

The background of the slide is a photograph of a server room. It shows rows of server racks with numerous small, glowing lights in various colors (blue, green, red, yellow) against a dark background. The perspective is looking down a long aisle of the server racks.

Interactive Brokers Webcast

S&P 500[®] Index Option Trading

June 15, 2016

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Director of Education

Disclosure

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S&P 500 Index Option Trading

Overview

- **S&P 500 Index Options**
- **Spreads and Short-Dated Options**
- **Trading Examples**
- **Summary / Q&A**

S&P 500 Index Options

Introduction

- **SPX options are cash-settled options with their value based on the S&P 500 Index**
- **A major use of SPX options by institutions involves buying puts for portfolio insurance purposes**
- **Because of this, we tend to see an increase in put volume during times of increased market uncertainty**

S&P 500 Index Options

Extended Trading Hours

- In March 2015, SPX option trading hours were expanded to open at 2:00 am Chicago time
- There is a 15 minute break between Extended Trading Hours and regular session from 8:15 am to 8:30 am Chicago time

Chicago Time –

ETH – 2:00 am – 8:15 am

Regular Session – 8:30 am to 3:15 pm

All times are Central (Chicago) time

Extended Trading Hours

Trading Hours Breakdown –

	Monday - Friday
Extended Trading Hours	2:00 am - 8:15 am
Regular Trading Hours	8:30 am - 3:15 pm

All times are Central (Chicago) times

S&P 500 Index Options

Wednesday WeeklysSM

- **SPX Wednesday WeeklysSM were introduced on February 23rd of this year**
- **Average daily volume for Wednesday options has been over 60,000 since launch**
- **On March 16 (FOMC Day), volume reached 97,000 contracts**

S&P 500 Index Options

Contracts

Summary of Available SPX Options

SPX Options Traditional	Ticker	Root Ticker	AM / PM Settlement	Settlement Date	Settlement Type	Exercise Style	ETH Available
SPX	SPX	SPX	AM	3rd Fridays	Cash	European	Yes
SPX Options Non Traditional	Ticker	Root Ticker	AM / PM Settlement	Settlement Date	Settlement Type	Exercise Style	ETH Available
SPX Weeklys	SPX	SPXW	PM	Non 3rd Fridays	Cash	European	Yes
SPX End of Month	SPX	SPXW	PM	Last Trading Day of Month	Cash	European	Yes
SPX Wednesday Weeklys	SPX	SPXW	PM	Wednesdays	Cash	European	Yes
SPX PM	SPXPM	SPXPM	PM	3rd Fridays	Cash	European	Yes

