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Market Analysis

All you need to know about the Golden Cross

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RESEARCH

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Golden Cross means market base-building to higher returns

A Golden Cross is when the 50-day moving average crosses above the 200-day moving average on the S&P 500, and this occurred on 23 June. Our research shows if the cross occurs during a NBER (National Bureau of Economic Research) recession, after a Silver Cross (40-day moving average crosses above the 150-day moving average), and as the 200-day moving average is falling, the Golden Cross is a better signal. We have a Golden Cross with all three of these readings today. When associated with recessions, Golden Crosses show higher returns 3, 6, and 12 months out of 7.4%, 8.3%, and 19.2%, respectively. Conclusion – the equity market remains in a base-building process that should lead to higher returns. Our upper end targets for the S&P remain 1055-1065. The upper end of the trading range in 2010 could be as high as 1200-1325 should the S&P 500 trade and hold above the January 09 high (944).

Best Golden Cross signals associated with recessions

Since January 1928, the S&P 500 has generated 42 Golden Cross signals that have on average preceded a 12-month return of 9.3%, exceeding the average 12-month return of 7.1% for the index. The S&P 500 has had 15 Golden Crosses associated with NBER recessions. These signals on average led to a return of 19.2% one year later. Today's Golden Cross on the S&P 500 was registered during this NBER recession, which began in the United States in December 2007. It points to a rally up to 1065 on the S&P 500 12-months out or June of next year.

Silver Crosses as predictors of Golden Crosses

Silver Crosses are much more predictive of Golden Crosses when associated with NBER recessions and when using the 3% rule, according to our study. We had a Silver Cross on 15 May. When associated with NBER recessions, there have been 23 Silver Crosses, 15 of which (65.2%) preceded Golden Crosses by an average of 15 days. Using a 3% rule to filter out false Silver Cross signals during recessions, 15 out of 16 (93.8%) preceded Golden Crosses. There were six occasions when a Golden Cross was not preceded by a Silver Cross and these Golden Crosses generated an average 12-month loss of 8.8%.

Interesting Golden Cross stats

- When associated with NBER recessions, the average 12-month return for a Golden Cross is 19.2%
- When preceded by a Silver Cross, a Golden Cross generates an average 12-month return of 12.3% (19.2% when associated with recessions)
- When a Golden Cross occurs as the 200-day MA is declining, the average 12-month return is 13.3% (23.3% when associated with recessions)
- When the time between a Silver and Golden Cross is above average, the average 12-month return for the Golden Cross is 12.2% (24.6% when associated with recessions)

The June 23, 2009 Golden Cross occurred during a recession, after a Silver Cross, with the 200-day MA still declining, and with a well above average time between Silver and Golden cross signals. This supports the case for a strong Golden Cross signal.

Refer to important disclosures on page 11 to 12. Analyst Certification on Page 10.

What is the Golden Cross?

The Golden Cross is when the 50-day simple moving average crosses above the 200-day simple moving average. It is an intermediate to longer-term indicator that points to a strengthening trend in the market or security.

The Golden Cross and recessions

Strongest signals associated with recessions

Average 12-month return for a recession cross is 19%

When associated with NBER recessions, the Golden Cross is a strong signal that suggests significant upside potential for the S&P 500 Index. Based on the table below, Golden Crosses have led to an above average 12-month return of 9.3% for the S&P 500. More importantly, Golden Crosses associated with NBER recessions saw an average 12-month return of 19.2%, which is well above the historical average S&P 500 12-month return of 7.1%. When not associated with recessions, Golden Crosses generated an average 12-month return of 4.1% - well below average.

