

Quantifying Technicals

Macro trends after SPX's golden cross

Primer

Summary: Macro trends after the S&P500's golden cross

On July 1, 2025 with a closing value of 6,198.01, the S&P 500 received a golden cross signal. This is when the 50d SMA crosses above the 200d SMA. This is the 50th signal since 1928 and the 30th where the 200d SMA was rising. In this report we summarize what this signal favors for macro market trends in 2H25. It tended to be bullish for the S&P500, bearish US 10Y (higher yield), supportive for gold and oil and showed little directional bias for the DXY.

Macro trends after a golden cross signal on SPX

In Exhibit 1 below we highlight the % up ratio for each macro asset after all golden cross signals on the S&P 500. The SPX tended to rise 25-100 trading days later 65-78% of the time. US 10 year tended to decline (yield rose) with weak up ratios around 30-50 and 100- trading days after. Gold tended to be higher around 50-, 65- and 80-trading days later. Oil tended to be higher at 15-, 20- and 50- trading days later. The DXY had a modest tendency to be higher 30 trading days later. DXY aside, noted tendencies were stronger when the 200d SMA on the SPX was rising (Exhibit 2). For more detail, please see inside the report.

Exhibit 1: The % up ratio for macro assets after a golden cross signal on the SPX

SPX tended to rise, US 10Y to sell off (yield up), Gold and oil found some support, DXY saw little trend bias.

Ticker	5d	10d	15d	20d	25d	30d	35d	40d	50d	65d	80d	100d	260d
SPX	57%	65%	65%	63%	71%	73%	65%	67%	65%	73%	73%	78%	69%
US 10Y	39%	45%	39%	39%	39%	35%	35%	39%	35%	45%	42%	32%	39%
Gold	56%	64%	64%	52%	56%	60%	52%	56%	68%	68%	72%	64%	60%
Oil	58%	53%	68%	68%	47%	53%	63%	63%	68%	58%	53%	63%	79%
DXY	38%	46%	54%	54%	58%	62%	54%	46%	54%	50%	54%	50%	62%

Source: BofA Global Research, Bloomberg.

Notes: SPX since 1928 saw 49 golden cross signals. Data on other assets is less available. US 10Y data since 1962 is available for 31 of those 49 signals. Gold since 1975 includes 25 signals. Oil since 1983 includes 19 signals. DXY since 1971 includes 26 signals.

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Exhibit 2: The % up ratio for macro assets after a golden cross with rising 200d SMA on the SPX

Up ratios increased for the SPX, US 10Y, Gold, Oil and to an extent DXY. Note fewer observations.

Ticker	5d	10d	15d	20d	25d	30d	35d	40d	50d	65d	80d	100d	260d
SPX	52%	66%	72%	66%	72%	72%	66%	69%	69%	76%	72%	79%	66%
US 10Y	33%	48%	38%	33%	38%	29%	29%	29%	29%	33%	29%	19%	33%
Gold	65%	76%	59%	53%	59%	65%	59%	59%	71%	76%	82%	71%	71%
Oil	54%	54%	69%	69%	54%	62%	77%	77%	77%	69%	62%	77%	85%
DXY	33%	33%	39%	44%	44%	50%	44%	50%	56%	56%	56%	50%	50%

Source: BofA Global Research, Bloomberg

Notes: SPX since 1928 saw 29 golden cross signals with a rising 200d SMA. Data on other assets is less available. US 10Y data since 1962 is available for 21 of those 49 signals. Gold since 1975 includes 17 signals. Oil since 1983 includes 13 signals. DXY since 1971 includes 18.

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Refer to important disclosures on page 7 to 9.

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Trading days after July 1, 2025

15 trading days after is July 23.

20 trading days after is July 30.

25 trading days after is August 6.

30 trading days after is August 13.

35 trading days after is August 20.

40 trading days after is August 27.

50 trading days after is Sept 11.

65 trading days after is October 2.

80 trading days after is October 24.

100 trading days after is Nov 24.

Closing values on July 1, 2025

SPX = 6,198.01

US 10Y = 4.24%

Gold = \$3,333.84/oz

Oil = \$61.72/brl

DXY = \$96.82

S&P 500 after a golden cross

- On July 1st 2025 with a closing value of 6,198.01, a golden cross signal occurred for the S&P 500. This is when the 50d SMA crosses above the 200d SMA. This is the 50th signal since 1928. In this instance, the 200d SMA had a positive slope (vs five days prior) which is the 30th signal since 1928.
- After past golden cross signals (49 signals), the S&P 500 was up approximately 72% of the time in 25-, 30-, 65- and 80-trading days later. It was up 78% of the time in 100 trading days. Average and median returns were positive, greater than all rolling periods and standard deviation of returns were lower. (Exhibit 3)
- In the past when the 200d SMA had a positive slope vs five days prior (29 signals) we found similar hit ratios and statistics. After 15 trading days, which is July 23, the tendency to be higher was greater (Exhibit 4) than all signals (Exhibit 3).

