number of Instances 3. Median Gain within 12 months 46.81%

Buy Signal 33								
S&P 500 closed -5% or greater off its latest high. Has held the low 4-7 days.								
S&P 500 gained 1.0% on the day								
NDR Multi cap (s241) 252 new Highs and Lows <25% on the day of the low.								
S&P 500 5-day Advances / 5 Day Declines > 2.8.								
S&P 500 Cumulative Returns								
# of	Date	Max Gain within	# of Days to	Max Drawdown To Max	# of Days to	Max Gain to next	Max Decline within	# of Days to
Signals		252-Days	252-Day Gain	252-Day Gain	Max Drawdown	-15.00% Correction	252-Days	252-Day Decline
1	7/13/2010	24.49%	202	-4.39%	32	24.49%	-4.39%	32
2	3/18/2009	46.81%	251	-3.25%	2	53.24%	-3.25%	2
3	8/20/1982	51.29%	212	0.00%	0	197.97%	0.00%	0
Median		46.81%	212	-3.25%	2	53.24%	-3.25%	2

Signal 34. August 20 Day-6.

1. S&P 500 Upside to Downside Volume Ratio greater than 65 to 1.
2. S&P 500 Upside volume to Downside Volume 17 to 1 for the second time in 10 days.
3. Number of Instances 3. Median Gain within 12 months 18.08%

Buy Signal 34								
S&P 500 Upside to Downside Volume Ratio greater than 65 to 1.								
S&P 500 Upside volume to Downside Volume 17 to 1 for the second time in 10 days.								
S&P 500 Cumulative Returns								
# of	Date	Max Gain within	# of Days to	Max Drawdown To Max	# of Days to	Max Gain to next	Max Decline within	# of Days to
Signals		252-Days	252-Day Gain	252-Day Gain	Max Drawdown	-15.00% Correction	252-Days	252-Day Decline
1	7/8/2016	15.19%	238	-2.10%	84	37.60%	-2.10%	84
2	12/20/2011	18.08%	185	0.00%	0	136.10%	0.00%	0
3	8/20/1982	51.29%	212	0.00%	0	197.97%	0.00%	0
Median		18.08%	212	0.00%	0	136.10%	0.00%	0

Signal 35. August 20 Day-6.

1. S&P 500 closed -7% or greater off its latest high. Has held the low for six days.
2. NYSE Daily Upside to Downside Volume > 15 to 1.
3. NASDAQ 7-Day MA of the Adv/Dec 1.52/1
4. Number of Instances 2. Median Gain within 12 months 36.44%

Buy Signal 35								
S&P 500 closed -7% or greater off its latest high. Has held the low for six days.								
NYSE Daily Upside to Downside Volume > 15 to 1.								
NASDAQ 7-Day MA of the Adv/Dec 1.52/1								
S&P 500 Cumulative Returns								
# of	Date	Max Gain within	# of Days to	Max Drawdown To Max	# of Days to	Max Gain to next	Max Decline within	# of Days to
Signals		252-Days	252-Day Gain	252-Day Gain	Max Drawdown	-15.00% Correction	252-Days	252-Day Decline
1	2/22/2016	21.58%	252	-1.25%	1	50.64%	-1.25%	1
2	8/20/1982	51.29%	212	0.00%	0	197.97%	0.00%	0
Median		36.44%	232	-0.62%	1	124.31%	-0.62%	1

Signal 36. August 20 Day-6.

1. NYSE Daily Upside to Downside Volume > 15 to 1.
2. S&P 500 gains 3.5% on the day.
3. S&P 500 10-Day ROC Highest in 180-Days.
4. Number of Instances 2. Median Gain within 12 months 46.99%

Buy Signal 36								
NYSE Daily Upside to Downside Volume > 15 to 1.								
S&P 500 gains 3.5% on the day.								
S&P 500 10-Day ROC Highest in 180-Days.								
S&P 500 Cumulative Returns								
# of	Date	Max Gain within	# of Days to	Max Drawdown To Max	# of Days to	Max Gain to next	Max Decline within	# of Days to
Signals		252-Days	252-Day Gain	252-Day Gain	Max Drawdown	-15.00% Correction	252-Days	252-Day Decline
1	3/23/2009	42.68%	252	-4.30%	5	47.92%	-4.30%	5
2	8/20/1982	51.29%	212	0.00%	0	197.97%	0.00%	0
Median		46.99%	232	-2.15%	3	122.95%	-2.15%	3

Signal 37. August 20 Day-6.

1. S&P 500 closed -7% or greater off its latest high. Has held the low for six days.
2. S&P 500 10-day ROC > 8%.
3. Number of Instances 3. Median Gain within 12 months 36.75%

Buy Signal 37 S&P 500 closed -7% or greater off its latest high. Has held the low for six days. S&P 500 10-day ROC > 8%. S&P 500 Cumulative Returns								
# of	Date	Max Gain within	# of Days to	Max Drawdown To Max	# of Days to	Max Gain to next	Max Decline within	# of Days to
Signals		252-Days	252-Day Gain	252-Day Gain	Max Drawdown	-15.00% Correction	252-Days	252-Day Decline
1	3/17/2009	49.88%	252	-1.23%	3	56.44%	-1.23%	3
2	8/20/1982	51.29%	212	0.00%	0	197.97%	0.00%	0
3	10/11/1974	34.40%	190	-8.62%	39	51.57%	-8.62%	39
Median		49.88%	212	-1.23%	3	56.44%	-1.23%	3

Signal 38. August 20 Day-6.

1. S&P 500 closed -7% or greater off its latest high. Has held the low for six days.
2. S&P 500 5-day ROC > 8%.
3. Number of Instances 7. Median Gain within 12 months 32.46%

Buy Signal 38 S&P 500 closed -7% or greater off its latest high. Has held the low for six days. S&P 500 5-day ROC > 8%. S&P 500 Cumulative Returns								
# of	Date	Max Gain within	# of Days to	Max Drawdown To Max	# of Days to	Max Gain to next	Max Decline within	# of Days to
Signals		252-Days	252-Day Gain	252-Day Gain	Max Drawdown	-15.00% Correction	252-Days	252-Day Decline
1	3/17/2009	49.88%	252	-1.23%	3	56.44%	-1.23%	3
2	3/19/2003	32.46%	227	-2.96%	8	79.07%	-2.96%	8
3	10/17/2002	19.43%	251	-8.93%	98	78.02%	-8.93%	98
4	7/31/2002	10.97%	221	-14.79%	49	5.60%	-14.79%	49
5	8/20/1982	51.29%	212	0.00%	0	197.97%	0.00%	0
6	10/11/1974	34.40%	190	-8.62%	39	51.57%	-8.62%	39
7	7/5/1962	24.63%	228	-5.84%	77	65.57%	-5.84%	77
Median		32.46%	227	-5.84%	39	65.57%	-5.84%	39

Comment. This momentum indicator is triggered after a final low has been printed. An exception occurred at the July 31, 2002 signal since the ultimate low was generated later on October 9, 2002, -2.63% below the July 23, 2002 low.

Signal 39. August 20 Day-6.

1. S&P 500 closed -7% or greater off its latest high. Has held the low for six days.
2. S&P 500 Number of New 252-Day New HIGH > 50.
3. Number of Instances 3. Median Gain within 12 months 32.42%

Buy Signal 39 S&P 500 closed -7% or greater off its latest high. Has held the low for six days. S&P 500 Number of New 252-Day New HIGH > 50. S&P 500 Cumulative Returns								
# of	Date	Max Gain within	# of Days to	Max Drawdown To Max	# of Days to	Max Gain to next	Max Decline within	# of Days to
Signals		252-Days	252-Day Gain	252-Day Gain	Max Drawdown	-15.00% Correction	252-Days	252-Day Decline
1	11/9/2020	32.42%	251	-0.38%	3	32.50% TD	-0.38%	3
2	12/2/1982	24.37%	216	-2.58%	9	142.59%	-2.58%	9
3	8/20/1982	51.29%	212	0.00%	0	197.97%	0.00%	0
Median		32.42%	216	-0.38%	3	170.28%	-0.38%	3

Signal 40. August 20 Day-6.

1. S&P 500 TRIN <= 0.5.
2. S&P 500 5-day ROC > 7%
3. Number of Instances 15. Median Gain within 12 months 36.17%

Buy Signal 40 S&P 500 TRIN ≤ 0.5. S&P 500 5-day ROC > 7% S&P 500 Cumulative Returns								
# of	Date	Max Gain within	# of Days to	Max Drawdown To Max	# of Days to	Max Gain to next	Max Decline within	# of Days to
Signals		252-Days	252-Day Gain	252-Day Gain	Max Drawdown	-15.00% Correction	252-Days	252-Day Decline
1	8/29/2011	17.27%	149	-9.16%	24	142.19%	-9.16%	24
2	8/15/2011	17.81%	159	-8.74%	34	143.32%	-8.74%	34
3	3/23/2009	42.68%	252	-4.30%	5	47.92%	-4.30%	5
4	3/18/2009	46.81%	251	-3.25%	2	53.24%	-3.25%	2
5	3/17/2009	49.88%	252	-1.23%	3	56.44%	-1.23%	3
6	3/12/2009	53.21%	251	0.00%	0	62.14%	0.00%	0
7	10/15/2002	19.09%	251	-9.14%	100	77.60%	-9.14%	100
8	7/29/2002	12.54%	223	-13.59%	51	7.09%	-13.59%	51
9	10/15/1998	35.45%	188	0.00%	0	45.82%	0.00%	0
10	11/3/1997	26.39%	176	-3.52%	7	26.39%	-3.52%	7
11	5/5/1997	36.17%	243	-1.76%	2	42.94%	-1.76%	2
12	8/3/1984	20.51%	240	-0.42%	46	107.43%	-0.42%	46
13	8/25/1982	45.42%	209	-0.40%	2	186.42%	-0.40%	2
14	8/23/1982	47.27%	211	-0.66%	1	190.04%	-0.66%	1
15	8/20/1982	51.29%	212	0.00%	0	197.97%	0.00%	0
Median		36.17%	223	-1.76%	3	62.14%	-1.76%	3

Signal 41. August 20 Day-6.

1. S&P 500 TRIN ≤ 0.5 .
2. NYSE Up Down Volume Ratio greater than 9 to 1.
3. S&P 500 closes -15% or greater off its latest high. Has held the low for six days.
4. S&P 500 gains $\geq 1\%$ during days 4-7 off the low.
5. NYSE Volume is greater than previous day's
6. Number of Instances 4. Median Gain within 12 months 42.72%

Buy Signal 41 S&P 500 TRIN ≤ 0.5 . NYSE Up Down Volume Ratio greater than 9 to 1. S&P 500 closes -15% or greater off its latest high. Has held the low for six days. S&P 500 gains $\geq 1\%$ during days 4-7 off the low. NYSE Volume is greater than previous day's S&P 500 Cumulative Returns								
# of	Date	Max Gain within	# of Days to	Max Drawdown To Max	# of Days to	Max Gain to next	Max Decline within	# of Days to
Signals		252-Days	252-Day Gain	252-Day Gain	Max Drawdown	-15.00% Correction	252-Days	252-Day Decline
1	1/4/2019	28.67%	250	0.00%	0	33.74%	0.00%	0
2	3/18/2009	46.81%	251	-3.25%	2	53.24%	-3.25%	2
3	9/8/1998	38.63%	215	-6.26%	22	49.24%	-6.26%	22
4	8/20/1982	51.29%	212	0.00%	0	197.97%	0.00%	0
Median		42.72%	233	-1.62%	1	51.24%	-1.62%	1

Signal 42. August 20 Day-6.

1. S&P 500 closed -14% or greater off its latest high. Has held the low for six days.
2. Net Up Volume as % of Total NYSE Volume (5-Day Smoothing) Above 45%.
3. Number of Instances 7. Median Gain within 12 months 33.43%

Buy Signal 42 S&P 500 closed -14% or greater off its latest high. Has held the low for six days. Net Up Volume as % of Total NYSE Volume (5-Day Smoothing) Above 45%. S&P 500 Cumulative Returns								
# of	Date	Max Gain within	# of Days to	Max Drawdown To Max	# of Days to	Max Gain to next	Max Decline within	# of Days to
Signals		252-Days	252-Day Gain	252-Day Gain	Max Drawdown	-15.00% Correction	252-Days	252-Day Decline
1	7/13/2010	24.49%	202	-4.39%	32	24.49%	-4.39%	32
2	3/17/2009	49.88%	252	-1.23%	3	56.44%	-1.23%	3
3	3/19/2003	32.46%	227	-2.96%	8	79.07%	-2.96%	8
4	8/20/1982	51.29%	212	0.00%	0	197.97%	0.00%	0
5	10/11/1974	34.40%	190	-8.62%	39	51.57%	-8.62%	39
6	6/3/1970	33.43%	228	-9.28%	23	53.13%	-9.28%	23
7	7/5/1962	24.63%	228	-5.84%	77	65.57%	-5.84%	77
Median		33.43%	227	-4.39%	23	56.44%	-4.39%	23

Signal 43. August 23 Day-7.

1. **Net Up Volume as % of Total NYSE Volume (5-Day Smoothing) Above 50%.**
2. **S&P 500 declines -15% from a high with no intervening lower days within past 11 days.**
3. **Number of Instances 12. Median Gain within 12 months 30.35%**

Buy Signal 43 Net Up Volume as % of Total NYSE Volume (5-Day Smoothing) Above 50%. S&P 500 declines -15% from a high with no intervening lower days within past 11 days. S&P 500 Cumulative Returns								
# of	Date	Max Gain within	# of Days to	Max Drawdown To Max	# of Days to	Max Gain to next	Max Decline within	# of Days to
Signals		252-Days	252-Day Gain	252-Day Gain	Max Drawdown	-15.00% Correction	252-Days	252-Day Decline
1	1/10/2019	26.11%	251	-0.54%	2	30.41%	-0.54%	2
2	10/10/2011	22.67%	235	-3.03%	33	145.27%	-3.03%	33
3	7/13/2010	24.49%	202	-4.39%	32	24.49%	-4.39%	32
4	3/18/2009	46.81%	251	-3.25%	2	53.24%	-3.25%	2
5	3/17/2009	49.88%	252	-1.23%	3	56.44%	-1.23%	3
6	3/16/2009	53.80%	252	0.00%	0	61.47%	0.00%	0
7	3/13/2009	52.07%	252	-0.35%	1	60.90%	-0.35%	1
8	11/28/2008	23.92%	250	-24.51%	67	4.29%	-24.51%	67
9	8/23/1982	47.27%	211	-0.66%	1	190.04%	-0.66%	1
10	6/2/1970	34.60%	229	-8.49%	24	54.47%	-8.49%	24
11	7/5/1962	24.63%	228	-5.84%	77	65.57%	-5.84%	77
12	7/3/1962	25.33%	229	-5.31%	78	66.51%	-5.31%	78
Median		30.35%	243	-3.14%	14	58.67%	-3.14%	14

Comment. The only failure for this volume-based signal was on November 28, 2008. The S&P 500 generated a low on November 20, 2008, but then declined -10.09% below its November 20, 2008 low into March 9, 2009. However, NASDAQ tested the November 20 low by -3.61%. NDX however held that low and did not trade below the close of November 20.

Signal 44. August 23 Day-7.

1. NDR (S55a) Multi-Cap Equity Series 10-Day Advancing Volume / (10-Day Advancing + Declining Volume) > 70.
2. NYSE 5-day average total daily volume highest in 126 days within the last 20 days.
3. Number of Instances 9. Median Gain within 12 months 26.29%

Buy Signal 44 NDR (S55a) Multi-Cap Equity Series 10-Day Advancing Volume / (10-Day Advancing + Declining Volume) > 70. NYSE 5-day average total daily volume highest in 126 days within the last 20 days. S&P 500 Cumulative Returns								
# of	Date	Max Gain within	# of Days to	Max Drawdown To Max	# of Days to	Max Gain to next	Max Decline within	# of Days to
Signals		252-Days	252-Day Gain	252-Day Gain	Max Drawdown	-15.00% Correction	252-Days	252-Day Decline
1	1/9/2019	26.68%	252	-0.09%	3	30.99%	-0.09%	3
2	1/6/1992	5.58%	243	-5.61%	66	183.94%	-5.61%	66
3	2/11/1991	14.16%	234	-1.57%	10	221.98%	-1.57%	10
4	1/14/1987	28.22%	155	0.00%	0	28.22%	-14.74%	226
5	8/3/1984	20.51%	240	-0.42%	46	107.43%	-0.42%	46
6	10/18/1982	26.27%	248	-2.78%	26	146.30%	-2.78%	26
7	10/13/1982	26.29%	251	-2.76%	29	146.34%	-2.76%	29
8	8/25/1982	45.42%	209	-0.40%	2	186.42%	-0.40%	2
9	8/23/1982	47.27%	211	-0.66%	1	190.04%	-0.66%	1
Median		26.29%	240	-0.66%	10	146.34%	-1.57%	26

Comment. The only poor signal was in 1992 in a flat market. The gain of 5.58% was preceded by a decline of -5.61%. The median drawdown for all 9 instances of -0.66% is an indication of the viability of this volume-based momentum indicator.

Signal 45. August 23 Day-7.

1. S&P 500 closed -12% or greater off its latest high. Has held the low for seven days.
2. S&P 500 closed at New 30-Day High.
3. S&P 500 gained 6% from its latest 10% Correction with no intervening higher days.
4. Number of Instances 5. Median Gain within 12 months 31.44%

Buy Signal 45								
S&P 500 closed -12% or greater off its latest high. Has held the low for seven days.								
S&P 500 closed at New 30-Day High.								
S&P 500 gained 6% from its latest 10% Correction with no intervening higher days.								
S&P 500 Cumulative Returns								
# of	Date	Max Gain within	# of Days to	Max Drawdown To Max	# of Days to	Max Gain to next	Max Decline within	# of Days to
Signals		252-Days	252-Day Gain	252-Day Gain	Max Drawdown	-15.00% Correction	252-Days	252-Day Decline
1	3/20/2003	32.21%	226	-3.14%	7	78.74%	-3.14%	7
2	8/2/1984	23.84%	241	0.00%	0	113.16%	0.00%	0
3	8/23/1982	47.27%	211	-0.66%	1	190.04%	-0.66%	1
4	10/14/1974	31.44%	189	-10.63%	38	48.24%	-10.63%	38
5	12/3/1971	20.94%	252	-0.57%	1	23.88%	-0.57%	1
Median		31.44%	226	-0.66%	1	78.74%	-0.66%	1

Signal 46. August 23 Day-7.

1. S&P 500 TRIN <= 0.5 two days in a row.
2. NYSE Daily Upside to Downside Volume > 10 to 1.
3. Net Up Volume as % of Total NYSE Volume (5-Day Smoothing) Above 45%.
4. Number of Instances 5. Median Gain within 12 months 23.84%

Buy Signal 46								
S&P 500 TRIN ≤ 0.5 two days in a row.								
NYSE Daily Upside to Downside Volume > 10 to 1.								
Net Up Volume as % of Total NYSE Volume (5-Day Smoothing) Above 45%.								
S&P 500 Cumulative Returns								
# of	Date	Max Gain within	# of Days to	Max Drawdown To Max	# of Days to	Max Gain to next	Max Decline within	# of Days to
Signals		252-Days	252-Day Gain	252-Day Gain	Max Drawdown	-15.00% Correction	252-Days	252-Day Decline
1	3/18/2009	46.81%	251	-3.25%	2	53.24%	-3.25%	2
2	6/1/1988	20.73%	246	-3.64%	57	38.34%	-3.64%	57
3	8/3/1984	20.51%	240	-0.42%	46	107.43%	-0.42%	46
4	8/2/1984	23.84%	241	0.00%	0	113.16%	0.00%	0
5	8/23/1982	47.27%	211	-0.66%	1	190.04%	-0.66%	1
Median		23.84%	241	-0.66%	2	107.43%	-0.66%	2

Signal 47. August 23 Day-7.

1. S&P 500 closes up on the day.
2. Volume rises on the day.
3. Volume is greatest of the last 250 days when volume rose on an up day.
4. S&P 500 declined -5% or greater off its latest high. Has held the low for four to seven days into today.
5. S&P 500 gained >1.0% on the day.
6. Number of Instances 5. Median Gain within 12 months 35.50%

<p>Buy Signal 47</p> <p>S&P 500 closes up on the day.</p> <p>Volume rises on the day.</p> <p>Volume is greatest of the last 250 days when volume rose on an up day.</p> <p>S&P 500 declined -5% or greater off its latest high. Has held the low for four to seven days into today.</p> <p>S&P 500 gained >1.0% on the day.</p> <p>S&P 500 Cumulative Returns</p>								
# of	Date	Max Gain within	# of Days to	Max Drawdown To Max	# of Days to	Max Gain to next	Max Decline within	# of Days to
Signals		252-Days	252-Day Gain	252-Day Gain	Max Drawdown	-15.00% Correction	252-Days	252-Day Decline
1	12/16/1994	35.50%	250	-0.37%	2	158.66%	-0.37%	2
2	8/3/1984	20.51%	240	-0.42%	46	107.43%	-0.42%	46
3	8/2/1984	23.84%	241	0.00%	0	113.16%	0.00%	0
4	8/23/1982	47.27%	211	-0.66%	1	190.04%	-0.66%	1
5	12/31/1957	38.06%	252	0.00%	0	81.65%	0.00%	0
Median		35.50%	241	-0.37%	1	113.16%	-0.37%	1

Signal 48. August 23 Day-7.

1. S&P 500 TRIN ≤ 0.5 .
2. NYSE Daily Upside to Downside Volume > 10 to 1 in the prior 1-3 days.
3. Net Up Volume as % of Total NYSE Volume (5-Day Smoothing) Above 45%.
4. Number of Instances 10. Median Gain within 12 months 36.75%

Buy Signal 48 S&P 500 TRIN ≤ 0.5 . NYSE Daily Upside to Downside Volume > 10 to 1 in the prior 1-3 days. Net Up Volume as % of Total NYSE Volume (5-Day Smoothing) Above 45%. S&P 500 Cumulative Returns								
# of	Date	Max Gain within	# of Days to	Max Drawdown To Max	# of Days to	Max Gain to next	Max Decline within	# of Days to
Signals		252-Days	252-Day Gain	252-Day Gain	Max Drawdown	-15.00% Correction	252-Days	252-Day Decline
1	11/23/2012	28.07%	252	-0.72%	2	107.98%	-0.72%	2
2	8/5/2009	21.40%	180	-2.29%	8	21.40%	-2.29%	8
3	3/18/2009	46.81%	251	-3.25%	2	53.24%	-3.25%	2
4	3/17/2009	49.88%	252	-1.23%	3	56.44%	-1.23%	3
5	6/1/1988	20.73%	246	-3.64%	57	38.34%	-3.64%	57
6	8/3/1984	20.51%	240	-0.42%	46	107.43%	-0.42%	46
7	8/2/1984	23.84%	241	0.00%	0	113.16%	0.00%	0
8	8/25/1982	45.42%	209	-0.40%	2	186.42%	-0.40%	2
9	8/23/1982	47.27%	211	-0.66%	1	190.04%	-0.66%	1
10	8/20/1982	51.29%	212	0.00%	0	197.97%	0.00%	0
Median		36.75%	241	-0.69%	2	107.71%	-0.69%	2

Signal 49. August 23 Day-7.

1. NYSE Closes up on the day on an increase in volume and Volume is the Highest of the Last 15 Days in which NYSE closed on higher volume.
2. S&P 500 Five-Day Rate of Change > 7.4%.
3. Number of Instances 8. Median Gain within 12 months 40.62%

Buy Signal 49								
NYSE Closes up on the day on an increase in volume and Volume is the Highest of the Last 15 Days in which NYSE closed on higher volume.								
S&P 500 Five-Day Rate of Change > 7.4%.								
S&P 500 Cumulative Returns								
# of	Date	Max Gain within	# of Days to	Max Drawdown To Max	# of Days to	Max Gain to next	Max Decline within	# of Days to
Signals		252-Days	252-Day Gain	252-Day Gain	Max Drawdown	-15.00% Correction	252-Days	252-Day Decline
1	3/18/2009	46.81%	251	-3.25%	2	53.24%	-3.25%	2
2	3/21/2003	29.24%	225	-5.31%	6	74.72%	-5.31%	6
3	9/28/2001	12.64%	67	-0.23%	1	12.64%	-23.37%	204
4	8/26/1982	44.23%	208	-1.21%	1	184.07%	-1.21%	1
5	8/23/1982	47.27%	211	-0.66%	1	190.04%	-0.66%	1
6	8/20/1982	51.29%	212	0.00%	0	197.97%	0.00%	0
7	10/10/1974	37.00%	191	-6.85%	40	54.51%	-6.85%	40
8	8/24/1970	29.36%	171	-0.05%	6	48.46%	-0.05%	6
Median		40.62%	210	-0.94%	2	64.61%	-2.23%	4

Comment. The September 28, 2001, signal led to a continued bear market rally of +12.64%. The other 7 instances all occurred at the early stage of an extended bull move.

Signal 50. August 23 Day-7.

1. S&P 500 7-Day Advances / 7-Day Declines Ratio > 3.25
2. Number of Instances 5. Median Gain within 12 months 29.38%.

Buy Signal 50								
S&P 500 7-Day Advances / 7-Day Declines Ratio > 3.25								
S&P 500 Cumulative Returns								
# of	Date	Max Gain within	# of Days to	Max Drawdown To Max	# of Days to	Max Gain to next	Max Decline within	# of Days to
Signals		252-Days	252-Day Gain	252-Day Gain	Max Drawdown	-15.00% Correction	252-Days	252-Day Decline
1	3/18/2009	46.81%	251	-3.25%	2	53.24%	-3.25%	2
2	12/31/1991	5.80%	246	-5.42%	69	184.53%	-5.42%	69
3	1/12/1987	29.38%	157	-0.13%	1	29.38%	-13.98%	228
4	10/13/1982	26.29%	251	-2.76%	29	146.34%	-2.76%	29
5	8/23/1982	47.27%	211	-0.66%	1	190.04%	-0.66%	1
Median		29.38%	246	-2.76%	2	146.34%	-3.25%	29

Signal 51. August 23 Day-7.

1. S&P 500 closed -18% or greater off its latest high. Has held the low for seven days.
2. S&P 500 gained 12% from its latest 10% Correction with no intervening higher days.
3. Number of Instances 4. Median Gain within 12 months 39.13%

Buy Signal 51								
S&P 500 closed -18% or greater off its latest high. Has held the low for seven days.								
S&P 500 Cumulative Returns								
# of	Date	Max Gain within	# of Days to	Max Drawdown To Max	# of Days to	Max Gain to next	Max Decline within	# of Days to
Signals		252-Days	252-Day Gain	252-Day Gain	Max Drawdown	-15.00% Correction	252-Days	252-Day Decline
1	3/18/2009	46.81%	251	-3.25%	2	53.24%	-3.25%	2
2	10/18/2002	18.73%	250	-9.46%	97	76.98%	-9.46%	97
3	8/23/1982	47.27%	211	-0.66%	1	190.04%	-0.66%	1
4	10/14/1974	31.44%	189	-10.63%	38	48.24%	-10.63%	38
Median		39.13%	231	-6.35%	20	65.11%	-6.35%	20

Signal 52. August 23 Day-7.

1. NASDAQ 10-Day Upside to Downside Volume Greater than 1.89/1.
2. NASDAQ 5-Day ROC Highest in 504-Days
3. Number of Instances 9. Median Gain within 12 months 26.11%

Buy Signal 52								
NASDAQ 10-Day Upside to Downside Volume Greater than 1.89/1.								
NASDAQ 5-Day ROC Highest in 504-Days								
S&P 500 Cumulative Returns								
# of	Date	Max Gain within	# of Days to	Max Drawdown To Max	# of Days to	Max Gain to next	Max Decline within	# of Days to
Signals		252-Days	252-Day Gain	252-Day Gain	Max Drawdown	-15.00% Correction	252-Days	252-Day Decline
1	1/10/2019	26.11%	251	-0.54%	2	30.41%	-0.54%	2
2	8/7/1996	44.59%	252	-2.22%	20	78.68%	-2.22%	20
3	7/12/1995	20.97%	221	-1.77%	5	111.58%	-1.77%	5
4	2/5/1991	19.79%	238	0.00%	0	237.86%	0.00%	0
5	2/4/1991	20.79%	239	0.00%	0	240.69%	0.00%	0
6	1/8/1987	30.90%	159	0.00%	0	30.90%	-12.97%	230
7	8/6/1984	20.33%	239	-0.57%	45	107.12%	-0.57%	45
8	8/26/1982	44.23%	208	-1.21%	1	184.07%	-1.21%	1
9	8/23/1982	47.27%	211	-0.66%	1	190.04%	-0.66%	1
Median		26.11%	238	-0.57%	1	111.58%	-0.66%	2

Signal 53. August 23 Day-7.

1. NASDAQ 10-Day Upside to Downside Volume Greater than 1.89/1.
2. Russell 2000 5-Day ROC Highest in 504-Days.
3. Number of Instances 11. Median Gain within 12 months 25.22%

Buy Signal 53 NASDAQ 10-Day Upside to Downside Volume Greater than 1.89/1. Russell 2000 5-Day ROC Highest in 504-Days S&P 500 Cumulative Returns								
# of	Date	Max Gain within	# of Days to	Max Drawdown To Max	# of Days to	Max Gain to next	Max Decline within	# of Days to
Signals		252-Days	252-Day Gain	252-Day Gain	Max Drawdown	-15.00% Correction	252-Days	252-Day Decline
1	1/10/2019	26.11%	251	-0.54%	2	30.41%	-0.54%	2
2	2/5/1991	19.79%	238	0.00%	0	237.86%	0.00%	0
3	2/4/1991	20.79%	239	0.00%	0	240.69%	0.00%	0
4	1/30/1991	23.43%	242	0.00%	0	248.11%	0.00%	0
5	1/29/1991	25.29%	243	0.00%	0	253.37%	0.00%	0
6	1/28/1991	25.22%	244	-0.06%	1	253.17%	-0.06%	1
7	1/25/1991	25.20%	245	-0.07%	2	253.13%	-0.07%	2
8	1/8/1987	30.90%	159	0.00%	0	30.90%	-12.97%	230
9	8/6/1984	20.33%	239	-0.57%	45	107.12%	-0.57%	45
10	8/26/1982	44.23%	208	-1.21%	1	184.07%	-1.21%	1
11	8/23/1982	47.27%	211	-0.66%	1	190.04%	-0.66%	1
Median		25.22%	239	-0.06%	1	237.86%	-0.07%	1

Signal 54. August 23 Day-7.

1. NYSE 10-Day Advances/10-Day Declines > 1.9.
2. S&P 500 10-Day ROC Highest in 180-Days.
3. Number of Instances 8. Median Gain within 12 months 27.39%.

Buy Signal 54 NYSE 10-Day Advances/10-Day Declines > 1.9. S&P 500 10-Day ROC Highest in 180-Days. S&P 500 Cumulative Returns								
# of	Date	Max Gain within	# of Days to	Max Drawdown To Max	# of Days to	Max Gain to next	Max Decline within	# of Days to
Signals		252-Days	252-Day Gain	252-Day Gain	Max Drawdown	-15.00% Correction	252-Days	252-Day Decline
1	1/8/2019	26.55%	248	0.00%	0	31.53%	0.00%	0
2	7/12/2016	14.00%	236	-3.11%	82	36.18%	-3.11%	82
3	3/23/2009	42.68%	252	-4.30%	5	47.92%	-4.30%	5
4	1/14/1987	28.22%	155	0.00%	0	28.22%	-14.74%	226
5	8/23/1982	47.27%	211	-0.66%	1	190.04%	-0.66%	1
6	10/14/1974	31.44%	189	-10.63%	38	48.24%	-10.63%	38
7	12/8/1971	21.76%	252	0.00%	0	24.06%	0.00%	0
8	7/10/1962	23.78%	225	-6.49%	74	64.44%	-6.49%	74
Median		27.39%	231	-1.89%	3	42.05%	-3.71%	22

Signal 55. August 23 Day-7.