Number of Golden Crosses since Jan 1928

	# of signals
All Golden Crosses	41
Golden Crosses associated with recessions	*15*
Golden Crosses not associated with recessions	27

Source: Banc of America Securities-Merrill Lynch Market Analysis, Bloomberg

Golden Cross signals and S&P 500 Index returns*

	3-month return	6-month return	12-month return
All Golden Crosses	3.0%	4.5%	9.3%
Golden Crosses associated with recessions	*7.4%*	*8.3%*	*19.2%*
Golden Crosses not associated with recessions	0.8%	2.5%	4.1%
Average S&P 500 returns since 1928	1.7%	3.3%	7.1%

Source: Banc of America Securities-Merrill Lynch Market Analysis, Bloomberg
*Our returns are based on daily data that assumes 21 trading sessions per month

Breaking down recession Golden Crosses

- 13 of 14 recession signals had positive 12-month returns
- 12 of 14 recession signals preceded above-average 12-month returns

Golden Crosses and recessions

93% of Golden Cross signals preceded positive 12-month returns.

86% of Golden Cross signals preceded above-average 12-month returns.

Golden Cross signals associated with NBER recessions and S&P 500 Index returns**

Date	S&P 500	50-day MA	200- day MA	3-month return	6-month return	12-month return	Recession dates
9/19/1932	7.34	6.98	6.97	-5.0%	-20.3%	32.4%	Aug 29 to Mar 33
5/18/1933*	8.89	7.14	7.12	14.7%	12.8%	11.0%	Aug 29 to Mar 33
7/27/1938*	12.25	10.85	10.83	9.6%	-3.2%	-1.7%	May 37 to Jun 38
7/25/1947*	16.08	15.02	15.01	-2.4%	-10.8%	0.6%	Feb 45 to Oct 45
8/30/1949	15.21	14.89	14.89	6.2%	13.9%	22.0%	Nov 48 to Nov 49
12/21/1953	24.95	24.47	24.44	7.4%	16.4%	40.4%	Jul 53 to May 54
5/8/1958*	43.99	42.36	42.29	8.5%	17.2%	29.3%	Aug 57 to Apr 58
1/4/1961	58.36	55.80	55.74	12.4%	11.7%	21.9%	Apr 60 to Feb 61
10/21/1970	83.66	82.11	82.05	12.1%	23.5%	15.9%	Dec 69 to Nov 70
3/7/1975	84.3	76.12	75.88	10.0%	2.3%	17.3%	Nov 73 to Mar 75
6/17/1980	116.03	107.69	107.67	8.3%	11.6%	13.9%	Jan 80 to Jul 80
9/28/1982	123.24	114.59	114.43	15.4%	23.9%	37.5%	Jul 81 to Nov 82
2/15/1991	369.06	334.17	334.03	0.8%	5.5%	12.1%	Jul 90 to Mar 91
5/14/2003*	939.28	882.60	882.49	5.4%	11.5%	16.8%	Mar 01 to Nov 01
6/23/2009	895.10	899.36	899.03	N/A	N/A	N/A	Dec 07 to ???
Average				7.4%	8.3%	19.2%	

Source: Banc of America Securities-Merrill Lynch Market Analysis, Bloomberg
*after end of NBER recession (07/25/47 and 5/14/03 were very late signals)
**Our returns are based on daily data that assumes 21 trading sessions per month

Non-recession Golden Cross signals

63% of Golden Cross signals preceded positive 12-month returns.

37% of Golden Cross signals preceded above-average 12-month returns.

Below average return for non-recession signals

- 17 of 27 signals preceded positive 12-month returns
- But only 10 signals led to above average 12-month returns

"Golden Cross" signals not associated with NBER recessions and S&P 500 Index returns*