Exhibit 3: S&P 500 forward returns following a golden cross signal and rolling returns from October 1928

On July 1, 2025 the 50d SMA crossed above the 200d SMA with a closing value of 6,198.01. In the past the SPX was up 25-, 30-, 65-, 80- and 100- trading days later +/- 72% of the time outperforming all periods. Average and median returns were greater than all periods and standard deviation of returns were lower. This implies the SPX may be above 6,198.01 on Aug 6, Aug 13, Oct 2, Oct 24 and/or Nov 24.

Signal Returns	5-day	10-day	15-day	20-day	25-day	30-day	35-day	40-day	50-day	65-day	80-day	100-day	260-day	Average
% Time Up (out of 49 signals)	57.14%	65.31%	65.31%	63.27%	71.43%	73.47%	65.31%	67.35%	65.31%	73.47%	73.47%	77.55%	69.39%	68.29%
Average	0.57%	1.26%	0.85%	1.28%	1.56%	2.30%	2.52%	2.81%	2.65%	4.06%	4.85%	5.02%	9.94%	3.05%
Median	0.39%	1.10%	0.89%	1.48%	1.69%	3.19%	3.45%	2.73%	3.47%	4.96%	4.42%	5.37%	10.93%	3.39%
Standard Deviation	2.45%	3.42%	4.45%	4.14%	4.93%	5.92%	6.99%	7.03%	6.02%	7.33%	8.93%	9.54%	16.81%	6.77%
Market Statistics - All Periods														
Rolling % Time up	56.17%	57.92%	59.00%	59.97%	60.04%	60.72%	61.00%	61.48%	62.86%	63.50%	64.15%	65.43%	69.02%	61.64%
Rolling Return Average All Periods	0.15%	0.30%	0.45%	0.61%	0.76%	0.91%	1.06%	1.21%	1.52%	1.96%	2.40%	2.99%	8.06%	1.72%
Rolling Return Median All Periods	0.29%	0.55%	0.78%	0.98%	1.20%	1.35%	1.53%	1.69%	2.04%	2.56%	3.01%	3.75%	9.39%	2.24%
Rolling Return Standard Deviation All Periods	2.61%	3.66%	4.54%	5.31%	5.99%	6.59%	7.15%	7.68%	8.61%	9.76%	10.64%	11.78%	20.26%	8.04%
Signal vs Market Statistics														
Δ % Time Up	0.97%	7.39%	6.30%	3.29%	11.39%	12.75%	4.31%	5.87%	2.45%	9.97%	9.32%	12.12%	0.36%	6.65%
Δ Average Return	0.42%	0.96%	0.40%	0.67%	0.81%	1.39%	1.46%	1.59%	1.13%	2.10%	2.46%	2.03%	1.87%	1.33%
Δ Median Return	0.10%	0.56%	0.11%	0.50%	0.49%	1.84%	1.92%	1.04%	1.43%	2.40%	1.41%	1.63%	1.54%	1.15%
Δ Standard Deviation	-0.16%	-0.24%	-0.10%	-1.17%	-1.05%	-0.67%	-0.16%	-0.65%	-2.58%	-2.43%	-1.71%	-2.24%	-3.45%	-1.28%

Source: BofA Global Research, Bloomberg. Note: This is out of 49 signals with the 50th signal occurring on July 1, 2025.

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Exhibit 4: S&P 500 forward returns following a golden cross signal with rising 200d SMA and rolling returns from October 1928

On July 1, 2025 when the 50d SMA crossed above the 200d SMA the 200d SMA was above its value five days prior or sloping positive. Results were similar with slightly stronger hit ratio and average returns 15 trading days later (or July 23, 2025). Overall, the "Average" column below and above is similar.