Source: www.cboe.com/spx

S&P 500 Index Options

Available Expirations

As of May 21, 2016

May 25th

May 27th

May 31st

June 1st

June 3rd

June 8th

June 10th

June 17th

June 24th

June 30th

July 1st

July 8th

July 15th

July 22nd

July 29th

August 19th

August 31st

September 16th

September 30th

October 31st

December 16th

December 30th

January 20th '17

March 17th '17

March 31st '17

June 16th '17

December 15th '17

December 21st '18

Wednesday Expirations

Source: CBOE Livevol

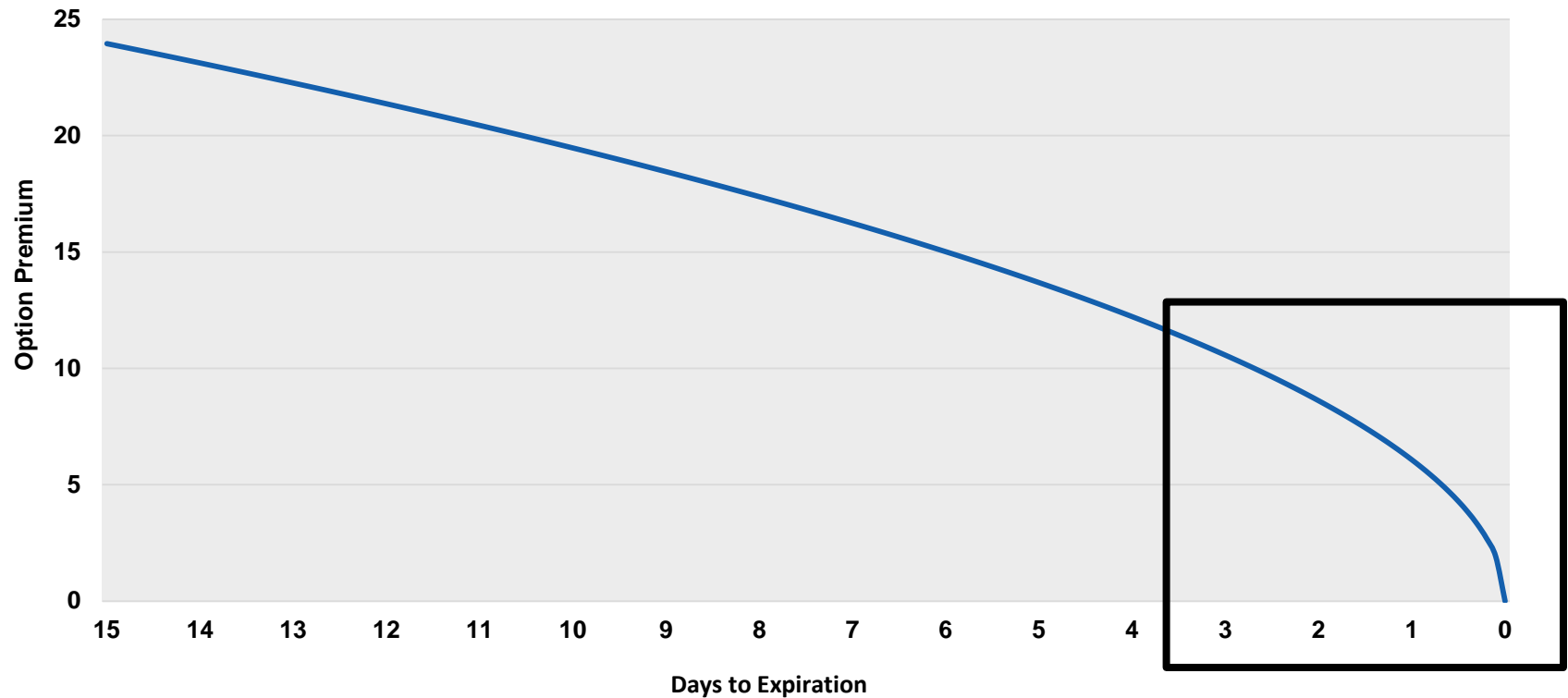
S&P 500 Index Options

Reasons to Trade Short-Dated Options

- ▶ **Very little time value – in the money option may replicate a long or short position in the S&P 500**
- ▶ **Rapid time decay – at the money options experience rapid time decay as expiration approaches**