Date	S&P 500	50-day MA	200-day MA	3-month return	6-month return	12-month return
5/23/1935	10.07	9.09	9.06	14.7%	33.3%	39.9%
9/18/1939	12.47	11.90	11.90	-0.8%	-2.6%	-14.8%
12/13/1940	10.69	10.79	10.79	-6.6%	-7.9%	-18.5%
8/18/1941	10.13	10.13	10.12	-8.6%	-16.1%	-13.8%
8/14/1942	8.58	8.51	8.51	10.5%	26.0%	38.9%
3/13/1944	12.24	11.85	11.84	0.2%	1.4%	14.7%
5/14/1948	16.39	15.10	15.05	-4.1%	-6.8%	-9.2%
6/3/1957	47.37	45.73	45.73	-6.1%	-11.9%	-6.9%
12/30/1959	59.77	57.93	57.91	-6.7%	-4.7%	-3.3%
1/3/1963	63.72	60.43	60.31	4.9%	9.0%	18.5%
9/17/1965	90.05	86.54	86.51	2.3%	-2.1%	-11.1%
2/3/1967	87.36	82.89	82.73	8.0%	9.5%	5.6%
5/17/1968	96.9	94.15	94.15	2.5%	9.7%	0.1%
5/27/1969	103.57	102.29	102.19	-9.0%	-10.0%	-33.1%
1/26/1972	102.5	99.19	99.05	4.5%	5.0%	13.6%
1/4/1977	105.7	102.93	102.87	-6.1%	-5.3%	-11.2%
5/22/1978	99.09	93.36	93.24	5.7%	-5.4%	0.8%
3/21/1979	101.25	99.19	99.18	0.3%	6.7%	2.8%
9/12/1984	164.68	159.07	159.04	-1.1%	9.1%	13.5%
11/25/1986	248.17	238.93	238.80	14.4%	16.3%	-2.1%
6/28/1988	272.31	262.68	262.55	-1.3%	2.0%	19.9%
5/25/1990	354.58	342.56	342.49	-13.4%	-10.9%	5.7%
9/15/1994	474.81	461.45	460.97	-5.2%	3.6%	21.9%
12/8/1998	1181.38	1094.23	1094.15	8.9%	11.6%	19.3%
11/11/1999	1381.46	1318.75	1318.42	2.6%	1.9%	2.0%
11/5/2004	1166.17	1119.87	1119.55	3.2%	0.4%	4.6%
9/12/2006	1313.11	1278.79	1278.76	7.4%	5.6%	12.1%
Average				0.8%	2.5%	4.1%

Source: Banc of America Securities-Merrill Lynch Market Analysis, Bloomberg

*Our returns are based on daily data that assumes 21 trading sessions per month

Stronger Golden Cross signals when…

…the 200-day moving average is declining

The 23 June Golden Cross has a declining 200-day MA

Of the 42 Golden Cross signals triggered since 1928, 20 have occurred with the 200-day moving average in a declining trend or lower than it was 30 trading sessions ago. These signals on average have generated 12-month returns of 13.3%.

The remaining 22 signals occurred when the 200-day moving average was rising or higher than it was 30 trading sessions ago. The returns for these signals were much lower and on average generated 12-month returns of 5.7%.

Golden Crosses that are signaled when the 200-day moving average is declining (lower than it was 30 trading sessions ago) have much stronger returns with an average 12-month return of 13.3%. When the 200-day moving average is rising (higher than it was 30 trading sessions ago) at the time of the Golden Cross signal, the average 12-month return for Golden Cross signals is only 5.7%. The current Golden Cross from 23 June 09 occurred with the 200-day moving average in a downtrend, which based on our data tends to be a stronger Golden Cross signal.

Golden Cross signals with rising/declining 200-day MAs and S&P 500 Index returns*

	3-month return	6-month return	12-month return
All Golden Crosses	3.0%	4.5%	9.3%
200-day moving average rising	2.3%	3.9%	5.7%
200-day moving average declining	*3.9%*	*5.1%*	*13.3%*
Average S&P 500 returns since 1928	1.7%	3.3%	7.1%

Source: Banc of America Securities-Merrill Lynch Market Analysis, Bloomberg
*Our returns are based on daily data that assumes 21 trading sessions per month

Golden Cross signals when the 200-day MA is declining

Golden Cross signals that occurred when the 200-day MA is falling and S&P 500 returns*