1. S&P 500 TRIN <= 0.5.
2. S&P 500 TRIN <= 0.3 1 day ago
3. Number of Instances 5. Median Gain within 12 months 26.35%.

Buy Signal 55 S&P 500 TRIN ≤ 0.5. S&P 500 TRIN ≤ 0.3 1 day ago S&P 500 Cumulative Returns								
# of	Date	Max Gain within	# of Days to	Max Drawdown To Max	# of Days to	Max Gain to next	Max Decline within	# of Days to
Signals		252-Days	252-Day Gain	252-Day Gain	Max Drawdown	-15.00% Correction	252-Days	252-Day Decline
1	10/5/2011	28.12%	238	0.00%	0	156.18%	0.00%	0
2	12/2/2010	11.63%	102	0.00%	0	11.63%	-10.01%	210
3	9/2/2010	25.09%	165	0.00%	0	25.09%	0.00%	0
4	6/1/1988	20.73%	246	-3.64%	57	38.34%	-3.64%	57
5	8/23/1982	47.27%	211	-0.66%	1	190.04%	-0.66%	1
Median		25.09%	211	0.00%	0	38.34%	-0.66%	1

Comment. Note the minimal drawdowns in 4 of the 5 instances of this double TRIN thrust signal.

Summary and Conclusion

The great bull market which began on August 13, 1982 generated an unusual number of market-data extremes. That data has proven significant, as similar market-data appeared near major turning points at bear market lows, corrective lows, and nascent bull markets in 1984, 1987, 1994, 1998, 2002, 2003, 2009, 2010, 2011, 2016, 2018, and 2020.

While we used 1982 data in our analysis, some of these signals had been generated prior to the 1982 Bull market at or near market lows in 1957, 1962, 1970, 1974 and 1980.

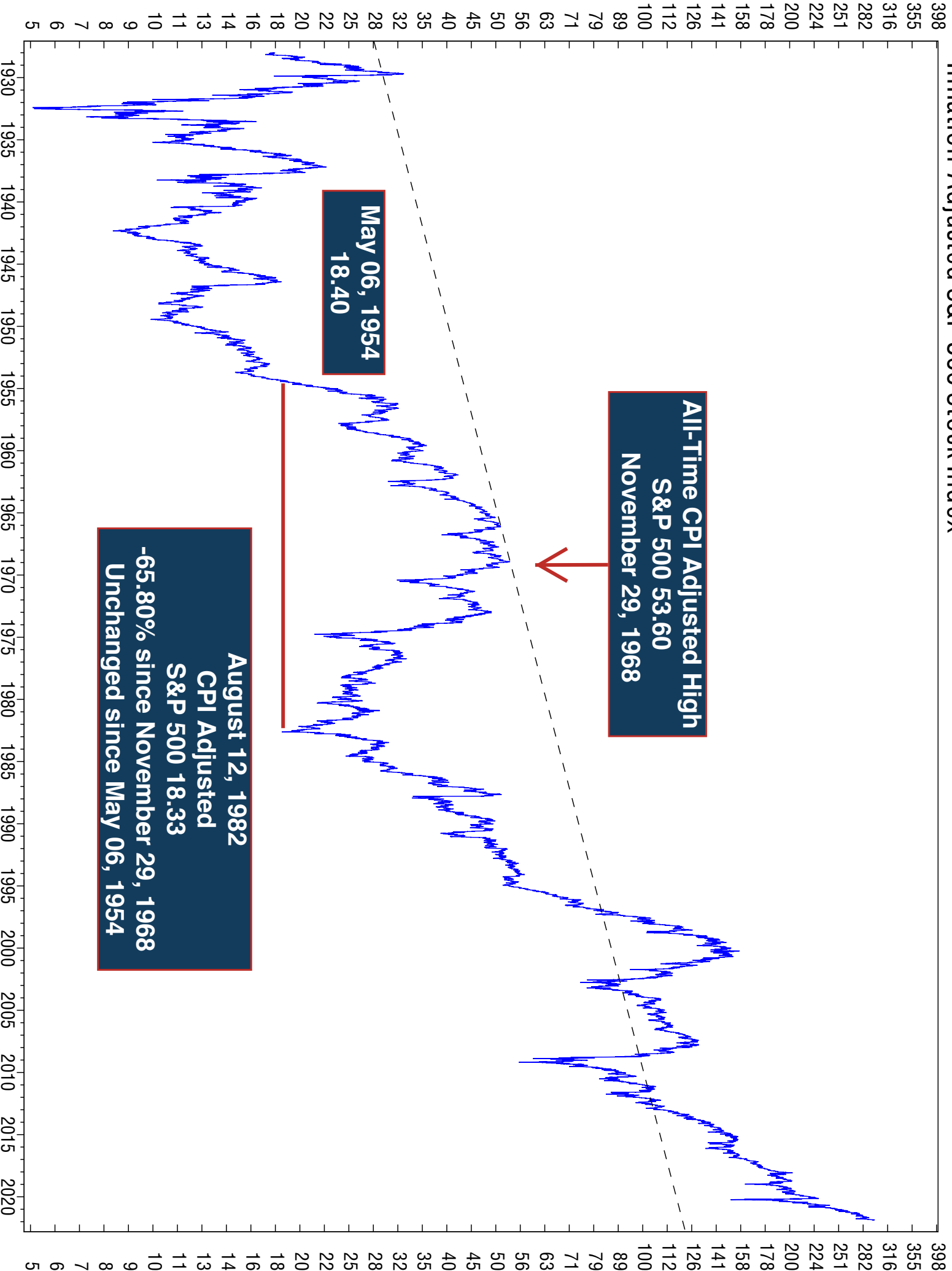
The momentum signals generated at the start of the August 1982 bull move have signaled prior to continuation moves and upward acceleration moves in October 1982, January 1987, May 1989, January 1991, July 1995, August 1996, May 1997, July 2009, August 2009, December 2010, December 2011, December 2012, January 2013, and July and November 2020. This is in addition to calling bullish turning points and bear market bottoms.

Also significant during the 7-day surge in August 1982, were indicators that signaled prior to bear market rallies of greater than 19% in September and October 2001, and prior to a final rally into a bull market peak beginning in October 1999.

In this report we have attempted to uncover the statistical aberrations that markets generate at bullish turning points. We believe we have uncovered many “new” indicators that were hiding in plain sight. We hope this paper opens new possibilities for those who work in our mystifying discipline of technical analysis.

Inflation-Adjusted S&P 500 Stock Index

Daily Data 1928-01-03 to 2021-11-12 (Log Scale)



Frequency of Signals Observed at the 8/12/1982 Low			
#	8/12/1982 Data used in Constructing Buy Indications	Number of Signals 1957 to 2021	Frequency
1	S&P 500 closed down -18% or greater off its latest high. Today is the lowest close since that high.	144	0.89%
2	Ned Davis Research Overbought -Oversold Oscillator Davis265 @17.50 or lower (Range 0-100)	291	2.88%
3	Number of 52 week highs within the 500 S&P issues are 2 or fewer.	681	5.62%
4	Russell 2000 Down 13 of 14 days.	15	0.15%
	8/13/1982 Day 1 Past the Low. Data used in Constructing Buy Indications	Number of Signals 1957 to 2021	Frequency
5	S&P 500 Closes at a new 2 year Low.	147	0.91%
6	S&P 500 closes at a 5-day high 1 day past a 5 day low.	200	1.24%
	8/17/1982 Day 3 Past the Low. Data used in Constructing Buy Indications	Number of Signals 1957 to 2021	Frequency
7	Net Up Volume as % of Total NYSE Volume (5-Day Smoothing) -45% 6 days ago		
8	Net Up Volume as % of Total NYSE Volume (5-Day Smoothing) Above 35%	560	3.47%
9	S&P 500 1-Day Volume at a 2000 day High	51	0.32%
10	Upside volume to Dowside Volume Ratio for the S&P 500 greater than 100 to 1	4	0.02%
11	S&P 500 closes down -7% or greater off its latest high. Has held the low for three days	668	4.14%
12	S&P 100 (OEX) gains 5.5% on the day	20	0.17%
13	S&P 100 (OEX) 5-day ROC > 6%	105	0.91%
14	S&P 500 5-day ROC > 6%	123	0.76%
15	S&P 500 4-Day Up to Down Volume Breadth >3.5 to 1	103	0.64%
16	S&P 500 closes down -18% or greater off its latest high. Has held the low for three days	49	0.30%
17	S&P 500 Percent of Stocks Lower than 60 Days Ago > 80%, 3 days ago	792	4.91%
18	S&P 500 gains 4.0% on the day	52	0.32%
19	S&P 500 closes down -15% or greater off its latest high. Has held the low for three days	65	0.40%
20	Upside Volume to Downside Volume Ratio for the NYSE greater than 12 to 1	99	0.61%
21	NASDAQ closes down -20% or greater off its latest high. Has held the low for two days	78	0.61%
22	S&P 500 Closes up on the day on an increase in volume and Volume is the Highest of the Last 250 Days in which the S&P closed up on higher volume.	50	0.31%
	8/18/1982 Day 4 Past the Low. Data used in Constructing Buy Indications	Number of Signals 1957 to 2021	Frequency
23	Ned Davis Research Overbought -Oversold Oscillator Davis265 @17.50 or lower (Range 0-100)	291	2.88%
24	80 % Of Stocks Lower than 60 Days Ago, 3 days ago	792	4.91%
25	S&P 500 4-Day Upside to Downside Volume Breadth >3.5 to 1	103	0.64%
26	S&P 500 closes down -18% or greater off its latest high. Has held the low for four days	43	0.27%
27	NASDAQ Highest daily Gain in Last 120 Days	112	0.87%
28	S&P 500 closes down -7% or greater off its latest high. Has held the low for four days	210	1.30%
29	NASDAQ Gained +1.60% for 2 days in a row	109	0.85%
30	Russell 2000 Up on Day and Volume Increased by 50%	106	1.08%
31	Russell 2000 DOWN 12 out of the last 13 days	22	0.22%
32	NASDAQ closes down -20% or greater off its latest high. Has held the low for three days	66	0.52%
33	NASDAQ Composite A/D Reverse Thrust (10-Day Advances / 10-Day Declines) <= 0.50 6 days ago.	86	0.67%
34	NASDAQ gains 1.5% on the day	873	6.81%
35	Russell 2000 DOWN 12 out of the last 14 days 3 days ago	54	0.55%
36	Value Line Geometric Index closes 4.5% below its 19-Day MA 4-7 days ago	778	5.11%
37	Number of 52-week highs within the 500 S&P issues 2 or fewer. 4-7 days ago.	682	4.23%
38	80 % Of Stocks Lower than 60 Days Ago, 4-7 days ago	792	4.91%
39	Net Up Volume as % of Total NYSE Volume (5-Day Smoothing) -40% 4-7 days ago	331	2.05%
40	S&P 500 declines on the day and volume increases on the day. The ratio of today's SP 500 volume to the Last 90 Days in which the S&P closed lower on higher volume is 2.27 to 1 or greater	5	0.03%
41	S&P 500 volume increases on the day. The ratio of today's SP 500 volume to the Last 250 Days in which the S&P closed higher on higher volume is 2.70 to 1 or greater	9	0.06%
42	S&P 500 volume increases on the day. The ratio of today's SP 500 volume to the Last 60 Days in which the S&P closed higher on higher volume is 2.33 to 1.	10	0.06%
43	NASDAQ closes down -16% or greater off its latest high. Has held the low for three days	84	0.66%
44	Dow Jones Industrial Average 1-Day Volume at 500-day New High	55	0.34%
45	S&P 100 Gained +1.50% for 2 days in a row	70	0.61%
46	NASDAQ closes down -19% or greater off its latest high. Has held the low for three days	67	0.52%
	8/19/1982 Day 5 Past the Low. Signals used in Constructing Buy Indications	Number of Signals 1957 to 2021	Frequency
47	S&P 500 closes down -18% or greater off its latest high. Has held the low for five days	38	0.24%
48	S&P 500 Volume 5-Day Average 2nd Highest in the Last 5.0 Years	250	1.55%
49	S&P 500 5-day Advances / 5 Day Declines > 2.7	63	0.39%
50	S&P 500 closes down -7% or greater off its latest high. Has held the low for five days	148	0.92%

Frequency of Signals Observed at the 8/12/1982 Low			
	8/20/1982 Day 6 Past the Low. Signals used in Constructing Buy Indications	Number of Signals 1957 to 2021	Frequency
51	NYSE Upside to Downside Volume Ratio greater than 30 twice within past 4 days	2	0.01%
52	NYSE 5-day average total daily volume is highest in 250 days	335	2.08%
53	S&P 500 Five-Day Rate of Change > 8%	45	0.28%
54	S&P 500 closes down -18% or greater off its latest high. Has held the low for six days	38	0.24%
55	SP500 5-Day ROC Highest in 1260-Days	26	0.16%
57	S&P 500 New 30-Day High	2732	16.94%
58	S&P 500 gains 10% from it latest a 10% Correction with no intervening down days	2210	13.70%
59	Net Up Volume as % of Total NYSE Volume (5-Day Smoothing) Above 45%	104	0.64%
60	S&P 500 gains 9% from it latest a 10% Correction and this is highest close.	2271	14.08%
61	NYSE Closes up on the day on an increase in volume and Volume is the Highest of the Last 15 Days in which NYSE closed up on higher volume.	406	2.52%
62	S&P 500 gains 2% on the day		
63	S&P 500 Advances / Declines > 6.0	658	4.08%
65	S&P 500 TRIN <= 0.5	677	4.20%
66	NYSE Daily Upside to Downside Volume > 10 to 1	144	0.89%
67	S&P 500 5-day Advances / 5 Day Declines > 2.80	53	0.33%
68	NDR Multi cap 252 new highs / Highs and Lows <25% on the day of the low		
69	S&P 500 Upside to downside Volume Ratio greater than 65	10	0.06%
70	S&P 500 Upside volume to Downside Volume 17 to 1 for the second time in 10 days and no intervening 17 to1 down days	20	0.12%
71	S&P 500 closes down -7% or greater off its latest high. Has held the low for six days	181	1.12%
73	NYSE Daily Upside to Downside Volume > 15 to 1	131	0.81%
74	NASDAQ 7-Day MA of the Adv/Dec 1.52/1	221	1.72%
75	S&P 500 gains 3.5% on the day	78	0.48%
76	SP500 10-Day ROC Highest in 180-Days	152	0.94%
77	NYSE Up Down Volume Ratio greater than 15 to 1	71	0.44%
78	Net Up Volume as % of Total NYSE Volume (5-Day Smoothing) Above 40%	249	1.54%
79	S&P 500 10-day ROC > 8%	143	0.89%
81	S&P 500 5-day ROC > 8%	45	0.28%
82	S&P 500 Number of New 252-Day New HIGH > 50	1510	9.36%
83	S&P 500 5-day ROC > 7%	72	0.45%
84	NYSE Up Down Volume Ratio greater than 9 to 1	197	1.22%
85	S&P 500 closes down -14% or greater off its latest high. Has held the low for six days	56	0.35%
86	S&P 500 closes down -15% or greater off its latest high. Has held the low for seven days	48	0.30%
87	S&P 500 closes down -5% or greater off its latest high. Has held the low for seven days	264	1.64%
89	S&P 500 gains 1.0% on the day	1770	10.97%
	8/23/1982 Day 7 Past the Low. Signals used in Constructing Buy Indications	Number of Signals 1957 to 2021	Frequency
90	S&P 500 closes down -7% or greater off its latest high. Has held the low for seven days	170	1.05%
91	S&P 500 Number of New 252-Day New HIGH > 50	1510	9.36%
92	Net Up Volume as % of Total NYSE Volume (5-Day Smoothing) Above 50%	44	0.27%
93	S&P 500 falls 15% from a high with no intervening lower days	221	1.37%
94	NYSE 5-day average total daily volume highest in 126 days within the last 20 days	3132	19.42%
95	NDR Multi-Cap Equity Series 10-Day Advancing Volume / (10-Day Advancing + Declining Volume) > 70	20	0.19%
96	S&P 500 closes down -12% or greater off its latest high. Has held the low for seven days	73	0.45%
97	S&P 500 at New 30-Day High	2732	16.94%
98	S&P 500 gains 6% from it latest a 10% Correction and this is highest close.	2457	15.23%
99	S&P 500 TRIN <= 0.5	677	4.20%
100	NYSE Daily Upside to Downside Volume > 10 to 1	144	0.89%
101	Net Up Volume as % of Total NYSE Volume (5-Day Smoothing) Above 45%	104	0.64%
102	S&P 500 TRIN <= 0.5 for 2 days in a row	183	1.13%
103	S&P 500 - Buy Signal Generated when Close > Prior Close, Volume > Prior Volume, and NYSE Volume is the Highest of the Last 250 Signals Days	79	0.49%
104	NYSE Closes up on the day on an increase in volume and Volume is the Highest of the Last 15 Days in which NYSE closed up on higher volume.	406	2.52%
105	S&P 500 Five-Day Rate of Change > 7.4%	62	0.38%
106	S&P 500 7-Day Advances / 7-Day Declines Ratio > 3.25	5	0.03%
107	S&P 500 closes down -18% or greater off its latest high. Has held the low for seven days	37	0.23%
108	NASDAQ 10-Day Upside to Downside Volume Greater than 1.89	470	3.67%
109	NASDAQ 5-Day ROC Highest in 504-Days	52	0.41%
110	Russell 2000 5-Day ROC Highest in 504-Days	44	0.45%
111	NYSE 5-day average total daily volume was the greatest in 375 days within the past 20 days.	2071	12.84%
112	DJIA Five-Day Rate of Change > 12%	11	0.07%
113	S&P 500 Number of New 252-Day New highs > 70	673	4.17%
115	S&P 500 TRIN <= 0.3 1 day ago	49	0.30%
116	NYSE 10-Day Advances/10-Day Declines > 1.9	29	0.18%
117	SP500 10-Day ROC Highest in 180-Days	152	0.94%
118	S&P 500 closes down -5% or greater off its latest high. Has held the low for seven days	264	1.64%

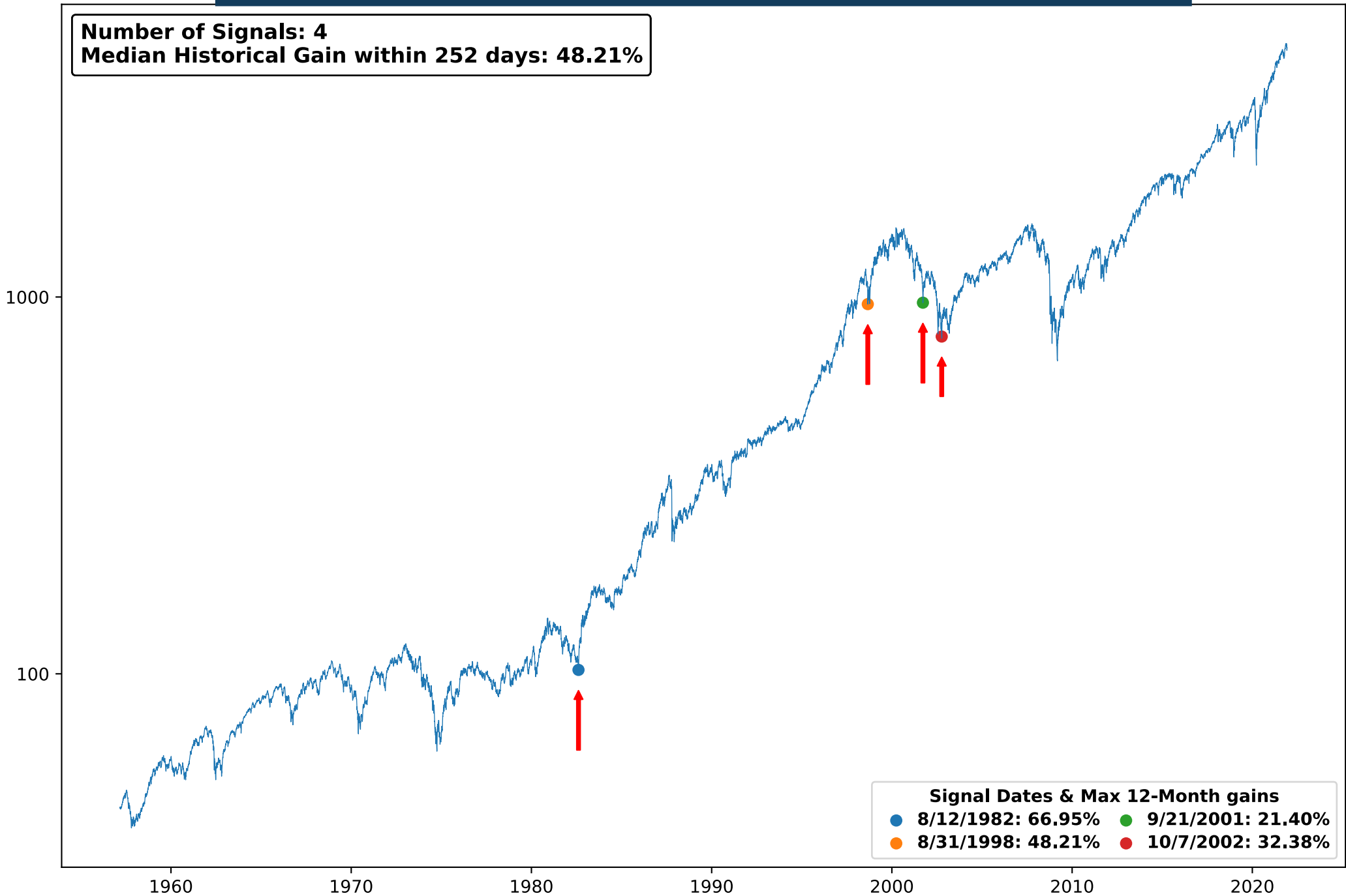
All Signal Dates							
Date	Days Past Low	Max Gain within 252-days	Days to 252-day gain	Max Drawdown to Max 252-day gain	Days to max drawdown	Max Gain to next -15% Decline	Corresponding 1982 Signal Dates
12/31/1957	NA	38.06%	252	0.00%	0	81.65%	8/23
7/3/1962	5	25.33%	229	-5.31%	78	66.51%	8/23
7/5/1962	6	24.63%	228	-5.84%	77	65.57%	8/23 8/20
7/10/1962	9	23.78%	225	-6.49%	74	64.44%	8/23
5/29/1970	3	36.86%	231	-6.95%	26	57.07%	8/20
6/1/1970	4	34.60%	230	-8.49%	25	54.47%	8/20
6/2/1970	5	34.60%	229	-8.49%	24	54.47%	8/23 8/20
6/3/1970	6	33.43%	228	-9.28%	23	53.13%	8/20
8/24/1970	7	29.36%	171	-0.05%	6	48.46%	8/23
12/3/1971	7	20.94%	252	-0.57%	1	23.88%	8/23
12/8/1971	10	21.76%	252	0.00%	0	24.06%	8/23
10/9/1974	4	40.98%	192	-4.14%	41	58.99%	8/18
10/10/1974	5	37.00%	191	-6.85%	40	54.51%	8/23 8/20 8/19
10/11/1974	6	34.40%	190	-8.62%	39	51.57%	8/20
10/14/1974	7	31.44%	189	-10.63%	38	48.24%	8/23
1/10/1975	NA	31.68%	128	-2.63%	7	48.51%	8/20
1/27/1975	NA	32.25%	252	0.00%	0	43.07%	8/20
4/17/1978	NA	13.28%	103	-1.08%	1	25.40%	8/19
4/2/1980	4	36.85%	166	-2.80%	12	36.85%	8/18
8/12/1982	0	66.95%	218	0.00%	0	228.81%	8/12
8/13/1982	1	64.65%	217	0.00%	0	224.29%	8/13
8/17/1982	3	56.81%	215	-0.47%	1	208.85%	8/20 8/17
8/18/1982	4	57.55%	214	0.00%	0	210.30%	8/18
8/19/1982	5	56.64%	213	0.00%	0	208.51%	8/19 8/17
8/20/1982	6	51.29%	212	0.00%	0	197.97%	8/23 8/20 8/19 8/17
8/23/1982	7	47.27%	211	-0.66%	1	190.04%	8/23 8/20
8/25/1982	9	45.42%	209	-0.40%	2	186.42%	8/23 8/20 8/19
8/26/1982	10	44.23%	208	-1.21%	1	184.07%	8/23 8/20 8/17
8/27/1982	11	46.01%	207	0.00%	0	187.57%	8/23
8/30/1982	12	45.33%	206	0.00%	0	186.22%	8/23
10/7/1982	NA	32.76%	179	0.00%	0	161.47%	8/20 8/17
10/13/1982	NA	26.29%	251	-2.76%	29	146.34%	8/23 8/20
10/14/1982	NA	28.30%	250	-1.22%	28	150.26%	8/23
10/18/1982	NA	26.27%	248	-2.78%	26	146.30%	8/23
10/19/1982	NA	26.41%	247	-2.67%	25	146.57%	8/23
10/20/1982	NA	24.00%	246	-4.52%	24	141.88%	8/23
12/2/1982	NA	24.37%	216	-2.58%	9	142.59%	8/20
8/2/1984	7	23.84%	241	0.00%	0	113.16%	8/23 8/20 8/17
8/3/1984	8	20.51%	240	-0.42%	46	107.43%	8/23 8/20 8/17
8/6/1984	9	20.33%	239	-0.57%	45	107.12%	8/23
8/7/1984	10	20.24%	238	-0.64%	44	106.98%	8/23
8/8/1984	11	20.96%	237	-0.05%	43	108.20%	8/23
8/9/1984	12	18.19%	236	-2.34%	42	103.44%	8/23
8/10/1984	13	18.27%	235	-2.27%	41	103.58%	8/23
8/13/1984	14	18.27%	234	-2.27%	40	103.57%	8/23
8/14/1984	15	18.99%	233	-1.67%	39	104.82%	8/23
1/8/1987	NA	30.90%	159	0.00%	0	30.90%	8/23
1/12/1987	NA	29.38%	157	-0.13%	1	29.38%	8/23
1/14/1987	NA	28.22%	155	0.00%	0	28.22%	8/23

All Signal Dates							
Date	Days Past Low	Max Gain within 252-days	Days to 252-day gain	Max Drawdown to Max 252-day gain	Days to max drawdown	Max Gain to next -15% Decline	Corresponding 1982 Signal Dates
1/15/1987	NA	26.85%	154	0.00%	0	26.85%	8/23
1/16/1987	NA	26.47%	153	0.00%	0	26.47%	8/23
10/19/1987	0	23.75%	247	-0.41%	33	64.09%	8/18
10/26/1987	5	24.59%	251	-1.65%	28	62.05%	8/19
10/30/1987	9	12.66%	247	-11.07%	24	46.53%	8/18
11/2/1987	10	10.91%	246	-12.45%	23	44.26%	8/20 8/19
6/1/1988	NA	20.73%	246	-3.64%	57	38.34%	8/23 8/20
10/7/1988	NA	29.03%	252	-5.12%	28	32.68%	8/20
5/12/1989	NA	14.64%	103	0.00%	0	17.56%	8/20
1/25/1991	NA	25.20%	245	-0.07%	2	253.13%	8/23
1/28/1991	NA	25.22%	244	-0.06%	1	253.17%	8/23
1/29/1991	NA	25.29%	243	0.00%	0	253.37%	8/23
1/30/1991	NA	23.43%	242	0.00%	0	248.11%	8/23
2/4/1991	NA	20.79%	239	0.00%	0	240.69%	8/23
2/5/1991	NA	19.79%	238	0.00%	0	237.86%	8/23
2/11/1991	NA	14.16%	234	-1.57%	10	221.98%	8/23
12/31/1991	NA	5.80%	246	-5.42%	69	184.53%	8/23
1/6/1992	NA	5.58%	243	-5.61%	66	183.94%	8/23
12/16/1994	6	35.50%	250	-0.37%	2	158.66%	8/23
7/12/1995	NA	20.97%	221	-1.77%	5	111.58%	8/23
8/7/1996	10	44.59%	252	-2.22%	20	78.68%	8/23
5/5/1997	NA	36.17%	243	-1.76%	2	42.94%	8/20
11/3/1997	5	26.39%	176	-3.52%	7	26.39%	8/20
8/31/1998	0	48.21%	220	0.00%	0	59.56%	8/12
9/8/1998	5	38.63%	215	-6.26%	22	49.24%	8/20 8/18
10/15/1998	5	35.45%	188	0.00%	0	45.82%	8/20
10/21/1999	4	19.00%	107	-0.13%	3	19.00%	8/18
9/20/2001	-1	19.09%	73	-1.90%	1	19.09%	8/12
9/21/2001	0	21.40%	72	0.00%	0	21.40%	8/12
9/27/2001	4	15.11%	68	0.00%	0	15.11%	8/18
9/28/2001	5	12.64%	67	-0.23%	1	12.64%	8/23 8/18
10/1/2001	6	12.90%	66	0.00%	0	12.90%	8/17
7/29/2002	4	12.54%	223	-13.59%	51	7.09%	8/20 8/18
7/31/2002	6	10.97%	221	-14.79%	49	5.60%	8/20
10/7/2002	-2	32.38%	239	-1.08%	2	99.31%	8/12
10/14/2002	3	24.72%	252	-4.84%	101	86.01%	8/17
10/15/2002	4	19.09%	251	-9.14%	100	77.60%	8/20 8/18
10/17/2002	6	19.43%	251	-8.93%	98	78.02%	8/20 8/18
10/18/2002	7	18.73%	250	-9.46%	97	76.98%	8/23
3/19/2003	6	32.46%	227	-2.96%	8	79.07%	8/20
3/20/2003	7	32.21%	226	-3.14%	7	78.74%	8/23
3/21/2003	8	29.24%	225	-5.31%	6	74.72%	8/23 8/20
11/4/2008	6	9.16%	240	-32.73%	84	0.00%	8/20
11/28/2008	5	23.92%	250	-24.51%	67	4.29%	8/23 8/19
12/8/2008	NA	22.09%	244	-25.63%	61	2.75%	8/19
3/10/2009	1	59.84%	217	0.00%	0	69.16%	8/13
3/12/2009	3	53.21%	251	0.00%	0	62.14%	8/20 8/18 8/17
3/13/2009	4	52.07%	252	-0.35%	1	60.90%	8/23 8/17
3/16/2009	5	53.80%	252	0.00%	0	61.47%	8/23

