CBOE THE OPTIONS INSTITUTE℠

EXECUTE SUCCESS℠

Interactive Brokers Webcast

Hedging with Options

March 20, 2013

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Disclosure

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Outline

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- The Collar
- The Dynamic Collar
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Hedging with a Put

Scenario

- Today is Friday February 25, 2013
- SPY is at 151.90 – up 6.65% on the year
- We are concerned about downside from here into the end of the quarter
- Decide to check out SPY Put options that expire on March 28, 2013

Buy 1 SPY Mar 28th 149 Put at 1.57

Hedging with a Put

Long 100 SPY @ 151.90 + Long 1 SPY Mar 28th 149 Put @ 1.57

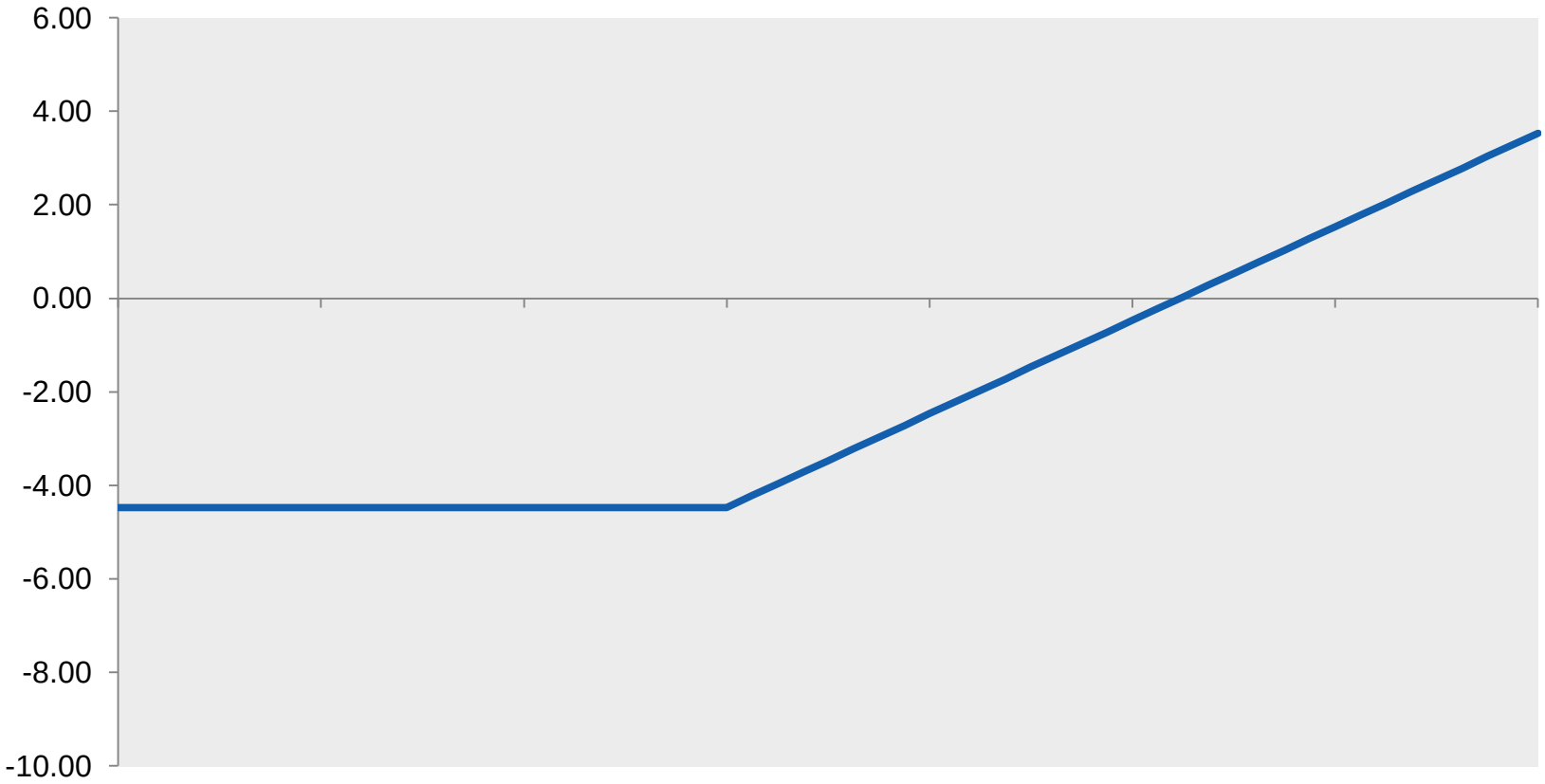
Payoff Table –

SPY at Expiration	SPY P/L	SPY 149 Put	Put Premium	Total P/L	Feb 25 - Mar 28 % Return
145	(6.90)	4.00	(1.57)	(4.47)	-2.94%
147	(4.90)	2.00	(1.57)	(4.47)	-2.94%
149	(2.90)	0.00	(1.57)	(4.47)	-2.94%
151	(0.90)	0.00	(1.57)	(2.47)	-1.63%
153	1.10	0.00	(1.57)	(0.47)	-0.31%
155	3.10	0.00	(1.57)	1.53	1.01%