Date	S&P 500	50-day MA	200-day MA	3-month return	6-month return	12-month return
9/19/1932	7.34	6.98	6.97	-5.0%	-20.3%	32.4%
7/27/1938	12.25	10.85	10.83	9.6%	-3.2%	-1.7%
9/18/1939	12.47	11.90	11.90	-0.8%	-2.6%	-14.8%
12/13/1940	10.69	10.79	10.79	-6.6%	-7.9%	-18.5%
8/18/1941	10.13	10.13	10.12	-8.6%	-16.1%	-13.8%
8/14/1942	8.58	8.51	8.51	10.5%	26.0%	38.9%
8/30/1949	15.21	14.89	14.89	6.2%	13.9%	22.0%
12/21/1953	24.95	24.47	24.44	7.4%	16.4%	40.4%
6/3/1957	47.37	45.73	45.73	-6.1%	-11.9%	-6.9%
5/8/1958	43.99	42.36	42.29	8.5%	17.2%	29.3%
1/3/1963	63.72	60.43	60.31	4.9%	9.0%	18.5%
2/3/1967	87.36	82.89	82.73	8.0%	9.5%	5.6%
10/21/1970	83.66	82.11	82.05	12.1%	23.5%	15.9%
3/7/1975	84.3	76.12	75.88	10.0%	2.3%	17.3%
5/22/1978	99.09	93.36	93.24	5.7%	-5.4%	0.8%
9/28/1982	123.24	114.59	114.43	15.4%	23.9%	37.5%
9/12/1984	164.68	159.07	159.04	-1.1%	9.1%	13.5%
6/28/1988	272.31	262.68	262.55	-1.3%	2.0%	19.9%
5/14/2003	939.28	882.60	882.49	5.4%	11.5%	16.8%
6/23/2009	895.1	899.36	899.03	N/A	N/A	N/A
Average				3.9%	5.1%	13.3%

Source: Banc of America Securities-Merrill Lynch Market Analysis, Bloomberg
*Our returns are based on daily data that assumes 21 trading sessions per month

Golden Cross signals when the 200-day MA is rising

Golden Cross signals that occurred when the 200-day MA is rising and S&P 500 returns*

Date	S&P 500	50-day MA	200- day MA	3-month return	6-month return	12-month return
5/18/1933	8.89	7.14	7.12	14.7%	12.8%	11.0%
5/23/1935	10.07	9.09	9.06	14.7%	33.3%	39.9%
3/13/1944	12.24	11.85	11.84	0.2%	1.4%	14.7%
7/25/1947	16.08	15.02	15.01	-2.4%	-10.8%	0.6%
5/14/1948	16.39	15.10	15.05	-4.1%	-6.8%	-9.2%
12/30/1959	59.77	57.93	57.91	-6.7%	-4.7%	-3.3%
1/4/1961	58.36	55.80	55.74	12.4%	11.7%	21.9%
9/17/1965	90.05	86.54	86.51	2.3%	-2.1%	-11.1%
5/17/1968	96.9	94.15	94.15	2.5%	9.7%	0.1%
5/27/1969	103.57	102.29	102.19	-9.0%	-10.0%	-33.1%
1/26/1972	102.5	99.19	99.05	4.5%	5.0%	13.6%
1/4/1977	105.7	102.93	102.87	-6.1%	-5.3%	-11.2%
3/21/1979	101.25	99.19	99.18	0.3%	6.7%	2.8%
6/17/1980	116.03	107.69	107.67	8.3%	11.6%	13.9%
11/25/1986	248.17	238.93	238.80	14.4%	16.3%	-2.1%
5/25/1990	354.58	342.56	342.49	-13.4%	-10.9%	5.7%
2/15/1991	369.06	334.17	334.03	0.8%	5.5%	12.1%
9/15/1994	474.81	461.45	460.97	-5.2%	3.6%	21.9%
12/8/1998	1181.38	1094.23	1094.15	8.9%	11.6%	19.3%
11/11/1999	1381.46	1318.75	1318.42	2.6%	1.9%	2.0%
11/5/2004	1166.17	1119.87	1119.55	3.2%	0.4%	4.6%
9/12/2006	1313.11	1278.79	1278.76	7.4%	5.6%	12.1%
Average				2.3%	3.9%	5.7%

