

Market Analysis Comment

SPX hits an all-time high and history suggests a continued rally

Market Analysis

It took 24 months for the SPX to hit a new high

It's perfectly normal. Friday's (1/19) rally took the S&P 500 (SPX) beyond its January 2022 peak of 4818.62 to a new all-time high of 4842.07. It took 24 months to achieve this new high, which is consistent with the median number of 25 months to hit a new high on a rally after a big correction. The 38.0% rally from the October 2022 low is also consistent with the median rally from a low to back to the old high or 40.5%.

106% over 4 years is the median SPX rally from a big low

The SPX has rallied 38.0% in the 16 months since hitting its October 2022 low of 3491.58, but the median rally after big corrections of 106% lasts 49 months. This suggests that the rally from late 2022 can continue to run into 4Q 2026 with 7100 not ruled out on the SPX. However, the secular bull market roadmap charts do not get the SPX into the 7000s until 2027 to 2028 (see our report, [2024 Equity Technical Strategy Year Ahead](#) for the secular bull market roadmap charts).

Push to new highs means SPX shrugs off bearish signals

The push to new all-time highs on the SPX has shrugged off the bearish signals highlighted last week from daily and weekly Demark, tactical breadth and the near-term upward moves in the US Dollar Index and US 10-year T-note yield (see our report, [Tactical overhangs](#)). However, most of these divergences remain in place even on the push to new all-time highs on the SPX.

All-time highs for A-D line preceded all-time highs on SPX

The SPX advance-decline (A-D) line is longer-term bullish. It moved to new all-time highs in December to confirm the breakout from the early 2022 into late 2023 bullish cup and handle and provide a leading indicator for Friday's (1/19) push to a new all-time high on the SPX (see our report, [2024 Equity Technical Strategy Year Ahead](#)).

But SPX A-D line has not yet confirmed the Jan rally

Although the SPX A-D line is longer-term bullish, as of Monday's (1/22) close, this A-D line was 175 net advancing stocks from a new all-time high. We would like to see this market breadth indicator score a new YTD high along with the SPX. Until then, this provides tactical non-confirmation for the YTD rally on the SPX.

No bullish confirmation yet for cumulative net up volume

The lack of an upside breakout for cumulative net up volume as the SPX completed its 2022-2023 cup and handle in December and as the index moved to a record high on Friday (1/19) is a missing ingredient for the bulls. We think that an upside breakout for cumulative net up volume is a much-needed bullish confirmation signal if the SPX is to continue to rally in 2024.

22 January 2024

Market Analysis
United States

Stephen Suttmeier, CFA, CMT
Technical Research Strategist
BofAS
+1 646 855 1888
stephen.suttmeier@bofa.com

Technical Strategy notes

[2024 Equity Technical Strategy Year Ahead: Cyclical uptrend within a secular bull market 12 January 2024](#)

Acronyms

A-D: Advance-decline

CPI: Consumer price index

GICS: Global Industry Classification Standard

HY: High yield

ICI: Investment Company Institute

IG: Investment grade

INDU: Dow Jones Industrial Average

MA: moving average

MACD: Moving average convergence divergence

MLP: Master Limited Partnership

OAS: Option adjusted spread

P&C: Property and Casualty

SPX: S&P 500

Trading ideas and investment strategies discussed herein may give rise to significant risk and are not suitable for all investors. Investors should have experience in relevant markets and the financial resources to absorb any losses arising from applying these ideas or strategies.

BofA Securities does and seeks to do business with issuers covered in its research reports. As a result, investors should be aware that the firm may have a conflict of interest that could affect the objectivity of this report. Investors should consider this report as only a single factor in making their investment decision. Refer to important disclosures on page 19 to 21.

12649253

Timestamp: 22 January 2024 11:01PM EST

Contents

SPX to a new all-time high	3
It took 24 months for the SPX to hit a new high	4
106% over 4 years is the median SPX rally from a big low	4
Indicators	5
All-time highs for A-D line preceded all-time highs on SPX	5
But SPX A-D line has not yet confirmed the Jan rally	5
No bullish confirmation yet for cumulative net up volume	6
A bearish divergence for the 3-month VIX vs the VIX	7
The 3Rs: Ranks, Rotations, and Relatives	8
Sector and group trend ranks and screens	8
Consistent leaders/laggards in tactical ranks	9
Consistent leaders/laggards in 52-week ranks	9
Rotations: Relative rotation graph (RRG)	10
A visit with the sector relatives	11
Sub-sector & group ranks & screens	14
GICS Level 2 trend ranks & screens	15
Net Tabs stall	16
Net Tab: Overhang on drop from overbought	16
Net Tab Bands: Bullish off a +3 oversold but stalled at -2	17
Net Tab methodology	18

SPX to a new all-time high

It took 24 months for the SPX to hit a new high

It's perfectly normal. Friday's (1/19) rally took the S&P 500 (SPX) beyond its January 2022 peak of 4818.62 to a new all-time high of 4842.07. It took 24 months to achieve this new high, which is consistent with the median number of 25 months to hit a new high on a rally after a big correction. The 38.0% rally from the October 2022 low is also consistent with the median rally from a low to back to the old high or 40.5%. In addition, the January 2022-October 2022 correction of 27.5% was also consistent with the median correction of 28.8%.

Table 1: S&P 500 corrections and time to recover the prior high: 1929 to present

Friday's rally took the SPX beyond its January 2022 peak of 4818.62 to a new all-time high of 4842.07. It took 24 months to achieve this new high, which is consistent with the median number of months to hit a new high of 25 months.

Secular trend	Correction start date	Correction end date	Number of months for correction	Downside correction	Date of new closing high	Number of months to achieve new high	Rally back to high
Bearish	September-29	June-32	33	-86.17%	September-54	300	623.07%
Bearish	March-37	April-42	61	-59.99%	April-46	109	149.94%
Bearish	May-46	June-49	37	-29.61%	September-50	52	42.07%
Bullish	August-56	October-57	14	-21.63%	September-58	25	27.60%
Bullish	December-61	June-62	6	-27.99%	October-63	22	38.87%
Bearish	February-66	October-66	8	-22.18%	July-67	17	28.50%
Bearish	November-68	May-70	18	-36.06%	May-72	42	56.40%
Bearish	January-73	October-74	21	-48.20%	July-80	90	93.05%
Bullish	November-80	August-82	21	-27.27%	December-82	25	37.49%
Bullish	August-87	October-87	2	-35.94%	July-89	23	56.10%
Bullish	July-90	October-90	3	-20.36%	March-91	8	25.57%
Bullish	July-98	October-98	3	-22.45%	December-98	5	28.95%
Bearish	March-00	October-02	31	-50.50%	March-13	156	102.02%
Bearish	October-07	March-09	17	-57.69%	April-13	49	136.35%
Bearish	May-11	October-11	5	-21.58%	March-12	5	27.52%
Bullish	September-18	December-18	3	-20.21%	April-19	4	25.33%
Bullish	February-20	March-20	1	-35.41%	August-20	5	54.82%
Bullish	January-22	October-22	9	-27.54%	January-24	24	38.01%
Average			16	-36.15%		53	88.42%
Median			12	-28.80%		25	40.47%
Maximum			61	-20.21%		300	623.07%
Minimum			1	-86.17%		4	25.33%

Source: BofA Global Research, Bloomberg

BofA GLOBAL RESEARCH

106% over 4 years is the median SPX rally from a big low

The SPX has rallied 38.0% in the 16 months since hitting its October 2022 low of 3491.58, but the median rally after big corrections of 106% lasts 49 months. This suggests that the rally from late 2022 can continue to run into 4Q 2026 with 7100 not ruled out on the SPX. However, the secular bull market roadmap charts do not get the SPX into the 7000s until 2027 to 2028 (see our report, [2024 Equity Technical Strategy Year Ahead](#) for the secular bull market roadmap charts).

Table 2: S&P 500 rallies from big lows: 1929 to present

The SPX has rallied 38.0% in the 16 months since hitting its October 2022 low of 3491.58, but the median rally after big corrections of 106% lasts 49 months. This suggests that the rally from late 2022 can continue to run into 4Q 2026 with 7100 not ruled out on the SPX.

Secular trend	Rally start date	Rally end date	Number of months for rally	Percent gain of rally	Projected time	Projected price
Bearish	June-32	March-37	57	324%	July-27	14815
Bearish	April-42	May-46	49	158%	November-26	8998
Bearish	June-49	August-56	86	267%	December-29	12817
Bullish	October-57	December-61	50	86%	December-26	6507
Bullish	June-62	February-66	44	80%	June-26	6277
Bearish	October-66	November-68	25	48%	November-24	5169
Bearish	May-70	January-73	32	74%	June-25	6059
Bearish	October-74	November-80	73	126%	November-28	7878
Bullish	August-82	August-87	60	231%	October-27	11544
Bullish	October-87	July-90	33	71%	July-25	5965
Bullish	October-90	July-98	93	304%	July-30	14115
Bullish	October-98	March-00	17	68%	March-24	5872
Bearish	October-02	October-07	60	105%	October-27	7159
Bearish	March-09	May-11	26	106%	December-24	7177
Bearish	October-11	September-18	82	174%	August-29	9554
Bullish	December-18	February-20	14	45%	December-23	5050
Bullish	March-20	January-22	22	120%	August-24	7676
		Average	48	140%	October-26	8390
		Median	49	106%	November-26	7177
		Maximum	93	324%	July-30	14815
		Minimum	14	45%	December-23	5050

Source: BofA Global Research, Bloomberg

BofA GLOBAL RESEARCH

Indicators

All-time highs for A-D line preceded all-time highs on SPX

The SPX advance-decline (A-D) line is longer-term bullish. It moved to new all-time highs in December to confirm the breakout from the early 2022 into late 2023 bullish cup and handle and provide a leading indicator for Friday's (1/19) push to a new all-time high on the SPX (see our report, [2024 Equity Technical Strategy Year Ahead](#)).