Hedging with a Put

Long 100 SPY @ 151.90 + Long 1 SPY Mar 28th 149 Put @ 1.57

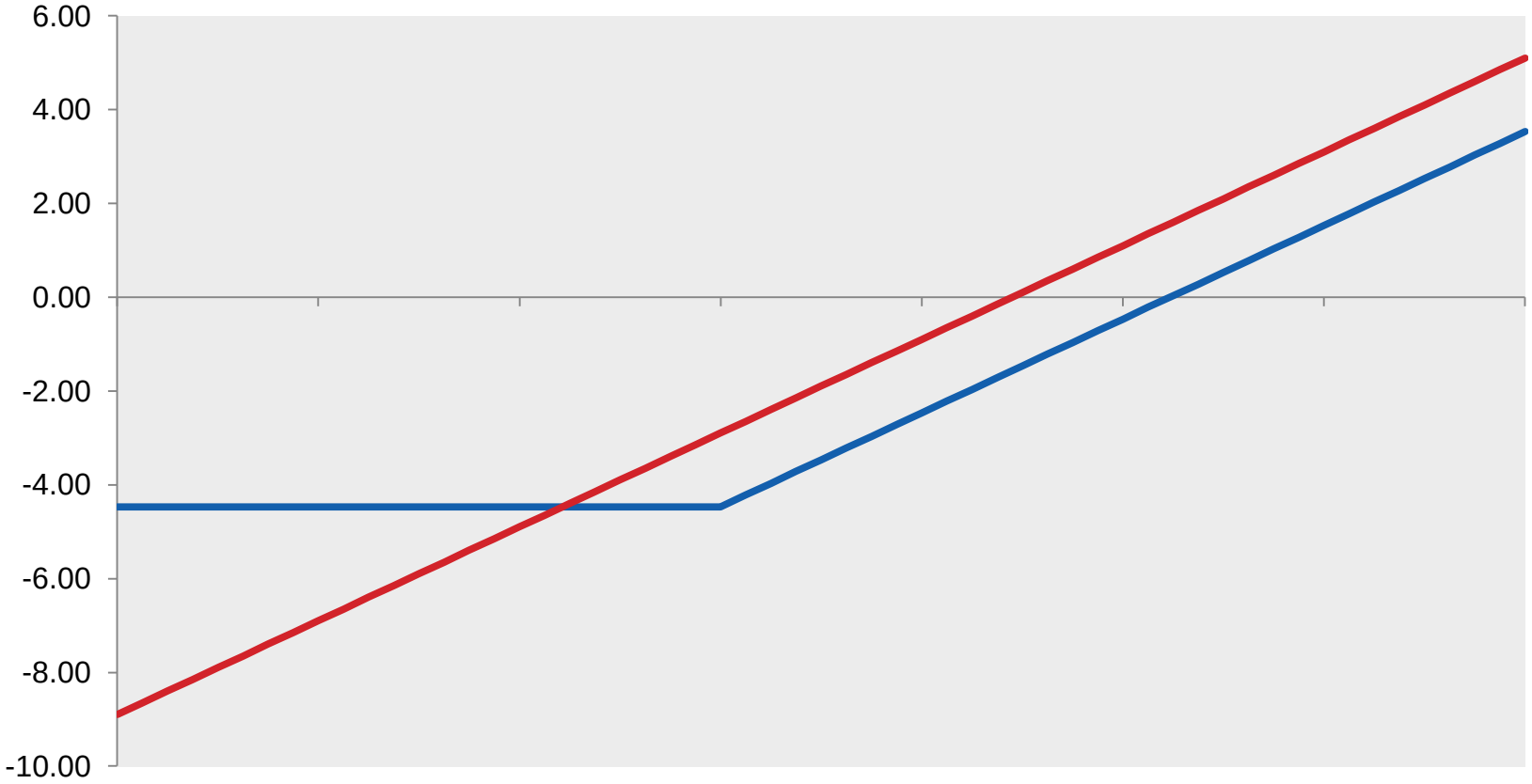
Payoff Diagram –



Hedging with a Put

Long 100 SPY @ 151.90 + Long 1 SPY Mar 28th 149 Put @ 1.57

Payoff Diagram –



Hedging with a Put

Summary

- Downside protection can be gained through purchasing a put option on SPY
- The cost of the protection may vary dramatically based on the current market environment
- Remember the implied volatility of index or broad based index exchange traded fund options tends to increase when the underlying market is selling off

When options are 'expensive' we may want to explore spread trades

Hedging with a Put Spread

Scenario

- Today is Friday February 25, 2013
- SPY is at 151.90 – up 6.65% on the year
- We are concerned about 2 – 3% of downside from here into the end of the quarter
- Decide to check out SPY Put options that expire on March 28, 2013
- Decide based on slightly bearish outlook on buying a put spread