Source: Banc of America Securities-Merrill Lynch Market Analysis, Bloomberg

*Our returns are based on daily data that assumes 21 trading sessions per month

Silver Crosses are weak signals

We recently introduced the concept of the Silver Cross, which is the cross of the 40-day simple moving average above the 150-day simple moving average. Since these moving averages are shorter than the 50 and 200-day moving averages used in the Golden Cross, we consider the implications for the Silver Cross to be not as strong as those for the Golden Cross. Based on 12-month returns, Silver Crosses underperformed both Golden Crosses as well as the average 12-month return for the market. However, Silver Cross signals that were not associated with recessions outperformed the corresponding signals for the Golden Cross.

Number of Silver Crosses since Jan 1928

	# of signals
All Silver Crosses	67
Silver Crosses associated with recessions	*22*
Silver Crosses not associated with recessions	45

Source: Banc of America Securities-Merrill Lynch Market Analysis, Bloomberg

Silver Cross signals and S&P 500 Index returns*

	3-month return	6-month return	12-month return
All Silver Crosses	1.0%	2.2%	6.3%
Silver Crosses associated with recessions	*1.5%*	*-0.2%*	*6.1%*
Silver Crosses not associated with recessions	0.8%	3.3%	6.4%
Average S&P 500 returns since 1928	1.7%	3.3%	7.1%

Source: Banc of America Securities-Merrill Lynch Market Analysis, Bloomberg

*Our returns are based on daily data that assumes 21 trading sessions per month

Breaking down recession Silver Crosses

- 14 of 21 recession signals saw positive 12-month returns
- 12 of 21 recession signals preceded above average 12-month returns

Silver Crosses and recessions

66% of Silver Cross signals preceded positive 12-month returns.

61% of Silver Cross signals preceded above average 12-month returns.

Silver Cross signals associated with NBER recessions and S&P 500 Index returns**

Date	S&P 500	40-day MA	150-day MA	3-month return	6-month return	12-month return	Recession dates
4/16/1930	25.56	24.26	24.25	-16.0%	-28.8%	-37.6%	Aug 29 to Mar 33
4/8/1931	16.5	17.40	17.37	-7.5%	-42.2%	-60.4%	Aug 29 to Mar 33
9/1/1932	8.47	6.57	6.52	-23.6%	-18.2%	31.4%	Aug 29 to Mar 33
5/10/1933*	8.82	7.02	6.95	17.8%	11.1%	8.3%	Aug 29 to Mar 33
7/18/1938*	12.35	10.60	10.59	6.5%	2.9%	-4.0%	May 37 to Jun 38
3/7/1947*	15.16	15.49	15.49	-5.1%	-0.1%	-7.6%	Feb 45 to Oct 45
7/21/1947*	15.8	15.07	15.07	-1.4%	-8.0%	2.6%	Feb 45 to Oct 45
8/16/1949	15.29	14.79	14.78	3.6%	12.2%	22.2%	Nov 48 to Nov 49
11/30/1953	24.76	24.19	24.18	6.0%	17.9%	39.5%	Jul 53 to May 54
3/25/1958	42.44	41.65	41.63	5.7%	16.4%	31.9%	Aug 57 to Apr 58
12/23/1960	57.44	55.78	55.74	12.2%	13.4%	23.5%	Apr 60 to Feb 61
9/30/1970	84.21	80.41	80.32	9.3%	19.1%	16.2%	Dec 69 to Nov 70
2/13/1975	81.01	72.79	72.52	13.9%	6.1%	24.4%	Nov 73 to Mar 75
6/13/1980	115.81	108.30	108.19	8.5%	10.0%	15.3%	Jan 80 to Mar 80
9/16/1982	123.77	112.96	112.77	11.0%	22.3%	33.2%	Jul 81 to Nov 82
1/30/1991	340.91	326.69	326.35	10.1%	13.4%	21.7%	Jul 90 to Mar 91
1/14/2002*	1138.41	1147.24	1147.12	-3.2%	-19.4%	-18.6%	Mar 01 to Nov 01
3/14/2002*	1153.04	1121.36	1120.91	-11.5%	-21.1%	-27.9%	Mar 01 to Nov 01
1/8/2003*	909.93	905.37	905.19	-3.5%	10.1%	23.8%	Mar 01 to Nov 01
5/5/2003*	926.55	877.62	876.82	5.8%	13.0%	20.6%	Mar 01 to Nov 01
6/12/2008	1339.87	1390.70	1390.56	-8.0%	-33.7%	-29.5%	Dec 07 to ???
5/15/2009	882.88	854.48	853.63	N/A	N/A	N/A	Dec 07 to ???
Average				1.5%	-0.2%	6.1%	