But SPX A-D line has not yet confirmed the Jan rally

Although the SPX A-D line is longer-term bullish, as of Monday's (1/22) close, this A-D line was 175 net advancing stocks from a new all-time high. We would like to see this market breadth indicator score a new YTD high along with the SPX. Until then, this provides tactical non-confirmation for the YTD rally on the SPX.

Chart 1: S&P 500 (top) and the S&P 500 advance-decline line (bottom): Daily chart

New highs for the A-D line provided a leading indicator of new highs on the SPX, which is bullish. As of Monday's (1/22) close, the SPX A-D line was 175 net advancing stocks from a new all-time high. We would like to see this A-D line score a new YTD high along with the SPX. Until then, this provides tactical non-confirmation for the YTD rally on the SPX.



Source: BofA Global Research, Bloomberg

BofA GLOBAL RESEARCH



No bullish confirmation yet for cumulative net up volume

Cumulative net up volume on the SPX shows signs of a double bottom from the October 2022 and October 2023 lows. However, the lack of an upside breakout for this volume indicator as the SPX completed its 2022-2023 cup and handle in December and as the index moved to a record high on Friday (1/19) is a missing ingredient for the bulls. We think that an upside breakout for cumulative net up volume is a much-needed bullish confirmation signal if the SPX is to continue to rally in 2024.

Chart 2: S&P 500 (top) and cumulative net up volume on the S&P 500 (bottom): Daily chart

We think that an upside breakout for cumulative net up volume is a much-needed bullish confirmation signal if the SPX is to continue to rally in 2024.



Source: BofA Global Research, Bloomberg

BofA GLOBAL RESEARCH

A bearish divergence for the 3-month VIX vs the VIX

As the SPX has rallied, the 3-month VIX relative to the VIX has dropped. This follows a negative divergence entering 2024 as this indicator lagged the SPX on its rally into yearend 2023 (see our report, [Tactical hangover entering 2024](#)). This divergence persists as we move into late January, but we think that a breakout above the downtrend line from late December on the 3-month VIX vs the VIX would be enough to trigger a bullish signal for the SPX.

Chart 3: S&P 500 (top) and the 3-month VIX relative to the VIX (bottom): Daily chart

The 3-month VIX relative to the VIX continues to lag the SPX as we move into late January. We view this as a negative divergence but think that a breakout above the downtrend line from late December on the 3-month VIX vs the VIX would be enough to trigger a bullish signal for the SPX.



Source: BofA Global Research, Bloomberg

BofA GLOBAL RESEARCH

The 3Rs: Ranks, Rotations, and Relatives

Sector and group trend ranks and screens

We highlight the 11 S&P 500 GICS Level 1 sectors and other subgroup indices. We sort these groups by their tactical trend rank and show their 40-, 26-, and 13-week absolute and relative trends. The tactical relative rank is a technical/quantitative screen using short- to intermediate-term moving averages (13-, 26-, and 40-week; the 40-week trend is the most important) to determine the relative price ranks of the stocks within each sector. We flag changes in weekly trends over the last week – green for improvement and red for deterioration in trend.

We show 13-week and 52-week absolute and relative highs and lows (High or Low) from the last four weeks and highlight if these changes occurred in the most recent week – green for High and red for Low. See our report, [Technical Explained: Equity technical analysis for the fundamental investor](#). All data are as of the Friday, Jan 19, close.

Table 3: Weekly price and moving average (13-, 26-, 40-, and 200-week) trend positions

Price and moving average trend positions are determined by 1) the slope of the moving average and 2) the price relative (above or below) the moving average.

Moving average trend

Bullish
Bullish at risk
Bearish at risk
Bearish

Criteria used on both an absolute & relative price basis

Weekly closing price ABOVE a RISING or bullish MA
Weekly closing price BELOW a RISING or bullish MA
Weekly closing price ABOVE a FALLING or bearish MA
Weekly closing price BELOW a FALLING or bearish MA

Source: BofA Global Research, Bloomberg

BofA GLOBAL RESEARCH

Ranks: GICS 1 ranks wrap-up

Tactical ranks: Top Five: Technology, Comm Services, Financials, Discretionary and Industrials. Bottom Five: Energy, Utilities, Staples, Materials and Real Estate.

52-week ranks: Top Five: Technology, Comm Services, Discretionary, Industrials and Financials. Bottom Five: Utilities, Energy, Real Estate, Materials and Staples.

Trading cycles: Bullish (rising 26 and 40-week MAs): Tech, Financials and Comm Services. Bearish (declining MAs): Staples and Utilities.

New highs and new lows: 52-week closing basis highs: SPX (also an all-time weekly closing basis high), Tech, Comm Services and Financials. Energy hit a 13-week low. Tech leadership continued on a 52-week high versus the SPX as Materials, Staples, Utilities and Energy dropped to 52-week lows relative to the SPX.

Table 4: S&P 500 GICS Level 1 Sectors with 40-, 26-, and 13-week absolute & relative price trends sorted by Tactical Trend rank

Top Five: Technology, Comm Services, Financials, Discretionary and Industrials. Bottom Five: Energy, Utilities, Staples, Materials and Real Estate.

Name	Price	Tactical trend rank	52-week Rank	40-week trend	40-week trend vs. SPX	26-week trend	26-week trend vs. SPX	13-week trend	13-week trend vs. SPX	13-week high/low	13-week high/low vs. SPX	52-week high/low	52-week high/low vs. SPX
S&P 500 INFO TECH INDEX	3565.21	1	1	Bullish	Bullish	Bullish	Bullish	Bullish	Bullish	High	High	High	High
COMSVCSLSCTPR	391.02	2	2	Bullish	Bullish	Bullish	Bullish	Bullish	Bearish at risk	High		High	
S&P 500 FINANCIALS INDEX	630.96	3	5	Bullish	Bullish	Bullish	Bullish	Bullish	Bullish	High	High	High	
S&P 500 CONS DISCRET IDX	1397.23	4	3	Bullish	Bullish at risk	Bullish	Bearish	Bullish	Bullish at risk				
S&P 500 INDUSTRIALS IDX	952.12	5	4	Bullish	Bearish	Bullish	Bearish	Bullish	Bullish	High	High	High	
S&P 500 HEALTH CARE IDX	1625.99	6	6	Bullish	Bearish	Bullish	Bearish	Bullish	Bearish	High		High	
S&P 500 REAL ESTATE IDX	243.07	7	9	Bullish	Bearish	Bullish	Bearish	Bullish	Bullish at risk	High			
S&P 500 MATERIALS INDEX	518.55	8	8	Bullish	Bearish	Bullish	Bearish	Bullish	Bearish		Low		Low
S&P 500 CONS STAPLES IDX	763.37	9	7	Bearish at risk	Bearish	Bearish at risk	Bearish	Bullish	Bearish	High	Low		Low
S&P 500 UTILITIES INDEX	309.79	10	11	Bearish	Bearish	Bearish	Bearish	Bullish at risk	Bearish	High	Low		Low
S&P 500 ENERGY INDEX	612.33	11	10	Bearish	Bearish	Bullish at risk	Bearish	Bearish	Bearish	Low	Low		Low

Source: BofA Global Research, Bloomberg

Note: This screen is not a recommended list either individually or as a group of stocks. Investors should consider the fundamentals of the companies and their own individual circumstances/objectives before making any investment decisions.

BofA GLOBAL RESEARCH



Consistent leaders/laggards in tactical ranks

- Consistent among top five over last eight weeks: Technology, Communication Services and Financials.
- Consistent among bottom five over last eight weeks: Energy, Utilities, Materials and Staples.

Table 5: Tactical trend ranks – current and historical sector rankings

Consistent top five over last eight weeks: Technology, Communication Services and Financials. Consistent bottom five over last eight weeks: Utilities, Staples, Materials and Energy.

Sector	19-Jan-24	12-Jan-24	05-Jan-24	29-Dec-23	22-Dec-23	15-Dec-23	08-Dec-23	01-Dec-23
S&P 500 Consumer Discretionary	4	6	7	4	4	2	2	4
S&P 500 Consumer Staples	9	9	10	9	9	10	10	10
S&P 500 Energy	11	11	11	11	11	11	11	11
S&P 500 Financials	3	3	1	2	2	3	4	2
S&P 500 Health Care	6	5	6	8	8	8	8	8
S&P 500 Industrials	5	7	5	6	6	5	6	6
S&P 500 Technology	1	1	4	1	1	1	1	1
S&P 500 Materials	8	8	8	7	7	7	7	7
S&P 500 Communication Services	2	2	2	5	5	6	3	3
S&P 500 Utilities	10	10	9	10	10	9	9	9
S&P 500 Real Estate	7	4	3	3	3	4	5	5

Source: BofA Global Research, Bloomberg

BofA GLOBAL RESEARCH

Consistent leaders/laggards in 52-week ranks

- Consistent among top five over last eight weeks: Technology, Communication Services, Discretionary and Industrials.
- Consistent among bottom five over last eight weeks: Utilities, Energy, Real Estate and Staples.