Buy 1 SPY Mar 28th 152 Put at 2.61

Sell 1 SPY Mar 28th 147 Put at 1.06

Net Cost = 1.55

Hedging with a Put Spread

Long 100 SPY @ 151.90 + Long 147 / 152 Put Spread @ 1.55

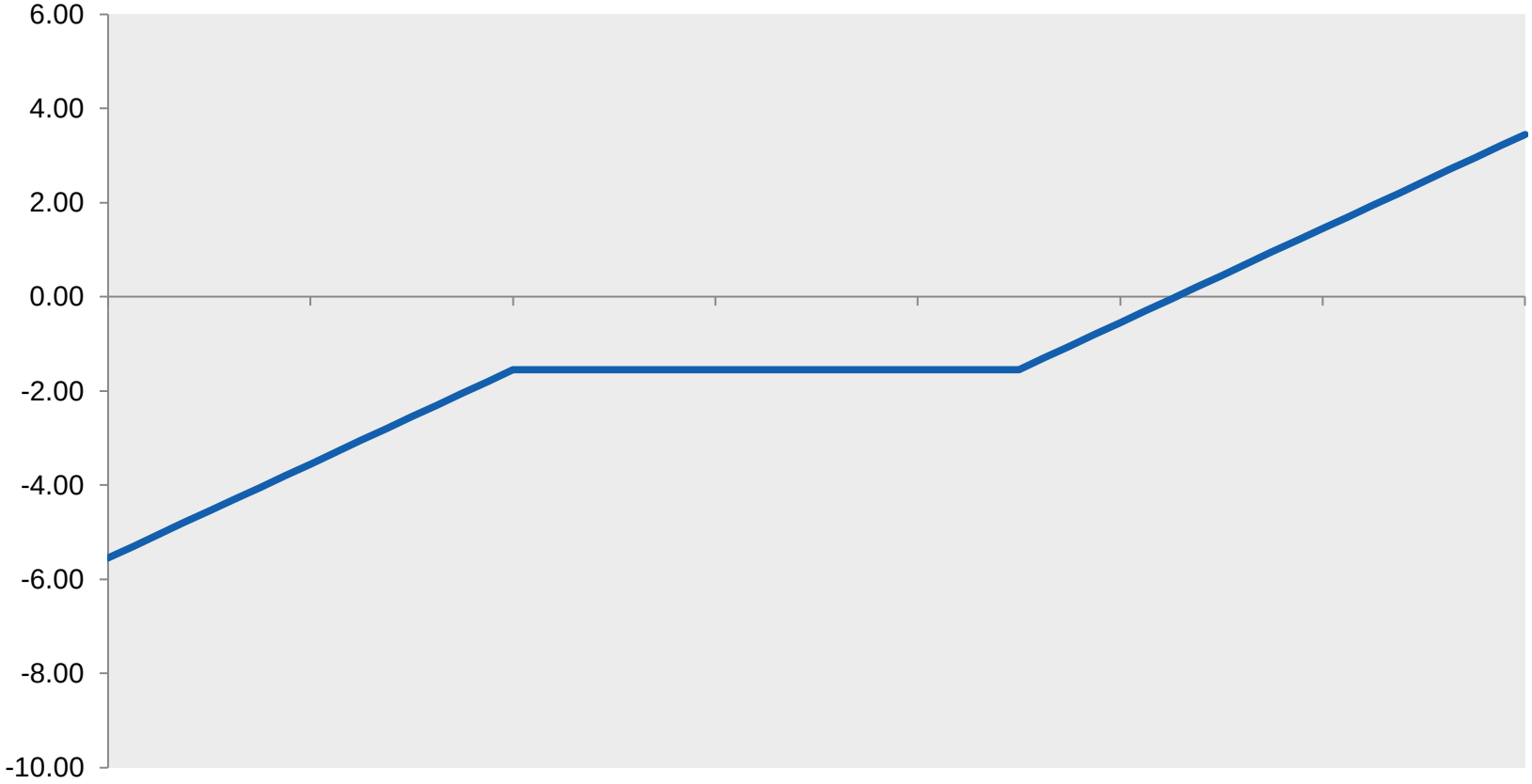
Payoff Table –

SPY at Expiration	SPY P/L	Long 152 Put	Short 147 Put	Spread Cost	Total P/L	Feb 25 - Mar 28 % Return
143	(8.90)	9.00	(4.00)	(1.55)	(5.45)	-3.59%
145	(6.90)	7.00	(2.00)	(1.55)	(3.45)	-2.27%
147	(4.90)	5.00	0.00	(1.55)	(1.45)	-0.95%
149	(2.90)	3.00	0.00	(1.55)	(1.45)	-0.95%
151	(0.90)	1.00	0.00	(1.55)	(1.45)	-0.95%
153	1.10	0.00	0.00	(1.55)	(0.45)	-0.30%
155	3.10	0.00	0.00	(1.55)	1.55	1.02%

