Situational Options Strategies

Using options for specific investment objectives

Sanjib Saha

Puget Sound Chapter

November 2021

Handouts may be found at www.betterinvesting.org/puget
under “News and Articles”

Disclaimer

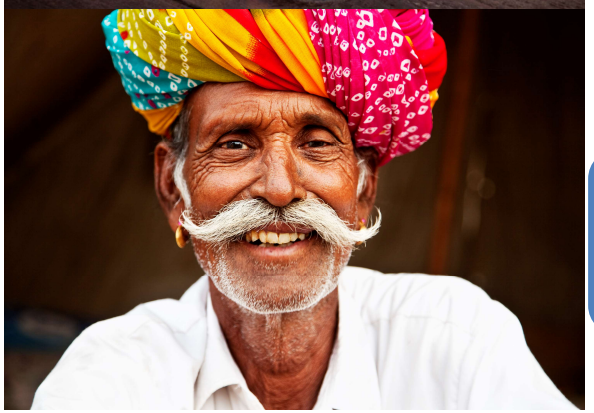
- The information in this presentation is for educational purposes only and is not intended to be a recommendation to purchase or sell any of the stocks, mutual funds, or other securities that may be referenced. The securities of companies referenced or featured in the seminar materials are for illustrative purposes only and are not to be considered endorsed or recommended for purchase or sale by BetterInvesting™ / National Association of Investors™. The views expressed are those of the instructors, commentators, guests and participants, as the case may be, and do not necessarily represent those of BetterInvesting™. Investors should conduct their own review and analysis of any company of interest before making an investment decision.
- Securities discussed may be held by the instructors in their own personal portfolios or in those of their clients. BetterInvesting presenters and volunteers are held to a strict code of conduct that precludes benefitting financially from educational presentations or public activities via any BetterInvesting programs, events and/or educational sessions in which they participate. Any violation is strictly prohibited and should be reported to the CEO of BetterInvesting or the Director of Chapter Relations.
- This presentation may contain images of websites and products or services not endorsed by BetterInvesting. The presenter is not endorsing or promoting the use of these websites, products or services.
- This session may be recorded for future use.

Topics

- Option basics
- Building-block strategies
- Situational applications

An unpleasant surprise!

Garden to Kitchen



Tom grows tomato

Kate makes ketchup

Tomato Contract: Breaking it down


Tom


Kate

Right to Sell at $5 even if market price is less

Right to Buy at $5 even if market price is more

Obligation to Be Bought at $5 even if market price is more

Obligation to Be Sold at $5 even if market price is less

- The contract has no price - the rights and obligations offset each other
- The contract eliminates price uncertainty for both
- At maturity, it ***may*** benefit one party at the expense of the other

Tomato Contract: Second thought?

Tom

Kate

Right to Sell at $5 even if market price is less

Right to Buy at $5 even if market price is more

Obligation to Be Sold at $5 even if market price is less

Obligation to Be Bought at $5 even if market price is more

Tania

Kyle

Tomato Contracts: Outcomes

Tom	Tania	Kate	Kyle
Discretion to sell for **$5/pound**	Obliged to honor Tom's contract	Discretion to buy for **$5/pound**	Obliged to honor Kate's contract
Scenario 1: Tomato price next year is **$5/pound**			
-$1		**-$1**	
Scenario 2: Tomato price next year is **$8/pound**			
			-$2
Scenario 3: Tomato price next year is **$2/pound**			
	-$2		

- Tom bought PUT options from Tania
- Kate bought CALL options from Kyle

Option Basics

Buy or sale a given quantity of an underlying asset

- CALL: Buy underlying
- PUT: Sell underlying

Discretionary

- Buy/Long/Hold: **Has right, but no obligation**
- Sell/Short/Write: **Has obligation, but no right**