Signal Returns	5-day	10-day	15-day	20-day	25-day	30-day	35-day	40-day	50-day	65-day	80-day	100-day	260-day	Average
% Time Up (out of 29 signals)	51.72%	65.52%	72.41%	65.52%	72.41%	72.41%	65.52%	68.97%	68.97%	75.86%	72.41%	79.31%	65.52%	68.97%
Average	0.23%	1.01%	1.37%	1.50%	1.72%	2.19%	3.04%	3.15%	2.36%	4.18%	4.99%	5.13%	6.85%	2.90%
Median	0.02%	1.24%	1.36%	2.06%	1.69%	2.89%	4.06%	2.87%	2.07%	4.49%	4.76%	5.84%	6.75%	3.08%
Standard Deviation	2.00%	3.37%	4.15%	3.96%	4.88%	6.04%	7.56%	7.97%	5.99%	7.29%	8.58%	8.33%	15.35%	6.57%
Market Statistics - All Periods														
Rolling % Time up	56.17%	57.92%	59.00%	59.97%	60.04%	60.72%	61.00%	61.48%	62.86%	63.50%	64.15%	65.43%	69.02%	61.64%
Rolling Return Average All Periods	0.15%	0.30%	0.45%	0.61%	0.76%	0.91%	1.06%	1.21%	1.52%	1.96%	2.40%	2.99%	8.06%	1.72%
Rolling Return Median All Periods	0.29%	0.55%	0.78%	0.98%	1.20%	1.35%	1.53%	1.69%	2.04%	2.56%	3.01%	3.75%	9.39%	2.24%
Rolling Return Standard Deviation All Periods	2.61%	3.66%	4.54%	5.31%	5.99%	6.59%	7.15%	7.68%	8.61%	9.76%	10.64%	11.78%	20.26%	8.04%
Signal vs Market Statistics														
Δ % Time Up	-4.45%	7.60%	13.41%	5.55%	12.37%	11.70%	4.52%	7.49%	6.11%	12.36%	8.27%	13.88%	-3.51%	7.33%
Δ Average Return	0.08%	0.71%	0.91%	0.89%	0.96%	1.28%	1.98%	1.93%	0.85%	2.22%	2.59%	2.14%	-1.21%	1.18%
Δ Median Return	-0.28%	0.70%	0.59%	1.08%	0.49%	1.54%	2.53%	1.18%	0.03%	1.93%	1.75%	2.10%	-2.64%	0.85%
Δ Standard Deviation	-0.61%	-0.29%	-0.39%	-1.34%	-1.11%	-0.55%	0.41%	0.29%	-2.62%	-2.46%	-2.06%	-3.44%	-4.91%	-1.47%

Source: BofA Global Research, Bloomberg. Note: This is out of 29 signals with the 30th signal occurring on July 1 2025.

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US 10Y yield after a SPX golden cross

- On July 1st 2025 with US 10Y yield closing at 4.24%, a golden cross signal occurred on the S&P 500. We review the average trend in US 10Y yield and found a tendency for yields to be higher (bearish price) more so than all rolling periods. This is out of 31 signals since 1962 with now being the 32nd signal.
- The average trend 30-, 35- and 50- trading days later was higher approximately 65% of the time by 5-7bps (average and median). After 100 trading days later, yield was up nearly 68% of the time on average by 15bps and median 21bps. However, standard deviation of returns was slightly higher. This is out of 31 occurrences.
- When the SPX had a golden cross with a rising 200d SMA, US 10Y yield tended to rise more often 30-100 trading days later. For example, after 30-, 35-, 40-, 50-, and 80- trading days later yield was up 71% of the time. After 100 trading days yield was up 81% of the time which is Nov 24 2025. This is out of 21 signals since 1962.

Exhibit 5: US 10Y yield forward returns in basis points following a golden cross signal on the S&P 500 and rolling returns as of January 1962

After a golden cross signal on the S&P 500, US 10y yield tended to be higher 30-, 35- and 50- trading days later approximately 65% of the time and 68% 100- trading days later. The tendency to be higher was greater than all periods with average and median returns higher. Although standard deviation was a bit higher.

Signal Returns	5-day	10-day	15-day	20-day	25-day	30-day	35-day	40-day	50-day	65-day	80-day	100-day	260-day	Average
% Time Up (Out of 31 signals)	61.29%	54.84%	61.29%	61.29%	61.29%	64.52%	64.52%	61.29%	64.52%	54.84%	58.06%	67.74%	61.29%	61.29%
Average (bps)	2.18	1.71	5.37	4.20	3.56	5.78	6.60	7.50	5.01	7.28	11.25	15.48	34.00	8.38%
Median (bps)	2.13	3.08	7.00	7.00	8.60	6.37	7.00	11.00	6.90	13.00	9.11	21.00	36.02	10.62%
Standard Deviation (bps)	13.30	34.71	33.31	36.70	42.15	47.13	56.94	49.97	64.05	68.20	65.86	87.81	134.71	56.54%
Market Statistics - All Periods														
Rolling % Time up	48.86%	49.65%	49.86%	49.94%	50.15%	50.19%	50.02%	50.64%	51.62%	52.69%	52.55%	52.50%	52.82%	50.88%
Rolling Return Average All Periods	0.01	0.02	0.02	0.03	0.04	0.05	0.07	0.08	0.11	0.15	0.18	0.23	0.52	0.08%
Rolling Return Median All Periods	0.00	0.00	0.00	0.00	0.20	0.26	0.02	0.84	1.90	3.00	2.80	3.00	7.00	1.46%
Rolling Return Standard Deviation	15.18	21.78	27.16	31.81	36.14	40.13	43.62	46.73	52.11	58.77	64.85	72.01	117.64	48.38%
Signal vs Market														
Δ % Time Up	12.43%	5.19%	11.43%	11.35%	11.14%	14.32%	14.50%	10.65%	12.90%	2.15%	5.51%	15.24%	8.47%	10.41%
Δ Average Return	2.17	1.70	5.34	4.17	3.52	5.73	6.53	7.41	4.91	7.14	11.07	15.24	33.48	8.31%
Δ Median Return	2.13	3.08	7.00	7.00	8.40	6.11	6.99	10.16	5.00	10.00	6.31	18.00	29.02	9.08%
Δ Standard Deviation	-1.88	12.93	6.14	4.89	6.01	7.00	13.32	3.24	11.94	9.44	1.01	15.80	17.07	8.15%