Hedging with a Put Spread

Long 100 SPY @ 151.90 + Long 147 / 152 Put Spread @ 1.55

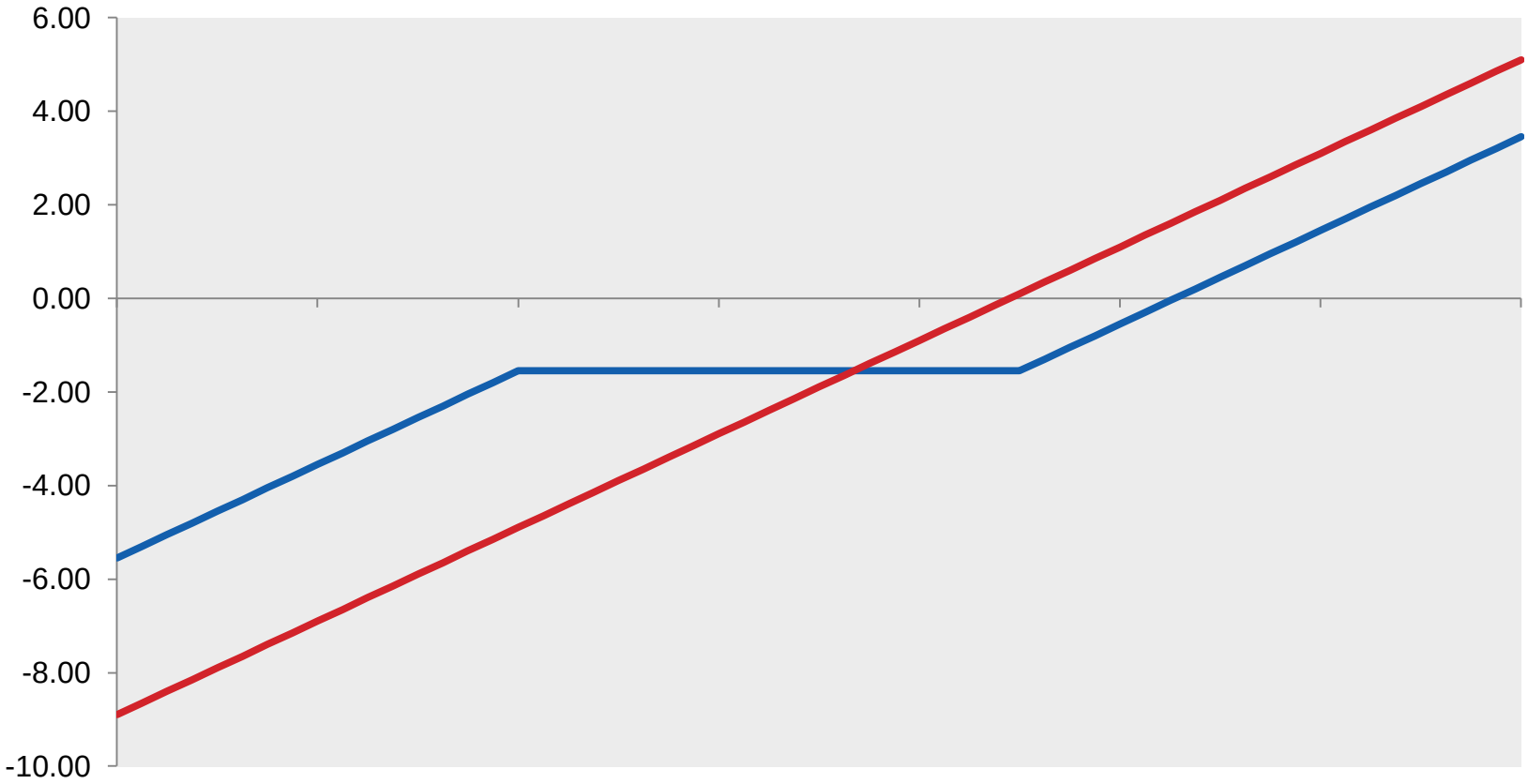
Payoff Diagram –



Hedging with a Put Spread

Long 100 SPY @ 151.90 + Long 147 / 152 Put Spread @ 1.55

Payoff Diagram –



Hedging with a Put Spread

Summary

- A put spread was purchased for approximately the same premium as purchasing the out of the money put in the first example
- The protection gained from this put spread hedged the SPY position against a move down from current levels
- Portfolio protection was limited to a drop in SPY to the lower strike price of the spread (147.00)
- Part of the ‘cost’ of this protection was limiting the portfolio protection to the lower strike price

The Collar

Scenario

- Today is Friday February 25, 2013
- Long 100 SPY at 151.90 – up 6.65% on the year
- We are concerned about downside from here into the end of the quarter
- We also are reluctant to pay for protection – but would sacrifice some upside to get downside protection

Buy 1 SPY Mar 28th 148 Put at 1.32

Sell 1 SPY Mar 28th 153 Call at 1.37

Net Credit = 0.05

The Collar

Long 100 SPY @ 151.90 + Long 148 P / Short 153 C @ 0.05 Cr.