Expiration date

Strike Price

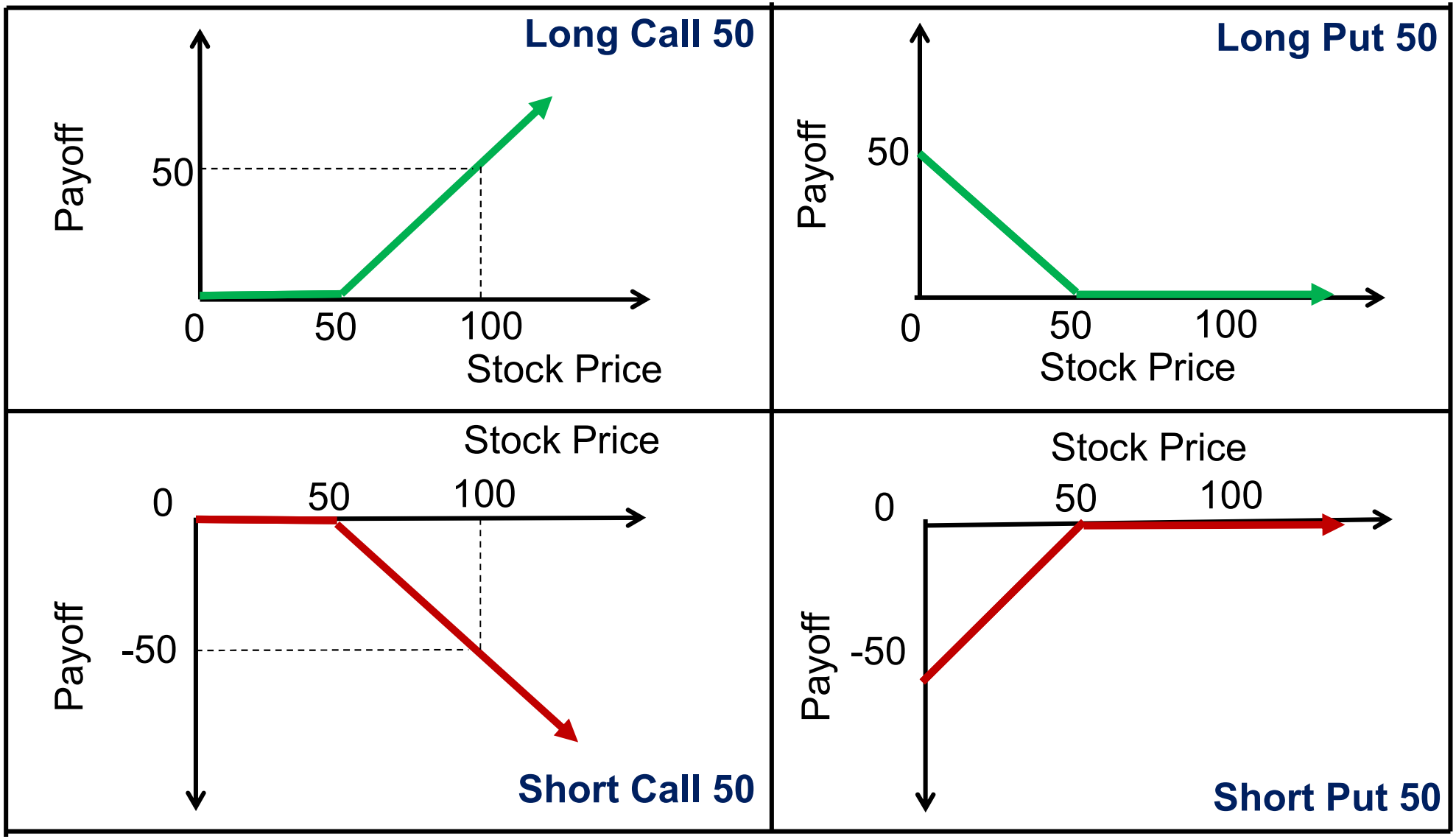
-TOMATO220831C5
-TOMATO220831P5

Option Premium

- Intrinsic Value (exercise value)
  - ITM: In the Money
  - OTM: Out of the Money
  - ATM: At the Money