Source: BoFA Global Research, Bloomberg. Note: US 10Y data since 1962 is available for 31 of the 49 golden cross signals on the SPX.

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Exhibit 6: US 10Y yield forward returns in basis points following a golden cross signal on the S&P 500 with a rising 200d SMA

After a golden cross signal with a rising 200d SMA on the S&P 500, US 10y yield tended to be higher 30-, 35-, 40-, 50- and 80- trading days later approximately 71% of the time. Yield was higher 81% of the time 100 trading days later. The tendency to be higher was greater than all periods with average and median returns higher with standard deviation of returns similar to all periods. 100 trading days later is November 24, 2025.

Signal Returns	5-day	10-day	15-day	20-day	25-day	30-day	35-day	40-day	50-day	65-day	80-day	100-day	260-day	Average
% Time Up (Out of 22 signals)	66.67%	52.38%	61.90%	66.67%	61.90%	71.43%	71.43%	71.43%	71.43%	66.67%	71.43%	80.95%	66.67%	67.77%
Average (bps)	2.88	5.40	8.17	8.62	12.57	15.35	19.24	19.96	22.92	28.32	31.97	38.68	65.88	3.92%
Median (bps)	2.13	2.00	7.00	7.00	11.00	12.00	13.87	15.94	10.00	29.00	20.95	26.81	60.00	3.23%
Standard Deviation (bps)	12.79	21.79	23.61	22.82	24.42	31.92	42.28	40.73	58.49	58.45	56.34	79.51	139.20	10.69%
Market Statistics - All Periods														
Rolling % Time up	48.86%	49.65%	49.86%	49.94%	50.15%	50.19%	50.02%	50.64%	51.62%	52.69%	52.55%	52.50%	52.82%	50.88%
Rolling Return Average All Periods	0.01	0.02	0.02	0.03	0.04	0.05	0.07	0.08	0.11	0.15	0.18	0.23	0.52	0.09%
Rolling Return Median All Periods	0.00	0.00	0.00	0.00	0.20	0.26	0.02	0.84	1.90	3.00	2.80	3.00	7.00	0.31%
Rolling Return Standard Deviation	15.18	21.78	27.16	31.81	36.14	40.13	43.62	46.73	52.11	58.77	64.85	72.01	117.64	10.85%
Signal vs Market														
Δ % Time Up	17.81%	2.74%	12.04%	16.73%	11.75%	21.23%	21.41%	20.79%	19.81%	13.97%	18.88%	28.46%	13.84%	16.88%
Δ Average Return	2.87	5.38	8.15	8.59	12.53	15.30	19.18	19.88	22.82	28.17	31.78	38.44	65.36	3.08%
Δ Median Return	2.13	2.00	7.00	7.00	10.80	11.74	13.86	15.10	8.10	26.00	18.15	23.81	53.00	2.85%
Δ Standard Deviation	-2.38	0.02	-3.55	-8.99	-11.71	-8.21	-1.34	-6.00	6.38	-0.32	-8.50	7.50	21.56	-0.08%

Source: BoFA Global Research, Bloomberg. Note: US 10Y data since 1962 is available for 21 of the 29 signals.

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Gold after a SPX golden cross

- On July 1st 2025 with Gold closing at \$3,333.84/oz a golden cross signal occurred on the S&P 500. We review the average trend in gold and found a tendency for gold prices to be higher 50-, 65- and 80- trading days later with positive average and median increases and a lower standard deviation of returns vs. all periods. This is out of 25 signals since 1975.
- When the S&P 500 had a golden cross signal with a rising 200d SMA like it did on July 1, gold's up ratios improved 50-, 65-, 80-, 100- and 260- trading days after. So was the average up ratio with higher average and median returns. However this is out of only 17 signals since 1975.

Exhibit 7: Gold forward returns following a golden cross signal in S&P 500 and rolling returns from January 1975

After a golden cross on the S&P500, gold prices tended to be higher 50-, 65- and 80- trading days later. This favors gold being above \$3,333.84 on or around September 11, October 2 and/or October 24th.