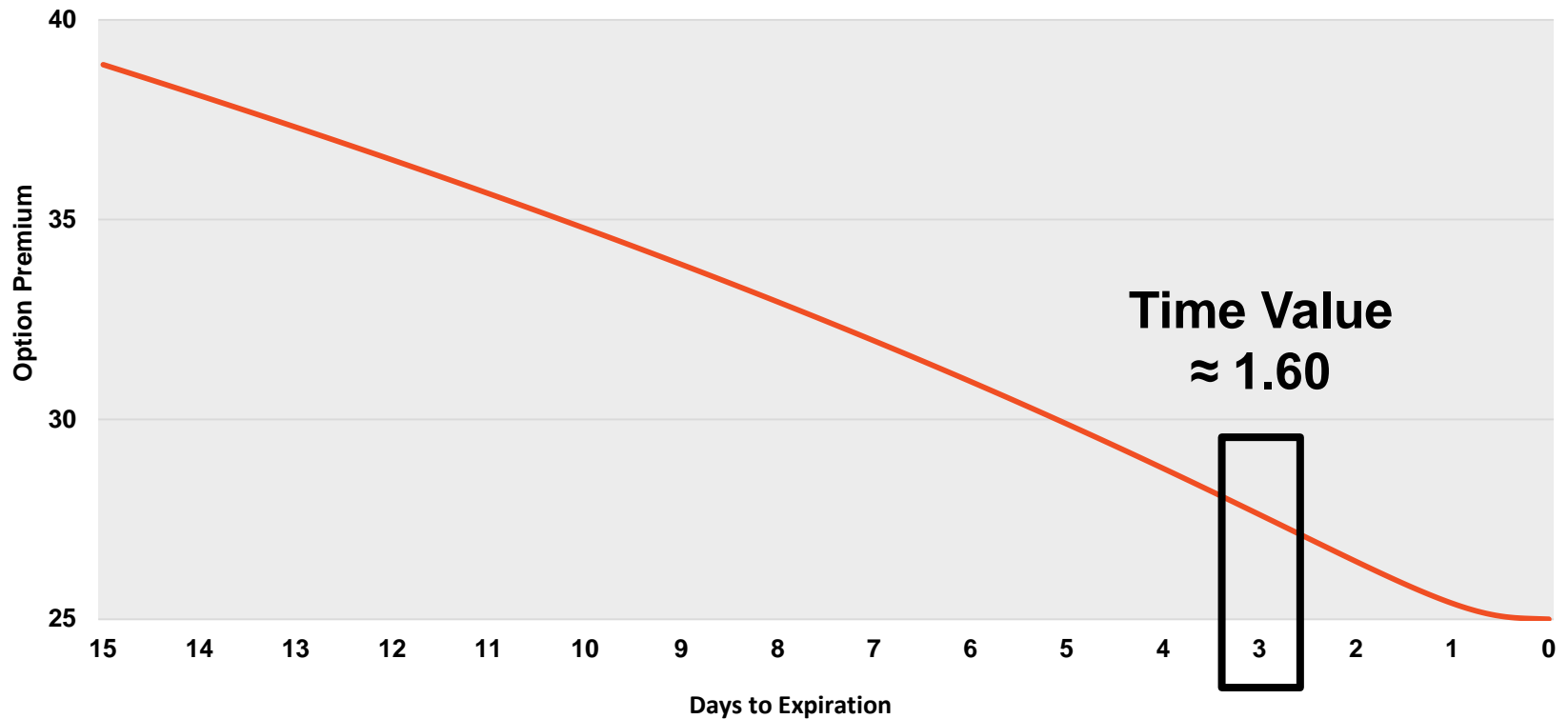
Time Decay Examples

SPX at 2000 – SPX 2000 Strike Call Option Premiums



Time Decay Examples

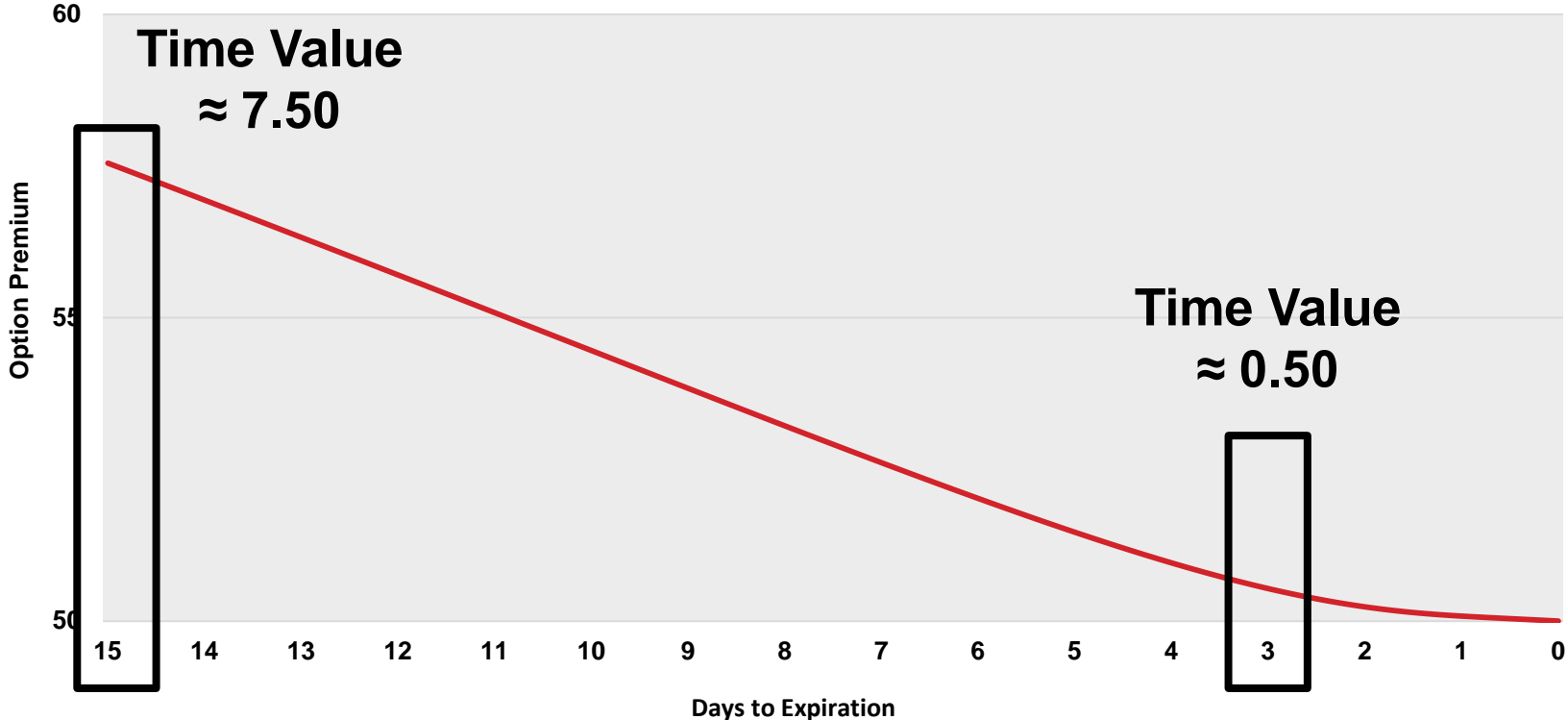
SPX at 2025 – SPX 2000 Strike Call Option Premiums



S&P 500 Index Options

Time Decay Examples

SPX at 2050 – SPX 2000 Strike Call Option Premiums



Short-Dated Options

Vertical Spread

- ▶ The S&P 500 is at 1857 and we have a neutral to bearish outlook over the next few weeks
- ▶ Based on this outlook, we check out selling a 20-Day SPX 1860 Call and buying an 1870 Call