All Signal Dates							
Date	Days Past Low	Max Gain within 252-days	Days to 252-day gain	Max Drawdown to Max 252-day gain	Days to max drawdown	Max Gain to next -15% Decline	Corresponding 1982 Signal Dates
3/17/2009	6	49.88%	252	-1.23%	3	56.44%	8/23 8/20
3/18/2009	7	46.81%	251	-3.25%	2	53.24%	8/23 8/20
3/23/2009	NA	42.68%	252	-4.30%	5	47.92%	8/23 8/20 8/17
7/15/2009	NA	30.51%	195	0.00%	0	30.51%	8/17
8/5/2009	NA	21.40%	180	-2.29%	8	21.40%	8/23 8/20
7/12/2010	5	26.41%	203	-2.92%	33	26.41%	8/19
7/13/2010	6	24.49%	202	-4.39%	32	24.49%	8/23 8/20 8/18
9/2/2010	5	25.09%	165	0.00%	0	25.09%	8/23
12/2/2010	NA	11.63%	102	0.00%	0	11.63%	8/23
8/11/2011	3	21.01%	161	-6.26%	36	149.93%	8/17
8/12/2011	4	20.38%	160	-6.75%	35	148.62%	8/18
8/15/2011	5	17.81%	159	-8.74%	34	143.32%	8/20
8/29/2011	NA	17.27%	149	-9.16%	24	142.19%	8/20
10/5/2011	2	28.12%	238	0.00%	0	156.18%	8/23
10/6/2011	3	25.82%	237	-0.82%	1	151.57%	8/17
10/10/2011	5	22.67%	235	-3.03%	33	145.27%	8/23 8/20 8/19
11/28/2011	1	22.91%	201	0.00%	0	145.75%	8/17
11/30/2011	3	17.55%	199	-3.34%	13	135.03%	8/20
12/1/2011	4	17.77%	198	-3.15%	12	135.48%	8/18 8/17
12/20/2011	NA	18.08%	185	0.00%	0	136.10%	8/20
11/23/2012	5	28.07%	252	-0.72%	2	107.98%	8/23 8/20 8/19
12/31/2012	NA	29.60%	252	0.00%	0	105.50%	8/17
1/4/2013	NA	26.04%	249	-0.64%	2	99.85%	8/17
10/24/2014	7	8.46%	143	-0.15%	1	49.18%	8/23
2/22/2016	6	21.58%	252	-1.25%	1	50.64%	8/20
7/8/2016	8	15.19%	238	-2.10%	84	37.60%	8/20
7/12/2016	10	14.00%	236	-3.11%	82	36.18%	8/23
2/15/2018	5	7.31%	150	-5.47%	30	7.31%	8/19
12/24/2018	0	37.13%	251	0.00%	0	44.02%	8/12
12/26/2018	1	31.29%	252	-0.80%	5	37.22%	8/17
12/31/2018	4	29.25%	250	-2.35%	2	35.08%	8/18
1/4/2019	7	28.67%	250	0.00%	0	33.74%	8/20
1/8/2019	NA	26.55%	248	0.00%	0	31.53%	8/23
1/9/2019	9	26.68%	252	-0.09%	3	30.99%	8/23
1/10/2019	10	26.11%	251	-0.54%	2	30.41%	8/23
3/19/2020	-2	64.94%	250	-7.14%	2	95.26% TD	8/18
3/25/2020	2	60.59%	252	-0.20%	5	90.04% TD	8/17
3/26/2020	3	51.16%	251	-6.07%	4	78.88% TD	8/23 8/20 8/18 8/17
3/27/2020	4	56.43%	250	-2.79%	3	85.11% TD	8/20
3/30/2020	5	51.35%	249	-5.94%	2	79.11% TD	8/23 8/20
11/5/2020	4	33.82%	252	-0.03%	1	34.02% TD	8/18
11/9/2020	6	32.42%	251	-0.38%	3	32.50% TD	8/20

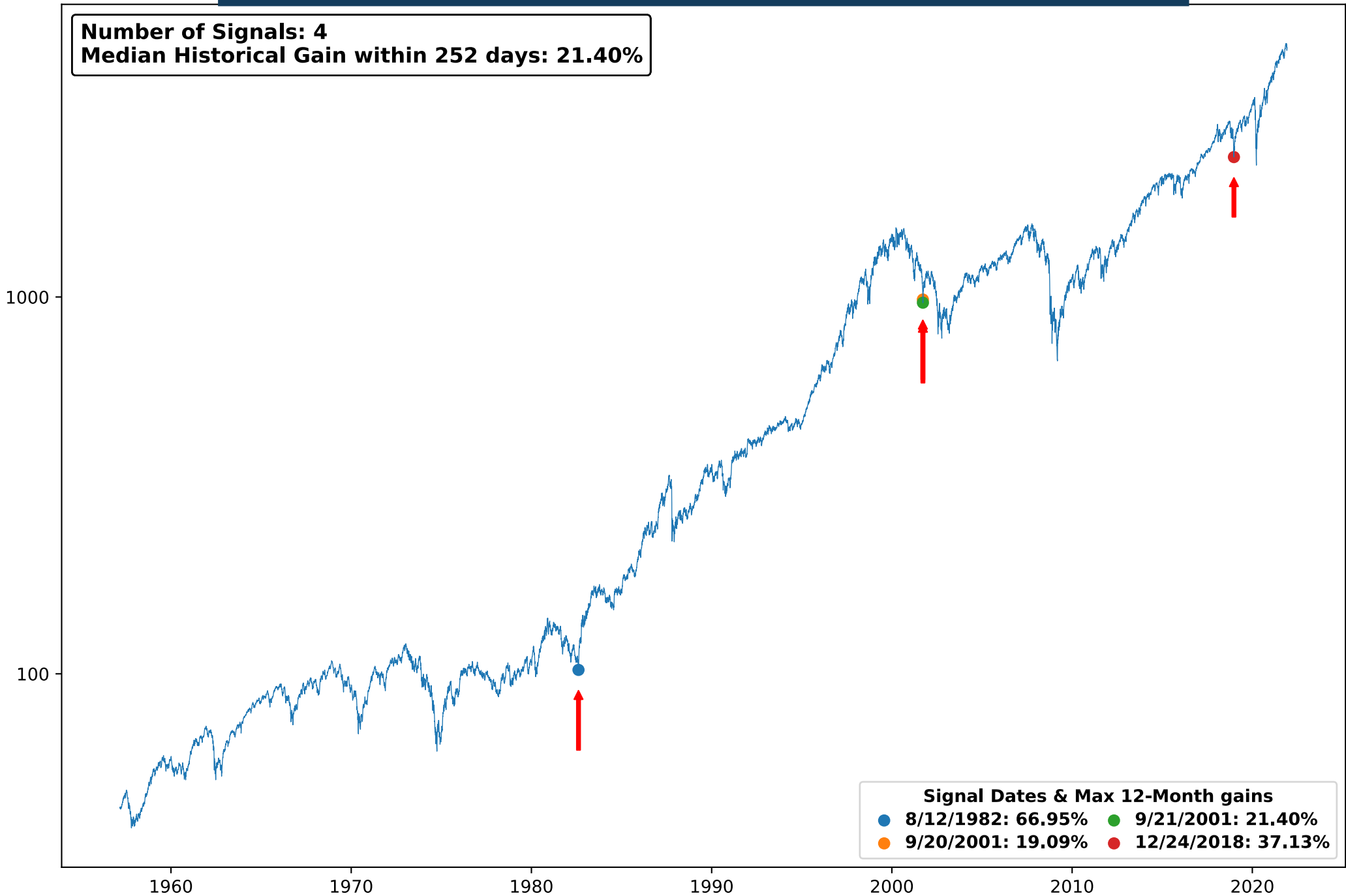
Buy Signal 1:
S&P 500 closed -18% or greater off its latest high. Today is the lowest close since that high.
Ned Davis Research Overbought -Oversold Oscillator Davis 265 @17.50 or lower (Range 0-100).
Number of 52-week highs within the 500 S&P issues are 2 or fewer.
(Updated through 12/6/2021)

Number of Signals: 4
Median Historical Gain within 252 days: 48.21%



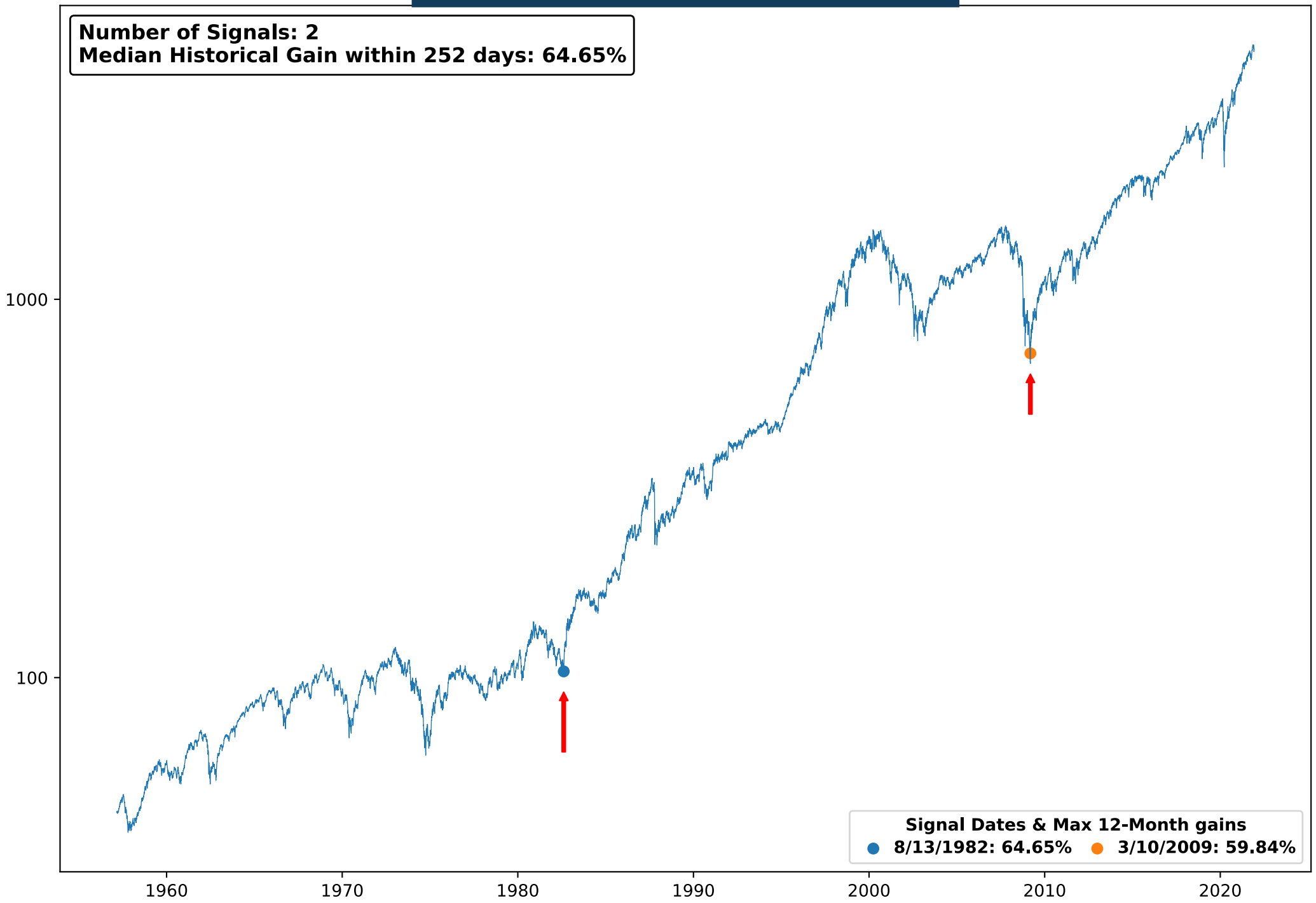
Buy Signal 2:
S&P 500 closed -18% or greater off its latest high. Today is the lowest close since that high.
Ned Davis Research Overbought -Oversold Oscillator Davis265 @17.50 or lower (Range 0-100).
Russell 2000 Down 13 of 14 days
(Updated through 12/6/2021)

Number of Signals: 4
Median Historical Gain within 252 days: 21.40%



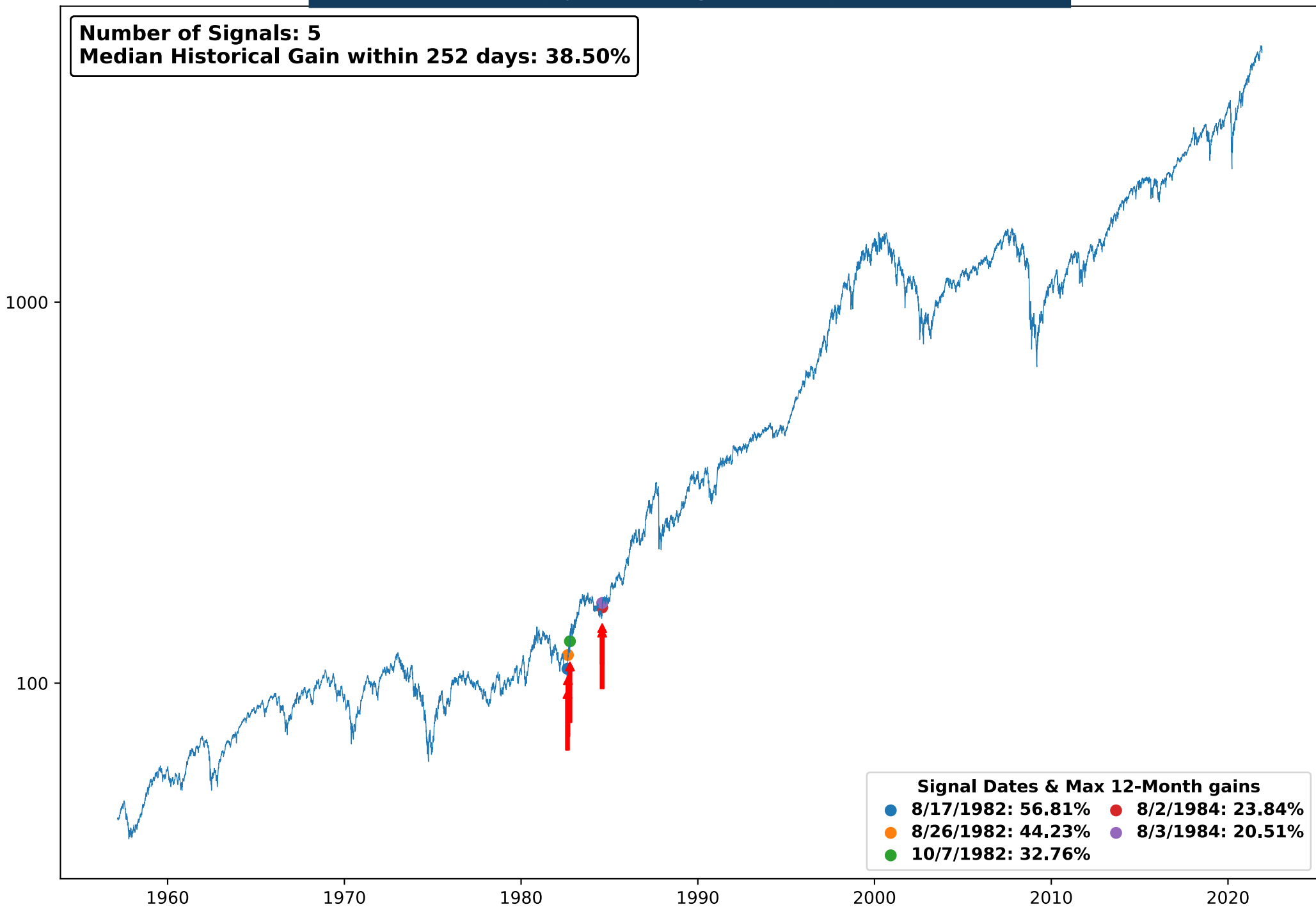
Buy Signal 3:
S&P 500 closed at a new 2-year low 1 day ago.
S&P 500 closed at a 5-day high 1 day past a 5-day low.
(Updated through 12/6/2021)

Number of Signals: 2
Median Historical Gain within 252 days: 64.65%



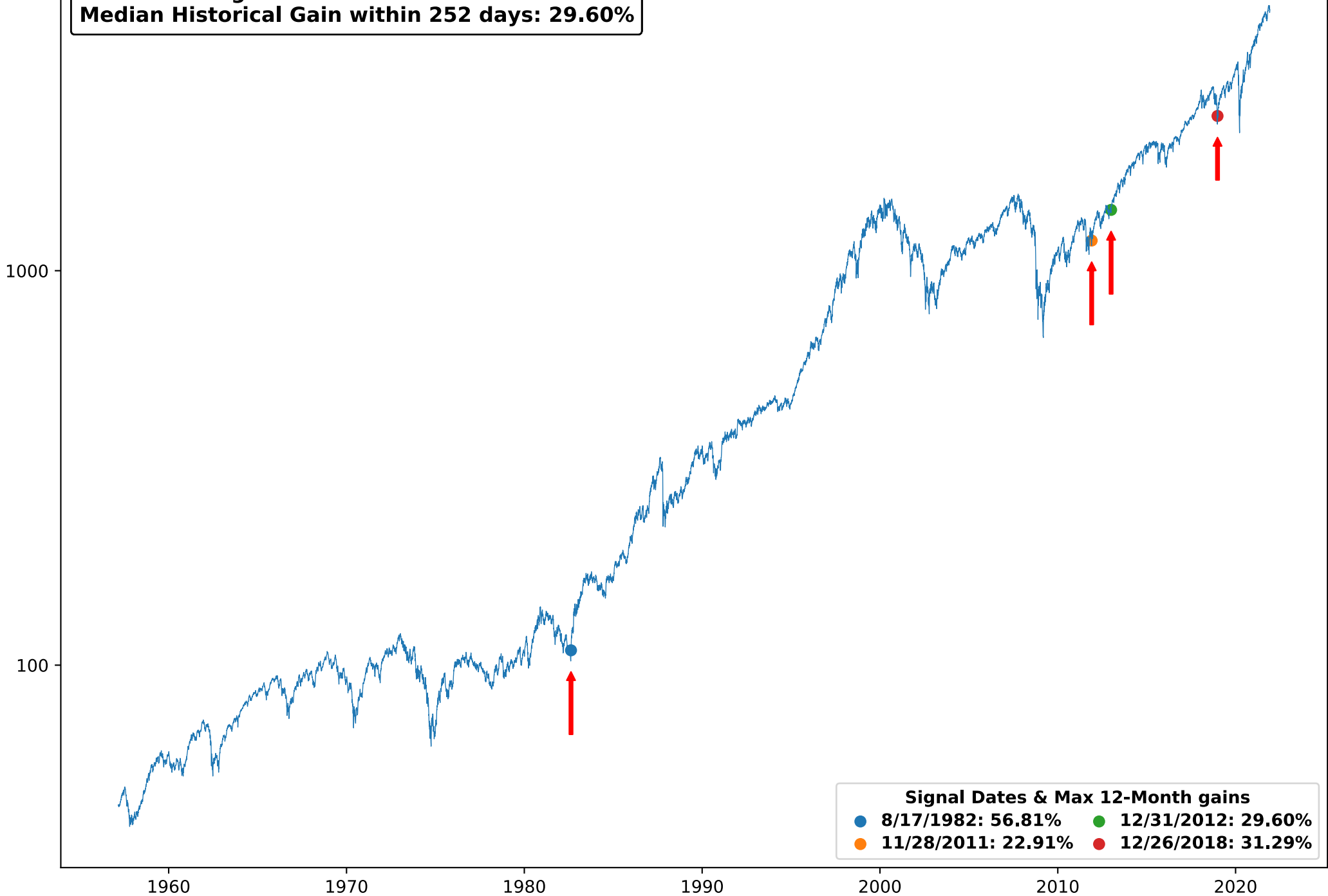
Buy Signal 4:
Net Up Volume as % of Total NYSE Volume (5-Day Smoothing) Above 35%.
S&P 500 1-Day Volume at a 2000-day High.
(Updated through 12/6/2021)

Number of Signals: 5
Median Historical Gain within 252 days: 38.50%



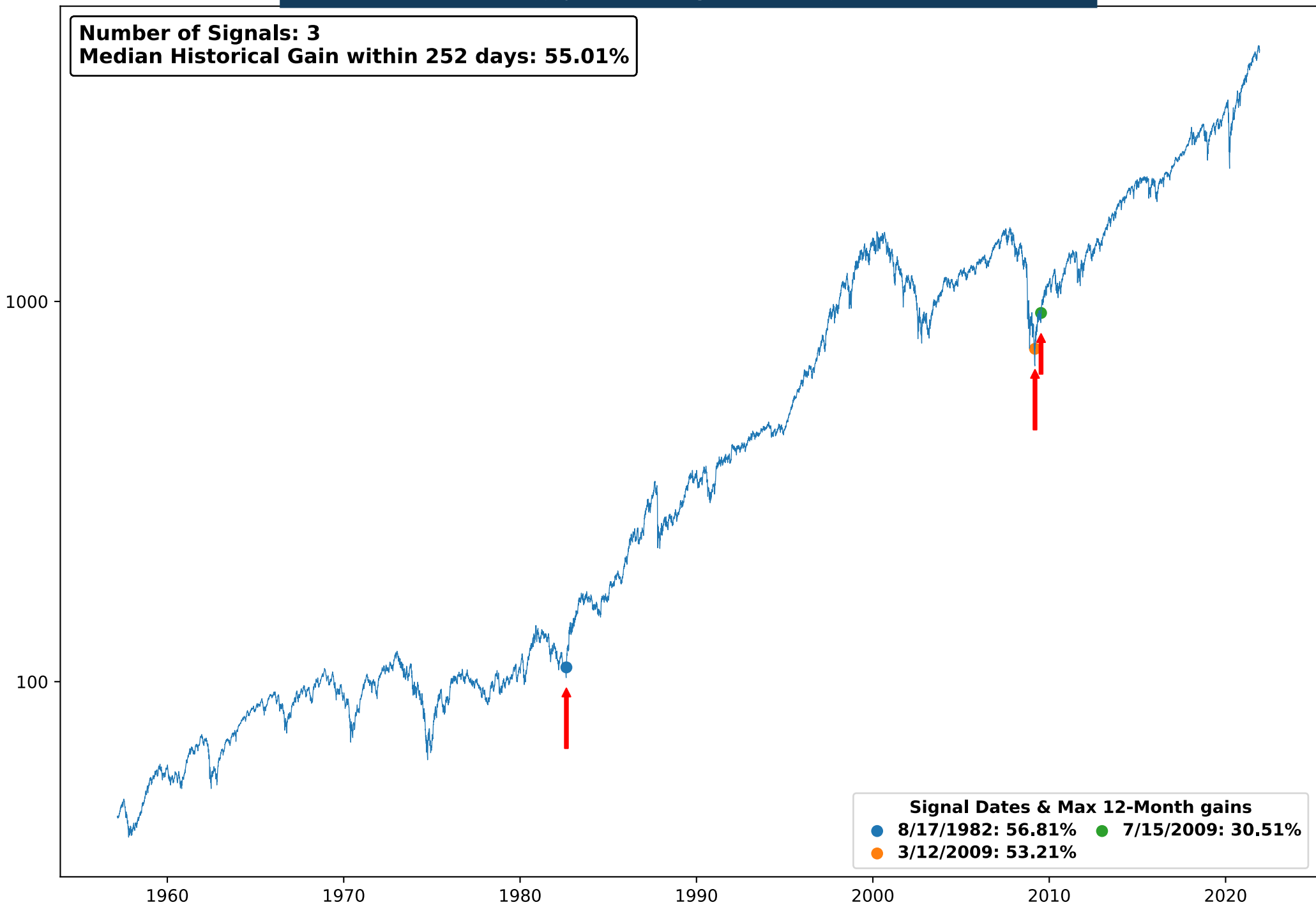
Buy Signal 5:
Upside Volume to Downside Volume Ratio for the S&P 500 greater than 100 to 1.
(Updated through 12/6/2021)

Number of Signals: 4
Median Historical Gain within 252 days: 29.60%



Buy Signal 6:
S&P 500 closed -7% or greater off its latest high. Has held the low for three days.
Net Up Volume as % of Total NYSE Volume (5-Day Smoothing) Above 35%.
(Updated through 12/6/2021)

Number of Signals: 3
Median Historical Gain within 252 days: 55.01%



Buy Signal 7:
S&P 500 closed -7% or greater off its latest high. Has held the low for three days.
S&P 100 (OEX) gained 5.5% on the day.
(Updated through 12/6/2021)

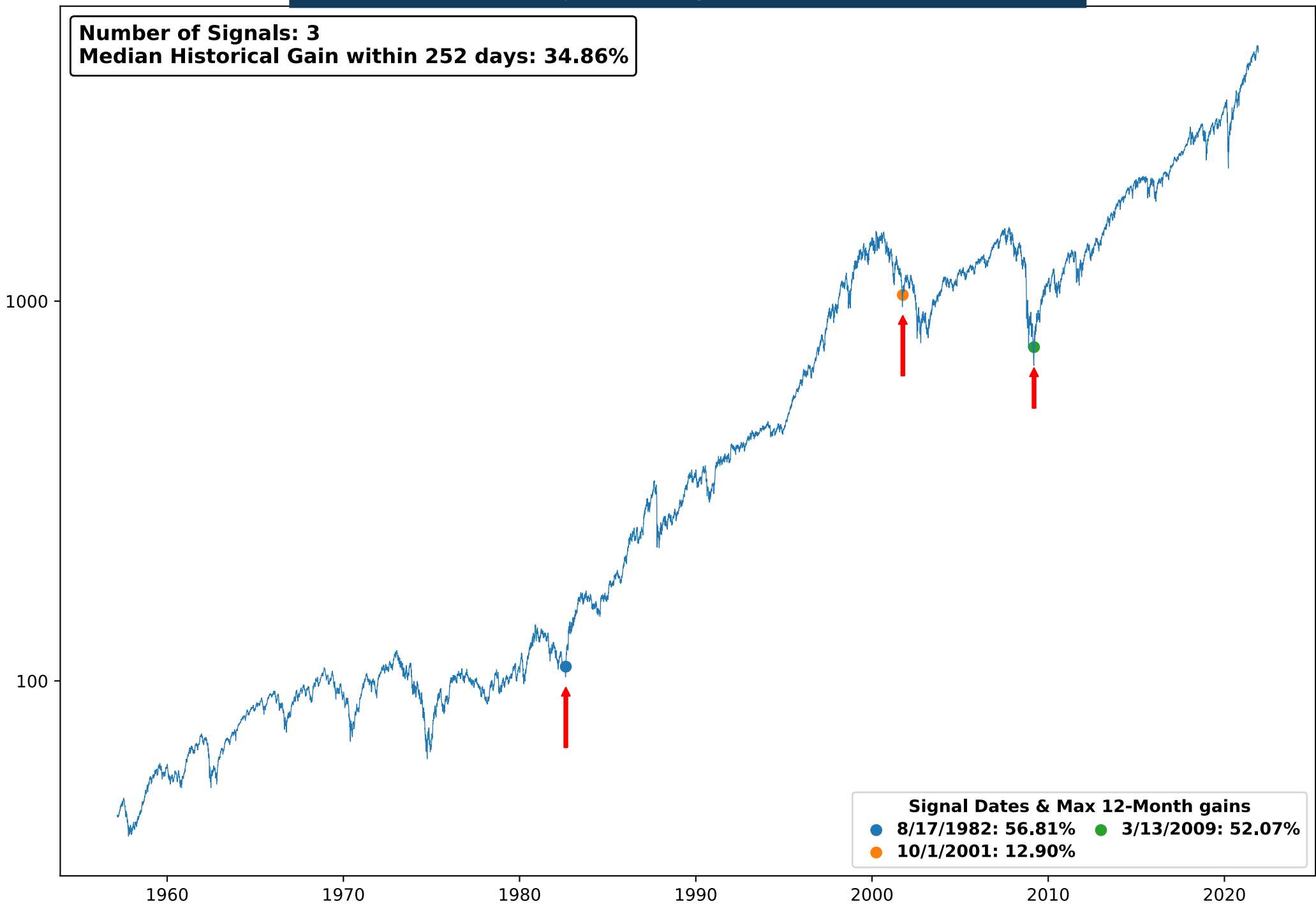
Number of Signals: 2
Median Historical Gain within 252 days: 56.81%



Signal Dates & Max 12-Month gains
● 8/17/1982: 56.81% ● 3/26/2020: 51.16%

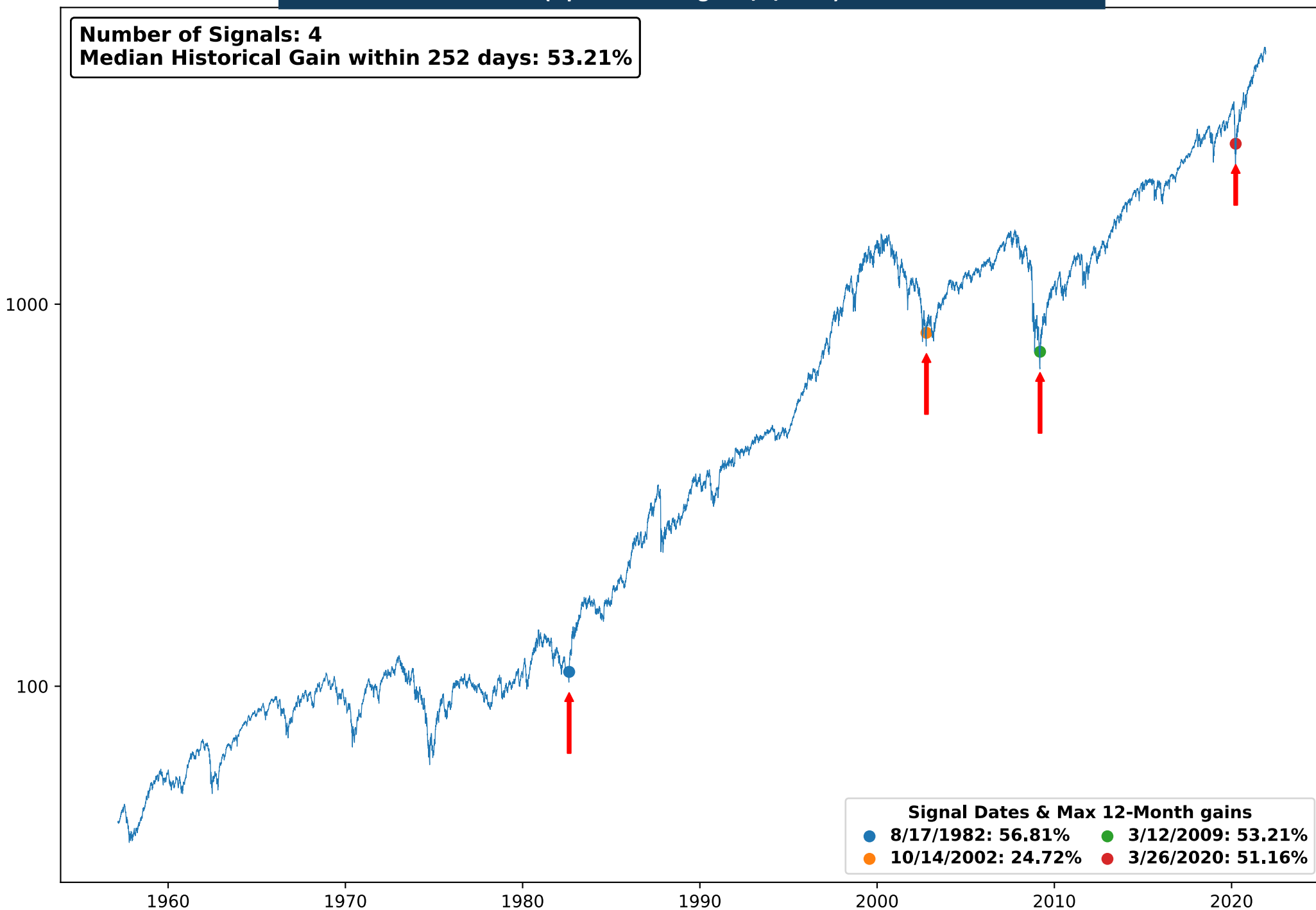
Buy Signal 8:
S&P 500 Percent of Stocks Lower than 60 Days Ago > 80%, 3 days ago.
Net Up Volume as % of Total NYSE Volume (5-Day Smoothing) -45% 6 days ago.
(Updated through 12/6/2021)