Signal Returns	5-day	10-day	15-day	20-day	25-day	30-day	35-day	40-day	50-day	65-day	80-day	100-day	260-day	Average
% Time Up	56%	64%	64%	52%	56%	60%	52%	56%	68%	68%	72%	64%	60%	60.92%
Average	0.08%	1.33%	1.44%	0.61%	0.27%	1.16%	1.36%	1.70%	3.98%	4.33%	4.91%	5.94%	9.78%	2.84%
Median	0.09%	1.03%	0.97%	0.14%	0.45%	0.36%	1.77%	1.38%	4.30%	5.93%	5.32%	5.90%	2.52%	2.32%
Standard Deviation	2.42%	3.39%	4.43%	4.01%	3.39%	4.08%	4.14%	4.61%	6.11%	7.30%	9.31%	10.65%	27.08%	6.99%
Market Statistics - All Periods														
Rolling % Time up	52.65%	52.04%	51.64%	51.12%	51.48%	52.15%	52.23%	52.40%	52.67%	53.47%	54.74%	56.59%	59.01%	53.25%
Rolling Return Average All Periods	0.15%	0.29%	0.44%	0.59%	0.74%	0.90%	1.04%	1.19%	1.48%	1.91%	2.35%	2.96%	8.43%	1.73%
Rolling Return Median All Periods	0.12%	0.14%	0.15%	0.11%	0.16%	0.25%	0.28%	0.34%	0.43%	0.63%	0.97%	1.57%	4.07%	0.71%
Rolling Return Standard Deviation All Periods	2.60%	3.68%	4.64%	5.43%	6.11%	6.74%	7.30%	7.82%	8.74%	9.71%	10.78%	12.52%	25.23%	8.56%
Market Statistics - All Periods														
Δ % Time Up	3.35%	11.96%	12.36%	0.88%	4.52%	7.85%	-0.23%	3.60%	15.33%	14.53%	17.26%	7.41%	0.99%	7.68%
Δ Average Return	-0.07%	1.04%	1.00%	0.02%	-0.48%	0.26%	0.32%	0.51%	2.49%	2.41%	2.56%	2.97%	1.35%	1.11%
Δ Median Return	-0.03%	0.89%	0.82%	0.03%	0.29%	0.10%	1.49%	1.03%	3.87%	5.30%	4.35%	4.33%	-1.55%	1.61%
Δ Standard Deviation	-0.18%	-0.28%	-0.21%	-1.42%	-2.72%	-2.65%	-3.16%	-3.21%	-2.62%	-2.42%	-1.47%	-1.87%	1.85%	-1.57%

Source: BofA Global Research, Bloomberg. Note: Gold data since 1975 overlaps with 25 past golden cross signals on the SPX.

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Exhibit 8: Gold forward returns following a golden cross signal in S&P 500 with rising MA and rolling returns from January 1975

After a golden cross on the S&P500 with rising 200d SMA, gold prices tended to be higher 50-, 65-, 80-, 100- and 260- trading days later. This favors gold being above \$3,333.84 on or around September 11, October 2, October 24, November 24th and/or July 1 2026.

Signal Returns	5-day	10-day	15-day	20-day	25-day	30-day	35-day	40-day	50-day	65-day	80-day	100-day	260-day	Average
% Time Up	64.71%	76.47%	58.82%	52.94%	58.82%	64.71%	58.82%	58.82%	70.59%	76.47%	82.35%	70.59%	70.59%	66.52%
Average	0.65%	1.78%	1.62%	0.92%	0.68%	1.91%	1.98%	2.22%	4.62%	5.66%	6.26%	7.09%	14.84%	3.86%
Median	0.99%	1.45%	0.97%	0.14%	0.45%	0.60%	2.10%	2.24%	5.02%	6.27%	6.07%	6.71%	5.39%	2.95%
Standard Deviation	2.49%	3.37%	4.91%	4.52%	3.09%	3.88%	3.23%	3.93%	5.54%	6.26%	7.45%	9.60%	29.65%	6.76%
Market Statistics - All Periods														
Rolling % Time up	52.65%	52.04%	51.64%	51.12%	51.48%	52.15%	52.23%	52.40%	52.67%	53.47%	54.74%	56.59%	59.01%	53.25%
Rolling Return Average All Periods	0.15%	0.29%	0.44%	0.59%	0.74%	0.90%	1.04%	1.19%	1.48%	1.91%	2.35%	2.96%	8.43%	1.73%
Rolling Return Median All Periods	0.12%	0.14%	0.15%	0.11%	0.16%	0.25%	0.28%	0.34%	0.43%	0.63%	0.97%	1.57%	4.07%	0.71%
Rolling Return Standard Deviation All Periods	2.60%	3.68%	4.64%	5.43%	6.11%	6.74%	7.30%	7.82%	8.74%	9.71%	10.78%	12.52%	25.23%	8.56%
Market Statistics - All Periods														
Δ % Time Up	12.06%	24.43%	7.19%	1.83%	7.35%	12.55%	6.59%	6.42%	17.91%	23.00%	27.62%	13.99%	11.58%	13.27%
Δ Average Return	0.50%	1.48%	1.18%	0.33%	-0.06%	1.01%	0.94%	1.03%	3.14%	3.75%	3.90%	4.13%	6.41%	2.13%
Δ Median Return	0.88%	1.31%	0.82%	0.03%	0.29%	0.34%	1.82%	1.90%	4.59%	5.64%	5.10%	5.14%	1.31%	2.24%
Δ Standard Deviation	-0.11%	-0.31%	0.27%	-0.91%	-3.02%	-2.86%	-4.07%	-3.89%	-3.19%	-3.45%	-3.33%	-2.92%	4.42%	-1.80%