Sell 1 20 Day SPX 1860 Call @ 21.90

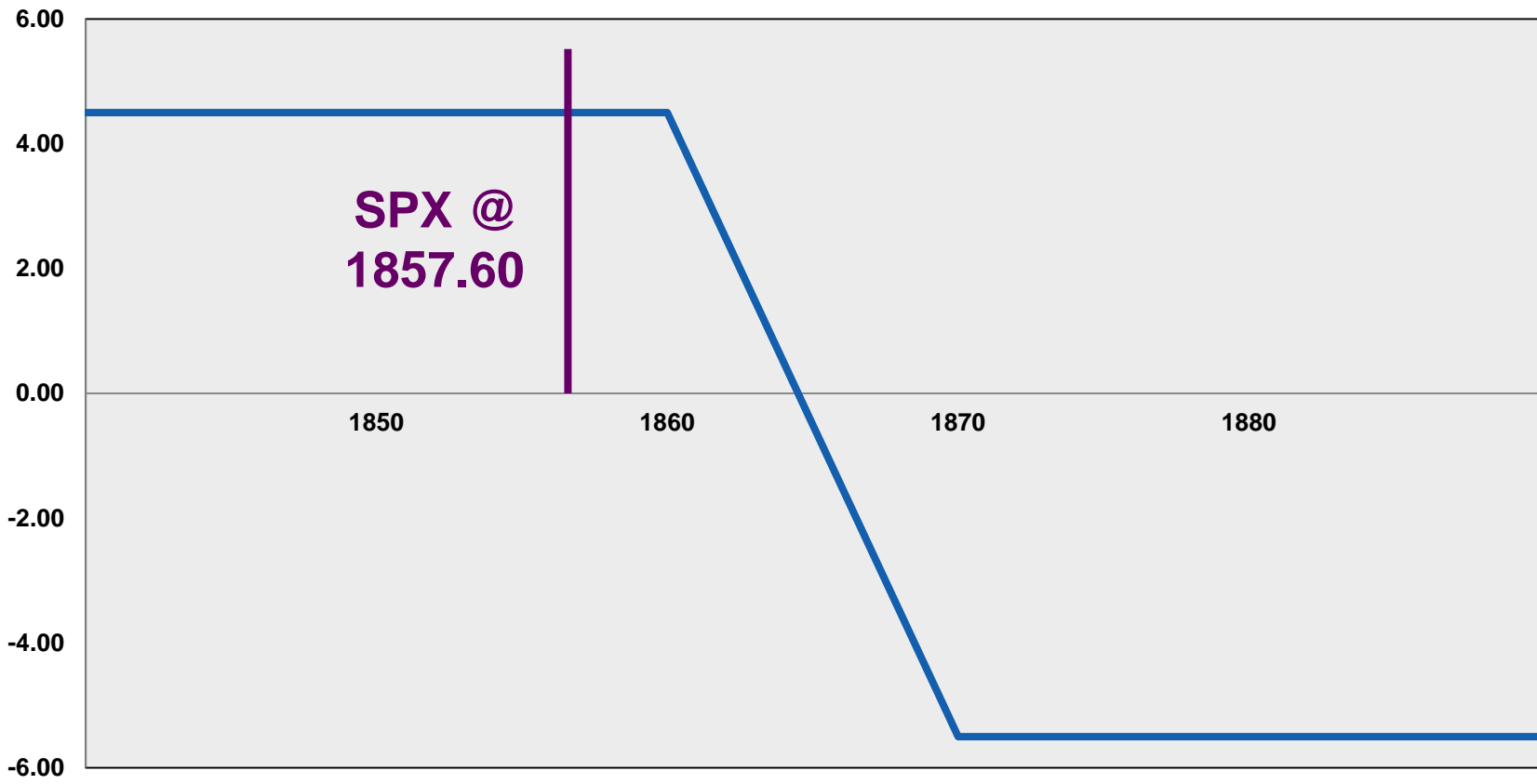
Buy 1 20 Day SPX 1870 Call @ 17.40

Net Credit = 4.50

Short-Dated Options

Vertical Spread

Payoff Diagram –



Short-Dated Options

Vertical Spread

Weekly Expiration Comparison –

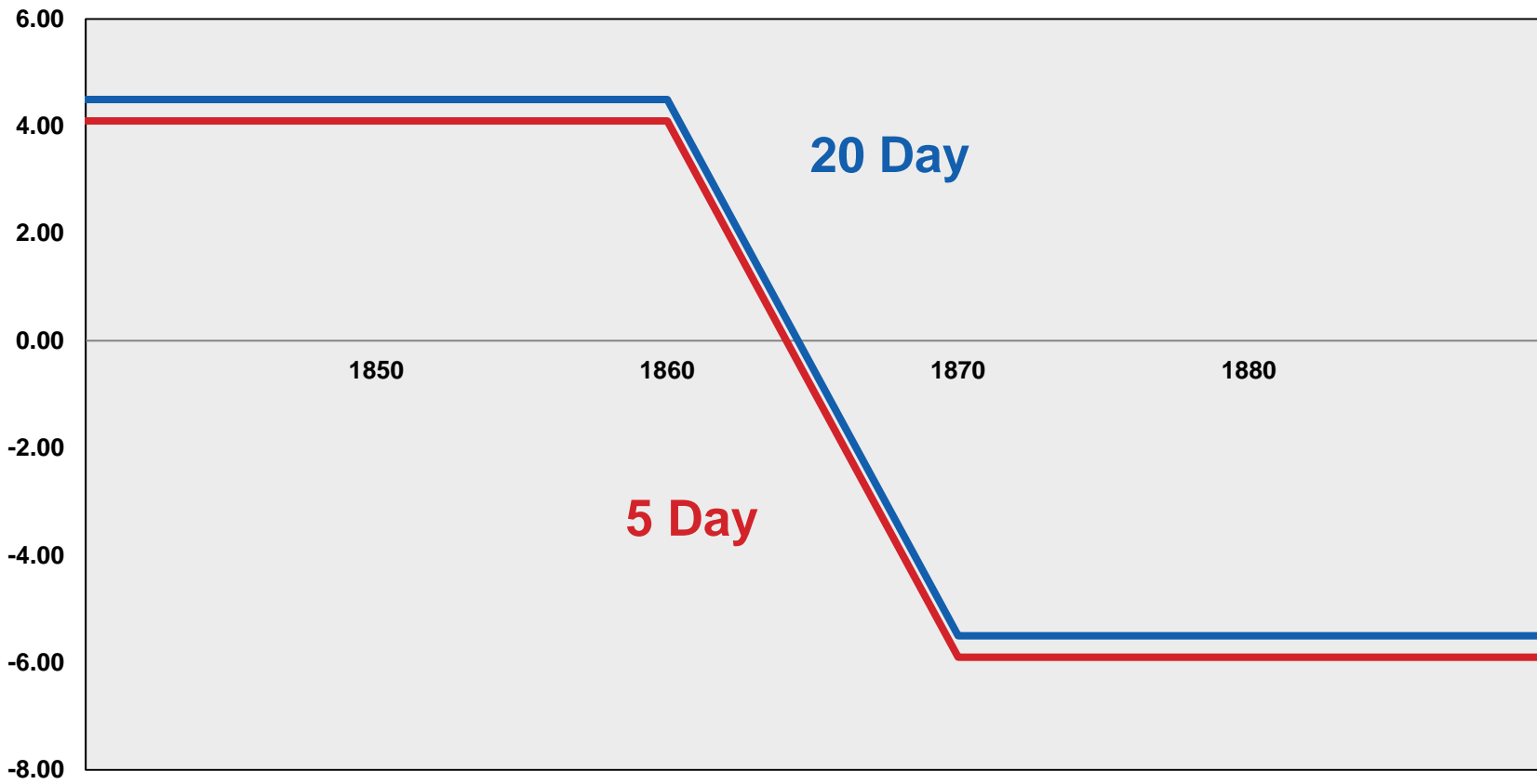
	SPX 1860 Call Bid	SPX 1870 Call Ask	Credit
5 Day	11.20	7.10	4.10
10 Day	15.50	11.30	4.20
15 Day	18.00	13.70	4.30
20 Day	21.90	17.40	4.50

Why use a 20 Day spread when you can do a 5 Day?

