

# S&P 500 Option Overlay Matrix



## Definitions

- Floor:** Long Put Position
- Re-Entry:** Short Put Position
- Cap:** Short Call Position
- Option Premium:** Expressed as a percentage of portfolio value
- Option Strike:** Expressed as a percentage of current index level

**Published:** 7/23/2010  
**S&P 500:** 1102.66

Option Term	Strike	Put Option Premium							Call Option Premium						
		-35%	-30%	-25%	-20%	-15%	-10%	-5%	0%	0%	+5%	+10%	+15%	+20%	+25%
3-Month		0.20%	0.32%	0.48%	0.78%	1.23%	1.90%	2.97%	4.64%	4.25%	1.83%	0.56%	0.13%	0.02%	0.00%
6-Month		0.80%	1.11%	1.54%	2.18%	2.89%	3.88%	5.24%	7.04%	6.26%	3.70%	1.96%	0.79%	0.29%	0.13%
1-Year		2.23%	2.86%	3.62%	4.56%	5.67%	7.04%	8.68%	10.70%	9.21%	6.61%	4.46%	2.80%	1.61%	0.85%
2-Year		4.69%	5.75%	6.98%	8.39%	9.95%	11.75%	13.70%	15.91%	13.10%	10.68%	8.54%	6.65%	5.05%	3.72%

### Example Hedge Structure: 1 year S&P 500 Put Spread Collar: -10% Floor / -30% Re-entry / +10% Cap

Investor purchases a -10% Floor and sells a -30% Re-Entry and +10% Cap on the S&P 500

Cost of a one-year -10% Floor:	7.04%
Value of a one-year -30% Reentry:	-2.86%
Value of a one-year +10% Cap:	-4.46%
<b>Net cost to investor as a % of portfolio value:</b>	<b>-0.28%</b>

**NOTE:** Please see pages 2-3 for sample hedge profile.

For informational purposes only. Costs and protection levels are based on current market characteristics and assumptions which change over time. The protection levels and costs described are estimates which may not be achieved or achievable and The Clifton Group makes no guarantee in this regard. Option premiums are calculated using implied market volatility on index traded options. Option strike levels based on index price, not index total return. Source: Bloomberg

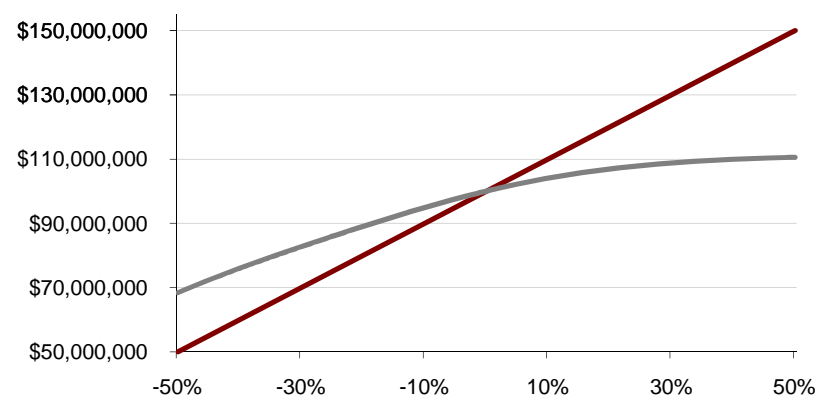
Historical Data available upon request: [Info@TheCliftonGroup.com](mailto:Info@TheCliftonGroup.com)

**S&P 500 Put-Spread Collar**  
1-Year Term  
Hedge Profile - 07/23/2010

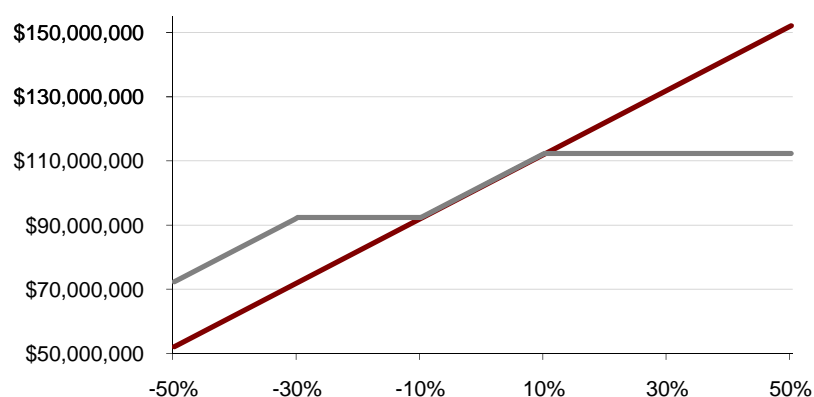
**S&P 500** 1102.66  
**Notional:** \$100,000,000  
**Hedge Term:** 7/23/2011