Number of Signals: 3
Median Historical Gain within 252 days: 34.86%



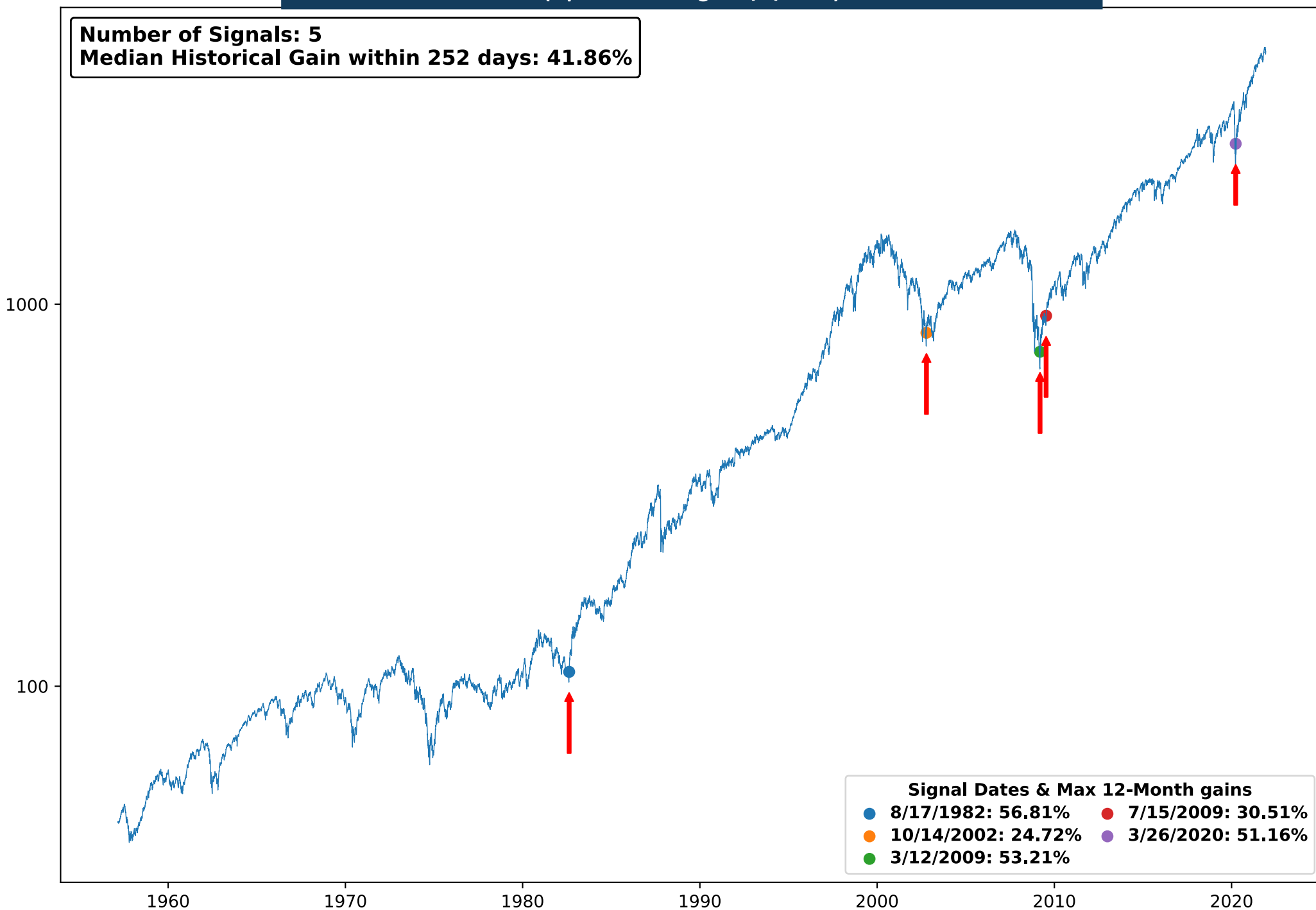
Buy Signal 9:
S&P 500 closed -7% or greater off its latest high. Has held the low for three days.
S&P 100 (OEX) 5-day ROC > 6%.
(Updated through 12/6/2021)

Number of Signals: 4
Median Historical Gain within 252 days: 53.21%



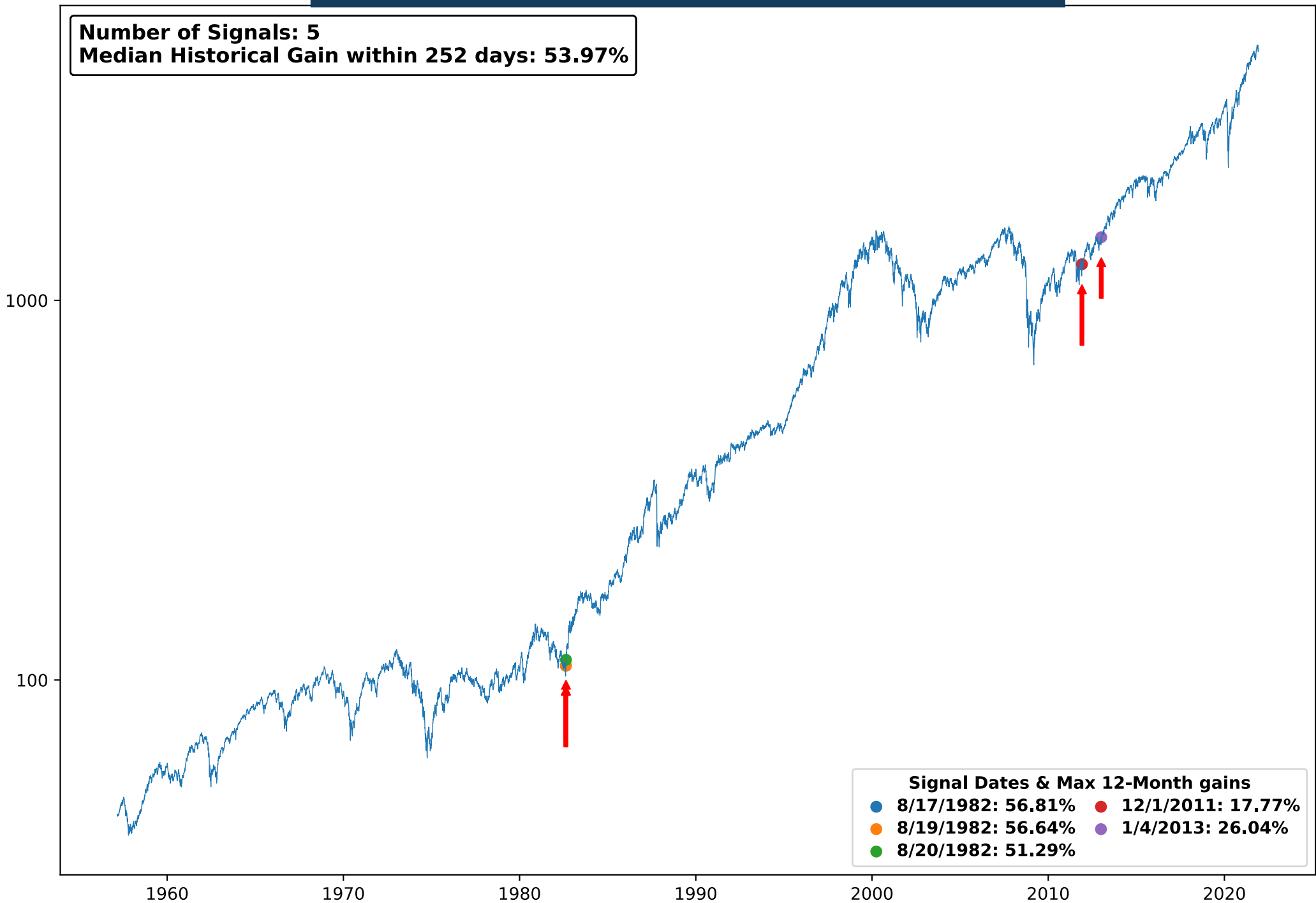
Buy Signal 10:
S&P 500 closed -7% or greater off its latest high. Has held the low for three days.
S&P 500 (SPX) 5-day ROC > 6%.
(Updated through 12/6/2021)

Number of Signals: 5
Median Historical Gain within 252 days: 41.86%



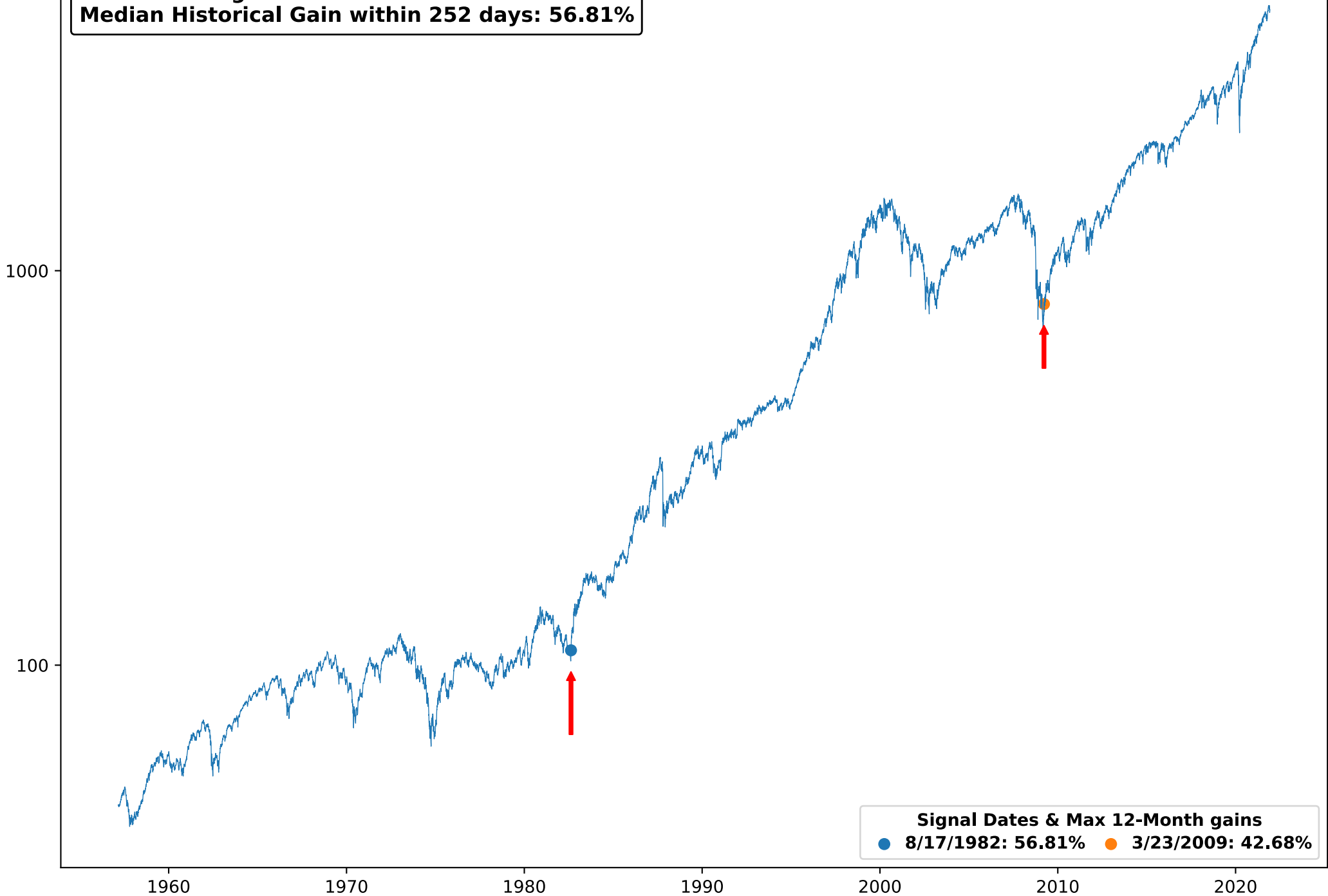
Buy Signal 11:
Net Up Volume as % of Total NYSE Volume (5-Day Smoothing) Above 35%.
S&P 500 4-Day Up to Down Volume Breadth > 3.5 to 1.
(Updated through 12/6/2021)

Number of Signals: 5
Median Historical Gain within 252 days: 53.97%



Buy Signal 12:
Net Up Volume as % of Total NYSE Volume (5-Day Smoothing) Above 35%. S&P 100 (OEX) gained 5.5% on the day.
(Updated through 12/6/2021)

Number of Signals: 2
Median Historical Gain within 252 days: 56.81%



Buy Signal 13:
S&P 500 closed -18% or greater off its latest high. Has held the low for three days.
S&P 500 Percent of Stocks Lower than 60 Days Ago > 80%, 3 days ago.
(Updated through 12/6/2021)

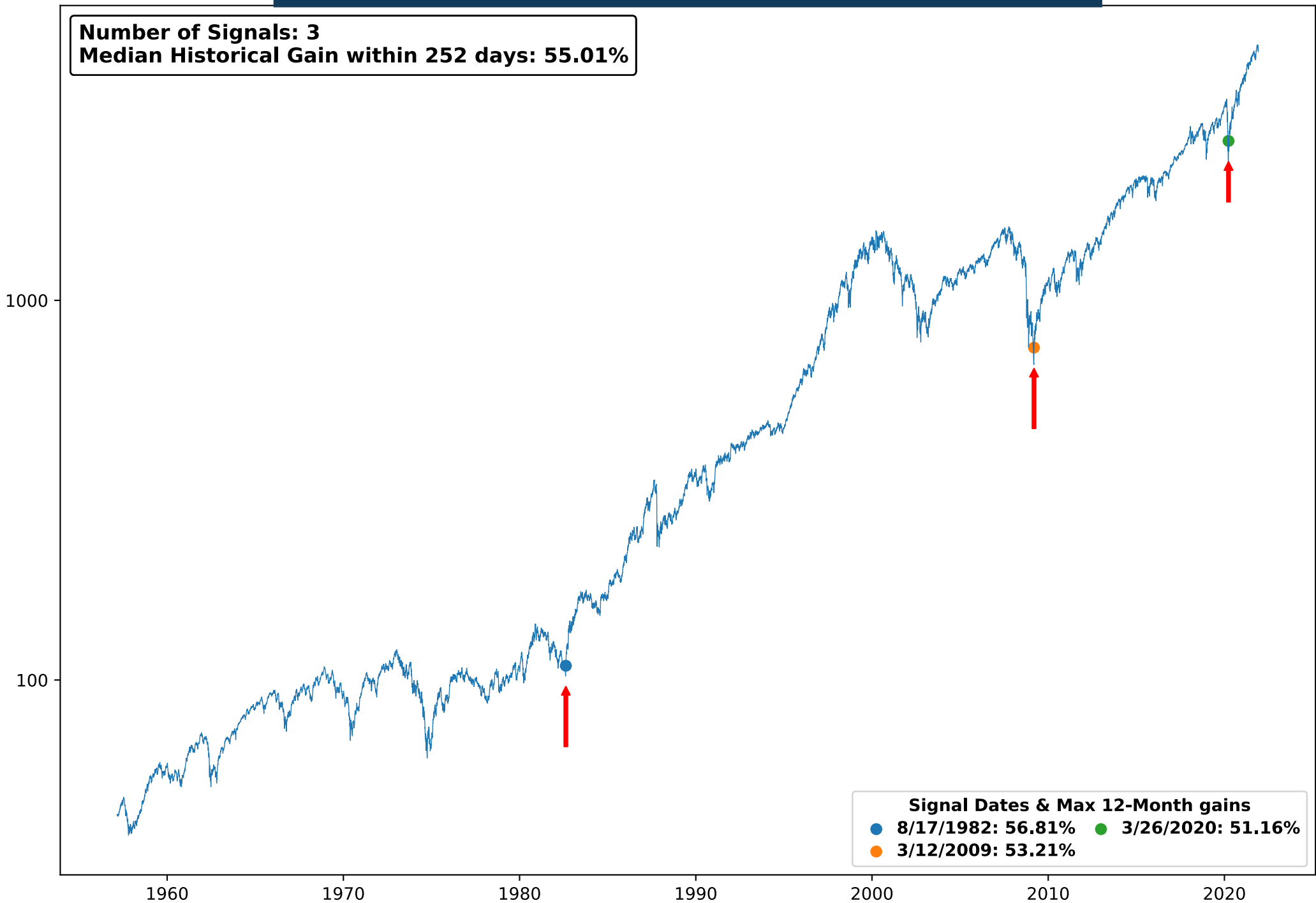
Number of Signals: 2
Median Historical Gain within 252 days: 56.81%



Signal Dates & Max 12-Month gains
● 8/17/1982: 56.81% ● 10/14/2002: 24.72%

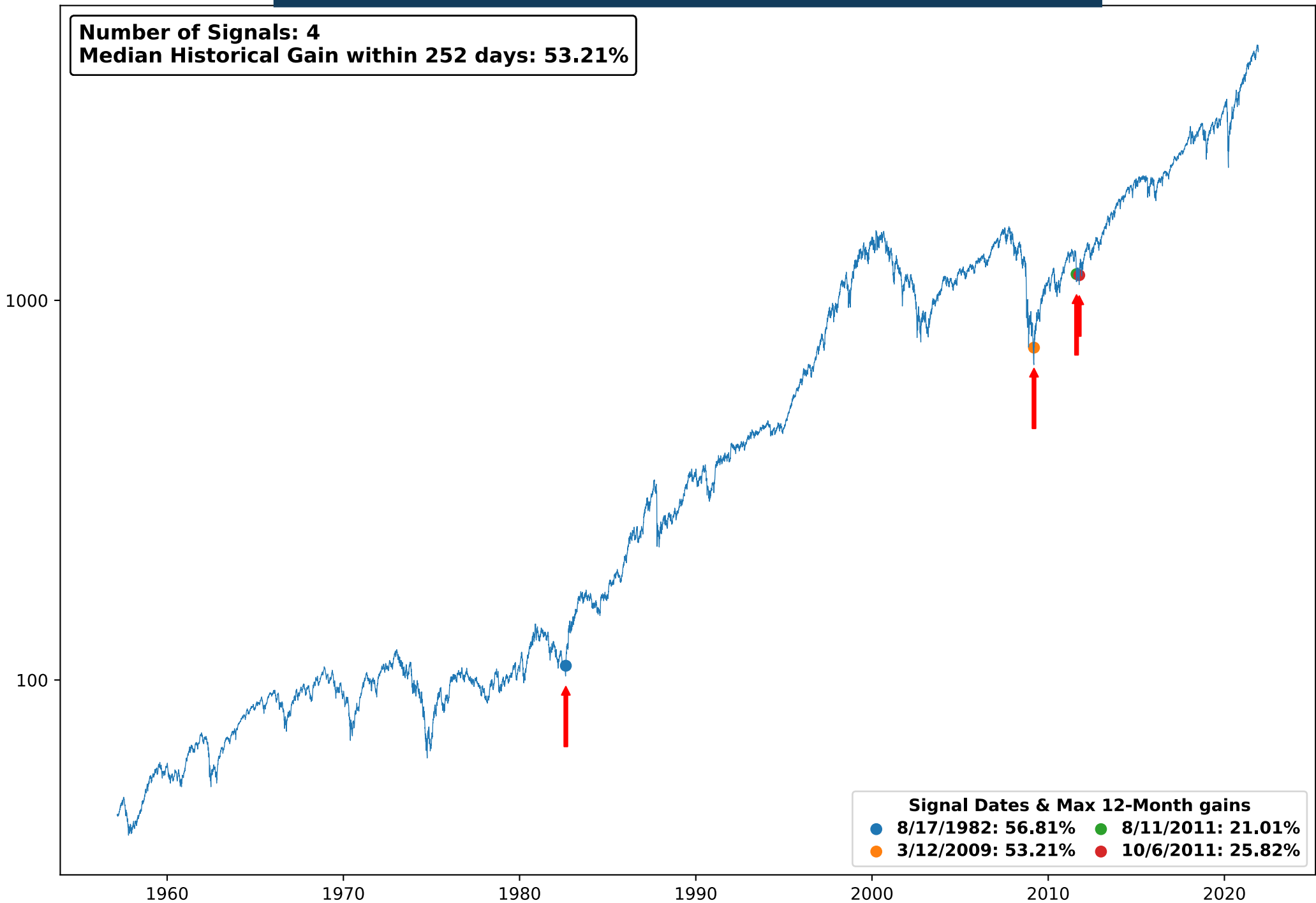
Buy Signal 14:
S&P 500 closed -18% or greater off its latest high. Has held the low for three days.
S&P 500 gained 4.0% on the day.
(Updated through 12/6/2021)

Number of Signals: 3
Median Historical Gain within 252 days: 55.01%



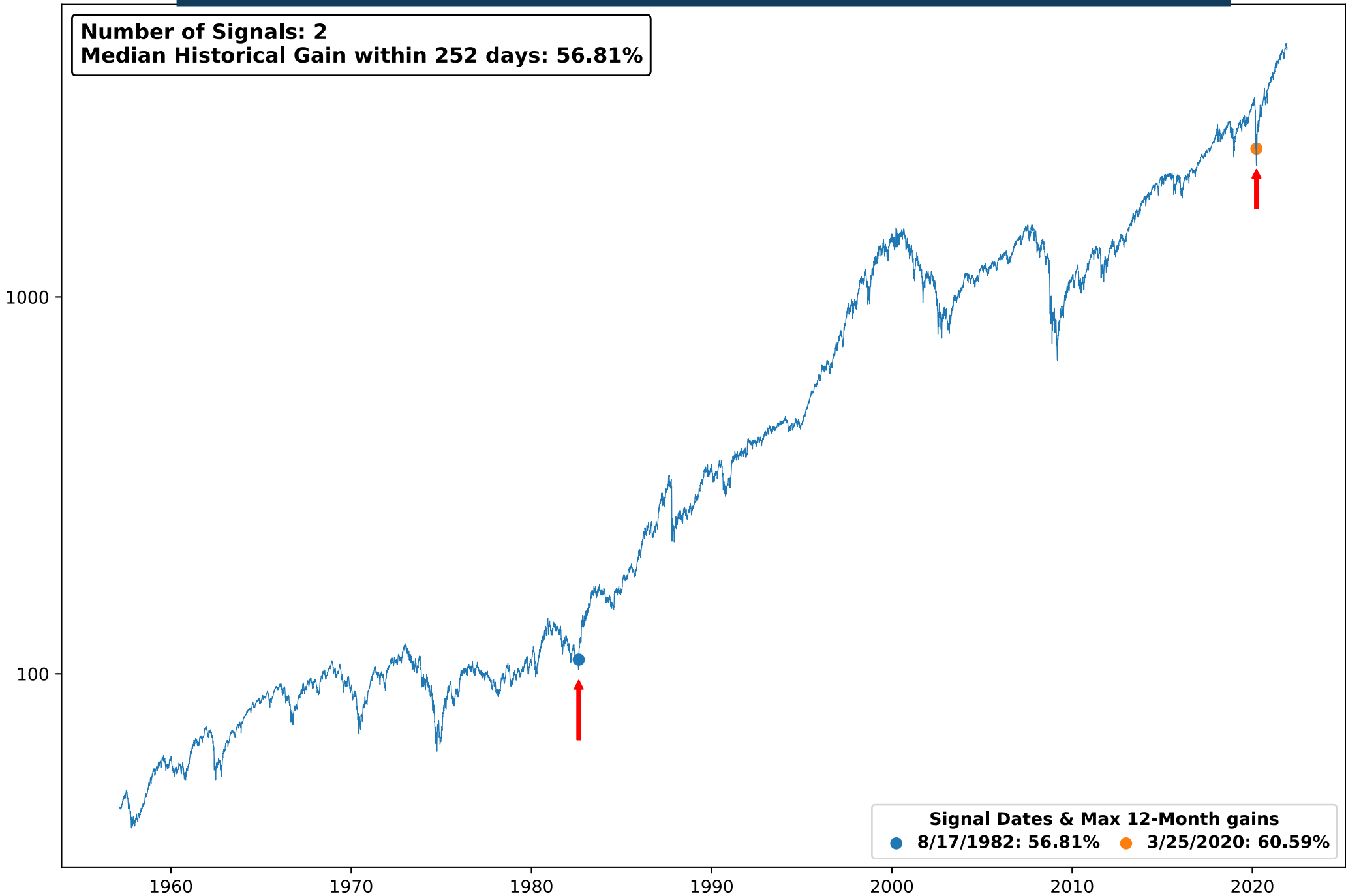
Buy Signal 15:
S&P 500 closed -15% or greater off its latest high. Has held the low for three days.
Upside Volume to Downside Volume Ratio for the NYSE greater than 12 to 1.
(Updated through 12/6/2021)

Number of Signals: 4
Median Historical Gain within 252 days: 53.21%



Buy Signal 16:
NASDAQ closed -20% or greater off its latest high. Has held the low for two days.
S&P 500 Closed up on the day on an increase in volume and Volume is the Highest of the Last 250 Days
in which the S&P closed up on higher volume.
(Updated through 12/6/2021)

Number of Signals: 2
Median Historical Gain within 252 days: 56.81%



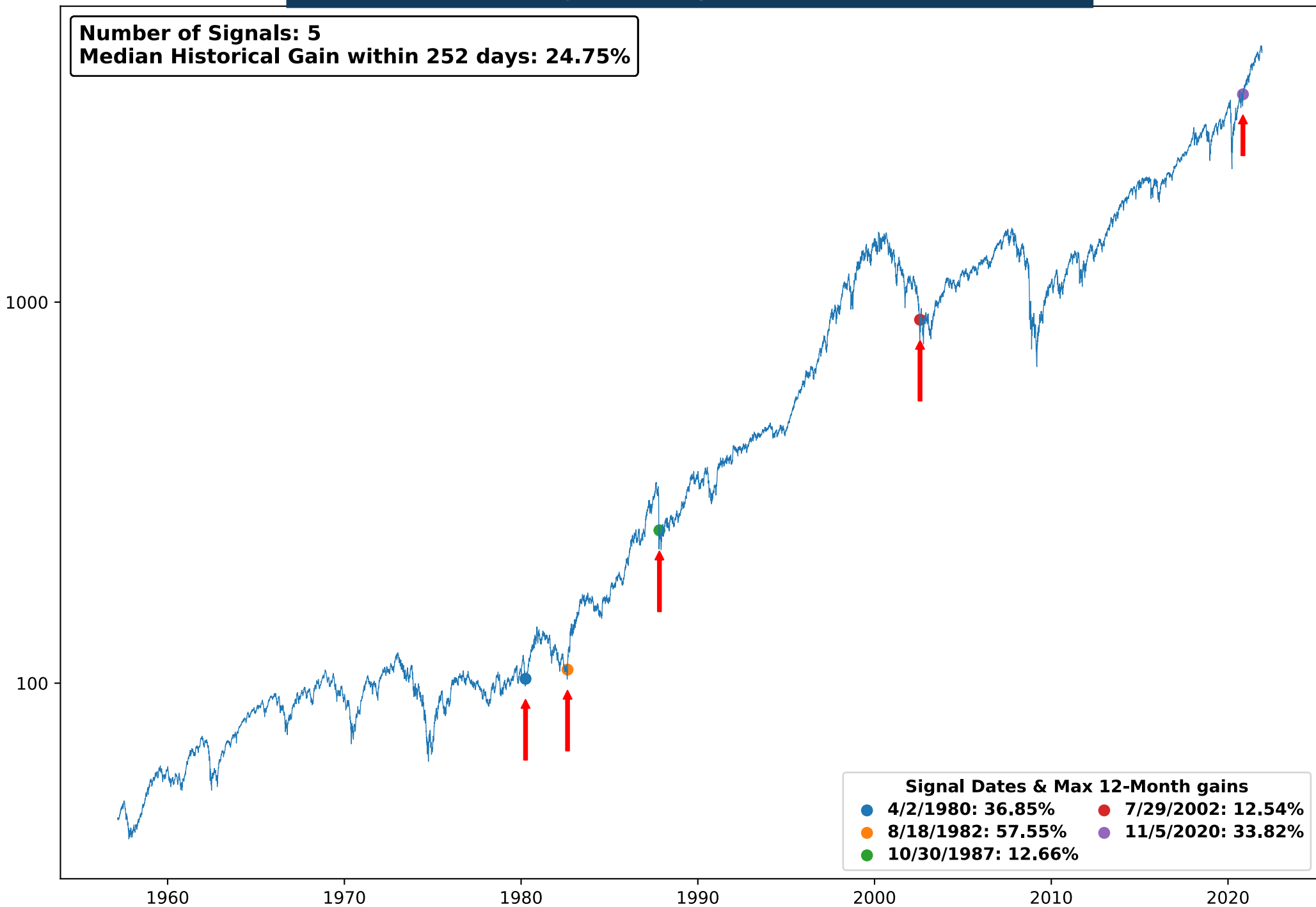
Buy Signal 17:
S&P 500 closed -18% or greater off its latest high. Has held the low for four days.
NASDAQ Highest daily Gain in Last 120 Days
(Updated through 12/6/2021)

Number of Signals: 2
Median Historical Gain within 252 days: 40.98%



Buy Signal 18:
S&P 500 closed -7% or greater off its latest high. Has held the low for four days.
NASDAQ Gained +1.60% for 2 days in a row.
(Updated through 12/6/2021)

Number of Signals: 5
Median Historical Gain within 252 days: 24.75%



Buy Signal 19:
S&P 500 closed -7% or greater off its latest high. Has held the low for four days.
Russell 2000 Up on Day and Volume Increased by 50%.
(Updated through 12/6/2021)

Number of Signals: 2
Median Historical Gain within 252 days: 57.55%



Buy Signal 20:
S&P 500 closed -18% or greater off its latest high. Has held the low for four days.
Russell 2000 down 12 out of the last 13 days, 4-7 days ago.
(Updated through 12/6/2021)

Number of Signals: 3
Median Historical Gain within 252 days: 36.33%



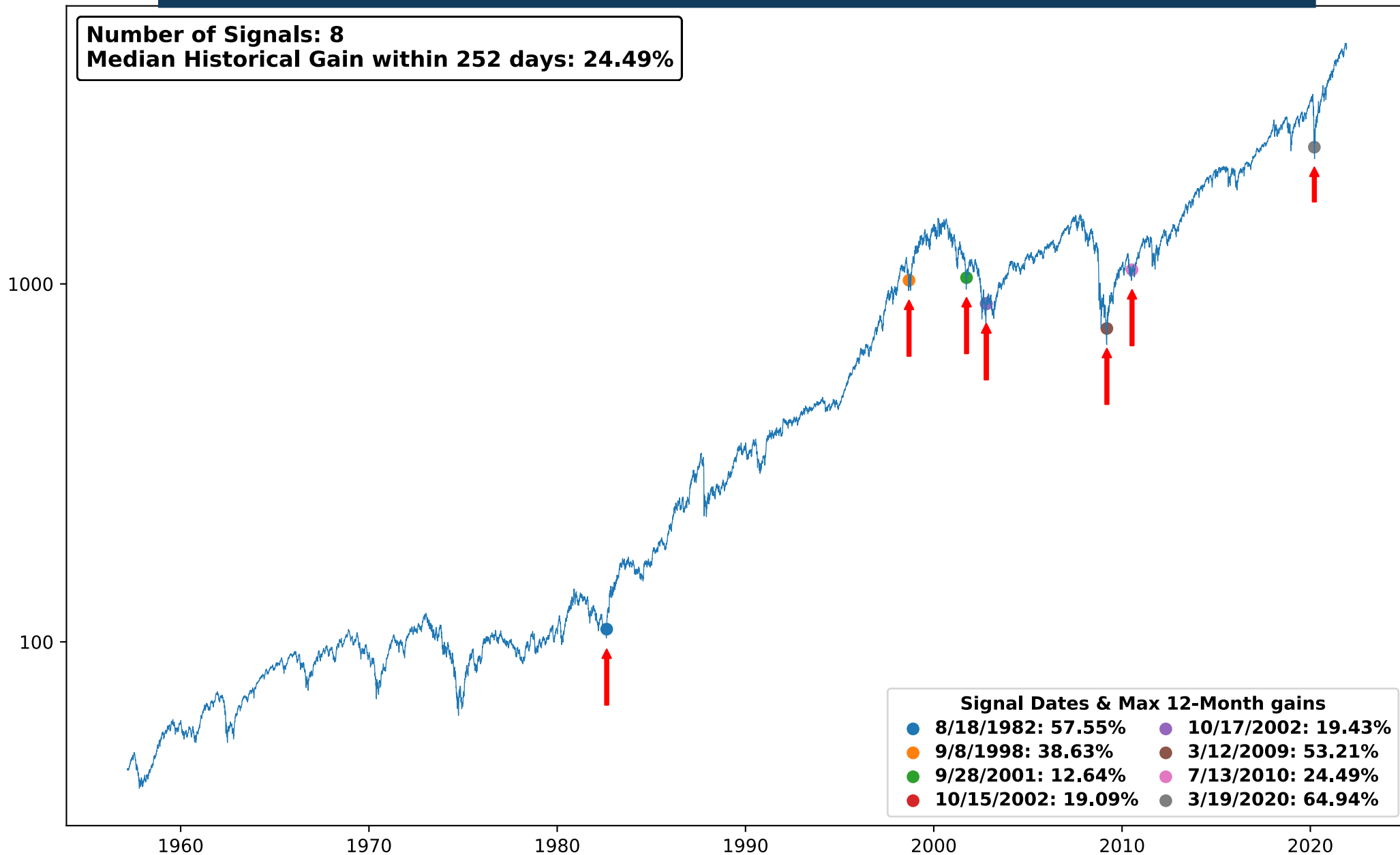
Buy Signal 21:
NASDAQ closed -20% or greater off its latest high. Has held the low for three days.
NASDAQ Composite A/D Reverse Thrust (10-Day Advances / 10-Day Declines) ≤ 0.50 6 days ago.
(Updated through 12/6/2021)