Source: BofA Global Research, Bloomberg. Note: Gold data since 1975 overlaps with 17 past golden cross signals with rising 200d SMA on the SPX.

BofA GLOBAL RESEARCH



Oil after a SPX golden cross

- On July 1 2025, the CL1 oil future closed at \$61.72 a barrel and a golden cross signal occurred on for the S&P 500. We review the average trend in front month WTI crude oil (roll adjusted five days prior to expiry) after this signal and see some tendency for oil prices to be higher in 15-, 20-, 35-, 40-, 50-, 100- and 260 trading days later. However this is out of just 19 signals since 1983.
- When the golden cross signal occurred with a rising 200d SMA, oil prices tended to see higher up ratios, average returns and median returns. Standard deviation of returns were similar to all golden cross signals. This is out of just 13 signals since 1983.

Exhibit 9: Oil forward returns following a golden cross signal in S&P 500 and rolling returns from March 1983

After a golden cross signal on the S&P500, oil prices tended to be higher 15-, 20-, 35-, 40-, 50-, 100- and 260- trading days later. This may mean oil is above \$61.72 come July 23, Aug 6, Aug 20, Aug 27, Sept 11, Nov 24 and/or July 1 2026.

Signal Returns	5-day	10-day	15-day	20-day	25-day	30-day	35-day	40-day	50-day	65-day	80-day	100-day	260-day	Average
% Time Up (Out of 19)	57.89%	52.63%	68.42%	68.42%	47.37%	52.63%	63.16%	63.16%	68.42%	57.89%	52.63%	63.16%	78.95%	61.13%
Average	0.44%	-0.19%	1.25%	1.51%	1.04%	2.76%	2.61%	4.36%	5.93%	5.32%	9.29%	12.61%	20.73%	5.20%
Median	1.06%	0.78%	1.71%	2.57%	-0.31%	0.31%	2.50%	4.42%	4.29%	1.44%	4.04%	4.46%	14.21%	3.19%
Standard Deviation	4.71%	5.44%	7.77%	9.73%	9.07%	10.19%	11.73%	9.00%	15.63%	16.03%	24.46%	30.65%	38.42%	14.83%
Market Statistics - All Periods														
Rolling % Time up	52.69%	53.39%	53.35%	53.30%	53.26%	53.70%	54.36%	55.09%	55.44%	55.08%	55.29%	55.24%	53.81%	54.15%
Rolling Return Average All Periods	0.18%	0.34%	0.50%	0.69%	0.87%	1.06%	1.24%	1.43%	1.80%	2.31%	2.81%	3.38%	8.08%	1.90%
Rolling Return Median All Periods	0.28%	0.46%	0.59%	0.72%	0.78%	0.88%	1.15%	1.48%	1.61%	1.66%	2.13%	2.18%	2.64%	1.27%
Rolling Return Standard Deviation	5.28%	7.25%	8.98%	10.59%	11.98%	13.23%	14.23%	15.25%	17.13%	19.46%	21.37%	23.00%	37.56%	15.79%
Signal Returns vs Market														
Δ % Time Up	5.20%	-0.76%	15.08%	15.13%	-5.90%	-1.06%	8.80%	8.07%	12.98%	2.82%	-2.66%	7.92%	25.14%	6.98%
Δ Average Return	0.27%	-0.52%	0.75%	0.82%	0.16%	1.70%	1.37%	2.93%	4.13%	3.02%	6.49%	9.23%	12.66%	3.31%
Δ Median Return	0.78%	0.33%	1.12%	1.85%	-1.09%	-0.57%	1.35%	2.95%	2.68%	-0.23%	1.91%	2.28%	11.57%	1.92%
Δ Standard Deviation	-0.57%	-1.80%	-1.21%	-0.86%	-2.91%	-3.04%	-2.50%	-6.26%	-1.49%	-3.43%	3.09%	7.65%	0.86%	-0.96%

Source: BofA Global Research, Bloomberg. Note: Oil since 1983 includes 19 golden cross signals on the S&P 500.