<u>Hedge Structure</u>	<u>Position</u>	<u>Contracts</u>	<u>Option Type</u>	<u>Index</u>	<u>Strike</u>	<u>Term</u>	<u>Premium</u>
<b>Floor:</b> -10.00%	Long	907	Put	S&P 500	992.39	7/23/11	\$ 7,038,741 7.04%
<b>Reentry:</b> -30.00%	Short	(907)	Put	S&P 500	771.86	7/23/11	\$ (2,858,558) -2.86%
<b>Cap:</b> +10.00%	Short	(907)	Call	S&P 500	1212.93	7/23/11	\$ (4,463,785) -4.46%
<b>Initial Premium:</b>							\$ (283,602) -0.28%

Portfolio Value - Instantaneous  
7/23/2010



Portfolio Value - at Maturity  
7/23/2011



— Unhedged Portfolio  
— Hedged Portfolio

Costs are based on current market characteristics and assumptions which change over time. The protection levels and costs described are estimates which may not be achieved or achievable, and The Clifton Group makes no guarantee in this regard

Return Estimate Period: **7/23/10 - 7/23/11**

**Protection Strategy**  
*Expected Return Profile*

Equity Cash Index Return (excludes Dividends)		Total Return Index <sup>1</sup>		Hedge Value at Expiration	Protection Gain/Loss <sup>2</sup>		Protected Equity Total Return <sup>3</sup>	
%	\$	%	\$	\$	%	\$	%	\$
50%	50,000,000	52.06%	52,064,554	(40,000,000)	-39.72%	(39,716,398)	12.35%	12,348,156
45%	45,000,000	47.06%	47,064,554	(35,000,000)	-34.72%	(34,716,398)	12.35%	12,348,156
40%	40,000,000	42.06%	42,064,554	(30,000,000)	-29.72%	(29,716,398)	12.35%	12,348,156
35%	35,000,000	37.06%	37,064,554	(25,000,000)	-24.72%	(24,716,398)	12.35%	12,348,156
30%	30,000,000	32.06%	32,064,554	(20,000,000)	-19.72%	(19,716,398)	12.35%	12,348,156
25%	25,000,000	27.06%	27,064,554	(15,000,000)	-14.72%	(14,716,398)	12.35%	12,348,156
20%	20,000,000	22.06%	22,064,554	(10,000,000)	-9.72%	(9,716,398)	12.35%	12,348,156
15%	15,000,000	17.06%	17,064,554	(5,000,000)	-4.72%	(4,716,398)	12.35%	12,348,156
10%	10,000,000	12.06%	12,064,554	0	0.28%	283,602	12.35%	12,348,156
5%	5,000,000	7.06%	7,064,554	0	0.28%	283,602	7.35%	7,348,156
0%	0	2.06%	2,064,554	0	0.28%	283,602	2.35%	2,348,156
-5%	(5,000,000)	-2.94%	(2,935,446)	0	0.28%	283,602	-2.65%	(2,651,844)
-10%	(10,000,000)	-7.94%	(7,935,446)	0	0.28%	283,602	-7.65%	(7,651,844)
-15%	(15,000,000)	-12.94%	(12,935,446)	5,000,000	5.28%	5,283,602	-7.65%	(7,651,844)
-20%	(20,000,000)	-17.94%	(17,935,446)	10,000,000	10.28%	10,283,602	-7.65%	(7,651,844)
-25%	(25,000,000)	-22.94%	(22,935,446)	15,000,000	15.28%	15,283,602	-7.65%	(7,651,844)
-30%	(30,000,000)	-27.94%	(27,935,446)	20,000,000	20.28%	20,283,602	-7.65%	(7,651,844)
-35%	(35,000,000)	-32.94%	(32,935,446)	20,000,000	20.28%	20,283,602	-12.65%	(12,651,844)
-40%	(40,000,000)	-37.94%	(37,935,446)	20,000,000	20.28%	20,283,602	-17.65%	(17,651,844)
-45%	(45,000,000)	-42.94%	(42,935,446)	20,000,000	20.28%	20,283,602	-22.65%	(22,651,844)
-50%	(50,000,000)	-47.94%	(47,935,446)	20,000,000	20.28%	20,283,602	-27.65%	(27,651,844)

1 Total Return Index assumes a constant dividend yield of 2.06% that is independent of the return on the Cash Index

2 Protection Gain/Loss is equal to Hedge Value at Expiration less the premium paid at initiation of hedge.

3 Protection Equity Total Return is equal to the sum of the Total Return Index and the Protection Gain/Loss.

**Comment:** The Protected Equity and Equity Total Return calculations above assume S&P 500 Index performance results. Actual performance will be higher or lower depending on actual manager results versus the S&P 500 Index over the protection term.