Short-Dated Options

Vertical Spread

5 Day vs. 20 Day Payoff Diagram –



Short-Dated Options

Iron Condor

- The S&P 500 is at 1857 and we have a neutral outlook for the equity market for the next four weeks
- Based on this outlook we check out putting on an iron condor

Buy 1 SPX 20 Day 1840 Put @ 19.30

Sell 1 SPX 20 Day 1850 Put @ 21.60

Sell 1 SPX 20 Day 1865 Call @ 19.10

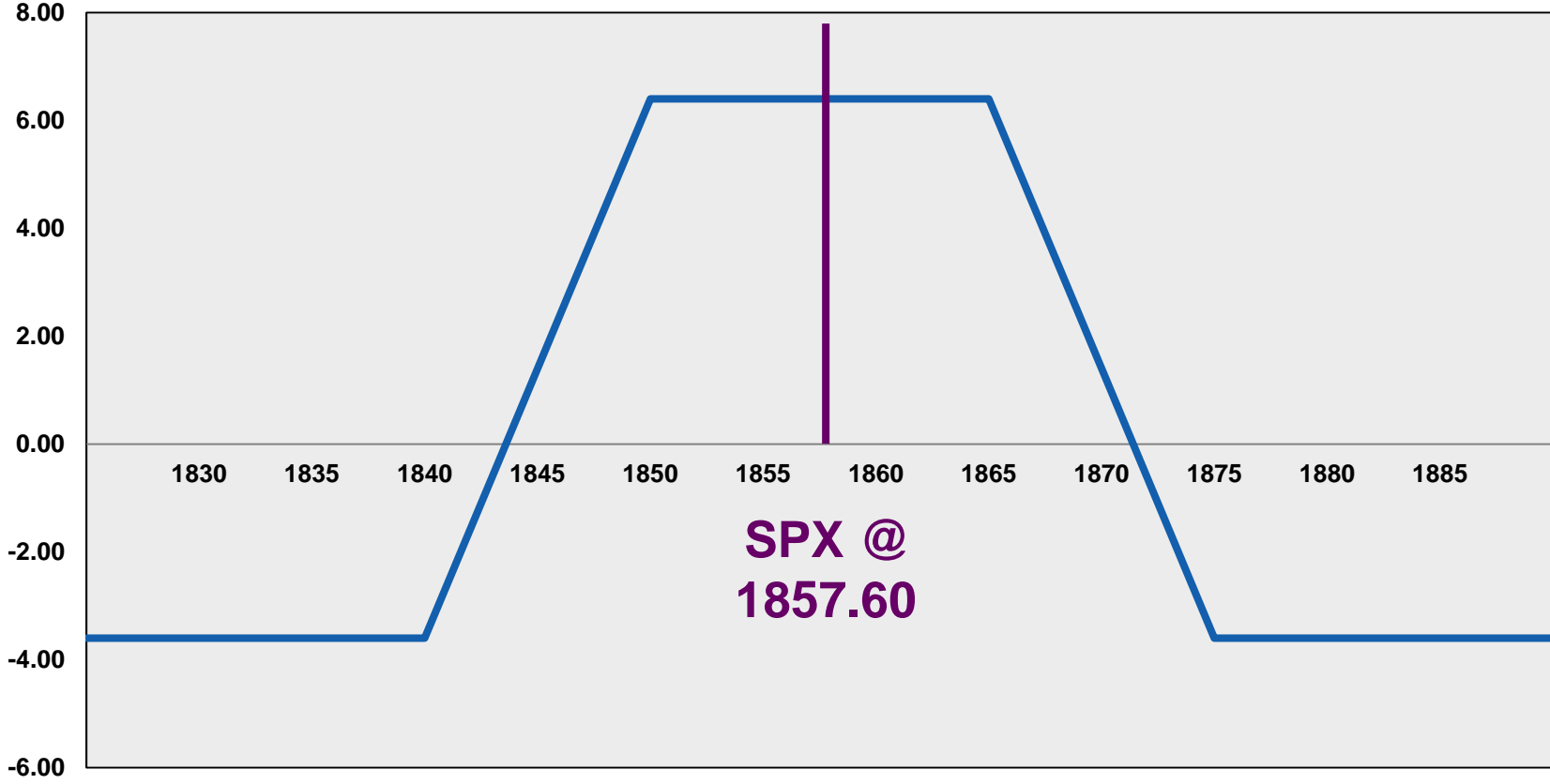