Table 6: 52-week ranks – current and historical sector rankings

Consistent top five over last eight weeks: Technology, Communication Services, Discretionary and Industrials. Consistent bottom five over last eight weeks: Utilities, Energy, Real Estate and Staples.

Sector	19-Jan-24	12-Jan-24	05-Jan-24	29-Dec-23	22-Dec-23	15-Dec-23	08-Dec-23	01-Dec-23
S&P 500 Consumer Discretionary	3	3	3	3	3	3	3	3
S&P 500 Consumer Staples	7	9	10	9	9	10	10	10
S&P 500 Energy	10	10	9	10	10	8	7	9
S&P 500 Financials	5	5	5	6	6	5	5	5
S&P 500 Health Care	6	6	8	8	8	9	9	8
S&P 500 Industrials	4	4	4	4	4	4	4	4
S&P 500 Technology	1	1	1	1	1	1	1	1
S&P 500 Materials	8	8	6	5	5	6	6	6
S&P 500 Communication Services	2	2	2	2	2	2	2	2
S&P 500 Utilities	11	11	11	11	11	11	11	11
S&P 500 Real Estate	9	7	7	7	7	7	8	7

Source: BofA Global Research, Bloomberg

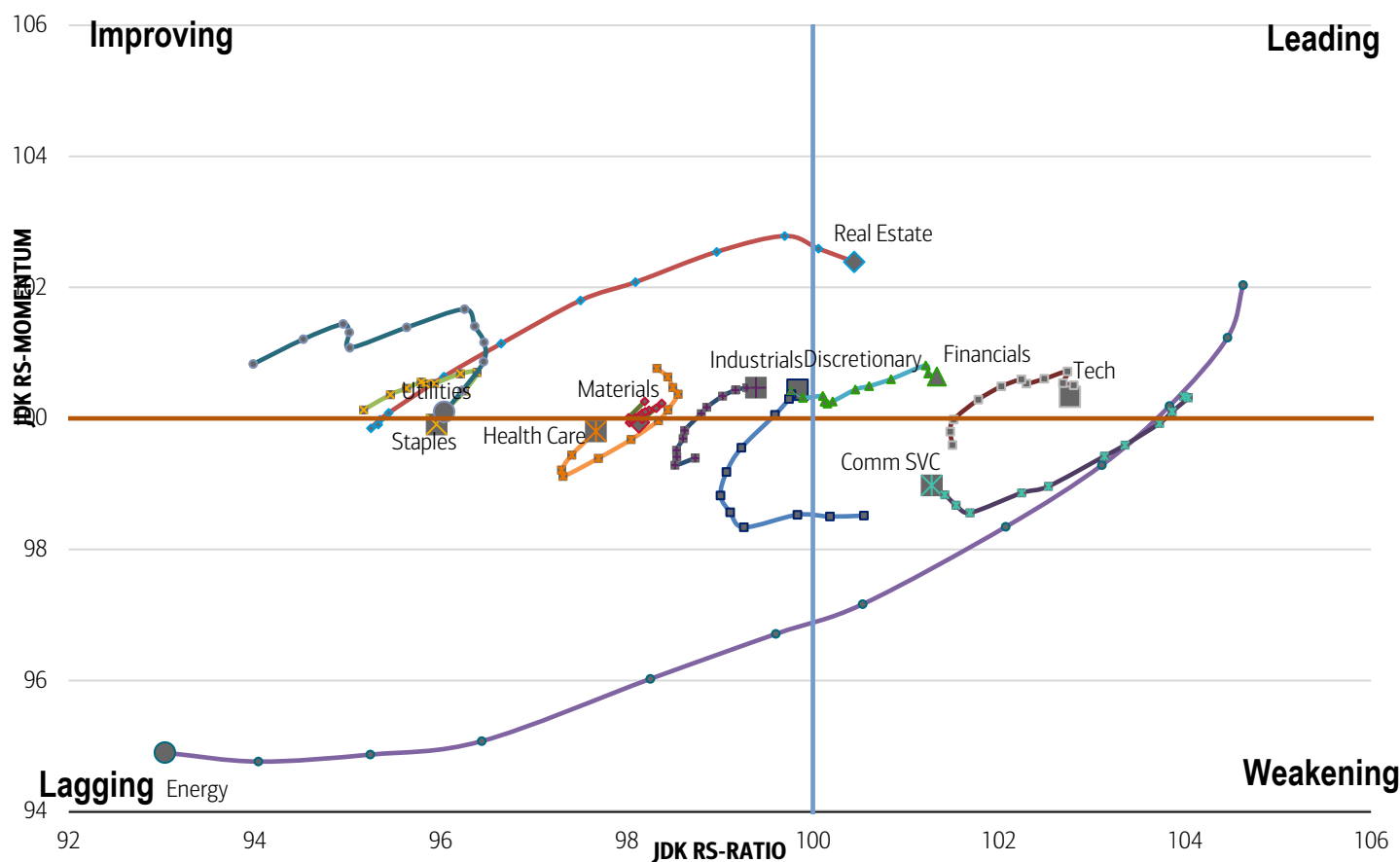
BofA GLOBAL RESEARCH

Rotations: Relative rotation graph (RRG)

- **Leading** (positive relative trend and positive relative momentum): Technology, Real Estate and Financials.
- **Weakening** (positive relative trend and negative relative momentum): Communication Services.
- **Lagging** (negative relative trend and negative relative momentum): Energy, Health Care, Staples (from Improving) and Materials (from Improving).
- **Improving** (negative relative trend and positive relative momentum): Utilities, Discretionary and Industrials.

Chart 4: S&P 500 GICs Level 1 sector weekly relative rotation graph

Leading: Technology, Real Estate and Financials. Weakening: Communication Services. Lagging: Energy, Health Care, Staples and Materials. Improving: Discretionary, Industrials and Utilities



Source: BofA Global Research, Bloomberg

BofA GLOBAL RESEARCH

A visit with the sector relatives

Cyclical sectors: Financials and Industrials firm up relative to the SPX

Weekly closes above the 40-week MA and the September and August peaks versus the SPX suggests a tactical leadership breakout for Financials. The next step for Financials is clearing big relative resistance, which suggest a bigger base. The Industrials sector has improved given some stability versus the SPX but needs help to regain leadership.

Chart 5: Financials relative to the S&P 500: Weekly Chart

Above 40-week MA as this sector forms a potential bigger base vs the SPX.



Source: BofA Global Research, Bloomberg

BofA GLOBAL RESEARCH

Chart 6: Industrials relative to the S&P 500: Weekly Chart

Some stability versus the SPX but needs help to regain leadership.



Source: BofA Global Research, Bloomberg

BofA GLOBAL RESEARCH

Materials retest 2020 low as Energy breaks down from a H&S top versus SPX

The break below support at the mid-2023 and late-2021 lows for Materials versus the SPX suggested risk back to the 2020 relative low, which the sector tested last week. Materials must regain broken supports versus the SPX to improve the outlook. Energy broke out from a 2020 into 2022 head and shoulders (H&S) bottom versus the SPX that resembled the bottom from 1999-2000. After a 2-year leadership trend, the sector has stalled and broke down from a H&S top relative to the SPX, which is bearish.

Chart 7: Materials relative to the S&P 500: Weekly Chart

Tests the 2020 low versus SPX after breaking big support in late 2023.



Source: BofA Global Research, Bloomberg

BofA GLOBAL RESEARCH

Chart 8: Energy relative to the S&P 500: Weekly Chart

Breaking lower a relative head and shoulders top versus the SPX.



Source: BofA Global Research, Bloomberg

BofA GLOBAL RESEARCH

Growth sectors: Tech stronger than Discretionary

Technology achieved a major leadership breakout on the move above its 2021 and 2000 peaks versus the SPX in May 2023. Holding this breakout has kept the long-term leadership trend intact. Discretionary improved near rising 26/40-week MAs. Continued closes above these MAs are required to continue the leadership trend for this sector.

Chart 9: Technology relative to the S&P 500: Weekly Chart

Bullish: Massive breakout remains intact above 2000-2021 peaks versus the SPX



Source: BofA Global Research, Bloomberg

BofA GLOBAL RESEARCH

Chart 10: Discretionary relative to the S&P 500: Weekly Chart

Weekly closes above rising 26/40-week MAs needed for leadership



Source: BofA Global Research, Bloomberg

BofA GLOBAL RESEARCH

Comm Services dip in uptrend, SOX breaks out from big base versus SPX

Comm Services remains in a leadership trend from late 2022. The sector has corrected (lagged the SPX) since late October but rising 26-/40-week MAs suggest a tactical dip in a bullish relative trend. A potential bull flag corroborates this view. Semiconductors (SOX) remain in a leadership trend. The SOX broke out above the June 2000 peak versus the SPX to confirm a big base and reassert its leadership. This is bullish for the SOX.

Chart 11: Comm Services relative to the S&P 500: Weekly Chart

Tactically positive with a bull flag above 26-/40-week MAs versus the SPX



Source: BofA Global Research, Bloomberg

BofA GLOBAL RESEARCH

Chart 12: Semiconductors (SOX) versus the S&P 500: Weekly Chart

Leadership is bullish. Breakout confirms a big base for SOX versus SPX.