Number of Signals: 2
Median Historical Gain within 252 days: 57.55%



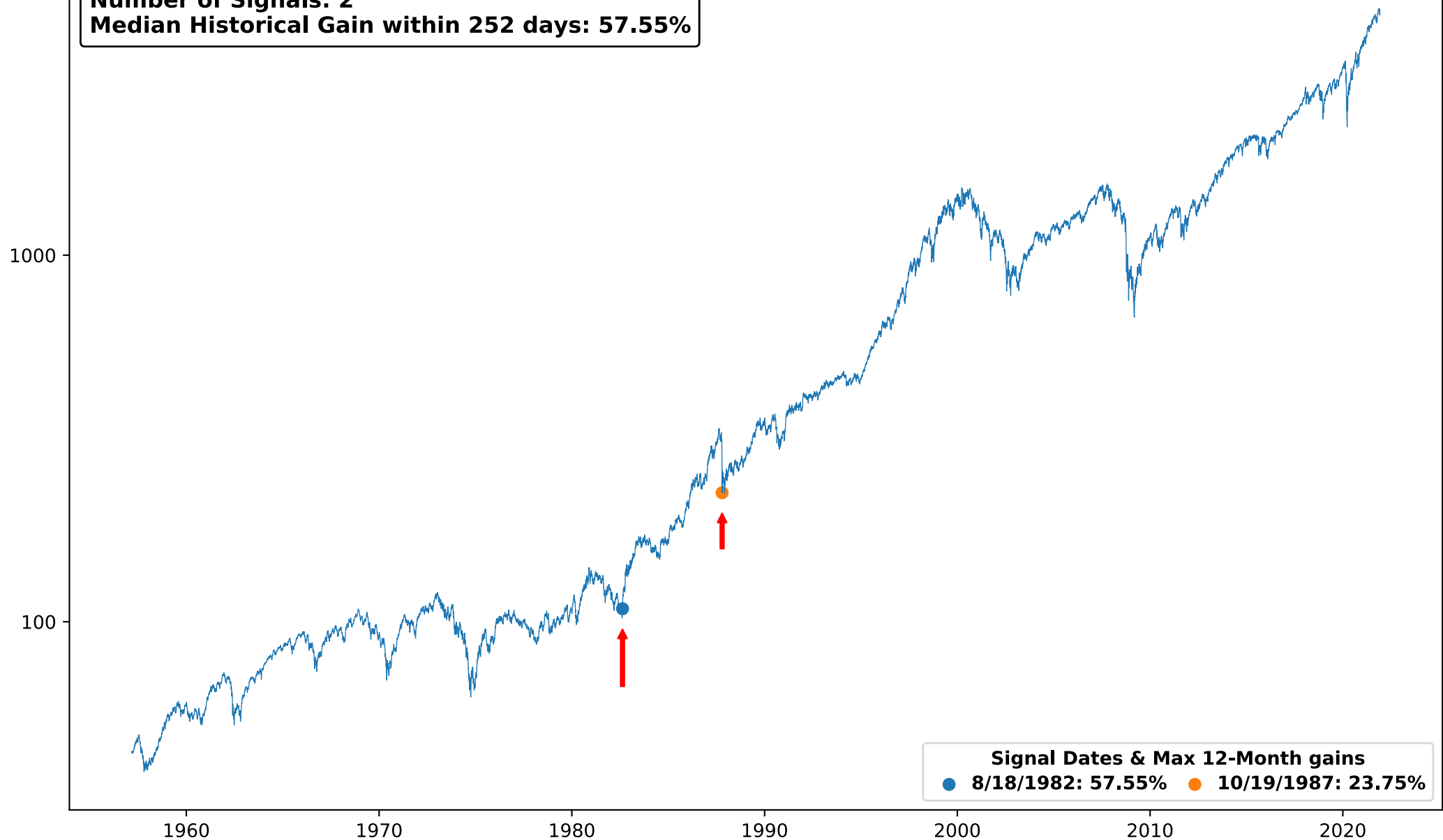
Buy Signal 22:
NASDAQ gained 1.5% on the day.
S&P 500 Percent of Stocks Lower than 60 Days Ago > 80%, 4-7 days ago.
Value Line Geometric Index closed 4.5% below its 19-Day MA 4-7 days ago.
Number of 52-week highs within the 500 S&P issues 2 or fewer, 4-7 days ago.
Net Up Volume as % of Total NYSE Volume (5-Day Smoothing) -40%, 4-7 days ago.
Ned Davis Research Overbought -Oversold Oscillator Davis 265 @17.50 or lower (Range 0-100) 4-7 days ago.
(Updated through 12/6/2021)

Number of Signals: 8
Median Historical Gain within 252 days: 24.49%



Buy Signal 23:
S&P 500 declined on the day and volume increased on the day.
The ratio of today's SP 500 volume to the Last 90 Days in which the S&P closed lower on higher volume is 2.27 to 1 or greater.
S&P 500 volume increased on the day. The ratio of today's SP 500 volume to the Last 250 Days in which the S&P closed on higher volume is 2.70 to 1 or greater.
S&P 500 volume increased on the day. The ratio of today's SP 500 volume to the Last 60 Days in which the S&P closed on higher volume is 2.33 to 1.
(Updated through 12/6/2021)

Number of Signals: 2
Median Historical Gain within 252 days: 57.55%



Buy Signal 24:
S&P 500 closed -7% or greater off its latest high. Has held the low for four days.
S&P 500 4-Day upside to downside Volume Breadth >3.5 to 1.
(Updated through 12/6/2021)

Number of Signals: 4
Median Historical Gain within 252 days: 20.38%



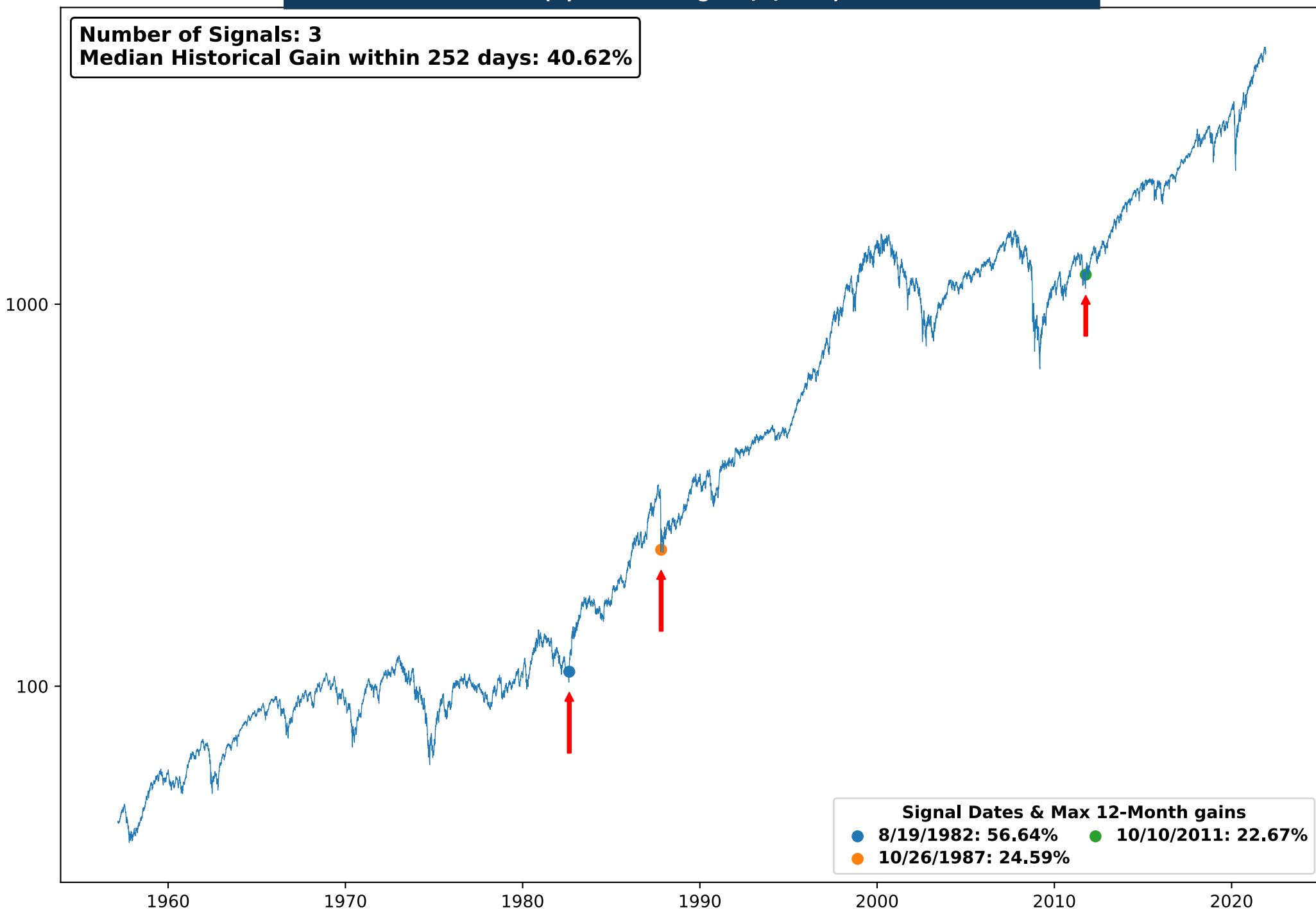
Buy Signal 25:
S&P 500 closed -7% or greater off its latest high. Has held the low for four days.
Dow Jones Industrial Average 1-Day Volume at 500-day New High.
(Updated through 12/6/2021)

Number of Signals: 2
Median Historical Gain within 252 days: 57.55%



Buy Signal 26:
S&P 500 closed -18% or greater off its latest high. Has held the low for five days.
S&P 500 Volume 5-Day average 2nd Highest in the Last 5.0 Years.
(Updated through 12/6/2021)

Number of Signals: 3
Median Historical Gain within 252 days: 40.62%



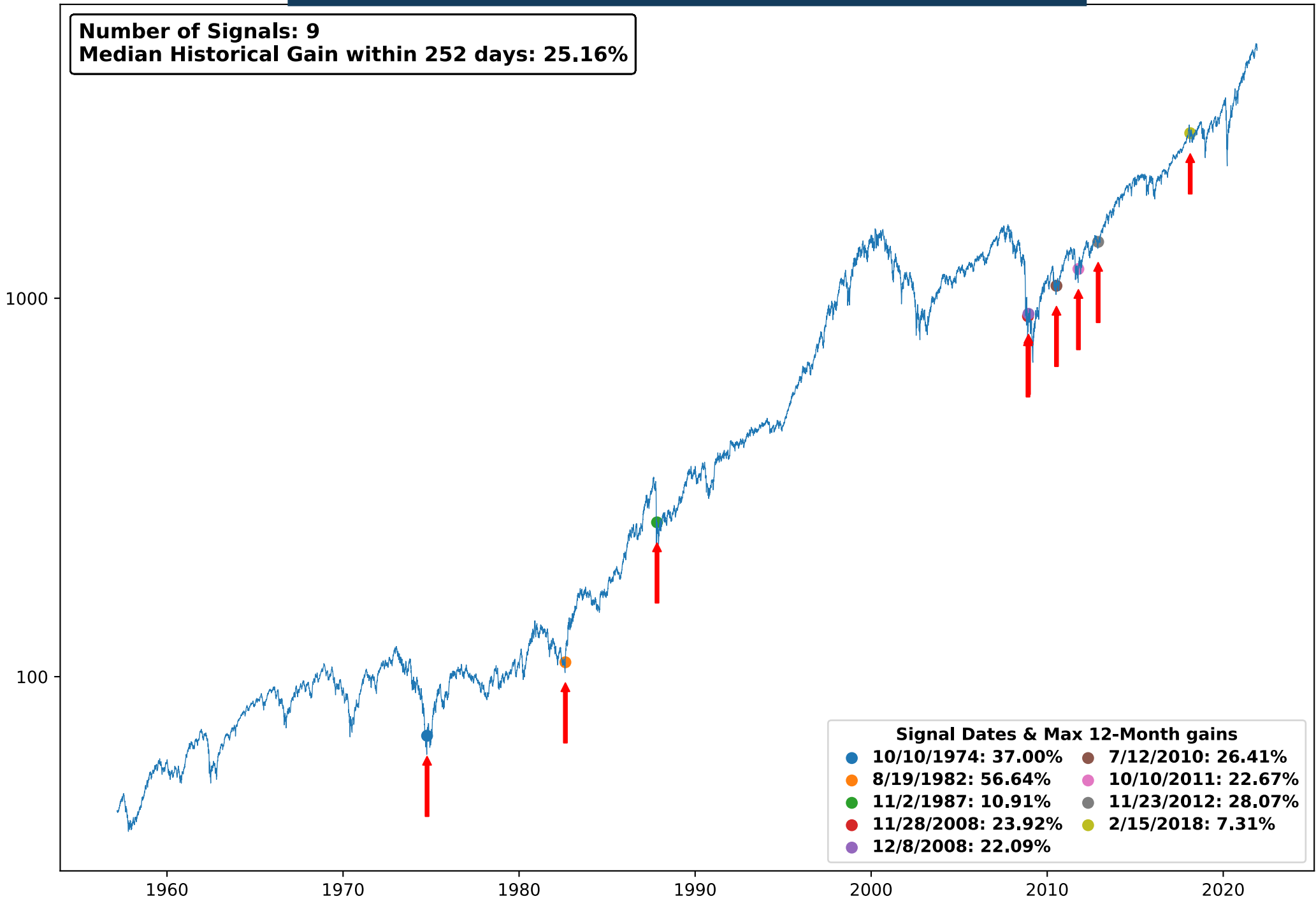
Signal Dates & Max 12-Month gains

● 8/19/1982: 56.64% ● 10/10/2011: 22.67%

- **10/26/1987: 24.59%**

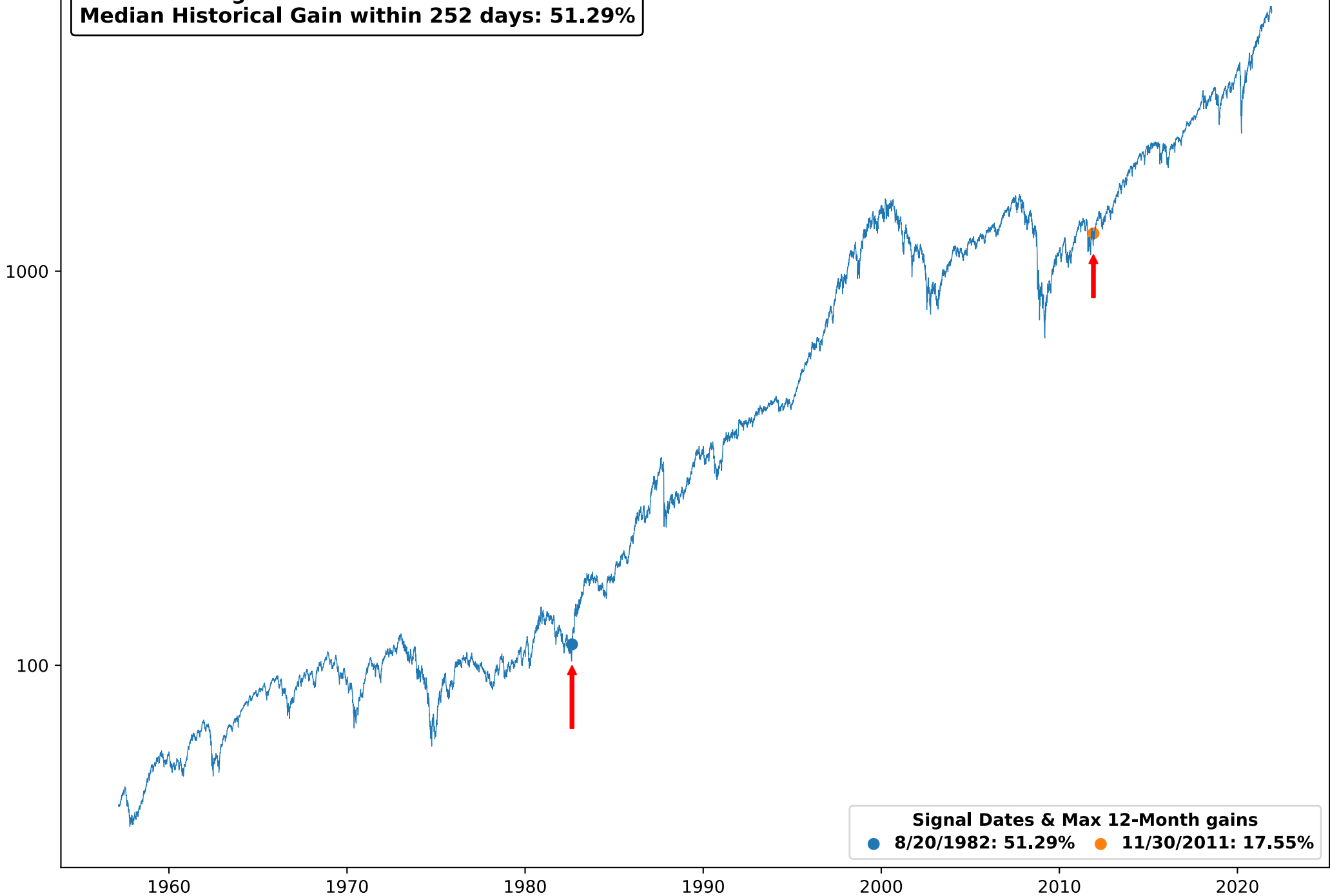
Buy Signal 27:
S&P 500 closed -7% or greater off its latest high. Has held the low for five days.
S&P 500 5-day Advances / 5 Day Declines > 2.7.
(Updated through 12/6/2021)

Number of Signals: 9
Median Historical Gain within 252 days: 25.16%



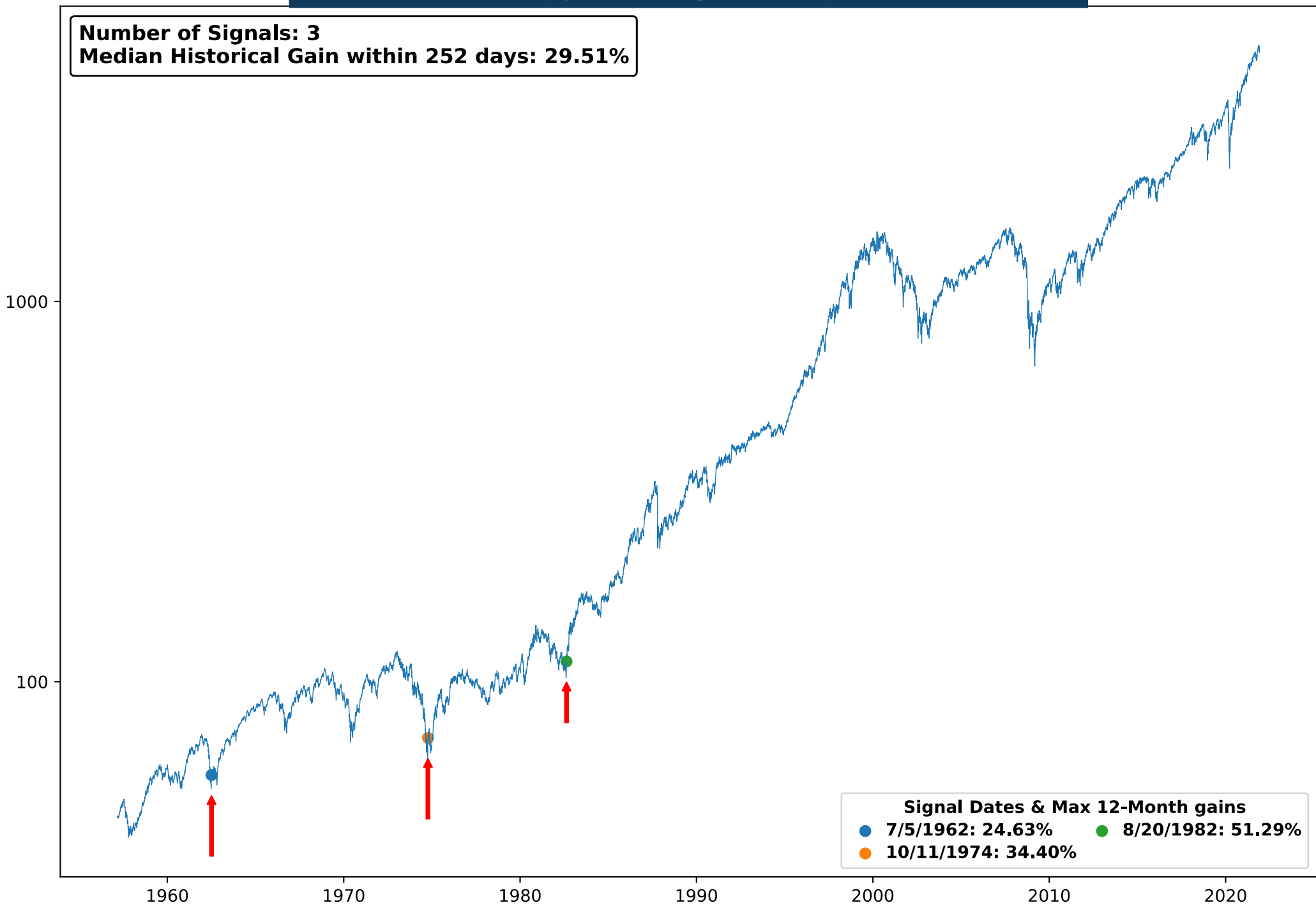
Buy Signal 28:
NYSE Upside to Downside Volume Ratio greater than 30/1 the second time in 4 days
(Updated through 12/6/2021)

Number of Signals: 2
Median Historical Gain within 252 days: 51.29%



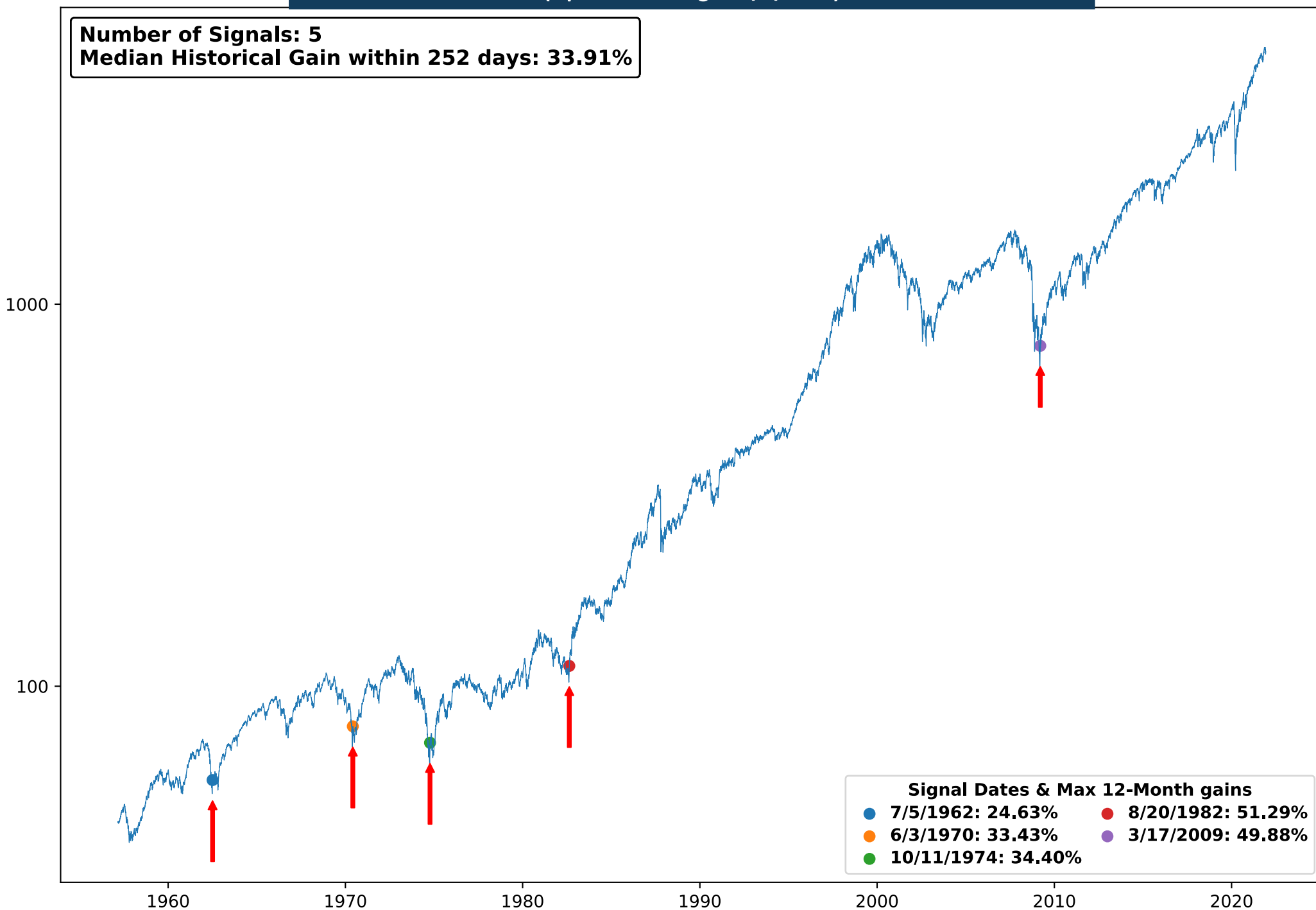
Buy Signal 29:
S&P 500 closes -18% or greater off its latest high. Has held the low for six days.
S&P 500 5-Day ROC Highest in 1260-Days.
(Updated through 12/6/2021)

Number of Signals: 3
Median Historical Gain within 252 days: 29.51%



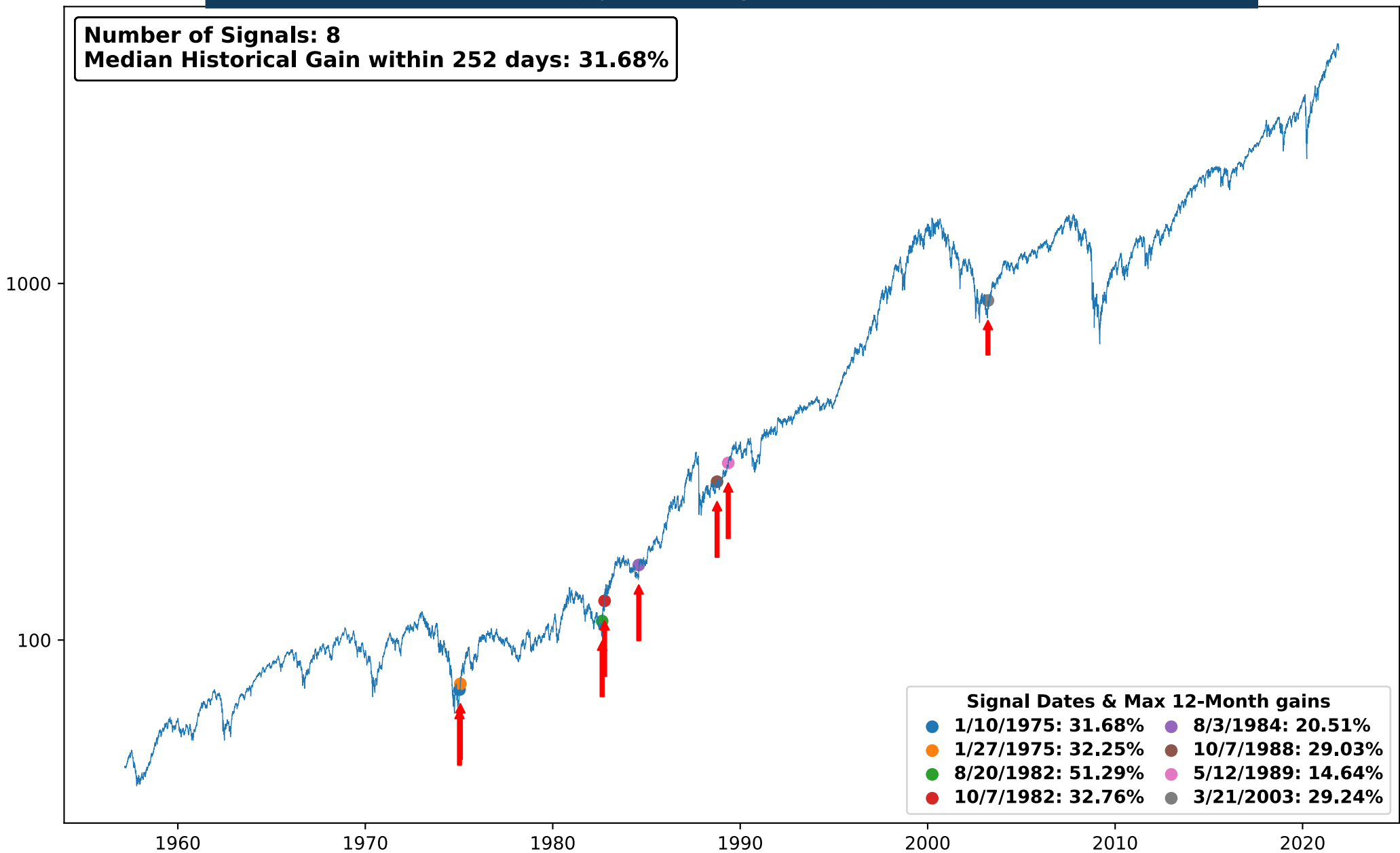
Buy Signal 30:
S&P 500 closed -18% or greater off its latest high. Has held the low for six days.
Net Up Volume as % of Total NYSE Volume (5-Day Smoothing) Above 45%.
(Updated through 12/6/2021)

Number of Signals: 5
Median Historical Gain within 252 days: 33.91%



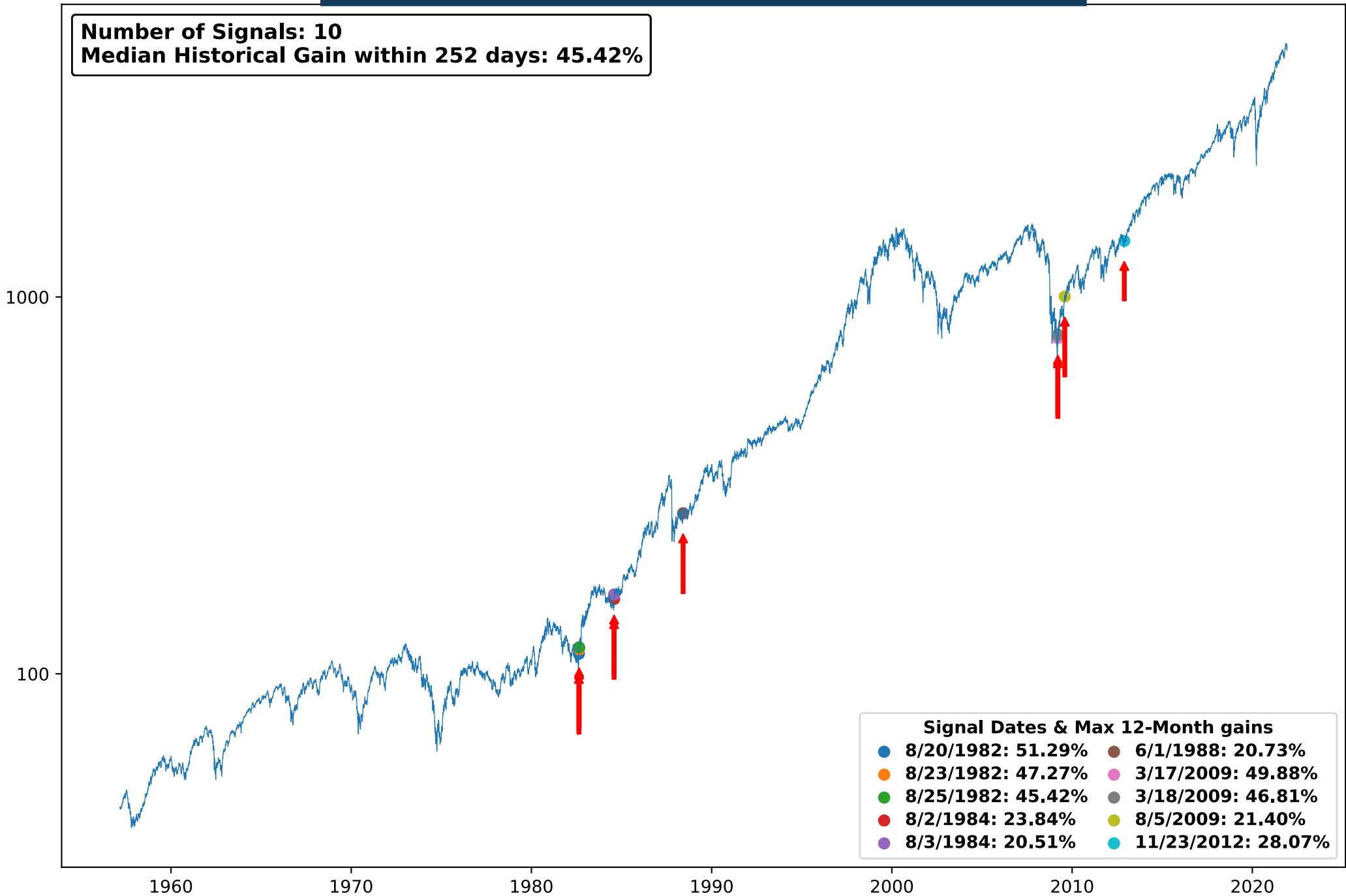
Buy Signal 31:
S&P 500 closed at New 30-Day High.
S&P 500 gained 9% from its latest 10% correction with no intervening higher days.
S&P 500 gained 2% on the day.
NYSE Closed up on the day on an increase in volume and volume is the Highest of the Last 15 Days
in which NYSE closed up on higher volume
S&P 500 Advances / Declines > 6.0.
(Updated through 12/6/2021)