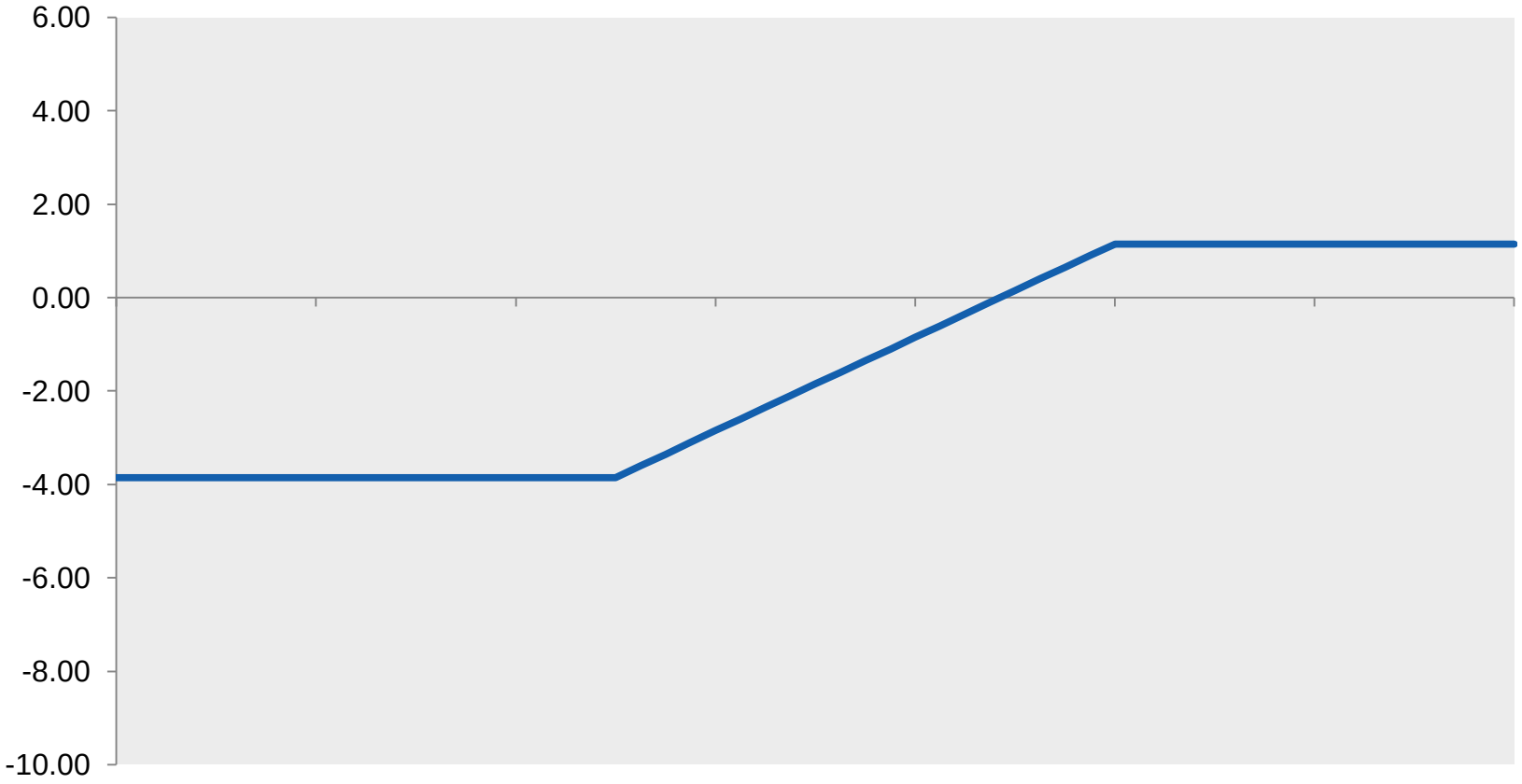
Payoff Table –

SPY at Expiration	SPY P/L	Long 148 Put	Short 153 Call	Spread Credit	Total P/L	Feb 25 - Mar 28 % Return
143	(8.90)	5.00	0.00	0.05	(3.85)	-2.53%
145	(6.90)	3.00	0.00	0.05	(3.85)	-2.53%
147	(4.90)	1.00	0.00	0.05	(3.85)	-2.53%
149	(2.90)	0.00	0.00	0.05	(2.85)	-1.88%
151	(0.90)	0.00	0.00	0.05	(0.85)	-0.06%
153	1.10	0.00	0.00	0.05	1.15	+0.76%
155	3.10	0.00	(2.00)	0.05	1.15	+0.76%

The Collar

Long 100 SPY @ 151.90 + Long 148 P / Short 153 C @ 0.05 Cr.