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Exhibit 10: Oil forward returns following a golden cross signal in S&P 500 with rising MA and rolling returns from March 1983

After a golden cross signal on the S&P500 with a rising 200d SMA, oil prices tended to be higher 15-, 20-, 35-, 40-, 50-, 65-, 100- and 260- trading days later. This may mean oil is above \$61.72 come July 23, Aug 6, Aug 20, Aug 27, Sept 11, Oct 2, Nov 24 and/or July 1 2026.

Signal Returns	5-day	10-day	15-day	20-day	25-day	30-day	35-day	40-day	50-day	65-day	80-day	100-day	260-day	Average
% Time Up (Out of 13)	53.85%	53.85%	69.23%	69.23%	53.85%	61.54%	76.92%	76.92%	76.92%	69.23%	61.54%	76.92%	84.62%	68.05%
Average	0.04%	1.29%	2.98%	2.74%	2.66%	5.21%	6.13%	6.42%	8.74%	9.19%	14.01%	19.13%	24.27%	7.91%
Median	1.67%	1.88%	3.98%	3.77%	4.95%	8.08%	8.47%	7.23%	6.81%	2.47%	6.11%	9.58%	15.32%	6.18%
Standard Deviation	5.42%	4.32%	7.01%	10.02%	9.95%	10.48%	10.13%	9.38%	17.96%	17.45%	27.68%	32.83%	44.74%	15.95%
Market Statistics - All Periods														
Rolling % Time up	52.69%	53.39%	53.35%	53.30%	53.26%	53.70%	54.36%	55.09%	55.44%	55.08%	55.29%	55.24%	53.81%	54.15%
Rolling Return Average All Periods	0.18%	0.34%	0.50%	0.69%	0.87%	1.06%	1.24%	1.43%	1.80%	2.31%	2.81%	3.38%	8.08%	1.90%
Rolling Return Median All Periods	0.28%	0.46%	0.59%	0.72%	0.78%	0.88%	1.15%	1.48%	1.61%	1.66%	2.13%	2.18%	2.64%	1.27%
Rolling Return Standard Deviation	5.28%	7.25%	8.98%	10.59%	11.98%	13.23%	14.23%	15.25%	17.13%	19.46%	21.37%	23.00%	37.56%	15.79%
Market Statistics - All Periods														
Δ % Time Up	1.15%	0.46%	15.88%	15.94%	0.58%	7.84%	22.56%	21.84%	21.48%	14.16%	6.25%	21.68%	30.81%	13.89%
Δ Average Return	-0.14%	0.95%	2.48%	2.05%	1.79%	4.15%	4.89%	4.99%	6.94%	6.88%	11.21%	15.75%	16.19%	6.01%
Δ Median Return	1.39%	1.42%	3.40%	3.04%	4.16%	7.20%	7.32%	5.76%	5.20%	0.81%	3.98%	7.40%	12.68%	4.90%
Δ Standard Deviation	0.14%	-2.93%	-1.97%	-0.57%	-2.03%	-2.75%	-4.11%	-5.87%	0.83%	-2.01%	6.30%	9.83%	7.18%	0.16%

Source: BofA Global Research, Bloomberg. Note: Oil since 1983 includes 13 golden cross signals on the S&P 500.

BofA GLOBAL RESEARCH

DXY after a SPX golden cross

- On July 1, 2025, the DXY closed at \$96.82 and a golden cross signal occurred on the S&P 500. We review the average trend and find the percent time up after this signal was marginally higher than all periods. After 30 trading days (+/- Aug 13, 2025), the DXY was higher 62% of the time. There were 26 signals.
- When the golden cross on the SPX occurred with a rising 200d SMA like it did on July 1, average trend thereafter did not show a strong tendency either way. There have been 18 signals.

Exhibit 11: DXY forward returns following a golden cross signal in S&P 500 and rolling returns from Jan 1971

After a golden cross signal on the SPX, the DXY tended to be higher 30 trading days later 62% of the time outperforming its rolling 30-day return. However all other time frames show little directionally bias. 30-trading days is August 13 2025.