Number of Signals: 8
Median Historical Gain within 252 days: 31.68%



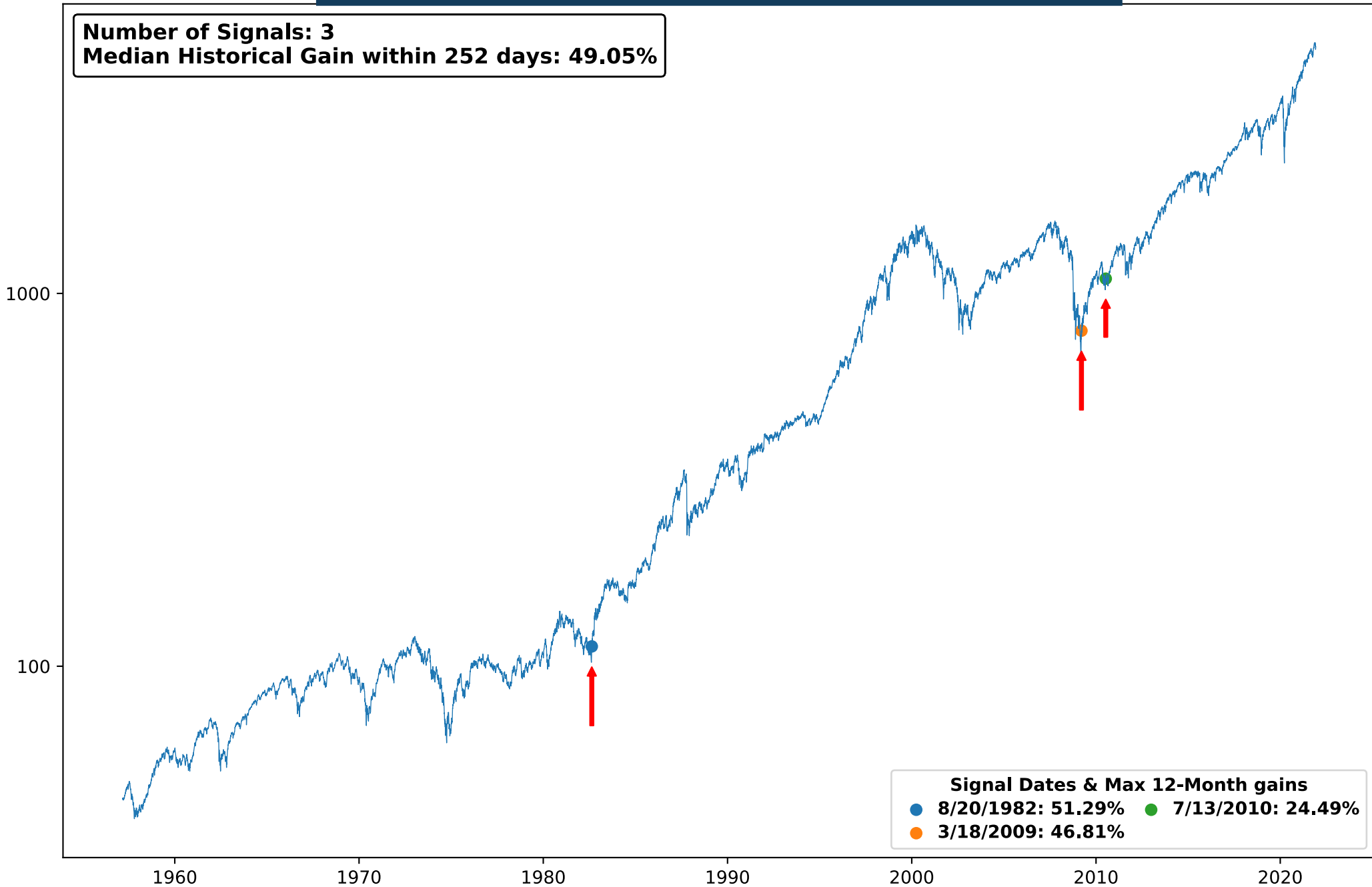
Buy Signal 32:
S&P 500 TRIN ≤ 0.5 .
NYSE Daily Upside to Downside Volume > 10 to 1 one to three days ago.
Net Up Volume as % of Total NYSE Volume (5-Day Smoothing) Above 45%.
(Updated through 12/6/2021)

Number of Signals: 10
Median Historical Gain within 252 days: 45.42%



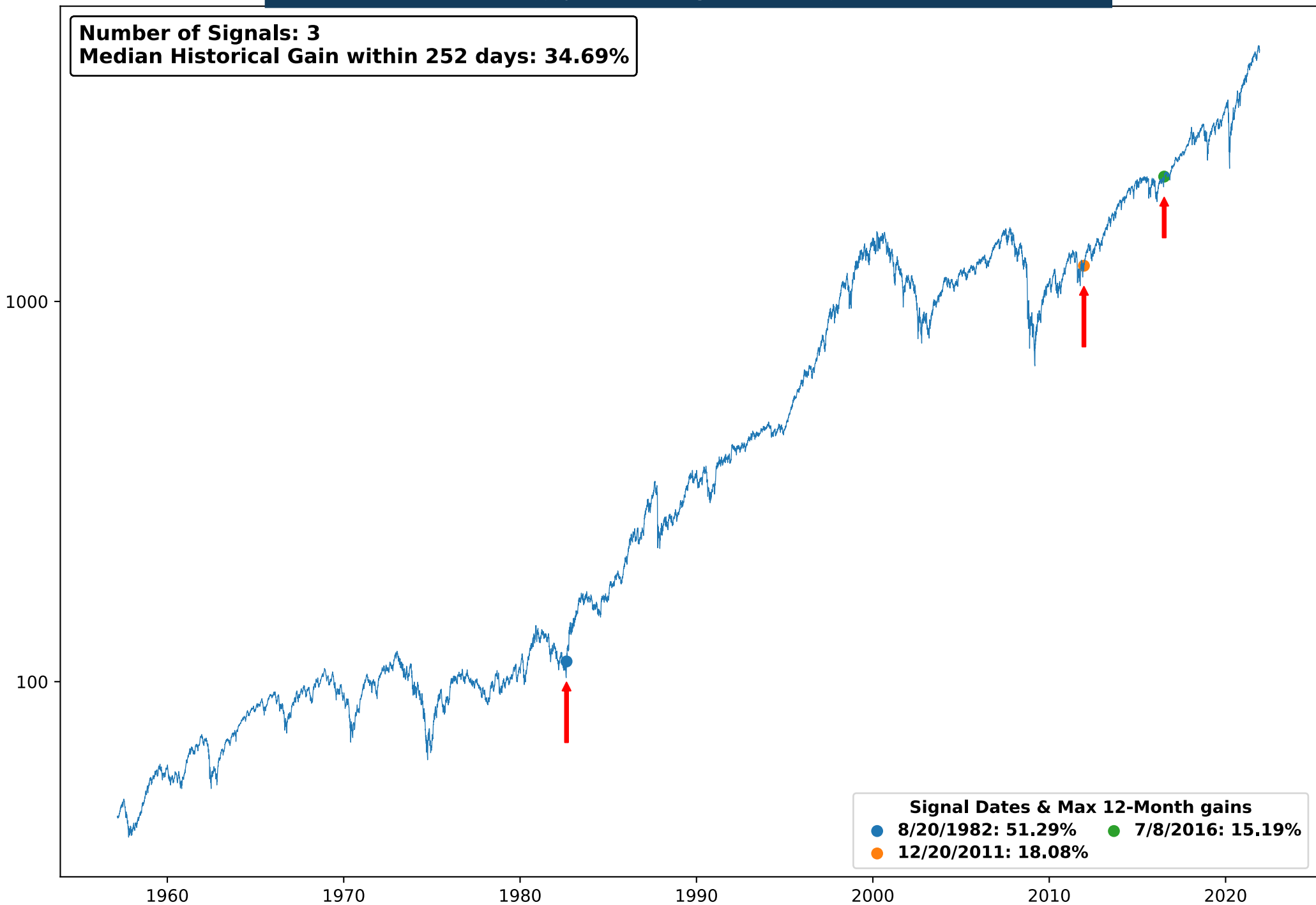
Buy Signal 33:
S&P 500 closed -5% or greater off its latest high. Has held the low 4-7 days.
S&P 500 gained 1.0% on the day
NDR Multi cap (s241) 252 new Highs and Lows <25% on the day of the low.
S&P 500 5-day Advances / 5 Day Declines > 2.8.
(Updated through 12/6/2021)

Number of Signals: 3
Median Historical Gain within 252 days: 49.05%



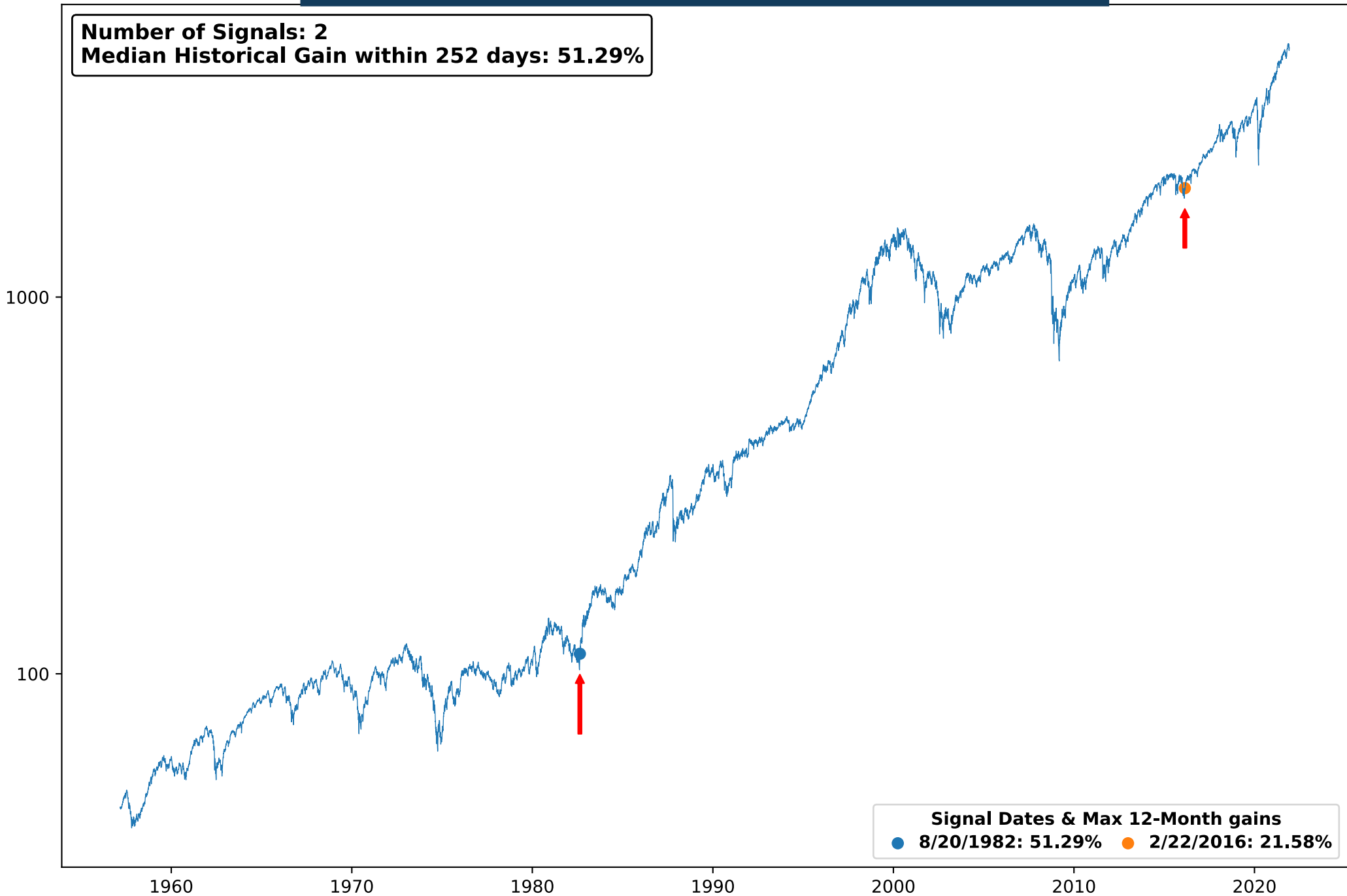
Buy Signal 34:
S&P 500 Upside to Downside Volume Ratio greater than 65 to 1.
S&P 500 Upside volume to Downside Volume 17 to 1 for the second time in 10 days.
(Updated through 12/6/2021)

Number of Signals: 3
Median Historical Gain within 252 days: 34.69%



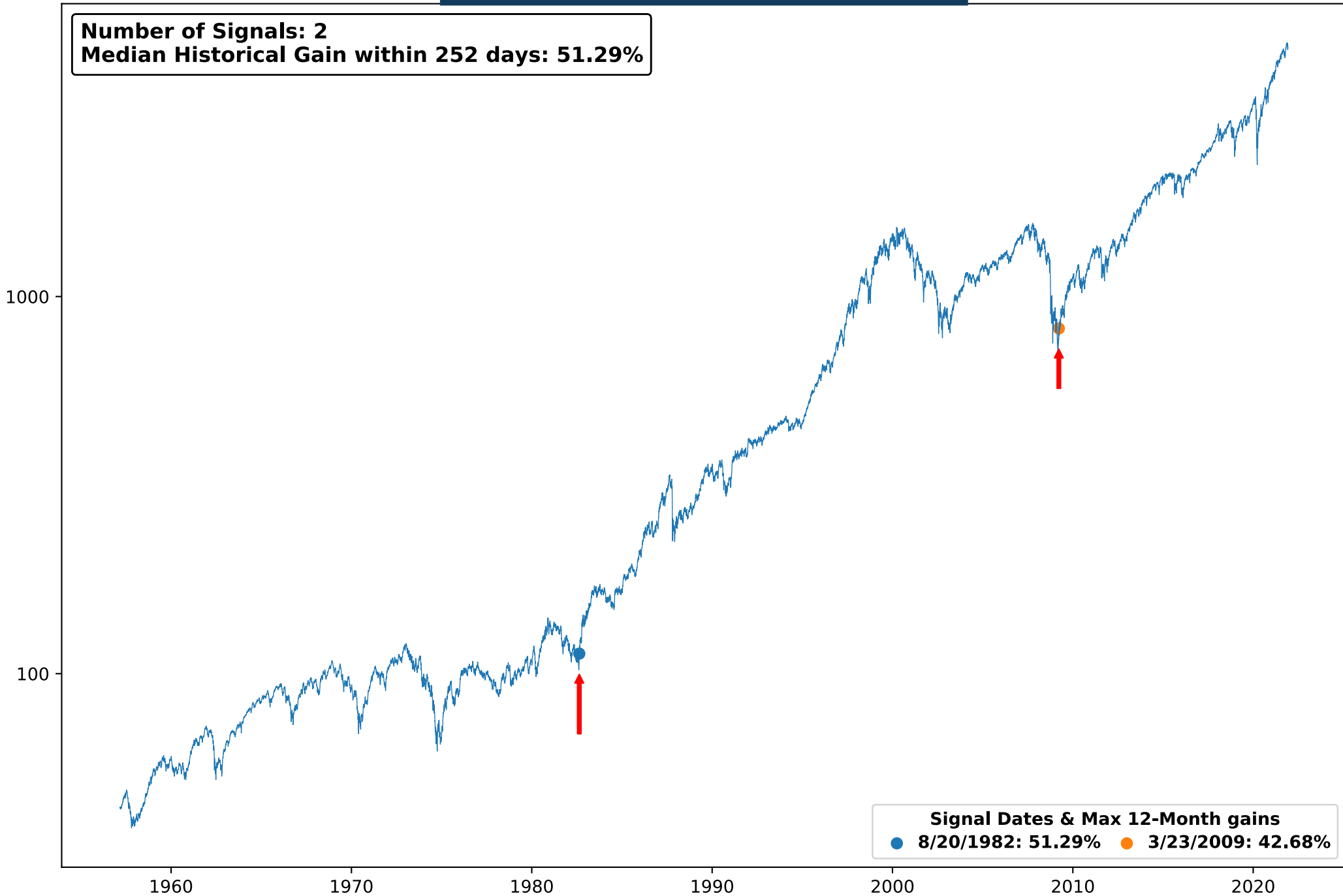
Buy Signal 35:
S&P 500 closed -7% or greater off its latest high. Has held the low for six days.
NYSE Daily Upside to Downside Volume > 15 to 1.
NASDAQ 7-Day MA of the Adv/Dec 1.52/1
(Updated through 12/6/2021)

Number of Signals: 2
Median Historical Gain within 252 days: 51.29%



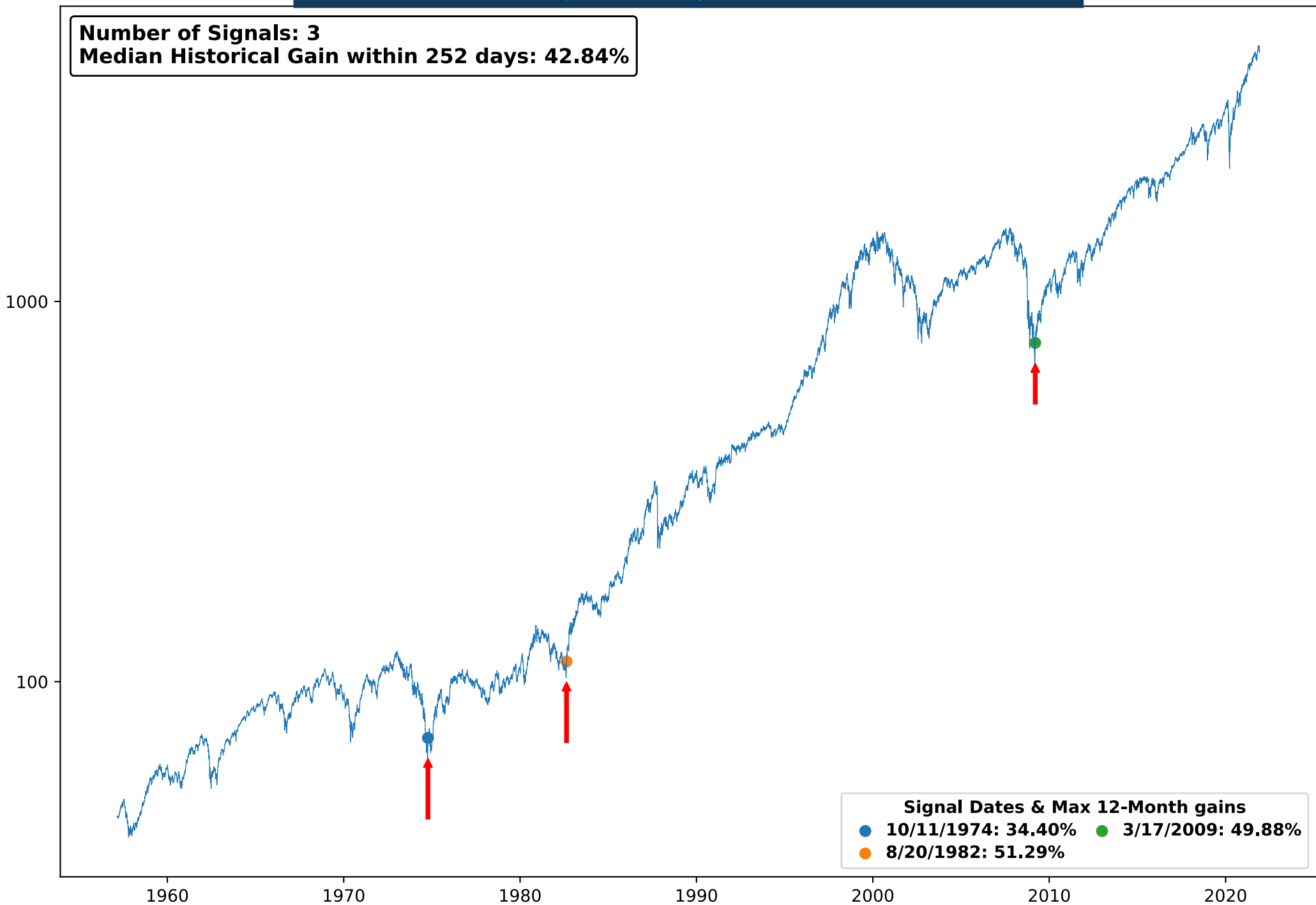
Buy Signal 36:
NYSE Daily Upside to Downside Volume > 15 to 1.
S&P 500 gains 3.5% on the day.
S&P 500 10-Day ROC Highest in 180-Days.
(Updated through 12/6/2021)

Number of Signals: 2
Median Historical Gain within 252 days: 51.29%



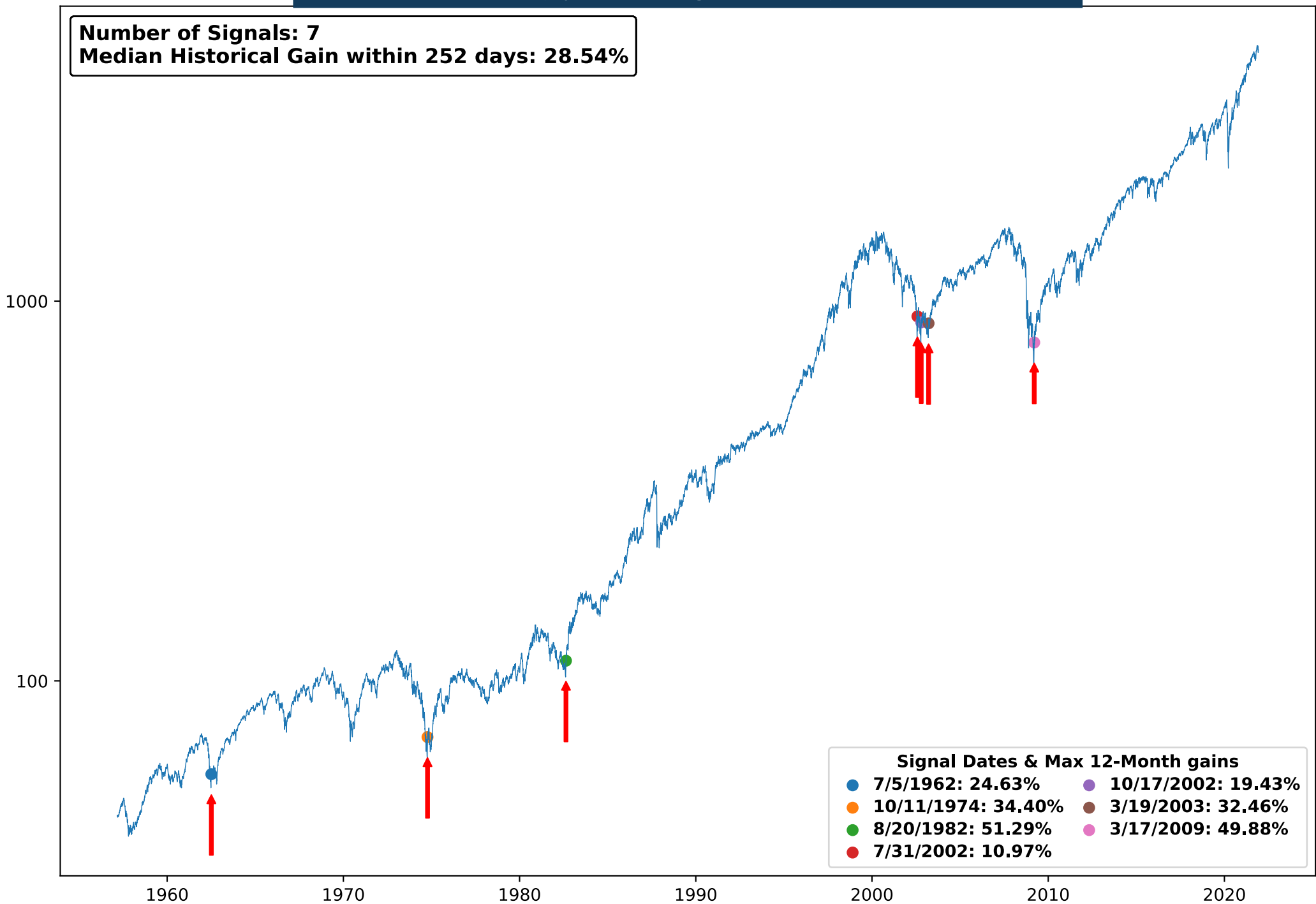
Buy Signal 37:
S&P 500 closed -7% or greater off its latest high. Has held the low for six days.
S&P 500 10-day ROC > 8%.
(Updated through 12/6/2021)

Number of Signals: 3
Median Historical Gain within 252 days: 42.84%



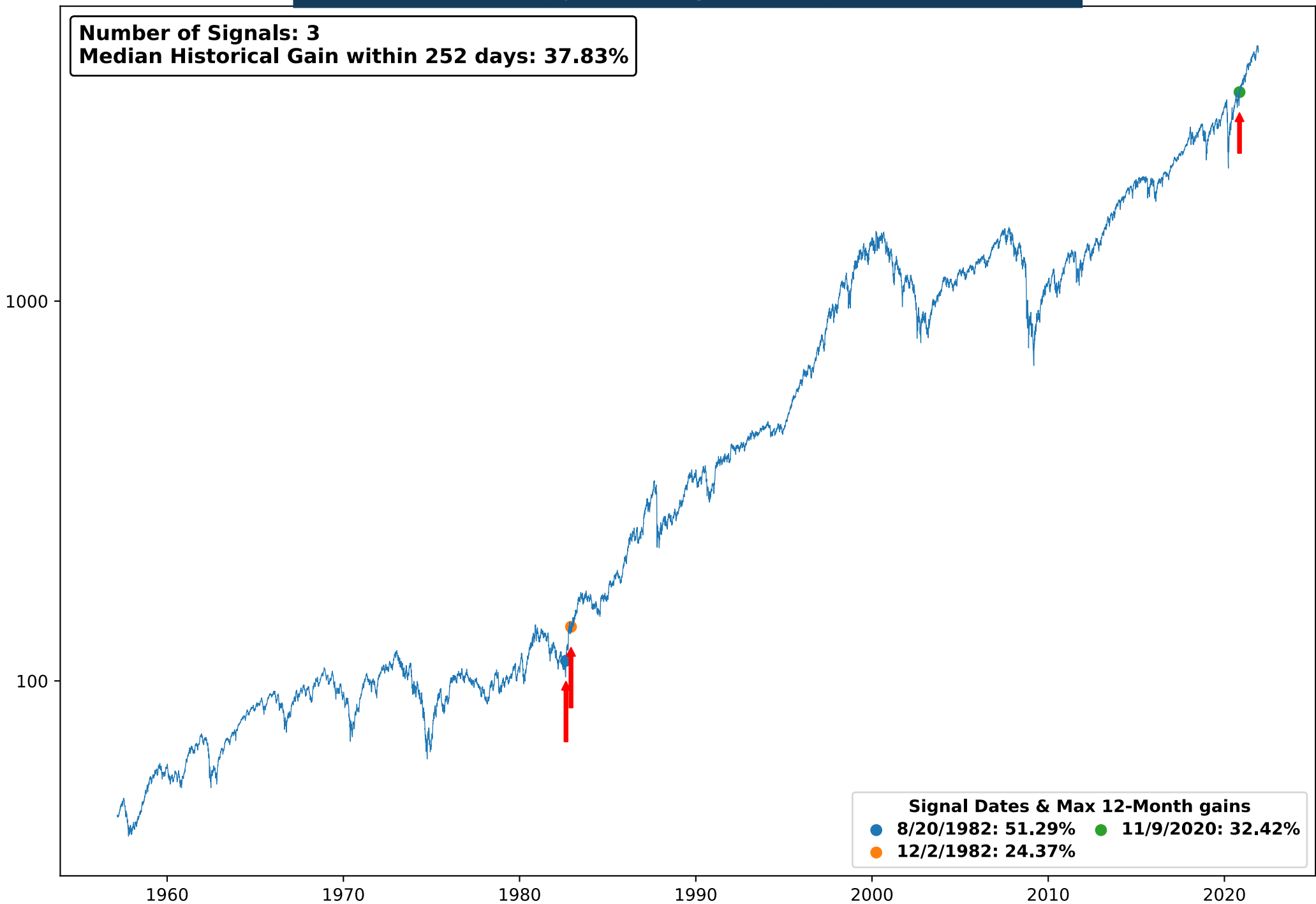
Buy Signal 38:
S&P 500 closed -7% or greater off its latest high. Has held the low for six days.
S&P 500 5-day ROC > 8%.
(Updated through 12/6/2021)

Number of Signals: 7
Median Historical Gain within 252 days: 28.54%



Buy Signal 39:
S&P 500 closed -7% or greater off its latest high. Has held the low for six days.
S&P 500 Number of New 252-Day New HIGH > 50.
(Updated through 12/6/2021)