Source: Banc of America Securities-Merrill Lynch Market Analysis, Bloomberg

*after end of NBER recession (07/25/47 and 5/14/03 were very late signals)

**Our returns are based on daily data that assumes 21 trading sessions per month

Non-recession Silver Cross signals

Non-recession Silver Cross signals
60% of Silver Cross signals preceded positive 12-month returns.

47% of Silver Cross signals preceded above average 12-month returns.

- 27 of 45 signals preceded positive 12-month returns
- But only 21 signals led to above average 12-month returns

Silver Cross signals not associated with NBER recessions and S&P 500 Index returns*

Date	S&P 500	40-day MA	150-day MA	3-month return	6-month return	12-month return
2/5/1934	11.81	10.40	10.37	-16.9%	-26.2%	-24.8%
1/4/1935	9.51	9.27	9.27	-9.9%	10.1%	43.2%
5/15/1935	9.82	9.05	9.05	18.8%	32.0%	45.5%
8/29/1939	11.48	11.66	11.65	7.4%	5.1%	-10.1%
10/23/1940	10.8	10.63	10.63	-3.2%	-13.0%	-9.1%
7/25/1941	10.34	9.96	9.94	-5.5%	-13.1%	-16.5%
7/15/1942	8.83	8.36	8.35	7.0%	14.3%	42.1%
2/16/1944	11.79	11.76	11.76	1.8%	8.9%	19.2%
5/3/1948	15.6	14.96	14.93	1.6%	5.8%	-5.3%
8/25/1950	18.54	17.89	17.87	8.8%	17.6%	23.5%
7/23/1951	22.1	21.58	21.58	5.5%	11.0%	14.2%
11/28/1952	25.66	24.59	24.59	1.1%	-4.4%	-3.5%
5/16/1957	47.02	45.30	45.29	-2.7%	-15.9%	-8.3%
12/30/1959	59.77	58.17	58.14	-6.7%	-4.7%	-3.3%
7/7/1960	57.24	56.62	56.57	-7.4%	2.3%	15.0%
12/4/1962	62.64	58.40	58.33	3.4%	12.9%	17.8%
9/20/1965	90.08	87.01	86.90	2.2%	-1.7%	-11.2%
1/11/1967	83.47	81.31	81.28	6.5%	10.8%	15.6%
12/29/1967	96.47	93.98	93.97	-6.5%	5.7%	7.0%
5/8/1968	98.91	93.84	93.70	0.1%	8.8%	-0.6%
5/28/1969	103.26	102.97	102.93	-8.5%	-10.0%	-29.5%
1/12/1972	103.59	98.16	97.94	6.0%	3.6%	16.1%
10/22/1973	109.16	107.00	106.81	-12.6%	-14.5%	-32.7%
11/25/1975	90.71	89.16	89.05	12.1%	9.7%	12.4%
1/5/1977	104.76	103.40	103.31	-6.2%	-4.5%	-10.7%
5/5/1978	96.53	92.00	91.97	7.2%	0.3%	5.5%
3/30/1979	101.59	99.22	99.17	1.2%	8.5%	-3.3%
12/20/1979	108.26	104.79	104.75	-4.7%	5.9%	22.9%
4/2/1981	136.32	131.46	131.40	-4.8%	-14.8%	-17.9%
8/27/1984	166.44	157.16	156.84	0.3%	7.7%	12.5%
11/14/1985	199.06	187.56	187.53	9.2%	17.8%	23.9%
12/1/1986	249.05	241.59	241.28	13.6%	16.4%	-3.5%
4/11/1988	270.16	264.52	264.30	-0.1%	0.8%	10.0%
10/5/1988	271.86	265.25	265.22	2.8%	9.0%	30.5%
5/16/1990	354	340.08	339.98	-4.1%	-9.8%	5.0%
8/4/1992	424.36	411.93	411.79	-1.3%	4.3%	6.1%
8/30/1994	476.07	458.44	458.27	-4.6%	2.4%	17.4%
2/2/1995	472.79	461.59	461.37	10.1%	18.2%	34.5%
9/12/1996	671.15	655.08	654.99	11.4%	19.8%	36.9%
12/1/1998	1175.28	1095.02	1092.59	4.5%	10.2%	18.2%
11/24/1999	1417.08	1339.51	1337.83	-4.5%	-1.3%	-4.9%
10/12/2004	1121.84	1114.81	1114.18	6.1%	5.9%	5.8%
6/23/2005	1200.73	1187.96	1187.92	0.8%	4.9%	3.7%
9/12/2006	1313.11	1283.43	1282.03	7.4%	5.6%	12.1%
10/8/2007	1552.58	1486.70	1485.59	-8.8%	-12.0%	-31.9%
Averages				0.8%	3.3%	6.4%