Signal Returns	5-day	10-day	15-day	20-day	25-day	30-day	35-day	40-day	50-day	65-day	80-day	100-day	260-day	Average
% Time Up (Out of 26 signals)	38.46%	46.15%	53.85%	53.85%	57.69%	61.54%	53.85%	46.15%	53.85%	50.00%	53.85%	50.00%	61.54%	52.37%
Average	0.01%	0.15%	0.21%	0.25%	0.62%	0.25%	-0.03%	-0.30%	0.04%	-0.26%	0.17%	-0.16%	2.06%	0.23%
Median	-0.18%	-0.16%	0.15%	0.51%	0.72%	0.77%	0.33%	-0.44%	0.78%	0.18%	0.24%	-0.37%	2.28%	0.37%
Standard Deviation	1.04%	1.26%	1.91%	2.42%	2.99%	3.01%	3.04%	3.06%	3.52%	4.14%	5.02%	6.27%	8.77%	3.57%
Market Statistics - All Periods														
Rolling % Time up	49.61%	49.18%	49.30%	49.69%	49.82%	49.94%	49.74%	49.47%	50.26%	49.30%	48.93%	48.09%	50.89%	49.56%
Rolling Return Average All Periods	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.01%	0.02%	0.03%	0.18%	0.02%
Rolling Return Median All Periods	0.00%	-0.02%	-0.02%	-0.01%	-0.01%	0.00%	-0.01%	-0.03%	0.02%	-0.06%	-0.12%	-0.22%	0.22%	-0.02%
Rolling Return Standard Deviation All Periods	1.12%	1.60%	1.99%	2.33%	2.63%	2.91%	3.16%	3.39%	3.83%	4.42%	4.97%	5.62%	9.23%	3.63%
Market Statistics - All Periods														
Δ % Time Up	-11.15%	-3.03%	4.55%	4.15%	7.88%	11.60%	4.11%	-3.31%	3.59%	0.70%	4.92%	1.91%	10.65%	2.81%
Δ Average Return	0.01%	0.15%	0.22%	0.25%	0.62%	0.25%	-0.02%	-0.30%	0.04%	-0.26%	0.16%	-0.19%	1.88%	0.22%
Δ Median Return	-0.18%	-0.14%	0.18%	0.52%	0.73%	0.77%	0.34%	-0.41%	0.76%	0.24%	0.36%	-0.14%	2.06%	0.39%
Δ Standard Deviation	-0.08%	-0.34%	-0.08%	0.10%	0.36%	0.11%	-0.12%	-0.33%	-0.31%	-0.28%	0.04%	0.65%	-0.45%	-0.06%

Source: BofA Global Research, Bloomberg. Note: DXY since 1971 includes 26 golden cross signals on SPX.

BofA GLOBAL RESEARCH

Exhibit 12: DXY forward returns following a golden cross signal in S&P 500 with rising MA and rolling returns from Jan 1971

We did not find a strong trend bias or up ratio for the DXY after this signal on the S&P 500.

Signal Returns	5-day	10-day	15-day	20-day	25-day	30-day	35-day	40-day	50-day	65-day	80-day	100-day	260-day	Average
% Time Up (Out of 18 signals)	33.33%	33.33%	38.89%	44.44%	44.44%	50.00%	44.44%	50.00%	55.56%	55.56%	55.56%	50.00%	50.00%	46.58%
Average	-0.17%	-0.10%	-0.05%	-0.05%	0.13%	-0.19%	-0.32%	-0.36%	-0.05%	0.03%	0.24%	-0.29%	1.60%	0.03%
Median	-0.28%	-0.33%	-0.20%	-0.34%	-0.78%	-0.11%	-0.37%	-0.09%	0.82%	0.47%	0.24%	-0.37%	0.13%	-0.09%
Standard Deviation	0.99%	1.36%	2.18%	2.69%	3.35%	3.37%	3.49%	3.56%	4.19%	4.60%	5.61%	6.68%	9.92%	4.00%
Market Statistics - All Periods														
Rolling % Time up	49.61%	49.18%	49.30%	49.69%	49.82%	49.94%	49.74%	49.47%	50.26%	49.30%	48.93%	48.09%	50.89%	49.56%
Rolling Return Average All Periods	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.01%	0.02%	0.03%	0.18%	0.02%
Rolling Return Median All Periods	0.00%	-0.02%	-0.02%	-0.01%	-0.01%	0.00%	-0.01%	-0.03%	0.02%	-0.06%	-0.12%	-0.22%	0.22%	-0.02%
Rolling Return Standard Deviation All Periods	1.12%	1.60%	1.99%	2.33%	2.63%	2.91%	3.16%	3.39%	3.83%	4.42%	4.97%	5.62%	9.23%	3.63%
Market Statistics - All Periods														
Δ % Time Up	-16.26%	-15.84%	-10.37%	-5.18%	-5.28%	0.16%	-5.20%	0.62%	5.39%	6.35%	6.73%	2.00%	-0.71%	-2.89%
Δ Average Return	-0.16%	-0.09%	-0.05%	-0.04%	0.14%	-0.19%	-0.31%	-0.36%	-0.05%	0.02%	0.23%	-0.31%	1.45%	0.02%
Δ Median Return	-0.28%	-0.31%	-0.18%	-0.33%	-0.77%	-0.11%	-0.36%	-0.05%	0.80%	0.54%	0.37%	-0.13%	-0.03%	-0.06%
Δ Standard Deviation	-0.13%	-0.24%	0.19%	0.37%	0.73%	0.47%	0.34%	0.18%	0.37%	0.18%	0.65%	1.07%	0.70%	0.38%

Source: BofA Global Research, Bloomberg. DXY since 1971 includes 18 golden cross signals with rising 200d SMA on SPX.

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