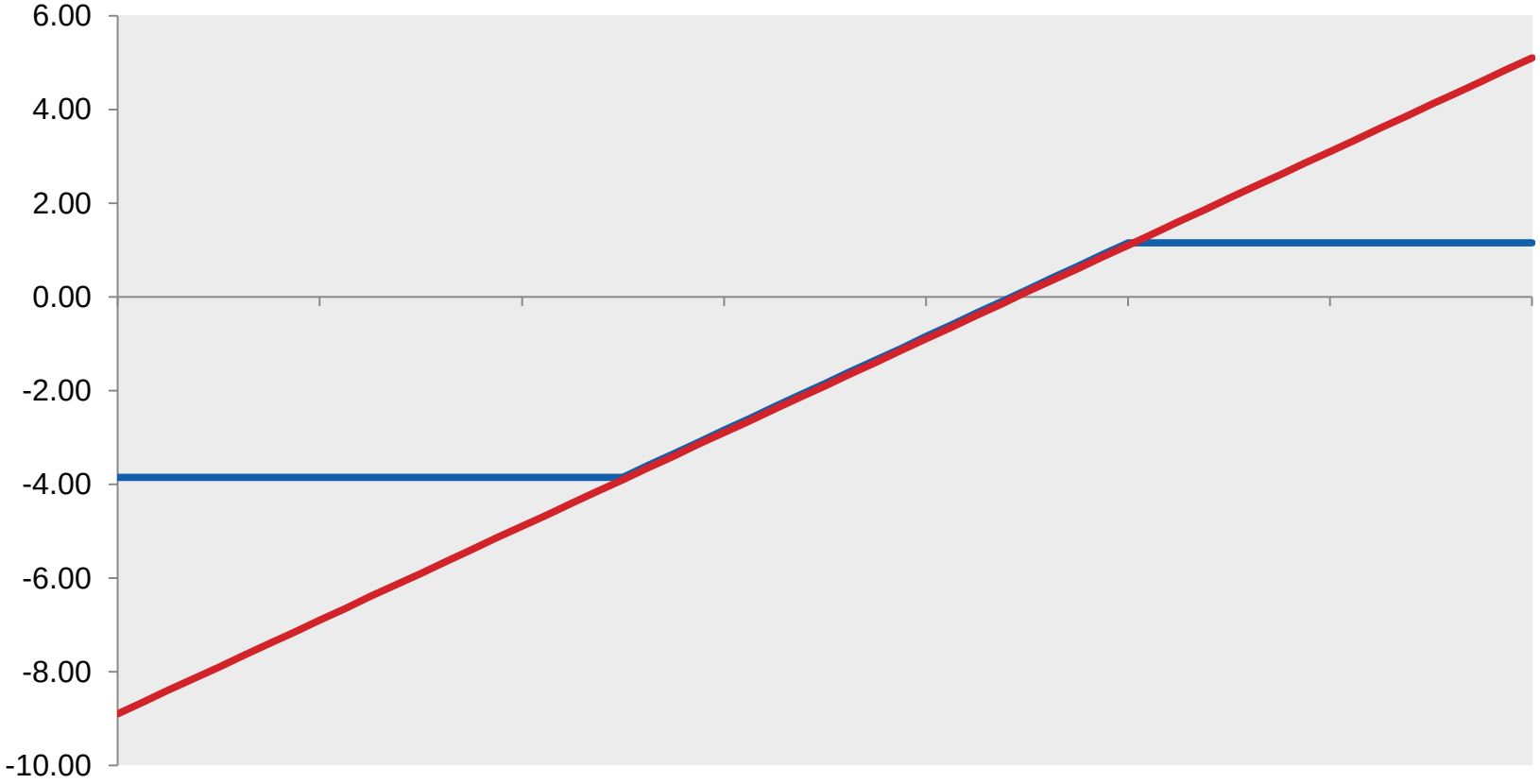
Payoff Diagram –



The Collar

Long 100 SPY @ 151.90 + Long 148 P / Short 153 C @ 0.05 Cr.

Payoff Diagram –



The Collar

Summary

- A call option is sold to pay for protection in the form of a long put
- The ‘cost’ of protection comes from giving up upside performance above the strike of the short call
- This method of hedging a portfolio would be appropriate if there is a strong feeling the market has limited upside

The Dynamic Collar

Scenario

- Today is Friday February 25, 2013
- Long 100 SPY at 151.90 – up 6.65% on the year
- We are concerned about downside from here into the end of the quarter
- We also are reluctant to pay for protection – but would sacrifice some upside to get downside protection
- Also – we want to try to take advantage of time decay

Buy 1 SPY Mar 28th 148 Put at 1.32

Sell 1 SPY Mar 1st 153 Call at 0.50

Net Debit = 0.82

The Dynamic Collar

Long 100 SPY @ 151.90 + Long 148 P / Short 153 C @ 0.82 Db.