Source: Banc of America Securities-Merrill Lynch Market Analysis, Bloomberg
*Our returns are based on daily data that assumes 21 trading sessions per month

When not preceded by a Silver Cross, Golden Crosses are weak signals. There have been six such signals (14% of all Golden Cross signals) that have an average 12-month decline of 8.8%. The average return for a Golden Cross preceded by a Silver Cross is 12.5%.

Silver as a predictor of Golden

Better predictor using a 3% rule and…

…when associated with NBER recessions

Key takeaway: do not buy a Golden Cross without a Silver Cross

Based on our data, Silver Crosses were directly followed by Golden Crosses 52.2% of the time. The rate increased to 65.2% for those Silver Crosses associated with NBER recessions, while non-recession Silver Crosses were directly followed Golden Crosses 45.5% of the time. Using the 3% rule, which means only accepting Silver Cross signals where the 40-day moving average exceeds the 150-day moving average by 3% or more, these numbers are much higher. For all Silver Crosses that met the 3% rule, 66.7% of them preceded Golden Crosses. For those associated with recessions, 93.8% were directly followed by Golden Crosses. Non-recession 3% rule Silver Crosses were followed by Golden Crosses 54.3% of the time.

Golden Crosses without Silver Crosses

Date	3-month return*	6-month return*	12-month return*
9/17/1965	2.3%	-2.1%	-11.1%
5/27/1969	-9.0%	-10.0%	-33.1%
1/4/1977	-6.1%	-5.3%	-11.2%
3/21/1979	0.3%	6.7%	2.8%
11/25/1986	14.4%	16.3%	-2.1%
11/11/1999	2.6%	1.9%	2.0%
Average returns	0.8%	1.3%	-8.8%

Source: Banc of America Securities-Merrill Lynch Market Analysis, Bloomberg
*Our returns are based on daily data that assumes 21 trading sessions per month

All Silver Crosses - with and without the 3% rule

Silver Crosses	67		Silver Crosses (met 3% rule)	51	
Preceded Golden Cross	35	52.2%	Preceded Golden Cross	34	66.7%
Did not precede Golden Cross	30		Did not precede Golden Cross	16	
After Golden Cross	6		After Golden Cross	N/A	
Same time as Golden Cross	2		Same time as Golden Cross	1	