Source: BofA Global Research, Bloomberg

BofA GLOBAL RESEARCH

Lack of defensive strength bullish: Utilities and Staples hit new lows vs the SPX

Long-term lagging trends for defensive sectors are a bullish market signal. The SPX bottomed in late 2022. Utilities and Staples peaked relative to the SPX in September and December 2022, respectively. Breakdowns for these sectors below relative uptrend lines from late 2021 and the weekly MAs confirmed a less defensive equity market in early 2023. Weak defensive sectors remain a bullish market signal in early 2024. Utilities hit an all-time relative low. Staples hit its lowest level versus the SPX since late 2000.

Chart 13: Utilities relative to the S&P 500: Weekly Chart

A weak relative trend drops to another all-time low vs the SPX.



Source: BofA Global Research, Bloomberg

BofA GLOBAL RESEARCH

Chart 14: Staples relative to the S&P 500: Weekly Chart

A weak relative trend for this defensive sector hit a new low last week.



Source: BofA Global Research, Bloomberg

BofA GLOBAL RESEARCH

Real Estate's bounce in downtrend stalls, Health Care holds big support versus SPX

The 2022 relative breakdown for Real Estate resembled past bearish breaks and shifts to lagging trends in 2013, 2016, and 2019. This sector has rebounded versus the SPX as the US 10-year yield has dropped from its October peak near 5%, but the longer-term downtrend versus the SPX remains intact. Health Care has struggled. The loss of the 30-year uptrend line versus the SPX is a big risk, but massive support at the late 2021 relative low is holding so far.

Chart 15: Real Estate relative to the S&P 500: Weekly Chart

A rebound within a longer-term lagging trend has stalled.

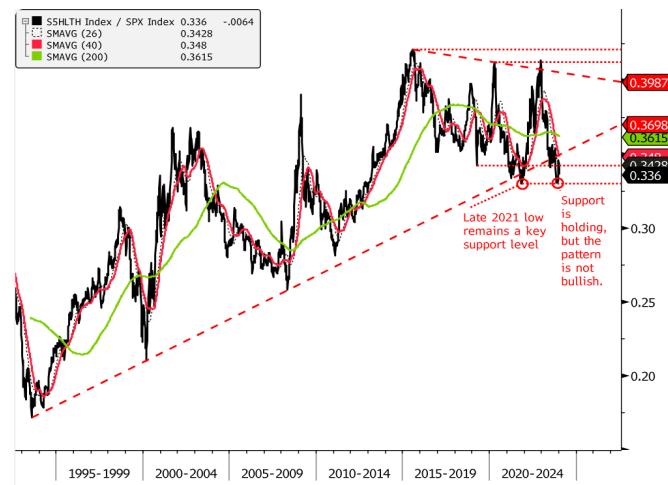


Source: BofA Global Research, Bloomberg

BofA GLOBAL RESEARCH

Chart 16: Health Care relative to the S&P 500: Weekly Chart

Below its 30-year uptrend line but is hold big support from late 2021 so far.



Source: BofA Global Research, Bloomberg

BofA GLOBAL RESEARCH

Sub-sector & group ranks & screens

Sectors & groups with bullish trading cycles

We list the bullish trading cycles as defined by rising 26- and 40-week moving averages (MAs) on both an absolute and relative basis: Semiconductors, Housing, Software & Services, Information Technology, P&C Insurance, Media, Banks, Regional Banks, Retailing, Communication Services, Financials, Road & Rail and Life Insurance.

Sectors with bearish trading cycles

We list the bearish trading cycles, as defined by falling 26- and 40-week moving averages on both an absolute and relative basis: Consumer Staples, Utilities and Gold & Silver.

Table 7: Sectors, groups and sub-groups

40-, 26-, and 13-week absolute & relative price trends sorted by Tactical Trend rank, new absolute, and relative highs and lows

Name	Price	Tactical trend rank	52-week Rank	40-week trend	40-week trend vs. SPX	26-week trend	26-week trend vs. SPX	13-week trend	13-week trend vs. SPX	13-week high/low high/low vs. SPX	13-week high/low	52-week high/low	52-week high/low vs. SPX
PHILA SEMICONDUCTOR INDX	4375.65	1	1	Bullish	Bullish	Bullish	Bullish	Bullish	Bullish	High	High	High	High
PHILA HOUSING INDEX	660.47	2	3	Bullish	Bullish	Bullish	Bullish	Bullish	Bullish	High		High	
S&P 500 SFTW & SVCS INDX	4465.08	3	5	Bullish	Bullish	Bullish	Bullish	Bullish	Bullish	High	High	High	High
S&P 500 INFO TECH INDEX	3565.21	4	2	Bullish	Bullish	Bullish	Bullish	Bullish	Bullish	High	High	High	High
S&P 500 PROP&CASULT IDX	1051.90	5	10	Bullish	Bullish	Bullish	Bullish	Bullish	Bullish	High		High	
S&P 500 Media & Ent	1048.11	6	4	Bullish	Bullish	Bullish	Bullish	Bullish	Bearish at risk	High	High	High	
KBW BANK INDEX	94.11	7	33	Bullish	Bullish	Bullish	Bullish	Bullish	Bullish	High	High		
KBW REGIONAL BANKING INX	106.07	8	30	Bullish	Bullish	Bullish	Bullish	Bullish	Bullish				
S&P 500 RETAILING INDEX	3974.04	9	7	Bullish	Bullish	Bullish	Bullish	Bullish	Bullish	High	High	High	High
COMSVCSLSCTPR	391.02	10	6	Bullish	Bullish	Bullish	Bullish	Bullish	Bearish at risk	High		High	
S&P 500 TELECOMM SVCS IX	121.74	11	28	Bearish at risk	Bearish at risk	Bullish	Bullish	Bullish	Bullish at risk	High	High		
KBW CAPITAL MARKETS INDX	593.58	12	19	Bullish	Bearish at risk	Bullish	Bullish	Bullish	Bullish	High	High	High	
S&P 500 INSURANCE INDEX	673.21	13	13	Bullish	Bearish at risk	Bullish	Bullish	Bullish	Bearish	High		High	
S&P 500 FINANCIALS INDEX	630.96	14	16	Bullish	Bullish	Bullish	Bullish	Bullish	Bullish	High	High	High	
S&P 500 ROAD & RAIL INDX	2905.13	15	15	Bullish	Bullish	Bullish	Bullish	Bullish	Bullish	High		High	
S&P 500 LIFE&HLTH IN IDX	488.11	16	23	Bullish	Bullish	Bullish	Bullish at risk	Bullish	Bearish	High		High	
NASDAQ BIOTECH INDEX	4396.76	17	24	Bullish	Bearish	Bullish	Bullish	Bullish	Bullish	High	High	High	
S&P 500 CONS DISCRET IDX	1397.23	18	9	Bullish	Bullish at risk	Bullish	Bearish	Bullish	Bullish at risk				
S&P 500 INDUSTRIALS IDX	952.12	19	11	Bullish	Bearish	Bullish	Bearish	Bullish	Bullish at risk	High	High	High	
S&P 500 MACHINERY INDEX	1929.32	20	12	Bullish	Bullish at risk	Bullish	Bearish	Bullish	Bearish	High	High	High	
S&P 500 HEALTH CARE IDX	1625.99	21	22	Bullish	Bearish	Bullish	Bearish	Bullish	Bearish	High		High	
S&P 500 REAL ESTATE IDX	243.07	22	27	Bullish	Bearish	Bullish	Bearish	Bullish	Bullish at risk	High			
S&P 500 TECH HW & EQP IX	3546.84	23	8	Bullish	Bearish	Bearish at risk	Bearish	Bullish	Bearish		Low		
S&P 500 PHARM INDEX	1032.52	24	18	Bullish	Bearish	Bullish	Bearish	Bullish	Bearish	High		High	
S&P 500 TRANSPN INDEX	993.93	25	21	Bullish	Bearish	Bearish at risk	Bearish	Bullish	Bearish				
S&P 500 AERO & DEFNS IDX	1458.89	26	17	Bullish	Bearish	Bullish	Bearish	Bullish	Bullish at risk	High	Low	High	
S&P 500 HC EQUIP&SVC IDX	1902.00	27	20	Bullish	Bearish	Bullish	Bearish	Bullish	Bearish	High	Low	High	Low
ALERIAN MLP INDEX	253.51	28	14	Bullish	Bearish	Bullish	Bullish at risk	Bullish	Bearish		Low		
NYSE Arca Biotechlgy Idx	5201.97	29	29	Bullish	Bearish	Bullish	Bearish	Bullish	Bearish	High	High		
S&P 500 MATERIALS INDEX	518.55	30	26	Bullish	Bearish	Bullish	Bearish	Bullish	Bearish		Low		Low
S&P 500 CONS STAPLES IDX	763.37	31	25	Bearish at risk	Bearish	Bearish at risk	Bearish	Bullish	Bearish	High	Low	Low	Low
S&P 500 UTILITIES INDEX	309.79	32	32	Bearish	Bearish	Bearish	Bearish	Bullish at risk	Bearish	High	Low	Low	Low
PHILA GOLD & SILVER INDX	112.94	33	34	Bearish	Bearish	Bearish	Bearish	Bullish at risk	Bearish		Low	Low	Low
S&P 500 ENERGY INDEX	612.33	34	31	Bearish	Bearish	Bullish at risk	Bearish	Bearish	Bearish	Low	Low		Low

Source: BofA Global Research, Bloomberg

Note: This screen is not a recommended list either individually or as a group of stocks. Investors should consider the fundamentals of the companies and their own individual circumstances/objectives before making any investment decisions

BofA GLOBAL RESEARCH



GICS Level 2 trend ranks & screens

Sectors with bullish trading cycles

Bullish trading cycles as defined by rising 26- and 40-week moving averages on both an absolute and relative basis: Semiconductors & Semiconductor Equip, Software & Services, Media & Entertainment, Banks and Retailing.