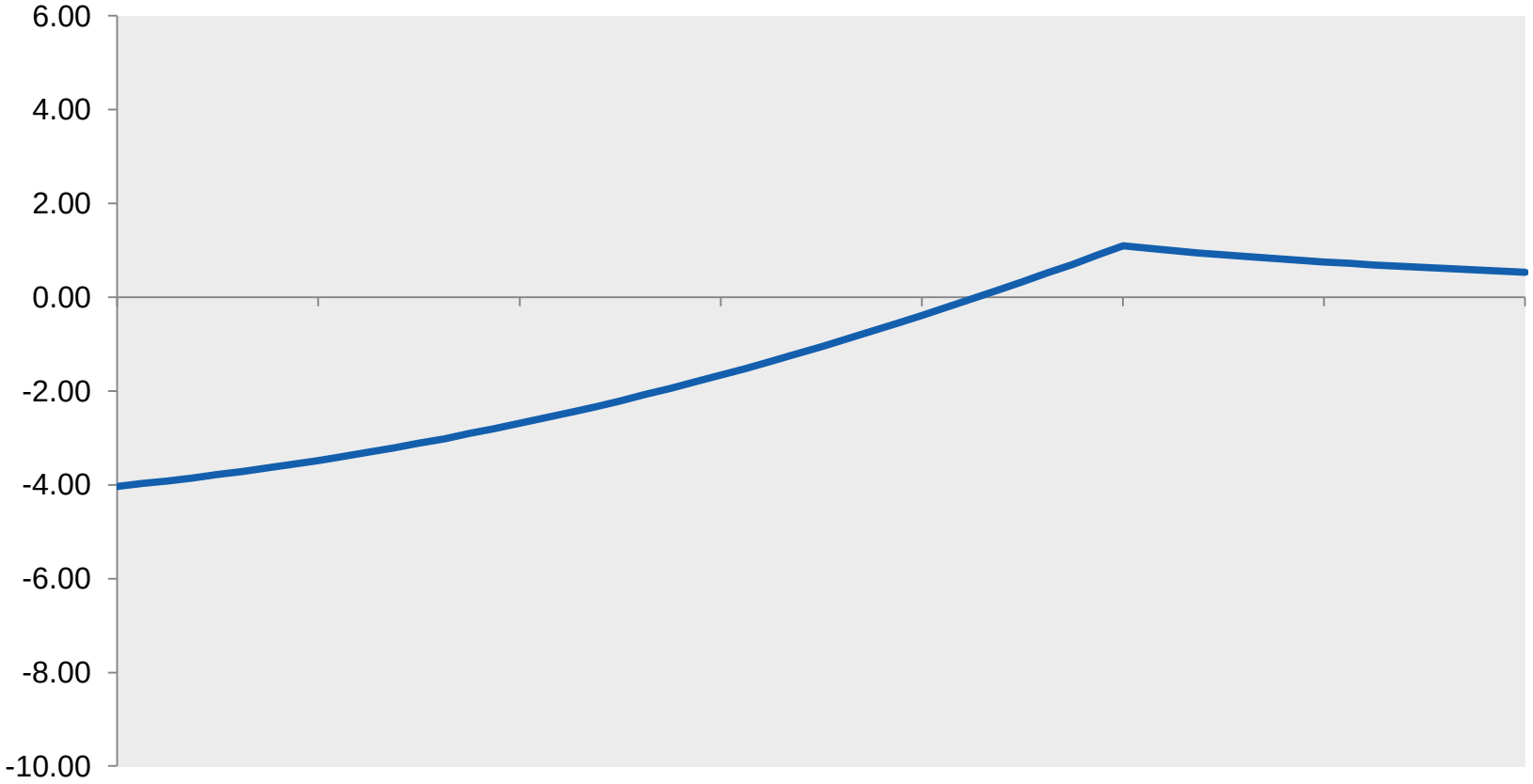
Payoff Table (March 1) –

SPY at Expiration	SPY P/L	Long Mar 28 148 Put*	Short Mar 1 153 Call	Spread Cost	Total P/L	Feb 25 - Mar 28 % Return
143	(8.90)	5.68	0.00	(0.82)	(4.04)	-2.66%
145	(6.90)	4.24	0.00	(0.82)	(3.48)	-2.29%
147	(4.90)	3.03	0.00	(0.82)	(2.69)	-1.77%
149	(2.90)	2.06	0.00	(0.82)	(1.66)	-1.09%
151	(0.90)	1.33	0.00	(0.82)	(0.39)	-0.03%
153	1.10	0.81	0.00	(0.82)	1.09	+0.72%
155	3.10	0.47	(2.00)	(0.82)	0.75	+0.49%

The Dynamic Collar

Long 100 SPY @ 151.90 + Long 148 P / Short 153 C @ 0.82 Db.