Source: Banc of America Securities-Merrill Lynch Market Analysis, Bloomberg

All Silver Crosses associated with NBER recessions - with and without the 3% rule

Silver Crosses	23		Silver Crosses (met 3% rule)	16	
Preceded Golden Cross	15	65.2%	Preceded Golden Cross	15	93.8%
Did not precede Golden Cross	8		Did not precede Golden Cross	1	
After Golden Cross	0		After Golden Cross	0	
Same time as Golden Cross	0		Same time as Golden Cross	0	

Source: Banc of America Securities-Merrill Lynch Market Analysis, Bloomberg

All Silver Crosses not associated with NBER recessions - with and without the 3% rule

Silver Crosses	44		Silver Crosses (met 3% rule)	35	
Preceded Golden Cross	20	45.5%	Preceded Golden Cross	19	54.3%
Did not precede Golden Cross	22		Did not precede Golden Cross	15	
After Golden Cross	6		After Golden Cross	N/A	
Same time as Golden Cross	2		Same time as Golden Cross	1	

Source: Banc of America Securities-Merrill Lynch Market Analysis, Bloomberg

Lead time between Silver & Golden

Longer lead times = bigger Golden Cross 12-month returns

Average lead of 18 days for all occurrences; 15 for recession signals

When a Silver Cross precedes a Golden Cross, the average 12-month return for the Golden Cross increases from 9.3% to 12.3%. For Golden Crosses associated with recessions and those not associated with recessions, longer lead times have preceded stronger 12-month performance.

Silver Cross to Golden Cross lead times and 12-month returns** for the S&P 500 Index

	Average Silver Cross lead time*	12-month return with longer than average lead times	12-month return with shorter than average lead times
All Occurrences	18.4	12.2%	12.5%
NBER Recessions	15.3	24.6%	15.3%
Non-recession	20.5	9.8%	6.5%

Source: Banc of America Securities-Merrill Lynch Market Analysis, Bloomberg
*Lead time is calendar days
**Our returns are based on daily data that assumes 21 trading sessions per month

Recession Golden Cross signal lead times

Date	Silver to Gold lead time (calendar days)	12 month return* for Golden Cross
7/25/1947	4	0.6%
6/17/1980	4	13.9%
5/18/1933	8	11.0%
7/27/1938	9	-1.7%
5/14/2003	9	16.8%
1/4/1961	12	21.9%
9/28/1982	12	37.5%
8/30/1949	14	22.0%
2/15/1991	16	12.1%
9/19/1932	18	32.4%
12/21/1953	21	40.4%
10/21/1970	21	15.9%
3/7/1975	22	17.3%
6/23/09	*39*	*???*
5/8/1958	44	29.3%

Source: Banc of America Securities-Merrill Lynch Market Analysis, Bloomberg
*Our returns are based on daily data that assumes 21 trading sessions per month

Non-recession Golden Cross signal lead times

Date	Silver to Gold lead time (calendar days)	12 month return* for Golden Cross
12/30/1959	0	19.9%
9/12/2006	0	-18.5%
12/8/1998	7	38.9%
5/23/1935	8	18.5%
5/17/1968	9	14.7%
5/25/1990	9	-13.8%
5/14/1948	11	4.6%
1/26/1972	14	5.6%
9/12/1984	16	-14.8%
9/15/1994	16	-6.9%
5/22/1978	17	0.8%
6/3/1957	18	13.5%
9/18/1939	20	21.9%
2/3/1967	23	13.6%
8/18/1941	24	-9.2%
11/5/2004	24	0.1%
3/13/1944	26	5.7%
8/14/1942	30	39.9%
1/3/1963	30	19.3%
12/13/1940	51	-3.3%
6/28/1988	78	12.1%

Source: Banc of America Securities-Merrill Lynch Market Analysis, Bloomberg
*Our returns are based on daily data that assumes 21 trading sessions per month

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