Buy 1 SPX 20 Day 1875 Call @ 15.00

Net Credit = 6.40

Short-Dated Options

Iron Condor

Payoff Diagram –



Short-Dated Options

Iron Condor

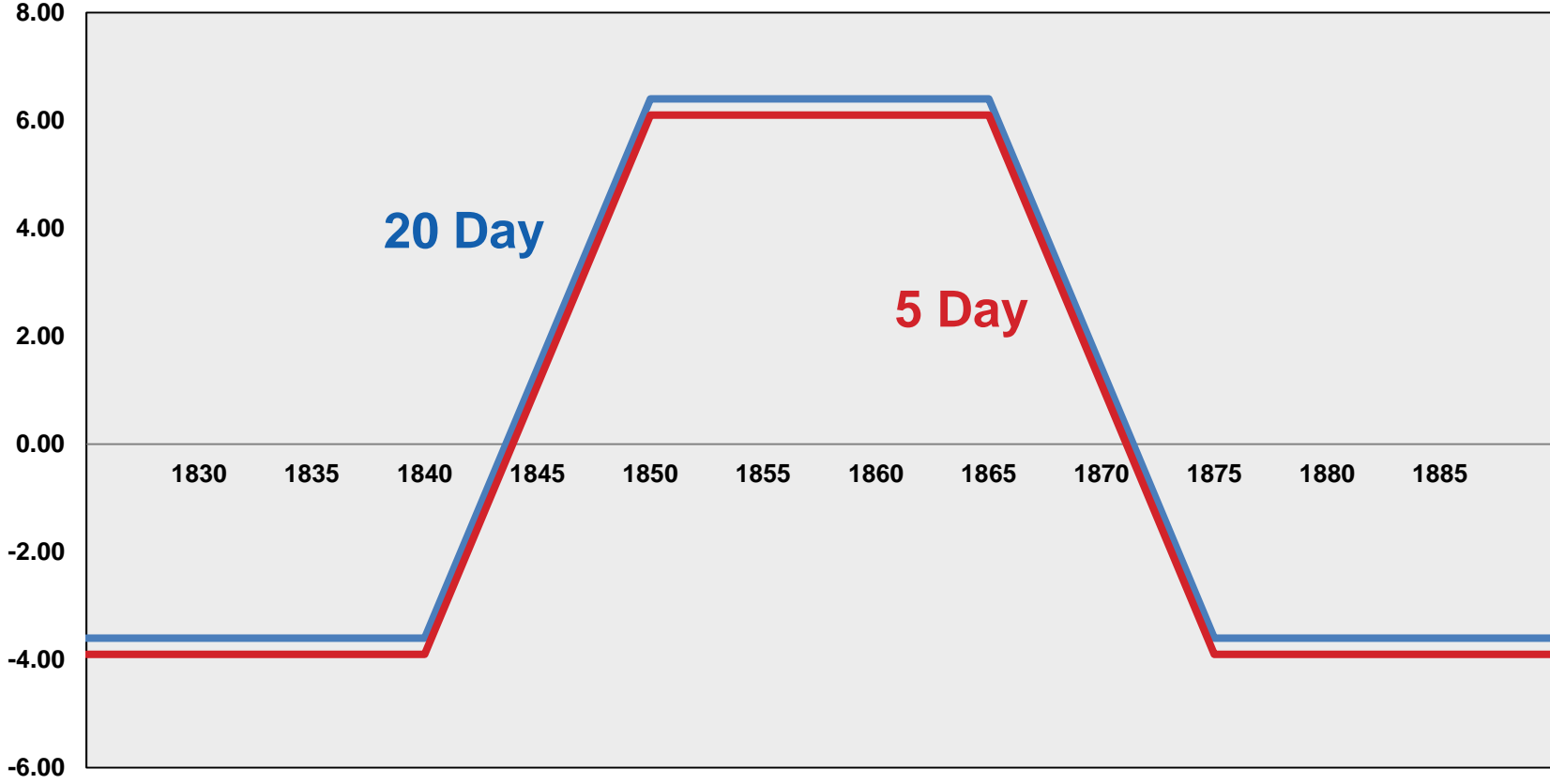
Weekly Expiration Comparison –

	SPX 1840 Put Ask	SPX 1850 Put Bid	SPX 1865 Call Bid	SPX 1875 Call Ask	Credit
5 Day	8.20	11.10	8.50	5.30	6.10
10 Day	12.80	15.00	13.00	9.00	6.20
15 Day	15.70	18.10	15.40	11.50	6.30
20 Day	19.30	21.60	19.10	15.00	6.40