Sectors with bearish trading cycles

We list the bearish trading cycles, as defined by falling 26- and 40-week moving averages on both an absolute and relative basis: Household & Personal Products, Food Beverage & Tobacco and Utilities.

Table 8: S&P 500 GICS Level 2 Sectors

40-, 26-, & 13-week absolute & relative price trends sorted by Tactical Trend rank, new absolute, and relative highs and lows

Name	Price	Tactical trend rank	52-week Rank	40-week trend	40-week trend vs. SPX	26-week trend	26-week trend vs. SPX	13-week trend	13-week trend vs. SPX	13-week high/low high/low vs. SPX	13-week high/low vs. SPX	52-week high/low high/low vs. SPX	52-week high/low vs. SPX
S&P 500 SEMI & SEMI EQP	3615.99	1	1	Bullish	Bullish	Bullish	Bullish	Bullish	Bullish	High	High	High	High
S&P 500 SFTW & SVCS INDX	4465.08	2	3	Bullish	Bullish	Bullish	Bullish	Bullish	Bullish	High	High	High	High
S&P 500 Media & Ent	1048.11	3	2	Bullish	Bullish	Bullish	Bullish	Bullish	Bearish at risk	High	High	High	
S&P 500 BANKS INDEX	346.30	4	17	Bullish	Bullish	Bullish	Bullish	Bullish	Bullish	High	High	High	
S&P 500 RETAILING INDEX	3974.04	5	5	Bullish	Bullish	Bullish	Bullish	Bullish	Bullish	High	High	High	High
S&P 500 FOOD/STPL RETAIL	720.18	6	10	Bullish	Bearish at risk	Bullish	Bullish	Bullish	Bullish	High	High	High	
S&P 500 TELECOMM SVCS IX	121.74	7	20	Bearish at risk	Bearish at risk	Bullish	Bullish	Bullish	Bullish at risk	High	High		
S&P 500 INSURANCE INDEX	673.21	8	11	Bullish	Bearish at risk	Bullish	Bullish	Bullish	Bearish	High		High	
S&P 500 CONS SRV IDX	1644.05	9	8	Bullish	Bearish	Bullish	Bearish at risk	Bullish	Bullish	High	High	High	
S&P 500 DIV FINANCIAL IX	1095.12	10	12	Bullish	Bearish	Bullish	Bullish	Bullish	Bullish	High	High	High	
S&P 500 CAPITAL GDS IDX	1002.99	11	9	Bullish	Bearish	Bullish	Bearish	Bullish	Bullish at risk	High	High	High	
S&P 500 PHRM BIO & LF SC	1324.44	12	16	Bullish	Bearish	Bullish	Bullish at risk	Bullish	Bearish at risk	High		High	
S&P 500 CON DUR&AP INDEX	419.55	13	14	Bullish	Bearish	Bullish	Bearish at risk	Bullish	Bullish at risk				
S&P 500 Comm & Prof Serv	582.68	14	7	Bullish	Bearish	Bullish	Bearish	Bullish	Bearish	High	Low	High	
S&P 500 REAL ESTATE INDX	243.05	15	19	Bullish	Bearish	Bullish	Bearish	Bullish	Bullish at risk	High			
S&P 500 TECH HW & EQP IX	3546.84	16	6	Bullish	Bearish	Bearish at risk	Bearish	Bullish	Bearish		Low		
S&P 500 TRANSPN INDEX	993.93	17	15	Bullish	Bearish	Bearish at risk	Bearish	Bullish	Bearish				
S&P 500 HC EQUIP&SVC IDX	1902.00	18	13	Bullish	Bearish	Bullish	Bearish	Bullish	Bearish	High	Low	High	Low
S&P 500 MATERIALS INDEX	518.55	19	18	Bullish	Bearish	Bullish	Bearish	Bullish	Bearish		Low		Low
S&P 500 HH & PR PDTS IDX	801.91	20	21	Bearish	Bearish	Bearish	Bearish	Bullish	Bearish		Low		Low
S&P 500 FD BEV & TOB IDX	791.23	21	22	Bearish	Bearish	Bearish	Bearish	Bullish	Bearish	High	Low		Low
S&P 500 UTILITIES INDEX	309.79	22	24	Bearish	Bearish	Bearish	Bearish	Bullish at risk	Bearish	High	Low		Low
S&P 500 ENERGY INDEX	612.33	23	23	Bearish	Bearish	Bullish at risk	Bearish	Bearish	Bearish	Low	Low		Low
S&P 500 AUTO & COMP IDX	118.37	24	4	Bullish at risk	Bearish	Bearish	Bearish	Bearish	Bearish		Low		

Source: BofA Global Research, Bloomberg

Note: This screen is not a recommended list either individually or as a group of stocks. Investors should consider the fundamentals of the companies and their own individual circumstances/objectives before making any investment decisions

BofA GLOBAL RESEARCH

Net Tabs stall

Net Tab: Overhang on drop from overbought

After a +5 oversold (inverted scale) helped to confirm a low near SPX 3500 in late 2022, the Net Tab finally hit a -3 overbought (-3 to -6) to confirm the cyclical rally in late December and early January. However, last week's move to -1 puts the Net Tab out of overbought, which we view as a potential overhang for the SPX that is aligned with the lackluster, or sideways, seasonal pattern for the index during the first half of the Presidential election year (see our report, [2024 Equity Technical Strategy Year Ahead: Cyclical uptrend within a secular bull market 12 January 2024](#)).

).

Table 9: Net Tab Indicator: Components and values

The Net Tab remained at -1 last week. This move out of overbought is a potential overhang.

	Level	Change	Current Week	Last Week	Change
S&P 500			4839.81	4783.83	1.17%
NYSE Stocks over 200 DMA	0	0	65.59%	69.16%	-3.57%
5 week A/D Diffusion	-1	0	55.73%	56.58%	-0.85%
Investment Services Bearish	-1	0	*	*	*
BofA Short Term Sentiment	-1	0	47.10%	47.70%	-0.60%
30 Day Arms Index	1	0	1.17	1.12	4.20%
25 day CBOE Put/Call	1	0	95.56	95.24	0.34%
This Week net	-1				
Last Week net	-1				

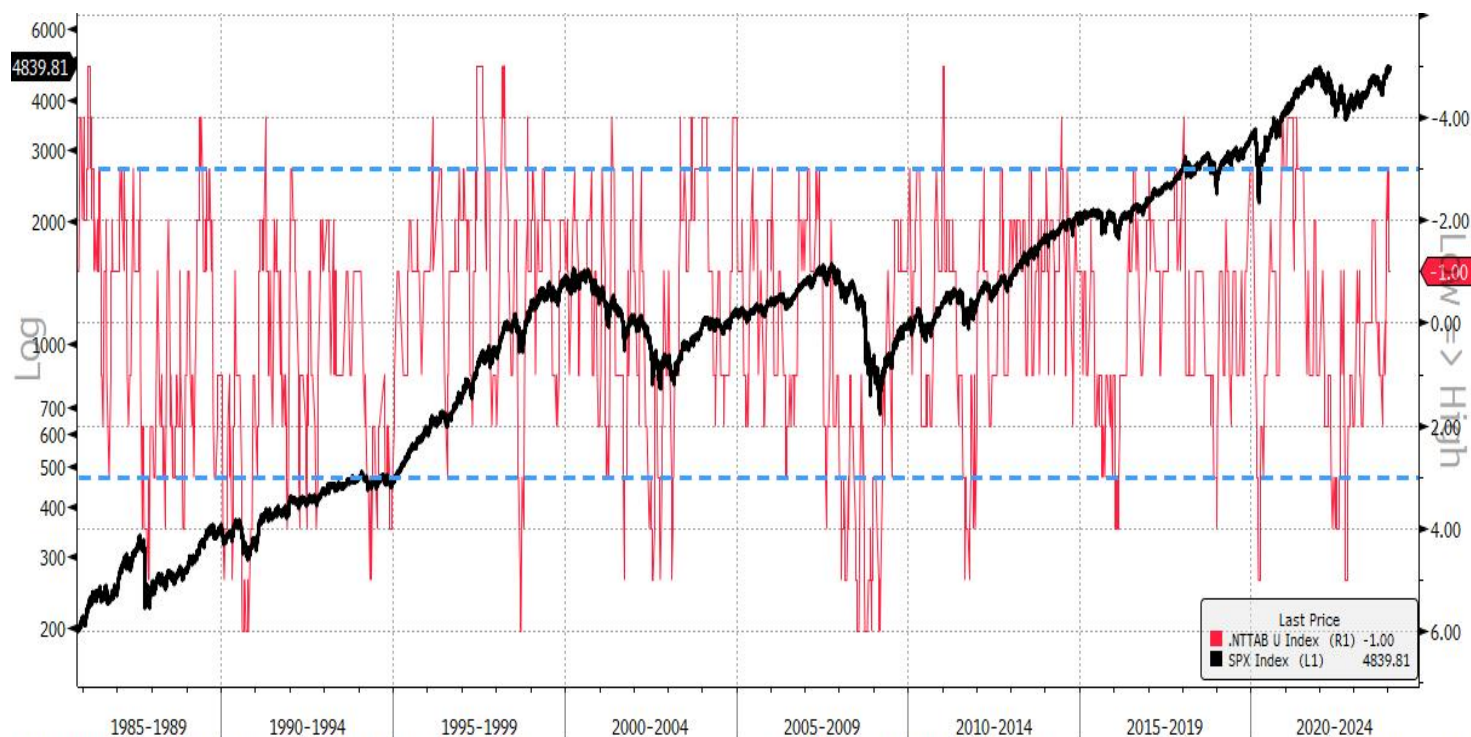
Source: BofA Global Research, Bloomberg

*Data restricted by provider

BofA GLOBAL RESEARCH

Chart 17: Net Tab Indicator: Components and values

After a +5 oversold (inverted scale) helped to confirm a low near SPX 3500 in late 2022, the Net Tab finally hit a -3 overbought (-3 to -6) to confirm the cyclical rally in late December and early January. However, last week's move to -1 puts the Net Tab out of overbought, which we view as a potential overhang for the SPX.