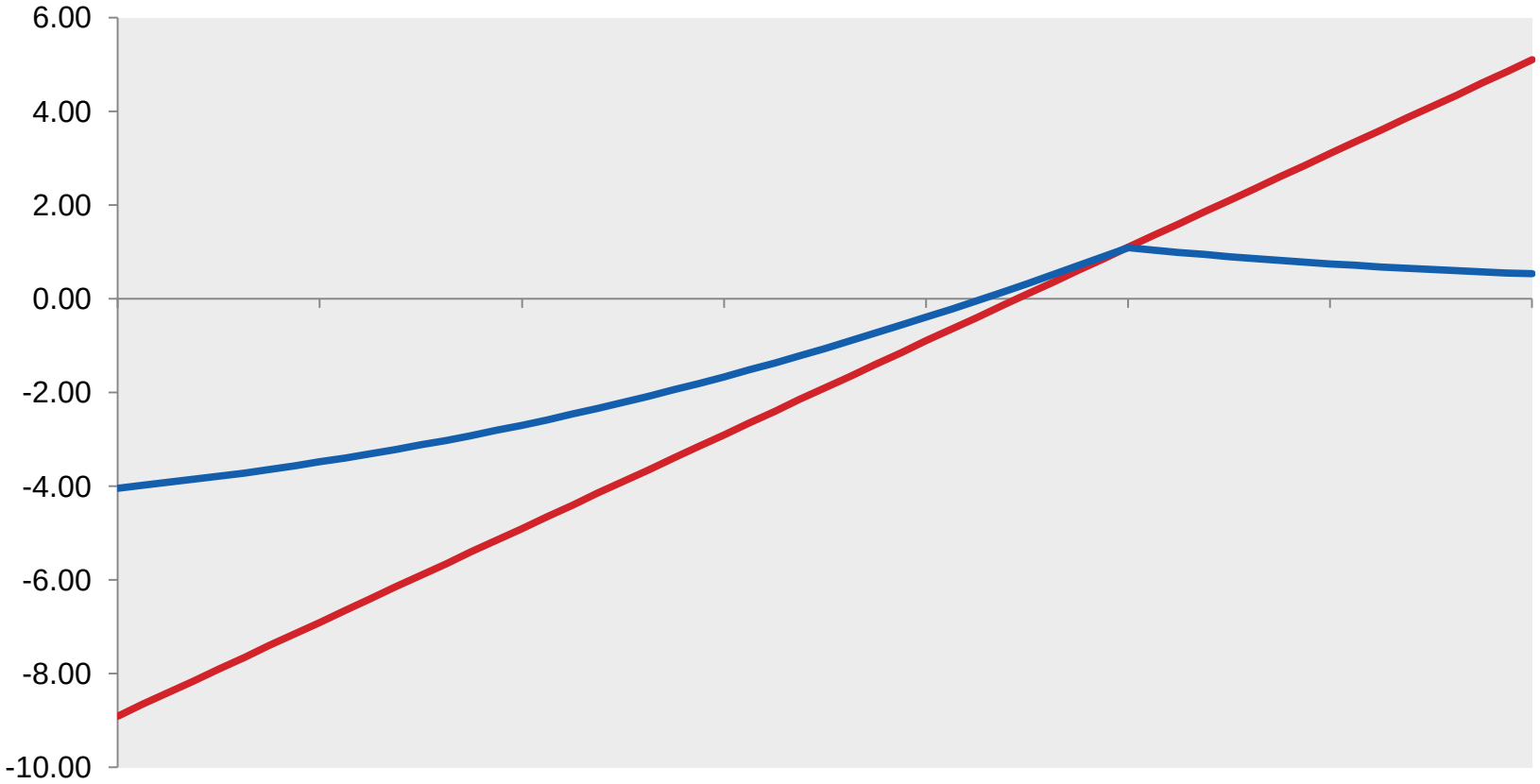
Payoff Diagram (March 1) –



The Dynamic Collar

Long 100 SPY @ 151.90 + Long 148 P / Short 153 C @ 0.82 Db.

Payoff Diagram (March 1) –



The Dynamic Collar

Long 100 SPY @ 151.90 + Long 148 P / Short 153 C @ 0.82 Db.

At March 1st Expiration –

If SPY is below 153.00 the
Short call expires

If SPY is over 153.00 the
Short call should be repurchased

Also – a trading decision would need to be made
regarding selling another call or exiting the put

The Dynamic Collar

Summary

- To take advantage of time decay differences a near dated call option is sold against the put option that was purchased
- Upon expiration of the near dated call option a trading decision would need to be made
- The put may be exited if the protection is no longer needed
- Another near term call option may be sold if circumstances warrant

Hedging with Options

Summary

- Options that have exposure to broad based market indexes may be used to guard against a drop in the overall market
- At times the cost of protection may be higher than desirable
- When options are expensive it may make more sense to put on a spread trade as opposed to buying a put option for protection

Summary

Resources / Contact

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