Short-Dated Options

Iron Condor

5 Day vs. 20 Day Payoff Diagram –



S&P 500 Index Options

Wednesday Weeklys

FOMC Minutes Trade –

About 12:00 April 6th

SPX at 2058

Bullish into FOMC Minutes

Buy SPX Apr 6th 2055 Put at 1.80

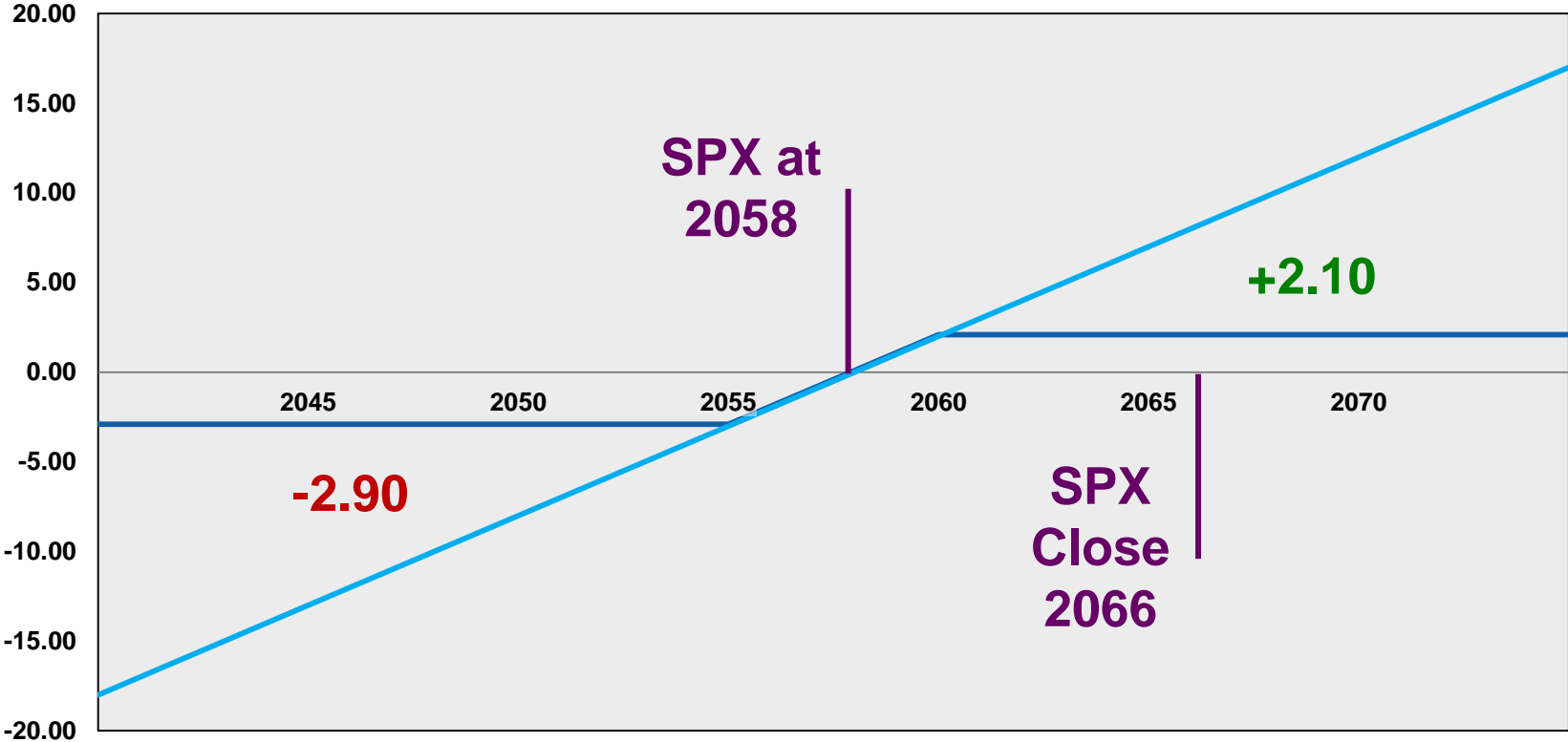
Sell SPX Apr 6th 2060 Put at 3.90

Credit = 2.10

S&P 500 Index Options

Wednesday Weeklys

Payoff Diagram –



S&P 500 Index Options

Short Futures Substitute

- Friday May 20th – SPX at 2052.30
- Decide we want to be short the S&P 500 over the following week