Source: BofA Global Research, Bloomberg

BofA GLOBAL RESEARCH

Net Tab Bands: Bullish off a +3 oversold but stalled at -2

The Net Tab Bands moved back to -1 from -2 after reaching oversold levels (+3 to +6) from 10/27 through 11/10 (inverted scale). This oversold triggered a rally into yearend, but a “bullish confirming” overbought reading from -3 to -6 has proven to be elusive with the Net Tab Bands stalling at -2 for the five weeks prior to moving back to -1.

The Net Tab Bands initiated a bullish trend continuation signal for US equities on the 2/3 move to -1 after reaching deep oversold levels of +5 to +6 (inverted scale) to suggest a bottoming process for US equities in mid-to-late 2022 (see our report, [Bullish continuation signals from Net Tabs and sentiment](#)).

Table 10: Net Tab Bands Indicator: Components and values

The Net Tab Bands indicator moved back to -1 from -2.

	Level	Change	Current Week	Last Week	Change
S&P 500			4839.81	4783.83	1.17%
NYSE Stocks over 200 DMA	0	0	65.59%	69.16%	-3.57%
McClellan Summation Index	0	1	645.76	874.86	-26.19%
Investment Services Bearish	0	0	*	*	*
BofA Short Term Sentiment	-1	0	47.10%	47.70%	-0.60%
30 Day Arms Index	0	0	1.17	1.12	4.20%
25 day CBOE Put/Call	0	0	95.56	95.24	0.34%
This Week net	-1				
Last Week net	-2				

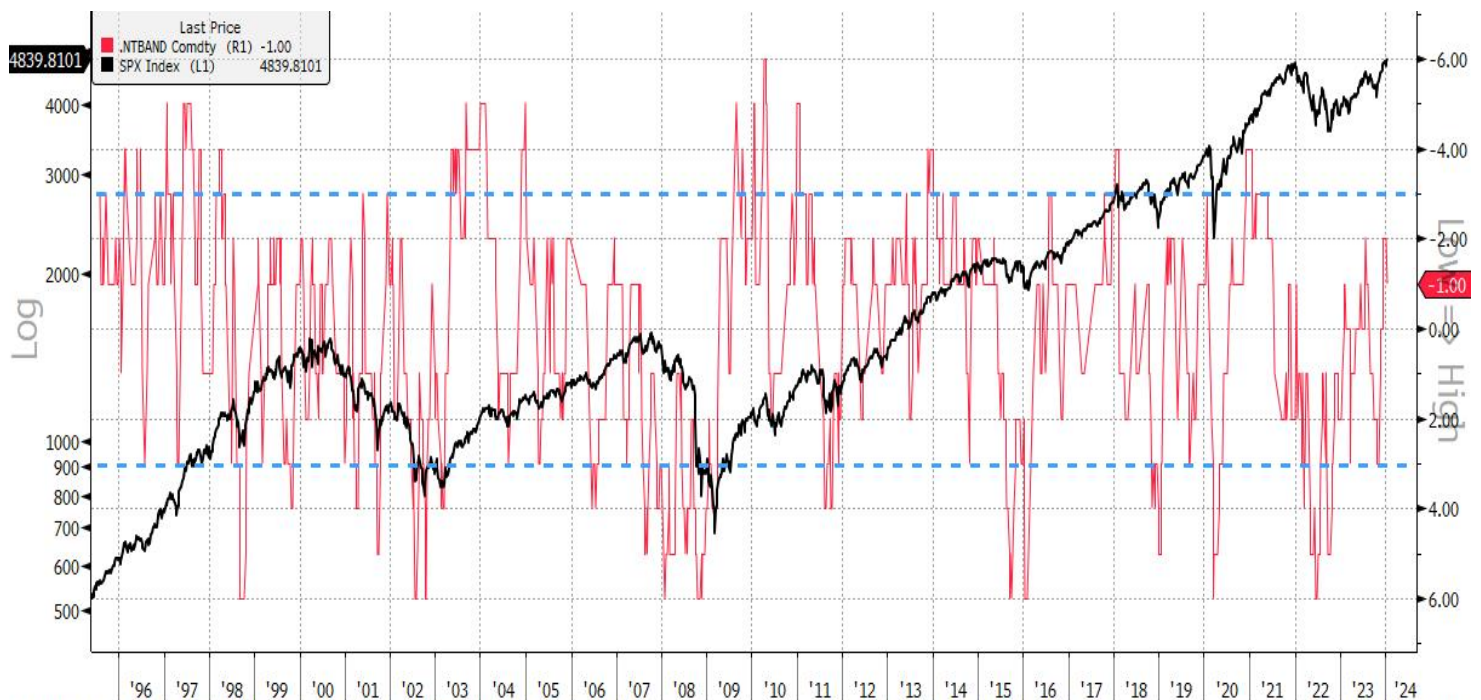
Source: BofA Global Research, Bloomberg

*Data restricted by provider

BofA GLOBAL RESEARCH

Chart 18: S&P 500 with the Net Tab Bands: Weekly chart

The Net Tab Bands moved back to -1 from -2 after reaching oversold levels (+3 to +6) from 10/27 through 11/10 (inverted scale). This oversold triggered a rally into yearend, but a “bullish confirming” overbought reading from -3 to -6 has proven to be elusive with the Net Tab Bands stalling at -2 for the last five weeks.



Source: BofA Global Research, Bloomberg

BofA GLOBAL RESEARCH

Net Tab methodology

The Net Tab is a leading breadth and sentiment indicator designed to measure macro overbought and oversold conditions. The indicator is made up of six factors, each of which employs a different method to measure investor sentiment and market breadth. The values achieved by each component factor of +1 (oversold), -1 (overbought) or 0 (neutral) are summed to produce the Net Tab. A variation of the Net Tab, the "Net Tab Bands," is composed in the same way with a slight variation in the factors used and how overbought, oversold and neutral scores are achieved. The underlying idea powering these indicators is that extreme overbought and oversold conditions should achieve consistent readings across various measures of market health.

Net Tab methodology

The Net Tab is a composite indicator of six separate indicators that gauge market breadth (NYSE Stocks > 200-day MA, 5-week A/D Diffusion and 30-day Arms Index) and sentiment (Investors Intelligence % Bears, BofA Short-term Sentiment, and 25-day CBOE Put/Call ratio). Each of these indicators is assigned a +1 (oversold), 0 (neutral), or -1 (overbought) reading. These readings are summed up or "tabbed" to get the Net Tab reading, which is on a scale of +6 to -6. Readings of +6 to +3 are oversold, +2 to -2 are neutral and -3 to -6 are overbought.

Bands Net Tab methodology

The Net Tab Bands is a companion to the traditional Net Tab. It also has six components (retaining five from the original Net Tab), but the overbought/ oversold readings are dynamic, not constant, reflecting the fact that the market is dynamic. The overbought/oversold extremes are based on a one standard deviation envelope around the 208-week moving average (MA) of the indicator being analyzed. The 208-week MA was chosen to be in harmony with the well-known and well-regarded Four-Year Cycle.

Five of the six components are the same as the traditional Net Tab; the exception is that we have replaced the Five-Week Advance Decline Diffusion Index with the McClellan Summation Oscillator. As is the case with the original Net Tab, buy readings are +3 or higher, and sell readings are in the -3 to -6 range. Both types of signals tend to occur as one-time events or as a cluster of such readings. Trend lines are also important.

Market bottoms tend to be more emotional than tops and take less time to develop. To help confirm a buy signal, we usually also want to see the indicator reverse from buy readings of +3 or higher to neutral readings of +2 or lower. We also like to see a confirming reversal through a dominant downtrend line.

During a bull market, history suggests that, following a confirmed reversal from a buy signal of +3 or higher, the Net Tab tends to move to the -3 to -6 sell range. During bear markets, the indicator may only achieve a reading of -2.

Disclosures

Important Disclosures

FUNDAMENTAL EQUITY OPINION KEY: Opinions include a Volatility Risk Rating, an Investment Rating and an Income Rating. **VOLATILITY RISK RATINGS**, indicators of potential price fluctuation, are: A - Low, B - Medium and C - High. **INVESTMENT RATINGS** reflect the analyst's assessment of both a stock's absolute total return potential as well as its attractiveness for investment relative to other stocks within its Coverage Cluster (defined below). Our investment ratings are: 1 - Buy stocks are expected to have a total return of at least 10% and are the most attractive stocks in the coverage cluster; 2 - Neutral stocks are expected to remain flat or increase in value and are less attractive than Buy rated stocks and 3 - Underperform stocks are the least attractive stocks in a coverage cluster. An investment rating of 6 (No Rating) indicates that a stock is no longer trading on the basis of fundamentals. Analysts assign investment ratings considering, among other things, the 0-12 month total return expectation for a stock and the firm's guidelines for ratings dispersions (shown in the table below). The current price objective for a stock should be referenced to better understand the total return expectation at any given time. The price objective reflects the analyst's view of the potential price appreciation (depreciation).