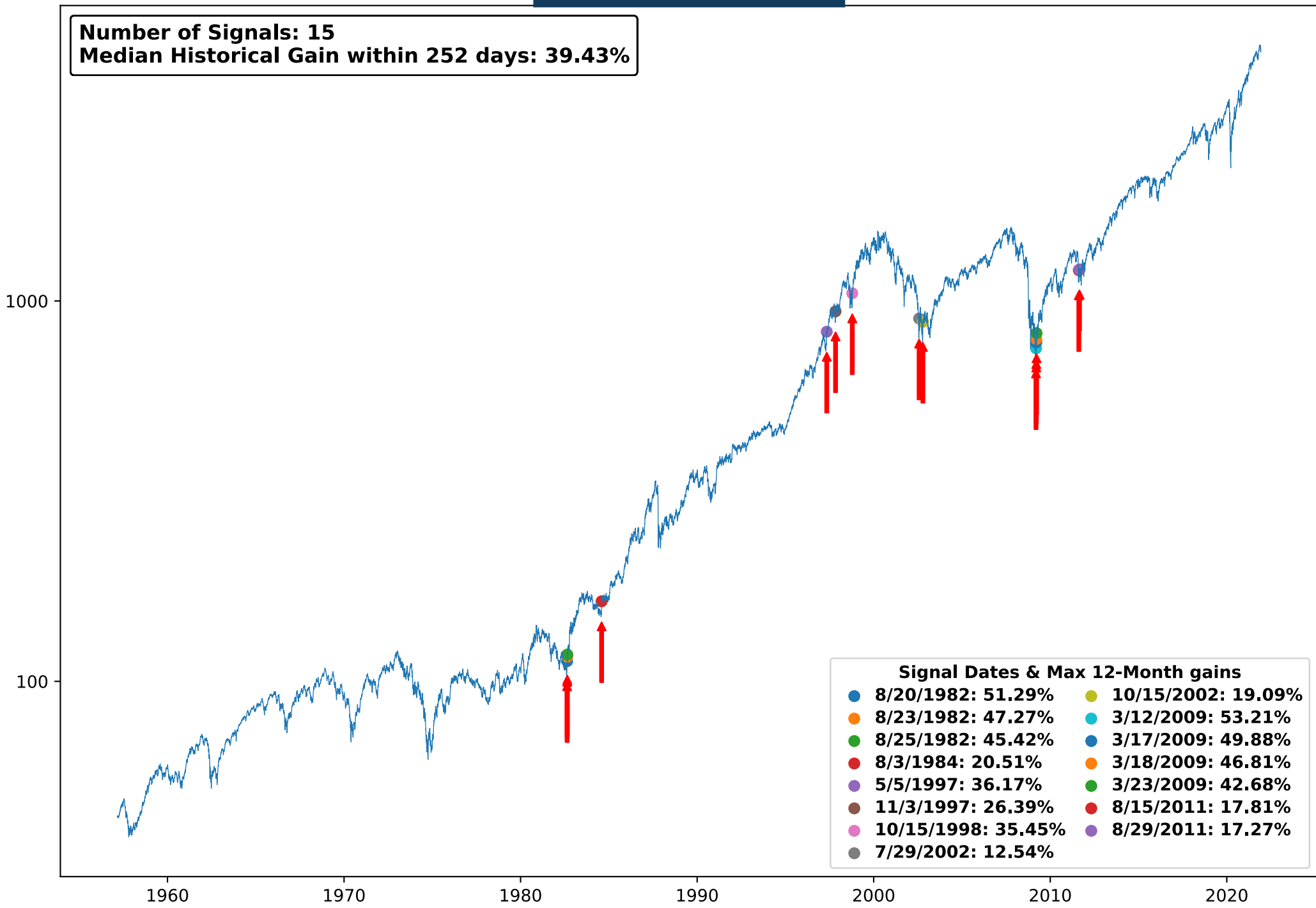
Number of Signals: 3
Median Historical Gain within 252 days: 37.83%



Signal Dates & Max 12-Month gains
● 8/20/1982: 51.29% ● 11/9/2020: 32.42%
● 12/2/1982: 24.37%

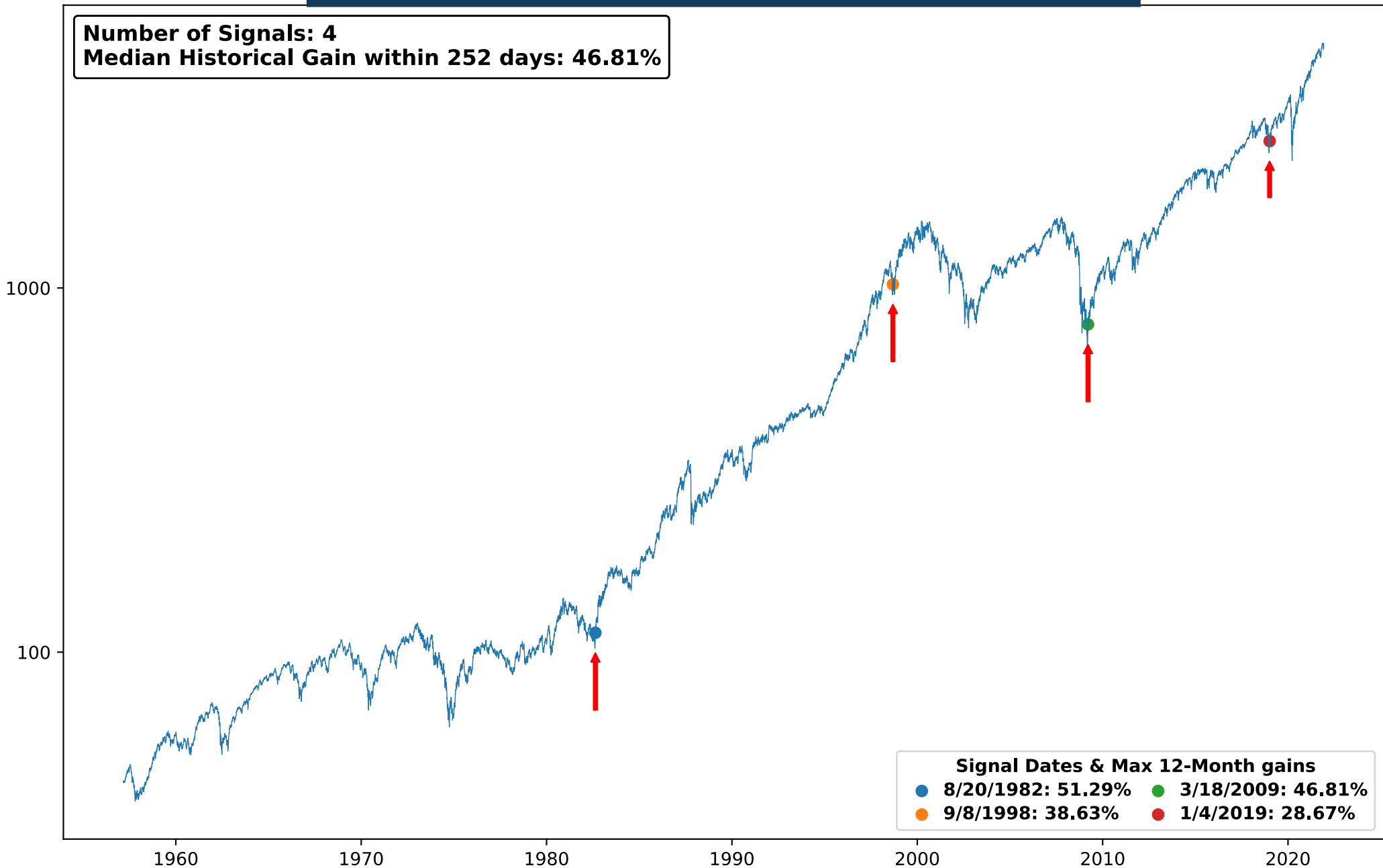
Buy Signal 40:
S&P 500 TRIN ≤ 0.5 .
S&P 500 5-day ROC > 7%
(Updated through 12/6/2021)

Number of Signals: 15
Median Historical Gain within 252 days: 39.43%



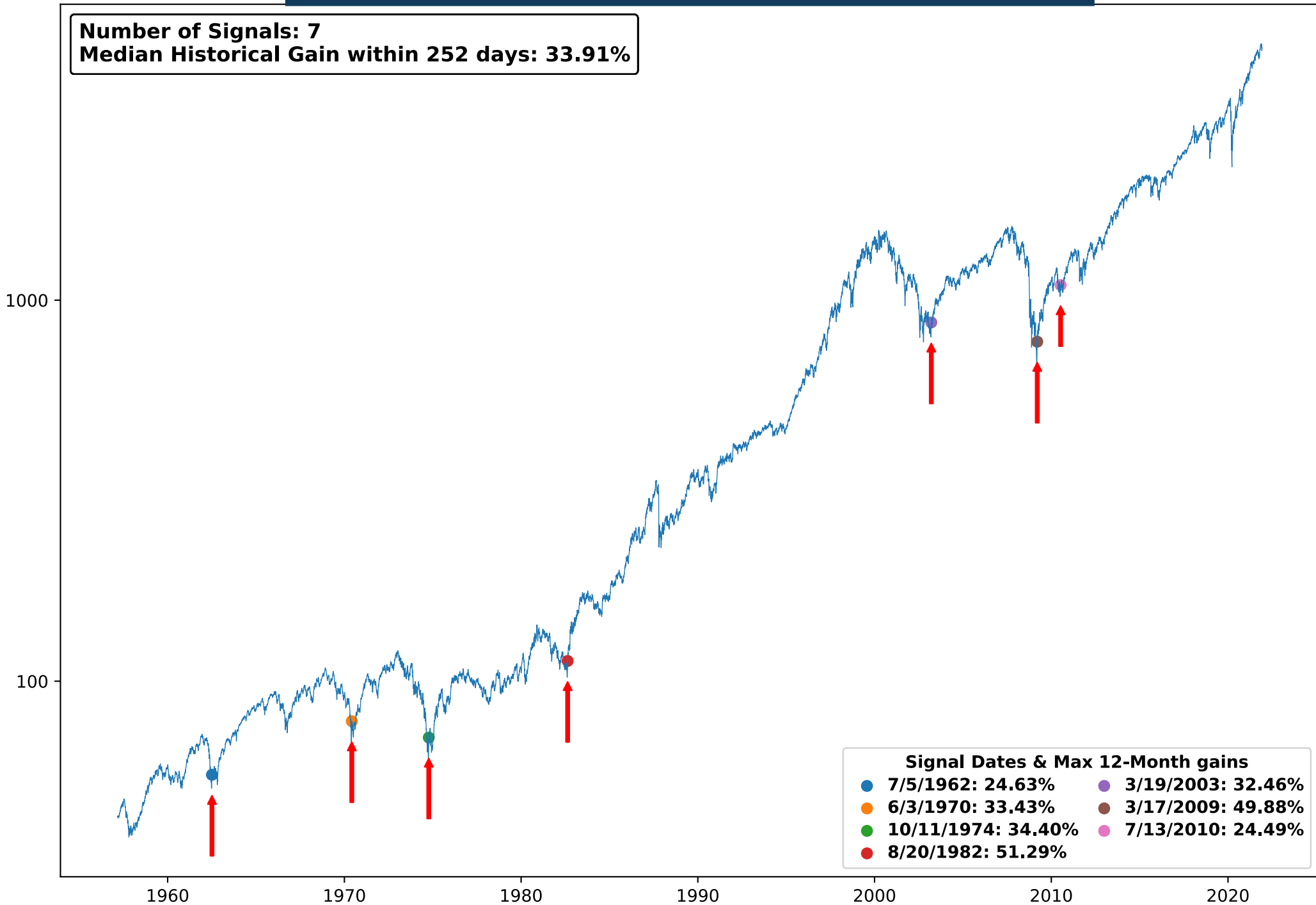
Buy Signal 41:
S&P 500 TRIN ≤ 0.5 .
NYSE Up Down Volume Ratio greater than 9 to 1.
S&P 500 closes -15% or greater off its latest high. Has held the low for six days.
S&P 500 gains $\geq 1\%$ during days 4-7 off the low.
NYSE Volume is greater than previous day's
(Updated through 12/6/2021)

Number of Signals: 4
Median Historical Gain within 252 days: 46.81%



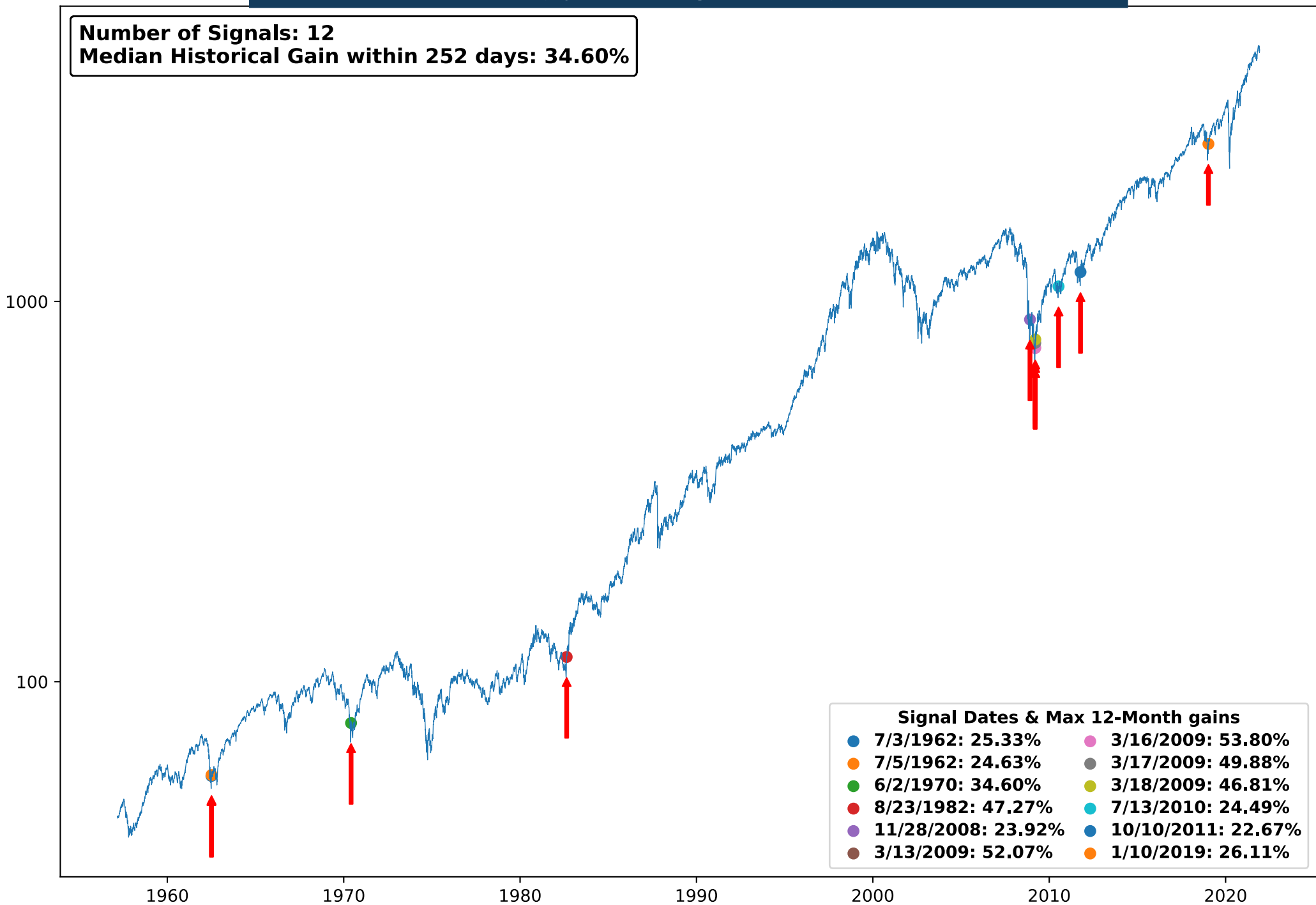
Buy Signal 42:
S&P 500 closed -14% or greater off its latest high. Has held the low for six days.
Net Up Volume as % of Total NYSE Volume (5-Day Smoothing) Above 45%.
(Updated through 12/6/2021)

Number of Signals: 7
Median Historical Gain within 252 days: 33.91%



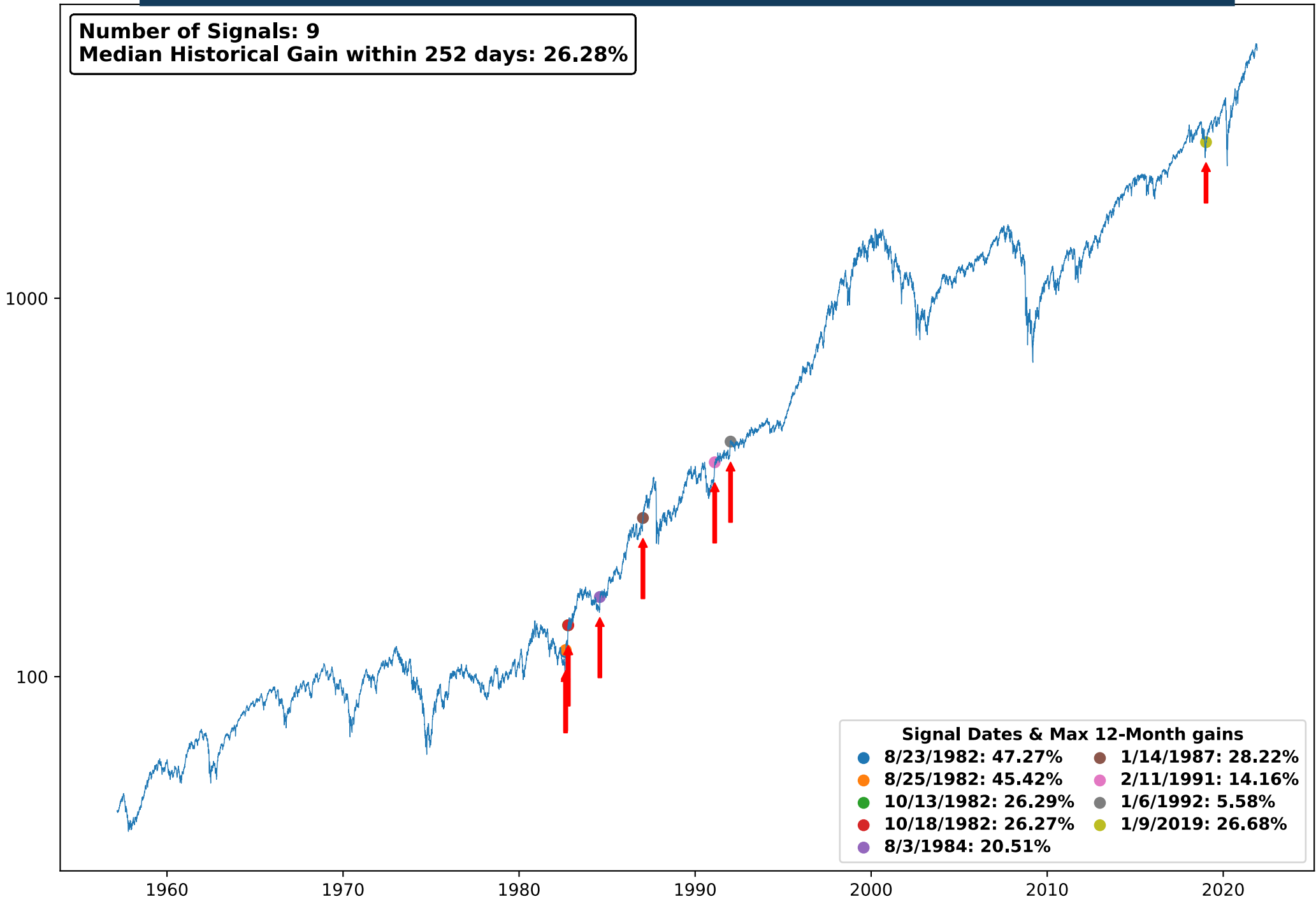
Buy Signal 43:
Net Up Volume as % of Total NYSE Volume (5-Day Smoothing) Above 50%.
S&P 500 declines -15% from a high with no intervening lower days within past 11 days.
(Updated through 12/6/2021)

Number of Signals: 12
Median Historical Gain within 252 days: 34.60%



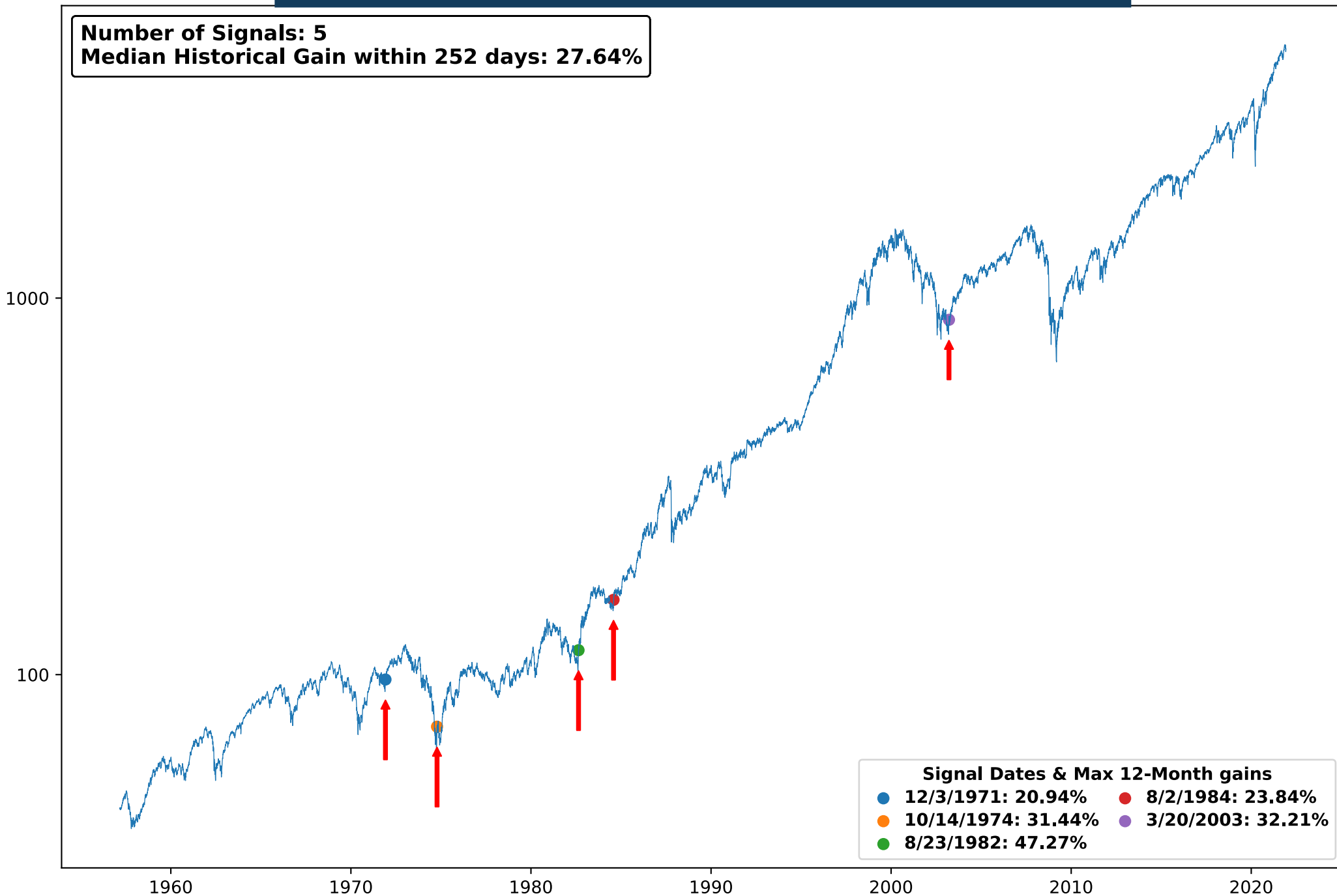
Buy Signal 44:
NDR (S55a) Multi-Cap Equity Series 10-Day Advancing Volume / (10-Day Advancing + Declining Volume) > 70.
NYSE 5-day average total daily volume highest in 126 days within the last 20 days.
(Updated through 12/6/2021)

Number of Signals: 9
Median Historical Gain within 252 days: 26.28%



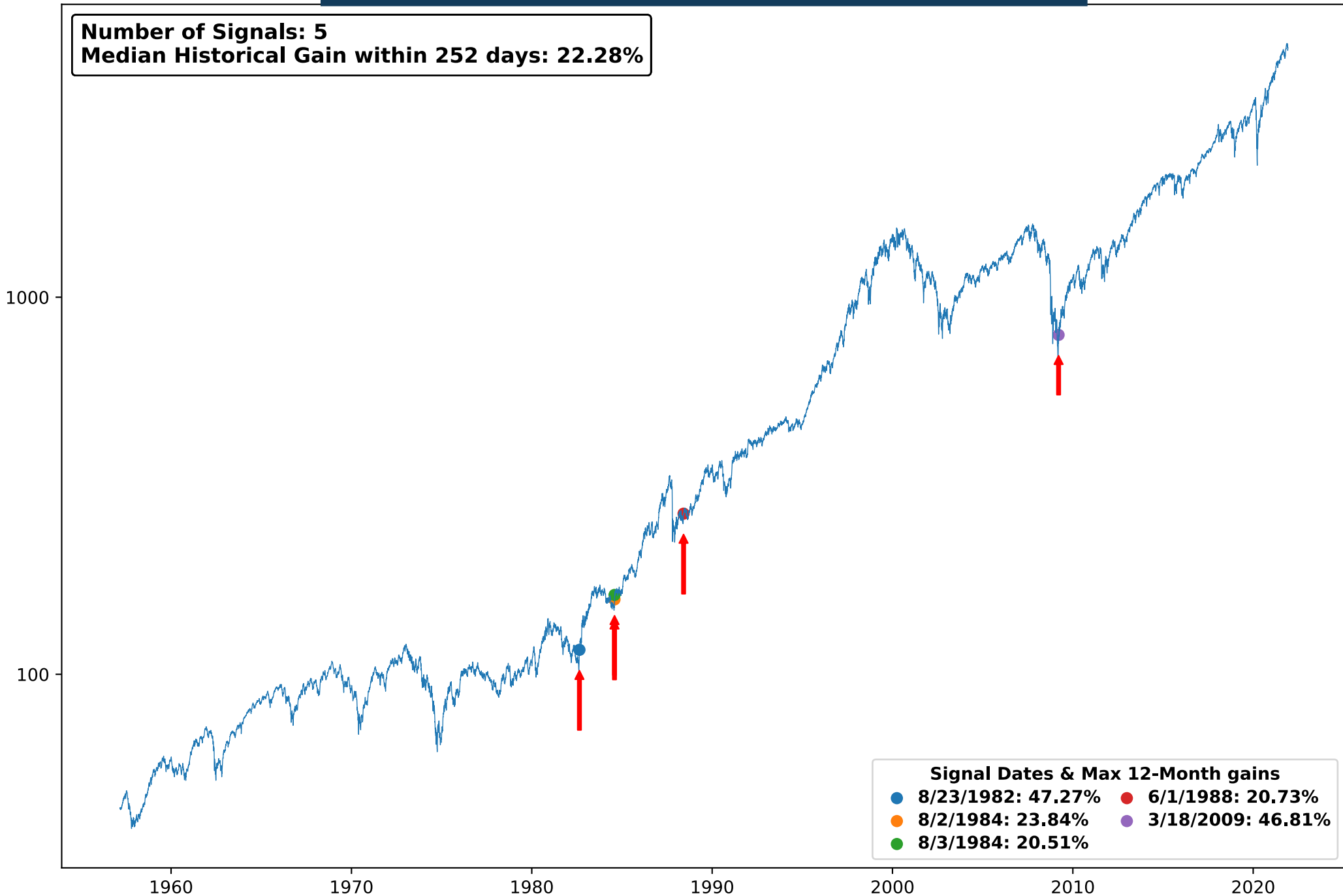
Buy Signal 45:
S&P 500 closed -12% or greater off its latest high. Has held the low for seven days.
S&P 500 closed at New 30-Day High.
S&P 500 gained 6% from its latest 10% Correction with no intervening higher days.
(Updated through 12/6/2021)

Number of Signals: 5
Median Historical Gain within 252 days: 27.64%



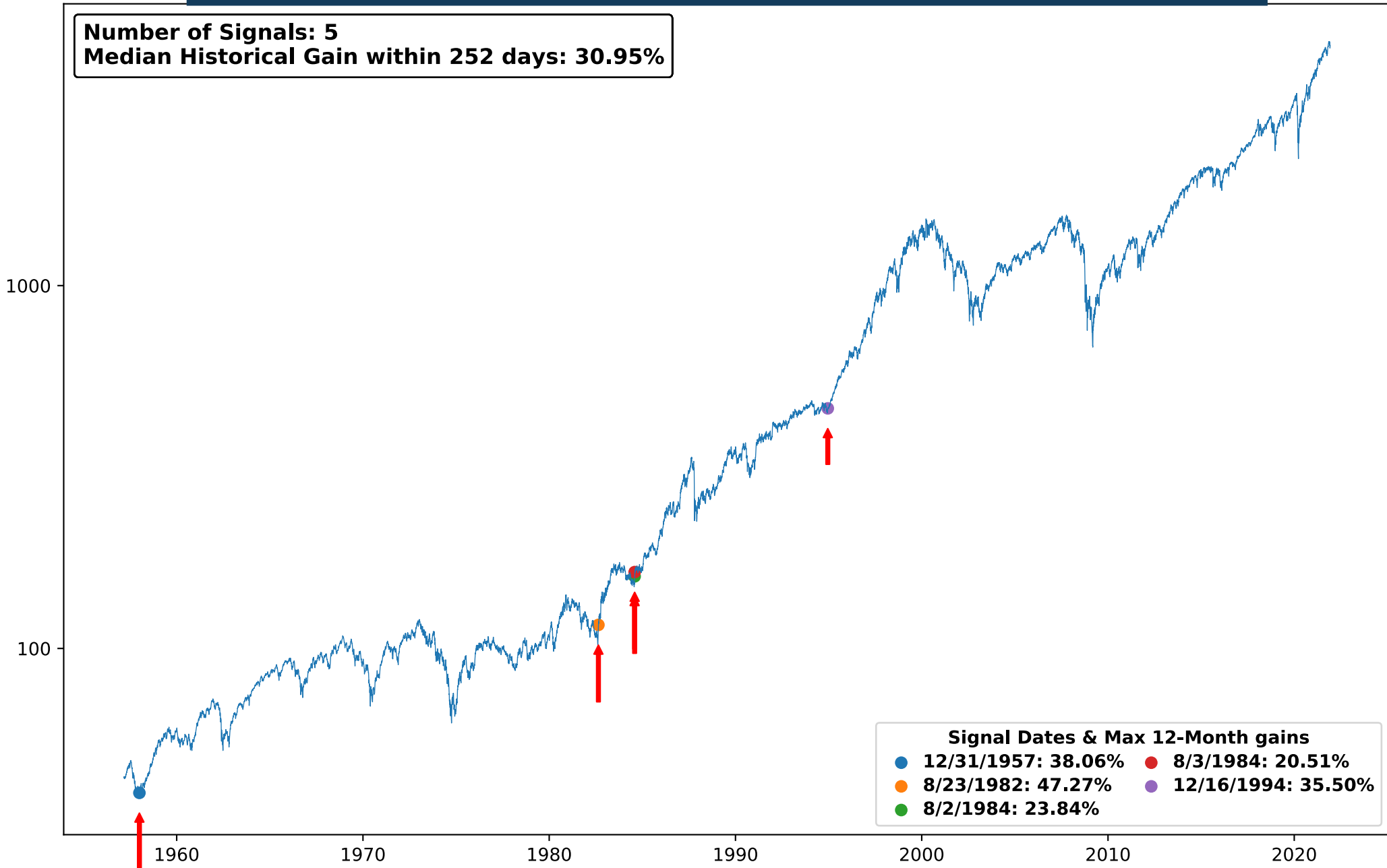
Buy Signal 46:
S&P 500 TRIN ≤ 0.5 two days in a row.
NYSE Daily Upside to Downside Volume > 10 to 1.
Net Up Volume as % of Total NYSE Volume (5-Day Smoothing) Above 45%.
(Updated through 12/6/2021)