Sell 1 SPX May 27th 2000 Call at 54.00

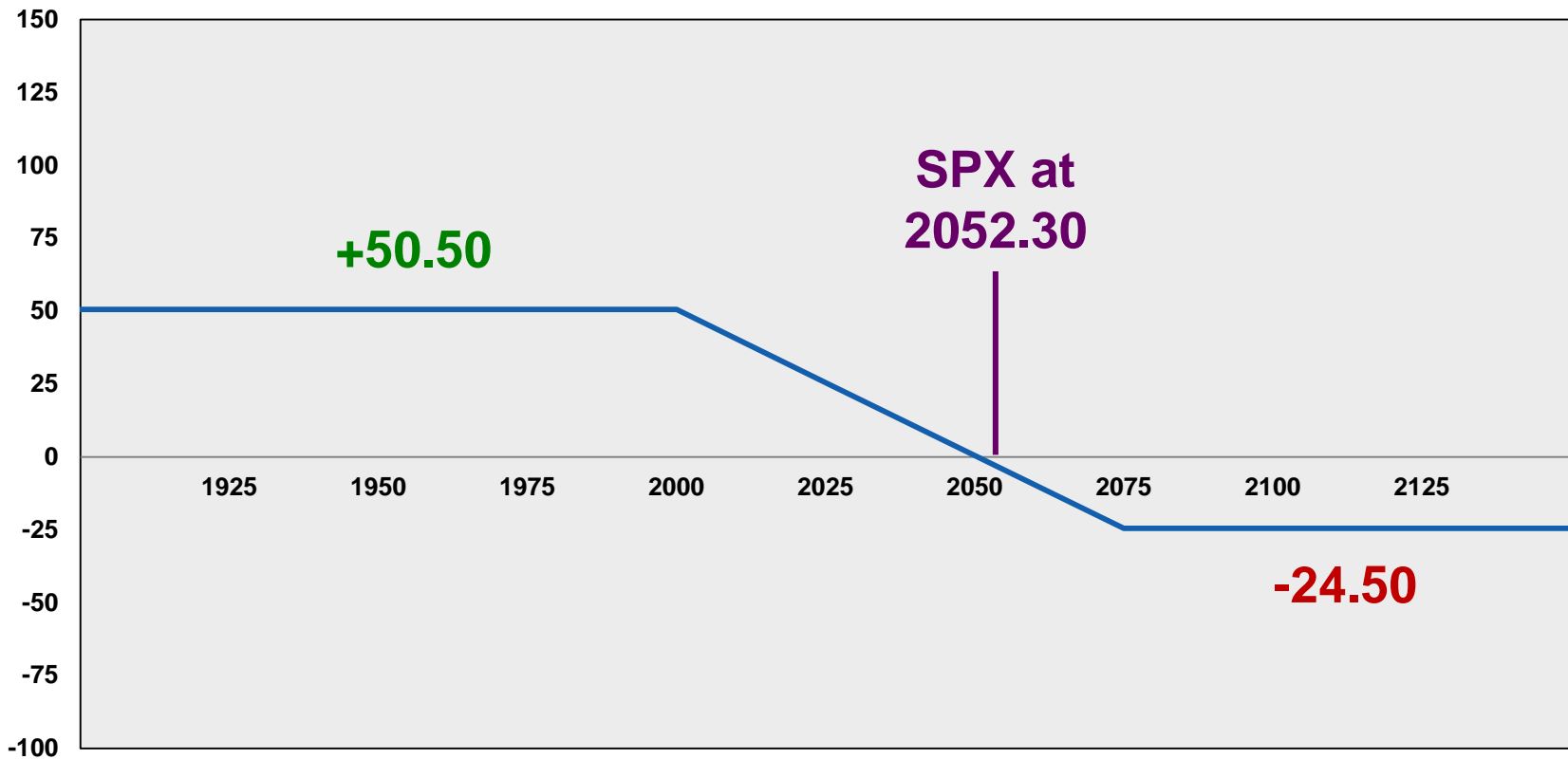
Buy 1 SPX Mar 27th 2075 Call at 3.50

Net Credit = 50.50

S&P 500 Index Options

Short Futures Substitute

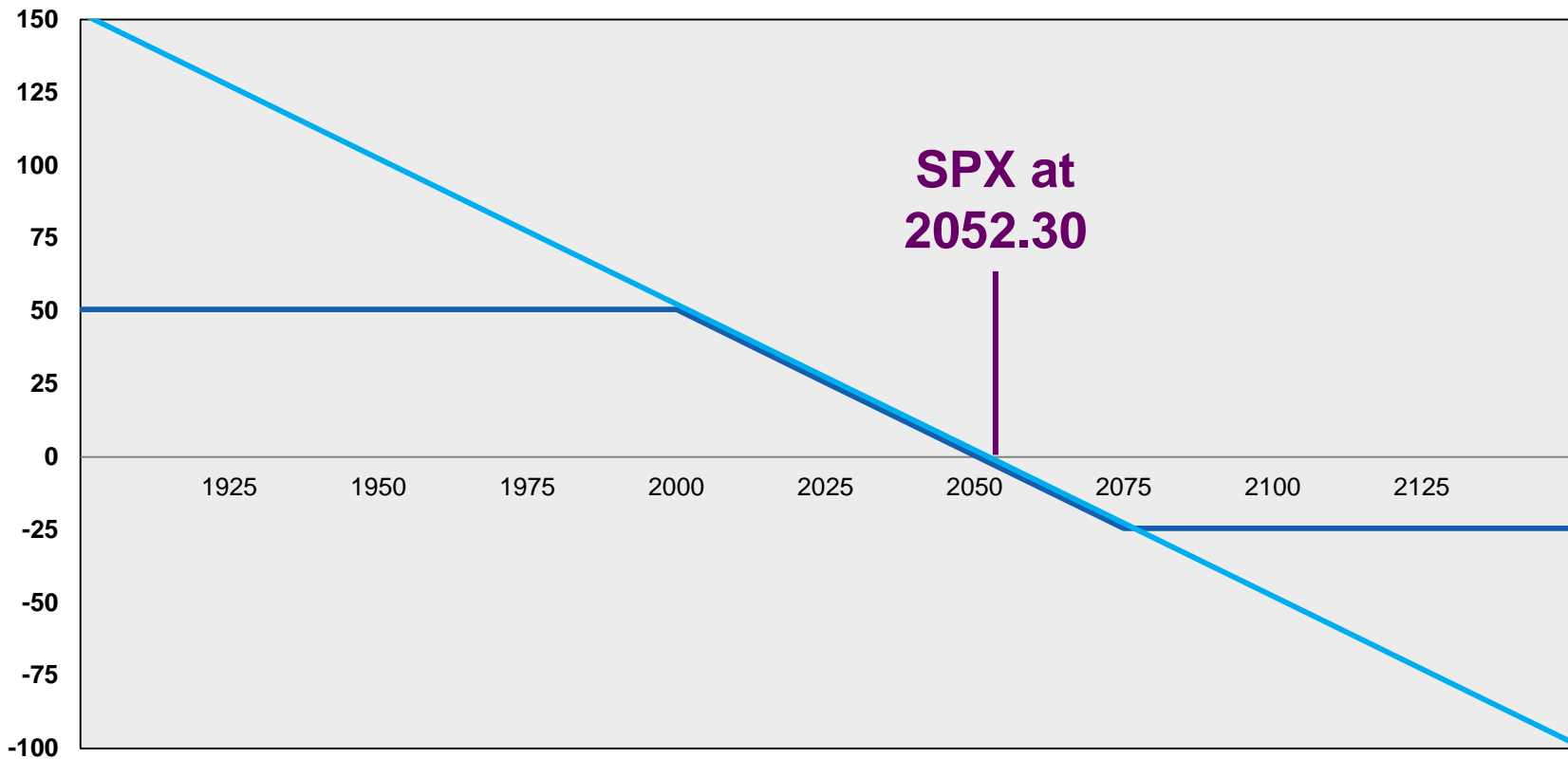
Short 1 SPX May 27th 2000 Call + Long 1 SPX May 27th 2075 Call



S&P 500 Index Options

Short Futures Substitute

Short 1 SPX May 27th 2000 Call + Long 1 SPX May 27th 2075 Call



S&P 500 Index Options

Summary

- **SPX option trading is available during hours outside of ‘normal’ US trading hours**
- **Wednesday Weeklys options were introduced earlier this year**
- **End of life time value has been a contributing factor to the acceptance of short-dated options by market participants**

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