Investment rating	Total return expectation (within 12-month period of date of initial rating)	Ratings dispersion guidelines for coverage cluster ^{R1}
Buy	≥ 10%	≤ 70%
Neutral	≥ 0%	≤ 30%
Underperform	N/A	≥ 20%

^{R1} Ratings dispersions may vary from time to time where BofA Global Research believes it better reflects the investment prospects of stocks in a Coverage Cluster.

INCOME RATINGS, indicators of potential cash dividends, are: 7 - same/higher (dividend considered to be secure), 8 - same/lower (dividend not considered to be secure) and 9 - pays no cash dividend. *Coverage Cluster* is comprised of stocks covered by a single analyst or two or more analysts sharing a common industry, sector, region or other classification(s). A stock's coverage cluster is included in the most recent BofA Global Research report referencing the stock.

Due to the nature of strategic analysis, the issuers or securities recommended or discussed in this report are not continuously followed. Accordingly, investors must regard this report as providing stand-alone analysis and should not expect continuing analysis or additional reports relating to such issuers and/or securities.

Due to the nature of quantitative analysis, the issuers or securities recommended or discussed in this report are not continuously followed. Accordingly, investors must regard this report as providing stand-alone analysis and should not expect continuing analysis or additional reports relating to such issuers and/or securities.

Due to the nature of technical analysis, the issuers or securities recommended or discussed in this report are not continuously followed. Accordingly, investors must regard this report as providing stand-alone analysis and should not expect continuing analysis or additional reports relating to such issuers and/or securities.

BofA Global Research personnel (including the analyst(s) responsible for this report) receive compensation based upon, among other factors, the overall profitability of Bank of America Corporation, including profits derived from investment banking. The analyst(s) responsible for this report may also receive compensation based upon, among other factors, the overall profitability of the Bank's sales and trading businesses relating to the class of securities or financial instruments for which such analyst is responsible.

BofA Securities fixed income analysts regularly interact with sales and trading desk personnel in connection with their research, including to ascertain pricing and liquidity in the fixed income markets.

Other Important Disclosures

Prices are indicative and for information purposes only. Except as otherwise stated in the report, for any recommendation in relation to an equity security, the price referenced is the publicly traded price of the security as of close of business on the day prior to the date of the report or, if the report is published during intraday trading, the price referenced is indicative of the traded price as of the date and time of the report and in relation to a debt security (including equity preferred and CDS), prices are indicative as of the date and time of the report and are from various sources including BofA Securities trading desks.

The date and time of completion of the production of any recommendation in this report shall be the date and time of dissemination of this report as recorded in the report timestamp.

Recipients who are not institutional investors or market professionals should seek the advice of their independent financial advisor before considering information in this report in connection with any investment decision, or for a necessary explanation of its contents.

Officers of BofAS or one or more of its affiliates (other than research analysts) may have a financial interest in securities of the issuer(s) or in related investments.

Refer to [BofA Global Research policies relating to conflicts of interest](#).

"BofA Securities" includes BofA Securities, Inc. ("BofAS") and its affiliates. Investors should contact their BofA Securities representative or Merrill Global Wealth Management financial advisor if they have questions concerning this report or concerning the appropriateness of any investment idea described herein for such investor. "BofA Securities" is a global brand for BofA Global Research.

Information relating to Non-US affiliates of BofA Securities and Distribution of Affiliate Research Reports:

BofAS and/or Merrill Lynch, Pierce, Fenner & Smith Incorporated ("MLPF&S") may in the future distribute, information of the following non-US affiliates in the US (short name: legal name, regulator): Merrill Lynch (South Africa): Merrill Lynch South Africa (Pty) Ltd., regulated by The Financial Service Board; MLI (UK): Merrill Lynch International, regulated by the Financial Conduct Authority (FCA) and the Prudential Regulation Authority (PRA); BofASE (France): BofA Securities Europe SA is authorized by the Autorité de Contrôle Prudentiel et de Résolution (ACPR) and regulated by the ACPR and the Autorité des Marchés Financiers (AMF). BofA Securities Europe SA ("BofASE") with registered address at 51, rue La Boétie, 75008 Paris is registered under no 842 602 690 RCS Paris. In accordance with the provisions of French Code Monétaire et Financier (Monetary and Financial Code), BofASE is an établissement de crédit et d'investissement (credit and investment institution) that is authorised and supervised by the European Central Bank and the Autorité de Contrôle Prudentiel et de Résolution (ACPR) and regulated by the ACPR and the Autorité des Marchés Financiers. BofASE's share capital can be found at www.bofam.com/BofASEdisclaimer; BofA Europe (Milan): Bank of America Europe Designated Activity Company, Milan Branch, regulated by the Bank of Italy, the European Central Bank (ECB) and the Central Bank of Ireland (CBI); BofA Europe (Frankfurt): Bank of America Europe Designated Activity Company, Frankfurt Branch regulated by BaFin, the ECB and the CBI; BofA Europe (Madrid): Bank of America Europe Designated Activity Company, Sucursal en España, regulated by the Bank of Spain, the ECB and the CBI; Merrill Lynch (Australia): Merrill Lynch Equities (Australia) Limited, regulated by the Australian Securities and Investments Commission; Merrill Lynch (Hong Kong): Merrill Lynch (Asia Pacific) Limited, regulated by the Hong Kong Securities and Futures Commission (HKSF); Merrill Lynch (Singapore): Merrill Lynch (Singapore) Pte Ltd, regulated by the Monetary Authority of Singapore (MAS); Merrill Lynch (Canada): Merrill Lynch Canada Inc, regulated by the Canadian Investment Regulatory Organization; Merrill Lynch (Mexico): Merrill Lynch Mexico, SA de CV, Casa de Bolsa, regulated by the Comisión Nacional Bancaria y de Valores; Merrill Lynch (Argentina): Merrill Lynch Argentina SA, regulated by Comisión Nacional de Valores; BofAS Japan: BofA Securities Japan Co., Ltd., regulated by the Financial Services Agency; Merrill Lynch (Seoul): Merrill Lynch International, LLC Seoul Branch, regulated by the Financial Supervisory Service; Merrill Lynch (Taiwan): Merrill Lynch Securities (Taiwan) Ltd., regulated by the Securities and Futures Bureau; BofAS India: BofA Securities India Limited, regulated by the Securities and Exchange Board of India (SEBI); Merrill Lynch (Israel): Merrill Lynch Israel Limited, regulated by Israel Securities Authority; Merrill Lynch (DIFC): Merrill Lynch International (DIFC Branch), regulated by the Dubai Financial Services Authority (DFSA); Merrill Lynch (Brazil): Merrill Lynch S.A. Corretora de Títulos e Valores Mobiliários, regulated by Comissão de Valores Mobiliários; Merrill Lynch KSA Company: Merrill Lynch Kingdom of Saudi Arabia Company, regulated by the Capital Market Authority.

This information has been approved for publication and is distributed in the United Kingdom (UK) to professional clients and eligible counterparties (as each is defined in the rules of the FCA and the PRA) by MLI (UK), which is authorized by the PRA and regulated by the FCA and the PRA - details about the extent of our regulation by the FCA and PRA are available from us on request;



has been approved for publication and is distributed in the European Economic Area (EEA) by BofASE (France), which is authorized by the ACPR and regulated by the ACPR and the AMF; has been considered and distributed in Japan by BofAS Japan, a registered securities dealer under the Financial Instruments and Exchange Act in Japan, or its permitted affiliates; is issued and distributed in Hong Kong by Merrill Lynch (Hong Kong) which is regulated by HKSF; is issued and distributed in Taiwan by Merrill Lynch (Taiwan); is issued and distributed in India by BofAS India; and is issued and distributed in Singapore to institutional investors and/or accredited investors (each as defined under the Financial Advisers Regulations) by Merrill Lynch (Singapore) (Company Registration No 198602883D). Merrill Lynch (Singapore) is regulated by MAS. Merrill Lynch Equities (Australia) Limited (ABN 65 006 276 795), AFS License 235132 (MLEA) distributes this information in Australia only to 'Wholesale' clients as defined by s.761G of the Corporations Act 2001. With the exception of Bank of America N.A., Australia Branch, neither MLEA nor any of its affiliates involved in preparing this information is an Authorised Deposit-Taking Institution under the Banking Act 1959 nor regulated by the Australian Prudential Regulation Authority. No approval is required for publication or distribution of this information in Brazil and its local distribution is by Merrill Lynch (Brazil) in accordance with applicable regulations. Merrill Lynch (DIFC) is authorized and regulated by the DFSA. Information prepared and issued by Merrill Lynch (DIFC) is done so in accordance with the requirements of the DFSA conduct of business rules. BofA Europe (Frankfurt) distributes this information in Germany and is regulated by BaFin, the ECB and the CBI. BofA Securities entities, including BofA Europe and BofASE (France), may outsource/delegate the marketing and/or provision of certain research services or aspects of research services to other branches or members of the BofA Securities group. You may be contacted by a different BofA Securities entity acting for and on behalf of your service provider where permitted by applicable law. This does not change your service provider. Please refer to the [Electronic Communications Disclaimers](#) for further information.