Number of Signals: 5
Median Historical Gain within 252 days: 22.28%



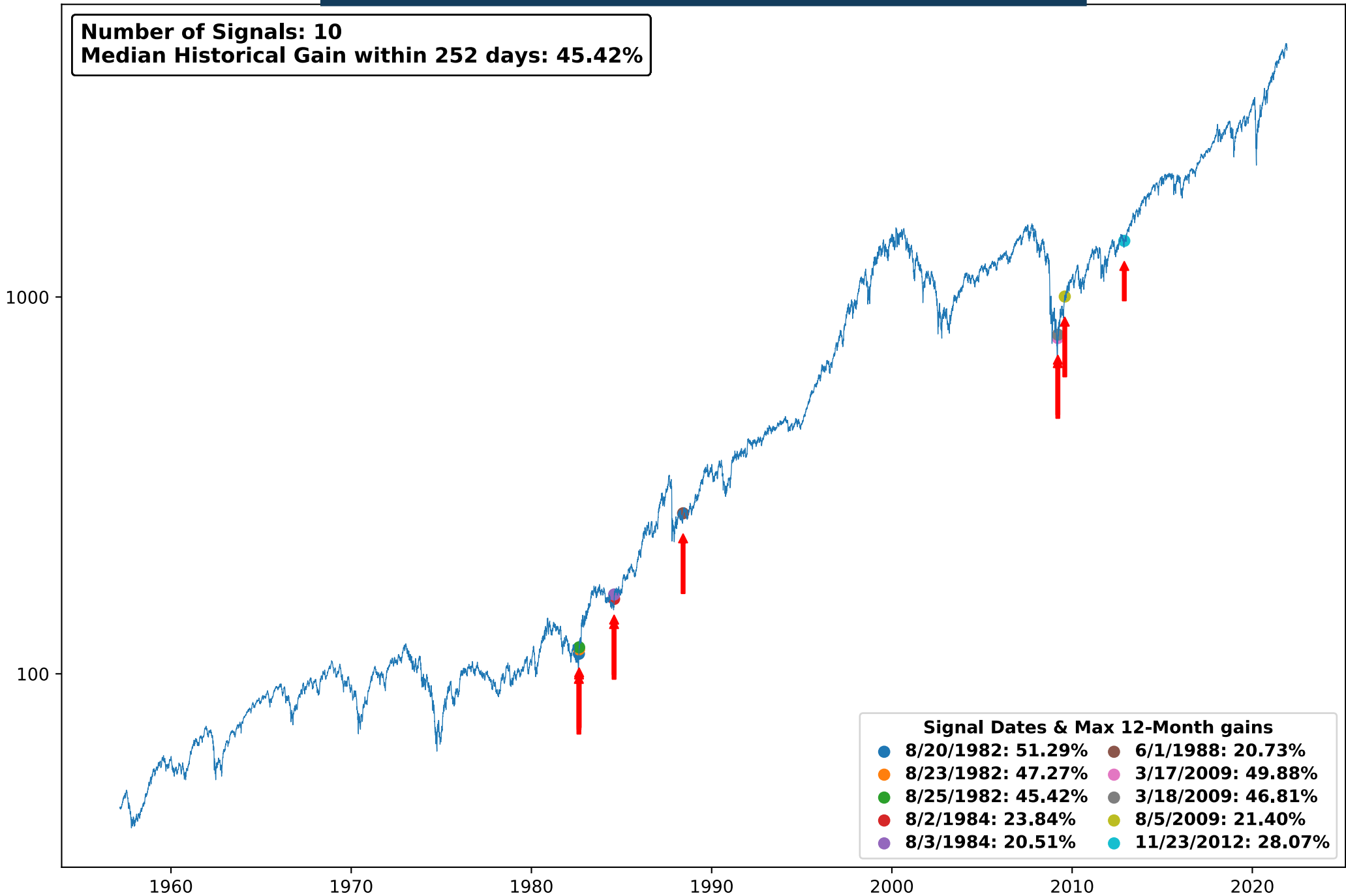
Buy Signal 47:
S&P 500 closes up on the day.
Volume rises on the day.
Volume is greatest of the last 250 days when volume rose on an up day.
S&P 500 declined -5% or greater off its latest high. Has held the low for four to seven days into today.
S&P 500 gained >1.0% on the day.
(Updated through 12/6/2021)

Number of Signals: 5
Median Historical Gain within 252 days: 30.95%



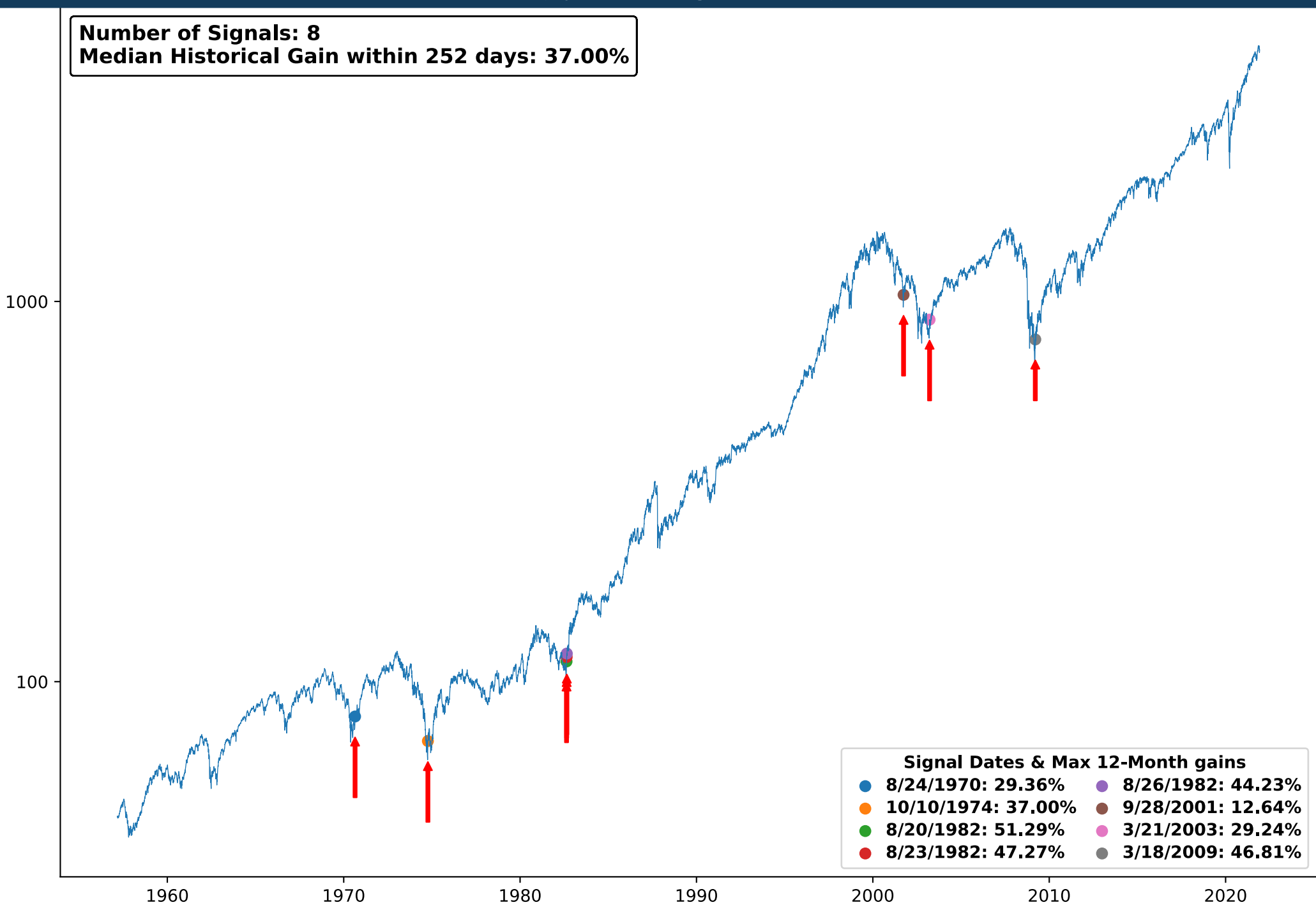
Buy Signal 48:
S&P 500 TRIN ≤ 0.5 .
NYSE Daily Upside to Downside Volume > 10 to 1 in the prior 1-3 days.
Net Up Volume as % of Total NYSE Volume (5-Day Smoothing) Above 45%.
(Updated through 12/6/2021)

Number of Signals: 10
Median Historical Gain within 252 days: 45.42%



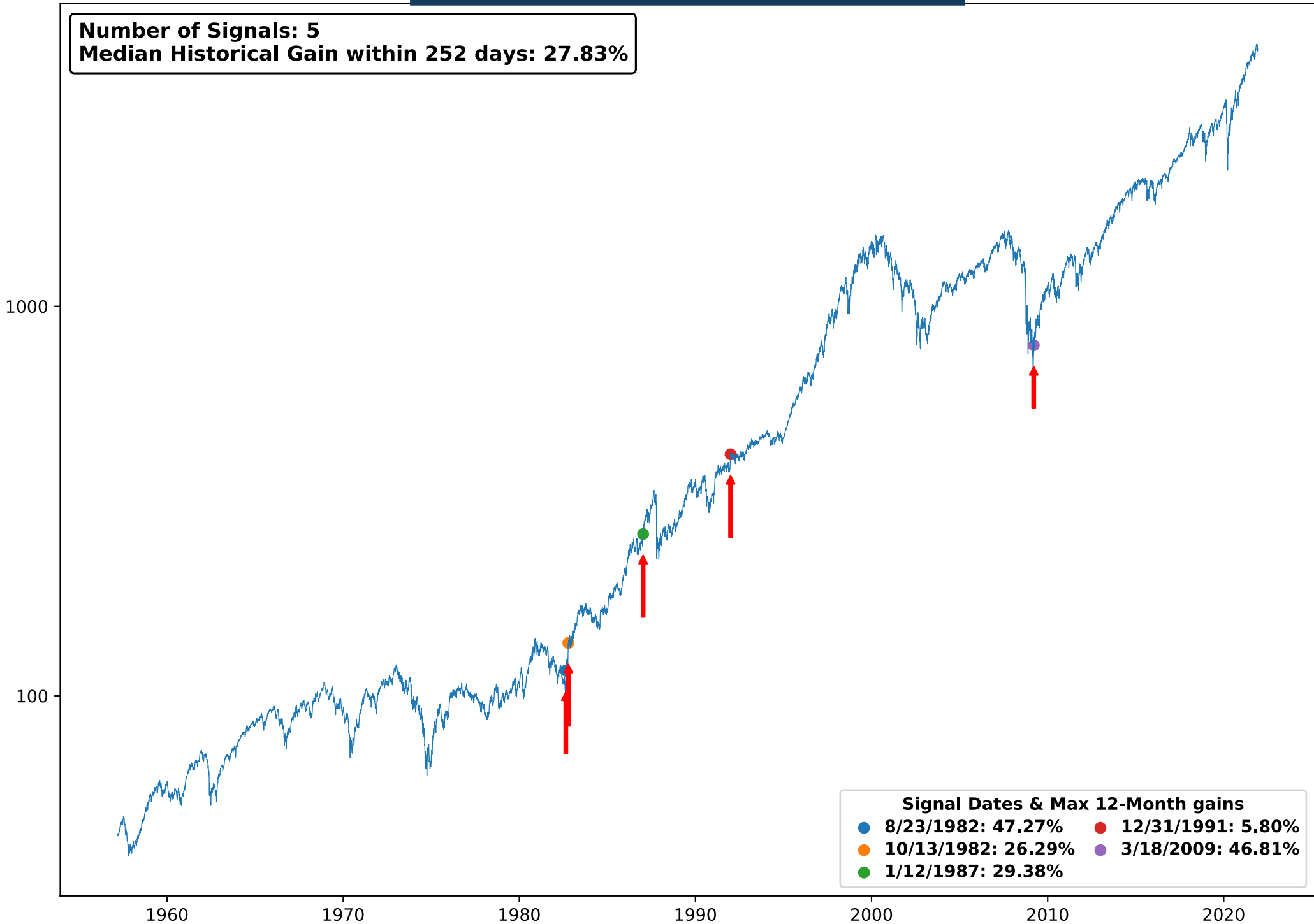
Buy Signal 49:
NYSE Closes up on the day on an increase in volume and Volume is the Highest of the Last 15 Days in which NYSE closed on higher volume.
S&P 500 Five-Day Rate of Change > 7.4%.
(Updated through 12/6/2021)

Number of Signals: 8
Median Historical Gain within 252 days: 37.00%



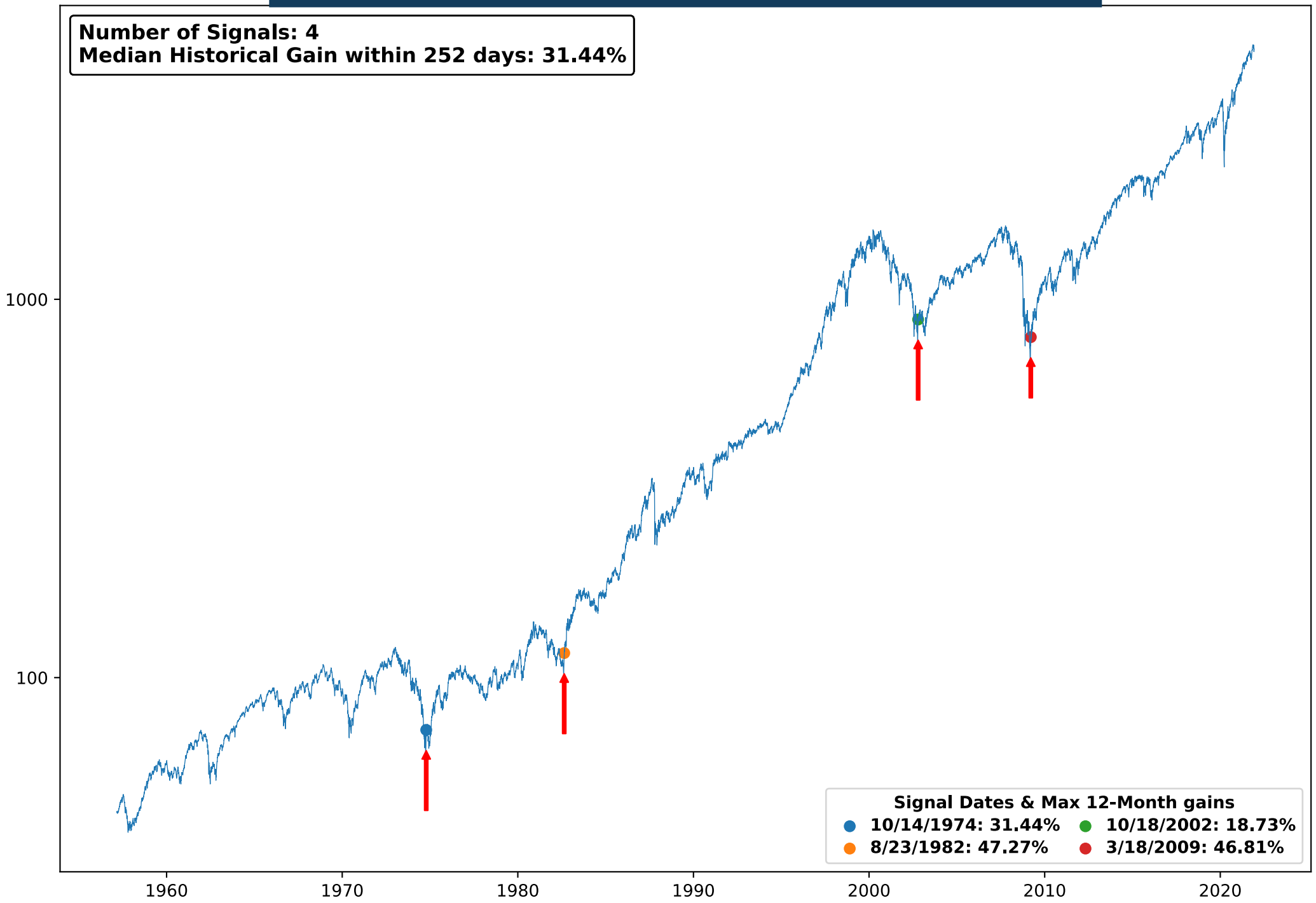
Buy Signal 50:
S&P 500 7-Day Advances / 7-Day Declines Ratio > 3.25
(Updated through 12/6/2021)

Number of Signals: 5
Median Historical Gain within 252 days: 27.83%



Buy Signal 51:
S&P 500 closed -18% or greater off its latest high. Has held the low for seven days.
S&P 500 gained 12% from its latest 10% Correction with no intervening higher days
(Updated through 12/6/2021)

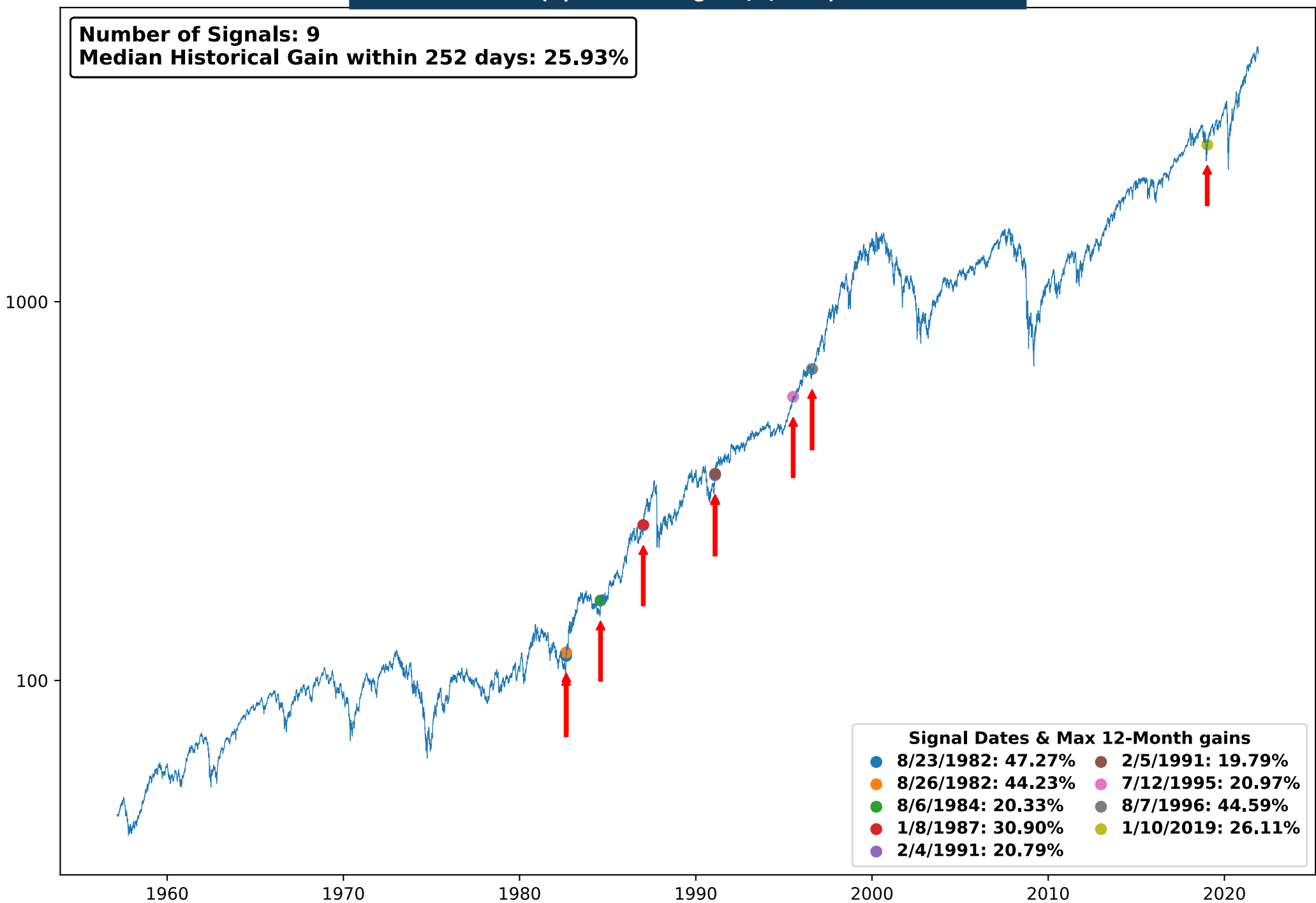
Number of Signals: 4
Median Historical Gain within 252 days: 31.44%



Signal Dates & Max 12-Month gains			
● 10/14/1974: 31.44%	● 10/18/2002: 18.73%		
● 8/23/1982: 47.27%	● 3/18/2009: 46.81%		

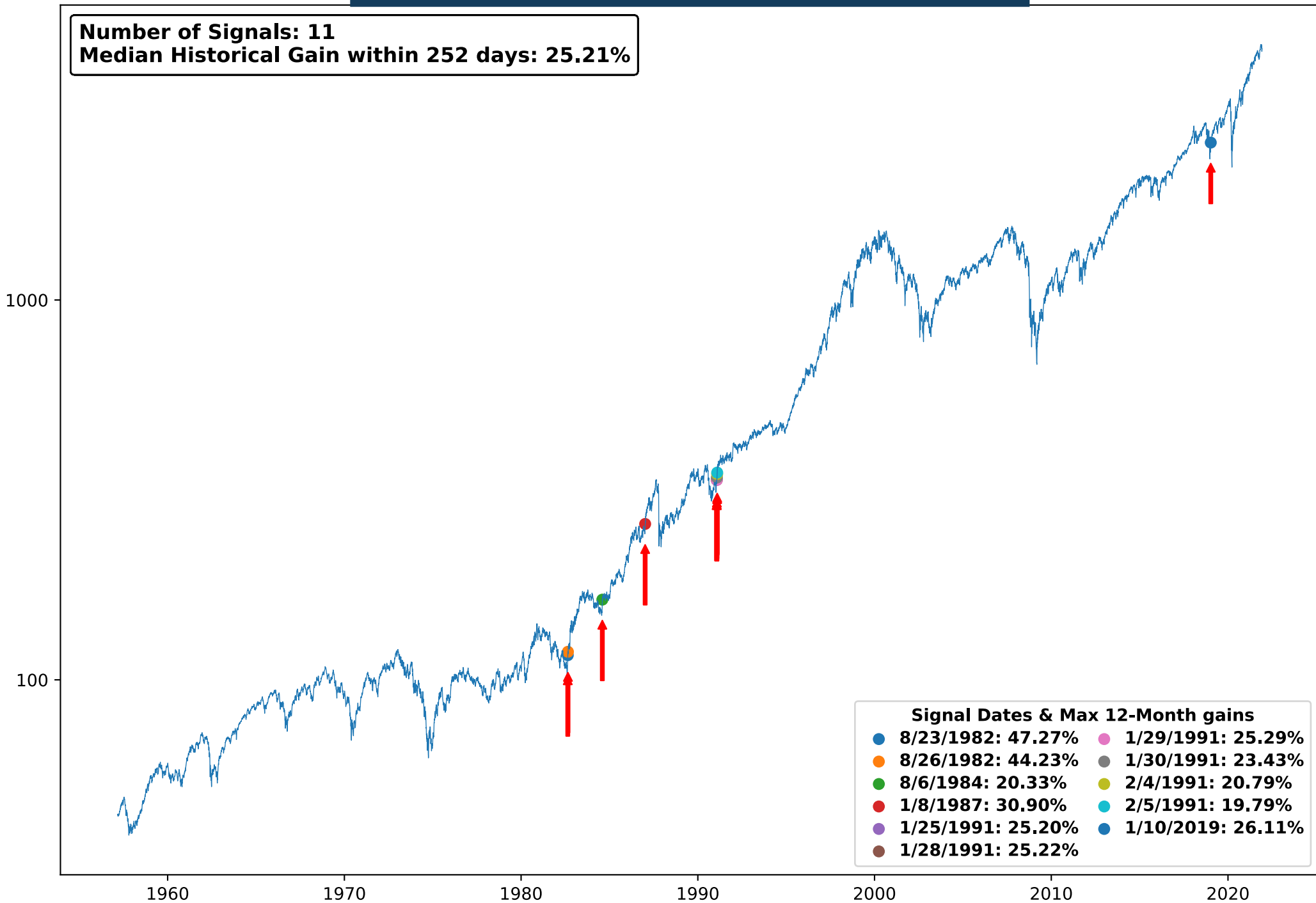
Buy Signal 52:
NASDAQ 10-Day Upside to Downside Volume Greater than 1.89/1.
NASDAQ 5-Day ROC Highest in 504-Days
(Updated through 12/6/2021)

Number of Signals: 9
Median Historical Gain within 252 days: 25.93%



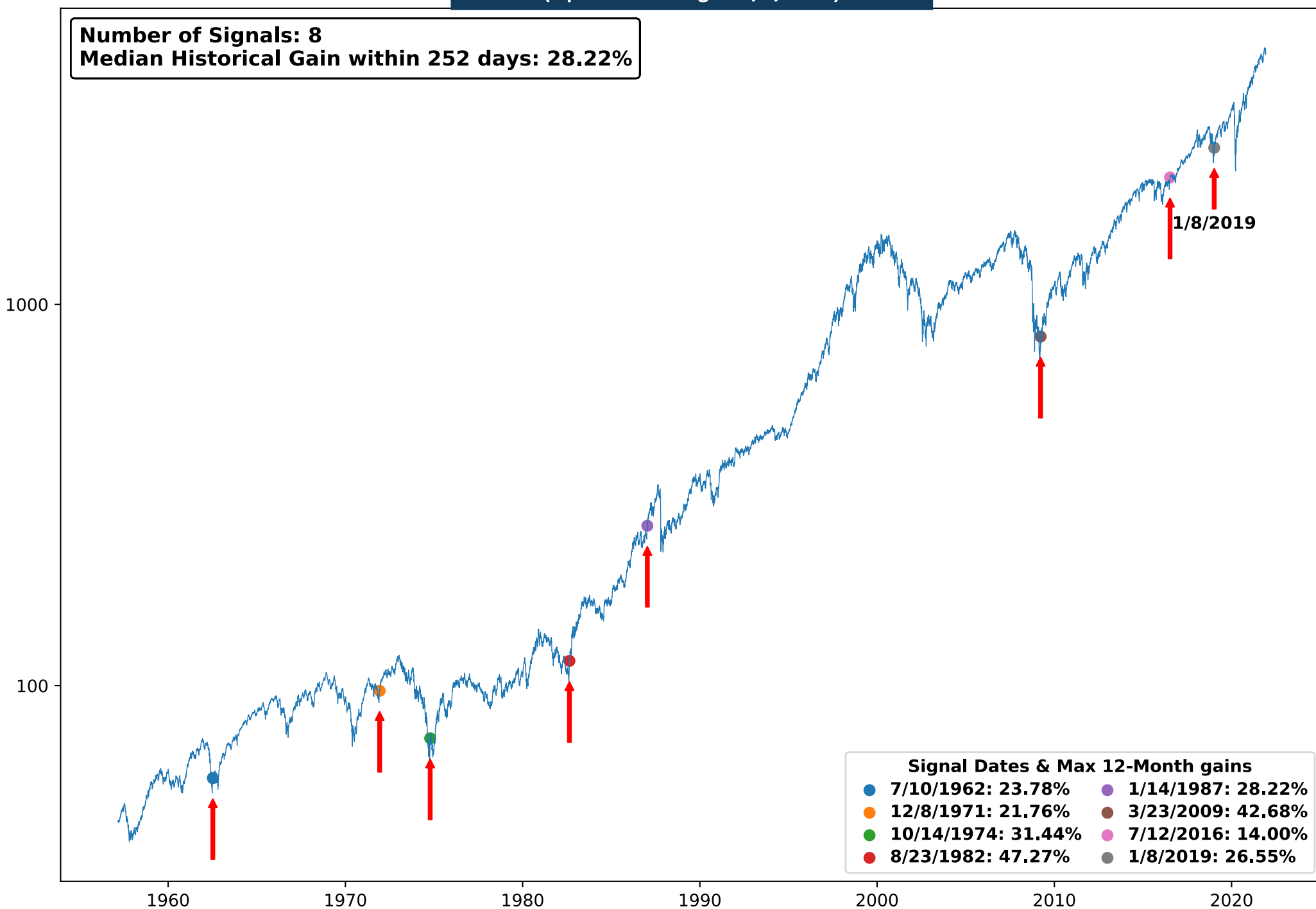
Buy Signal 53:
NASDAQ 10-Day Upside to Downside Volume Greater than 1.89/1.
Russell 2000 5-Day ROC Highest in 504-Days
(Updated through 12/6/2021)

Number of Signals: 11
Median Historical Gain within 252 days: 25.21%



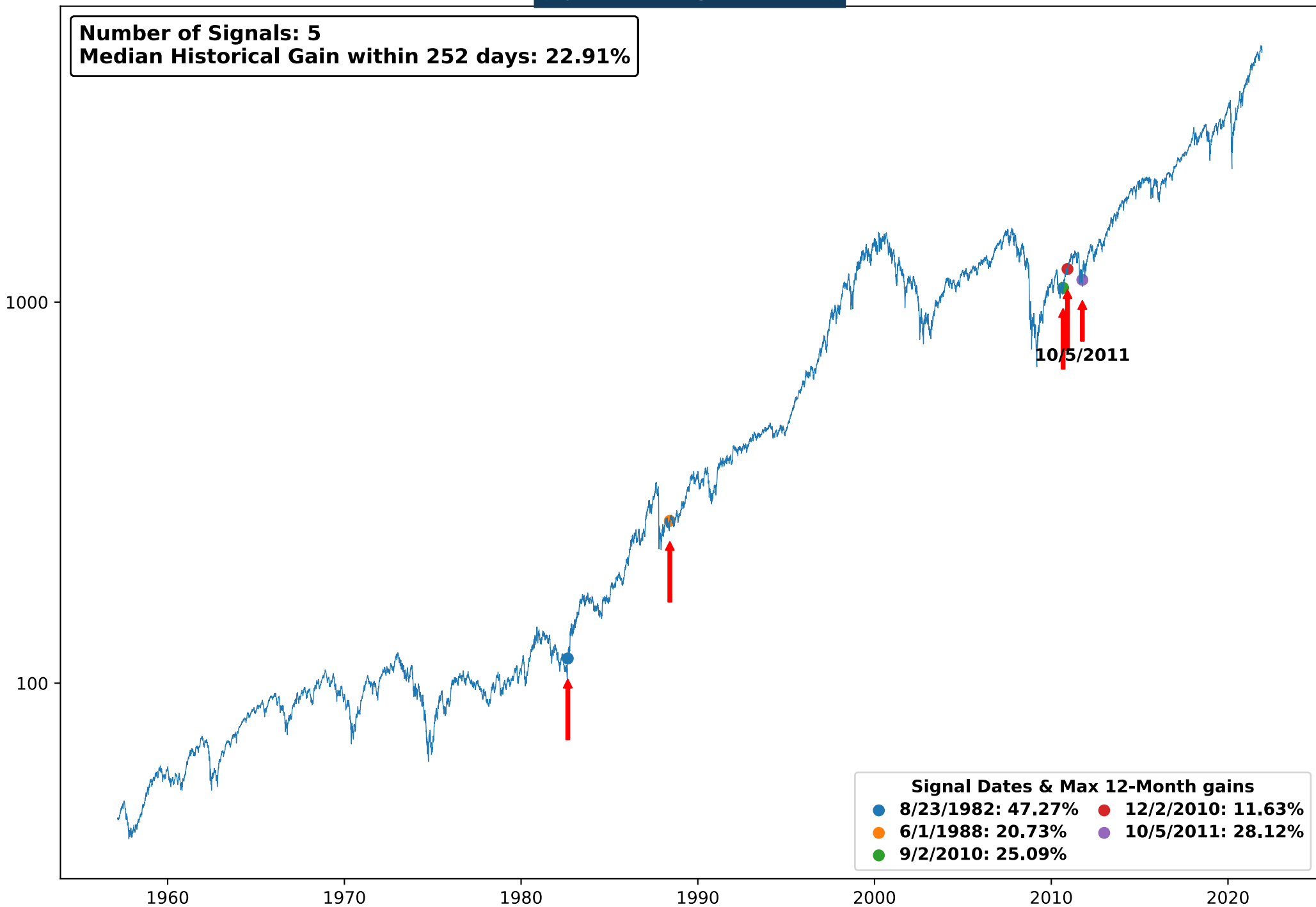
Buy Signal 54:
NYSE 10-Day Advances/10-Day Declines > 1.9.
S&P 500 10-Day ROC Highest in 180-Days.
(Updated through 12/6/2021)

Number of Signals: 8
Median Historical Gain within 252 days: 28.22%



Buy Signal 55:
S&P 500 TRIN ≤ 0.5 .
S&P 500 TRIN ≤ 0.3 1 day ago
(Updated through 12/6/2021)

Number of Signals: 5
Median Historical Gain within 252 days: 22.91%





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