This information has been prepared and issued by BofAS and/or one or more of its non-US affiliates. The author(s) of this information may not be licensed to carry on regulated activities in your jurisdiction and, if not licensed, do not hold themselves out as being able to do so. BofAS and/or MLPF&S is the distributor of this information in the US and accepts full responsibility for information distributed to BofAS and/or MLPF&S clients in the US by its non-US affiliates. Any US person receiving this information and wishing to effect any transaction in any security discussed herein should do so through BofAS and/or MLPF&S and not such foreign affiliates. Hong Kong recipients of this information should contact Merrill Lynch (Asia Pacific) Limited in respect of any matters relating to dealing in securities or provision of specific advice on securities or any other matters arising from, or in connection with, this information. Singapore recipients of this information should contact Merrill Lynch (Singapore) Pte Ltd in respect of any matters arising from, or in connection with, this information. For clients that are not accredited investors, expert investors or institutional investors Merrill Lynch (Singapore) Pte Ltd accepts full responsibility for the contents of this information distributed to such clients in Singapore.

General Investment Related Disclosures:

Taiwan Readers: Neither the information nor any opinion expressed herein constitutes an offer or a solicitation of an offer to transact in any securities or other financial instrument. No part of this report may be used or reproduced or quoted in any manner whatsoever in Taiwan by the press or any other person without the express written consent of BofA Securities.

This document provides general information only, and has been prepared for, and is intended for general distribution to, BofA Securities clients. Neither the information nor any opinion expressed constitutes an offer or an invitation to make an offer, to buy or sell any securities or other financial instrument or any derivative related to such securities or instruments (e.g., options, futures, warrants, and contracts for differences). This document is not intended to provide personal investment advice and it does not take into account the specific investment objectives, financial situation and the particular needs of, and is not directed to, any specific person(s). This document and its content do not constitute, and should not be considered to constitute, investment advice for purposes of ERISA, the US tax code, the Investment Advisers Act or otherwise. Investors should seek financial advice regarding the appropriateness of investing in financial instruments and implementing investment strategies discussed or recommended in this document and should understand that statements regarding future prospects may not be realized. Any decision to purchase or subscribe for securities in any offering must be based solely on existing public information on such security or the information in the prospectus or other offering document issued in connection with such offering, and not on this document.

Securities and other financial instruments referred to herein, or recommended, offered or sold by BofA Securities, are not insured by the Federal Deposit Insurance Corporation and are not deposits or other obligations of any insured depository institution (including, Bank of America, N.A.). Investments in general and, derivatives, in particular, involve numerous risks, including, among others, market risk, counterparty default risk and liquidity risk. No security, financial instrument or derivative is suitable for all investors. Digital assets are extremely speculative, volatile and are largely unregulated. In some cases, securities and other financial instruments may be difficult to value or sell and reliable information about the value or risks related to the security or financial instrument may be difficult to obtain. Investors should note that income from such securities and other financial instruments, if any, may fluctuate and that price or value of such securities and instruments may rise or fall and, in some cases, investors may lose their entire principal investment. Past performance is not necessarily a guide to future performance. Levels and basis for taxation may change.

This report may contain a short-term trading idea or recommendation, which highlights a specific near-term catalyst or event impacting the issuer or the market that is anticipated to have a short-term price impact on the equity securities of the issuer. Short-term trading ideas and recommendations are different from and do not affect a stock's fundamental equity rating, which reflects both a longer term total return expectation and attractiveness for investment relative to other stocks within its Coverage Cluster. Short-term trading ideas and recommendations may be more or less positive than a stock's fundamental equity rating.

BofA Securities is aware that the implementation of the ideas expressed in this report may depend upon an investor's ability to "short" securities or other financial instruments and that such action may be limited by regulations prohibiting or restricting "shortselling" in many jurisdictions. Investors are urged to seek advice regarding the applicability of such regulations prior to executing any short idea contained in this report.

Foreign currency rates of exchange may adversely affect the value, price or income of any security or financial instrument mentioned herein. Investors in such securities and instruments, including ADRs, effectively assume currency risk.

BofAS or one of its affiliates is a regular issuer of traded financial instruments linked to securities that may have been recommended in this report. BofAS or one of its affiliates may, at any time, hold a trading position (long or short) in the securities and financial instruments discussed in this report.

BofA Securities, through business units other than BofA Global Research, may have issued and may in the future issue trading ideas or recommendations that are inconsistent with, and reach different conclusions from, the information presented herein. Such ideas or recommendations may reflect different time frames, assumptions, views and analytical methods of the persons who prepared them, and BofA Securities is under no obligation to ensure that such other trading ideas or recommendations are brought to the attention of any recipient of this information.

In the event that the recipient received this information pursuant to a contract between the recipient and BofAS for the provision of research services for a separate fee, and in connection therewith BofAS may be deemed to be acting as an investment adviser, such status relates, if at all, solely to the person with whom BofAS has contracted directly and does not extend beyond the delivery of this report (unless otherwise agreed specifically in writing by BofAS). If such recipient uses the services of BofAS in connection with the sale or purchase of a security referred to herein, BofAS may act as principal for its own account or as agent for another person. BofAS is and continues to act solely as a broker-dealer in connection with the execution of any transactions, including transactions in any securities referred to herein.

Copyright and General Information:

Copyright 2024 Bank of America Corporation. All rights reserved. iQdatabase® is a registered service mark of Bank of America Corporation. This information is prepared for the use of BofA Securities clients and may not be redistributed, retransmitted or disclosed, in whole or in part, or in any form or manner, without the express written consent of BofA Securities. BofA Global Research information is distributed simultaneously to internal and client websites and other portals by BofA Securities and is not publicly-available material. Any unauthorized use or disclosure is prohibited. Receipt and review of this information constitutes your agreement not to redistribute, retransmit, or disclose to others the contents, opinions, conclusion, or information contained herein (including any investment recommendations, estimates or price targets) without first obtaining express permission from an authorized officer of BofA Securities.

Materials prepared by BofA Global Research personnel are based on public information. Facts and views presented in this material have not been reviewed by, and may not reflect information known to, professionals in other business areas of BofA Securities, including investment banking personnel. BofA Securities has established information barriers between BofA Global Research and certain business groups. As a result, BofA Securities does not disclose certain client relationships with, or compensation received from, such issuers. To the extent this material discusses any legal proceeding or issues, it has not been prepared as nor is it intended to express any legal conclusion, opinion or advice. Investors should consult their own legal advisers as to issues of law relating to the subject matter of this material. BofA Global Research personnel's knowledge of legal proceedings in which any BofA Securities entity and/or its directors, officers and employees may be plaintiffs, defendants, co-defendants or co-plaintiffs with or involving issuers mentioned in this material is based on public information. Facts and views presented in this material that relate to any such proceedings have not been reviewed by, discussed with, and may not reflect information known to, professionals in other business areas of BofA Securities in connection with the legal proceedings or matters relevant to such proceedings.

This information has been prepared independently of any issuer of securities mentioned herein and not in connection with any proposed offering of securities or as agent of any issuer of any securities. None of BofAS any of its affiliates or their research analysts has any authority whatsoever to make any representation or warranty on behalf of the issuer(s). BofA Global Research policy prohibits research personnel from disclosing a recommendation, investment rating, or investment thesis for review by an issuer prior to the publication of a research report containing such rating, recommendation or investment thesis.

Any information relating to the tax status of financial instruments discussed herein is not intended to provide tax advice or to be used by anyone to provide tax advice. Investors are urged to

seek tax advice based on their particular circumstances from an independent tax professional.

The information herein (other than disclosure information relating to BofA Securities and its affiliates) was obtained from various sources and we do not guarantee its accuracy. This information may contain links to third-party websites. BofA Securities is not responsible for the content of any third-party website or any linked content contained in a third-party website. Content contained on such third-party websites is not part of this information and is not incorporated by reference. The inclusion of a link does not imply any endorsement by or any affiliation with BofA Securities. Access to any third-party website is at your own risk, and you should always review the terms and privacy policies at third-party websites before submitting any personal information to them. BofA Securities is not responsible for such terms and privacy policies and expressly disclaims any liability for them.

All opinions, projections and estimates constitute the judgment of the author as of the date of publication and are subject to change without notice. Prices also are subject to change without notice. BofA Securities is under no obligation to update this information and BofA Securities ability to publish information on the subject issuer(s) in the future is subject to applicable quiet periods. You should therefore assume that BofA Securities will not update any fact, circumstance or opinion contained herein.

Certain outstanding reports or investment opinions relating to securities, financial instruments and/or issuers may no longer be current. Always refer to the most recent research report relating to an issuer prior to making an investment decision.

In some cases, an issuer may be classified as Restricted or may be Under Review or Extended Review. In each case, investors should consider any investment opinion relating to such issuer (or its security and/or financial instruments) to be suspended or withdrawn and should not rely on the analyses and investment opinion(s) pertaining to such issuer (or its securities and/or financial instruments) nor should the analyses or opinion(s) be considered a solicitation of any kind. Sales persons and financial advisors affiliated with BofAS or any of its affiliates may not solicit purchases of securities or financial instruments that are Restricted or Under Review and may only solicit securities under Extended Review in accordance with firm policies.

Neither BofA Securities nor any officer or employee of BofA Securities accepts any liability whatsoever for any direct, indirect or consequential damages or losses arising from any use of this information.