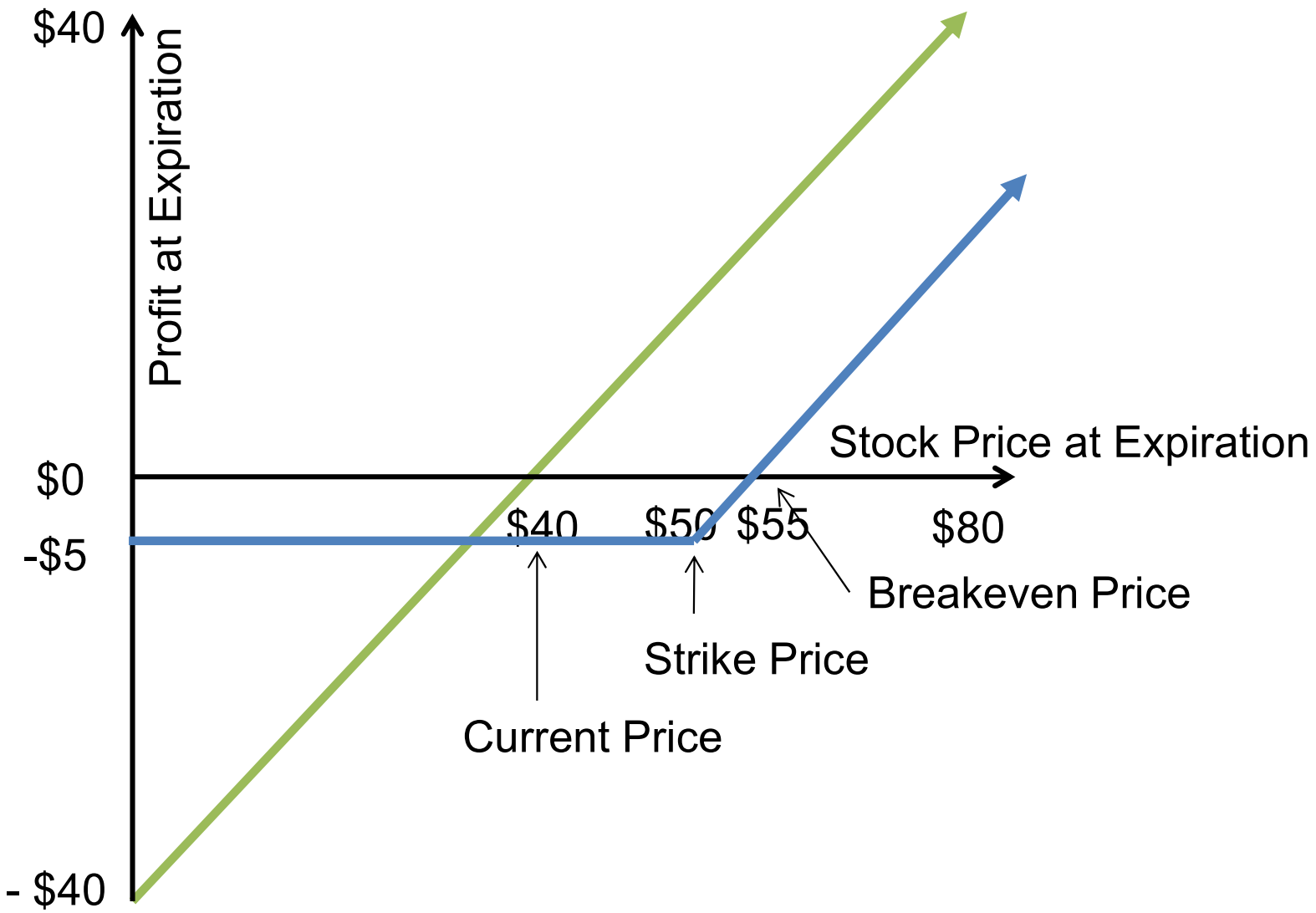
- Time value (speculative value)
  - Price of “hope” that intrinsic value picks up by expiration

Type / Ownership Payoff

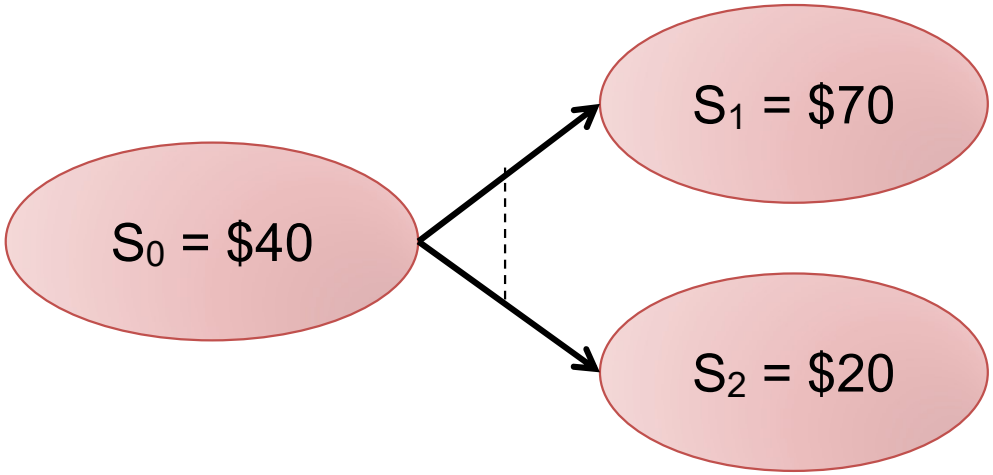


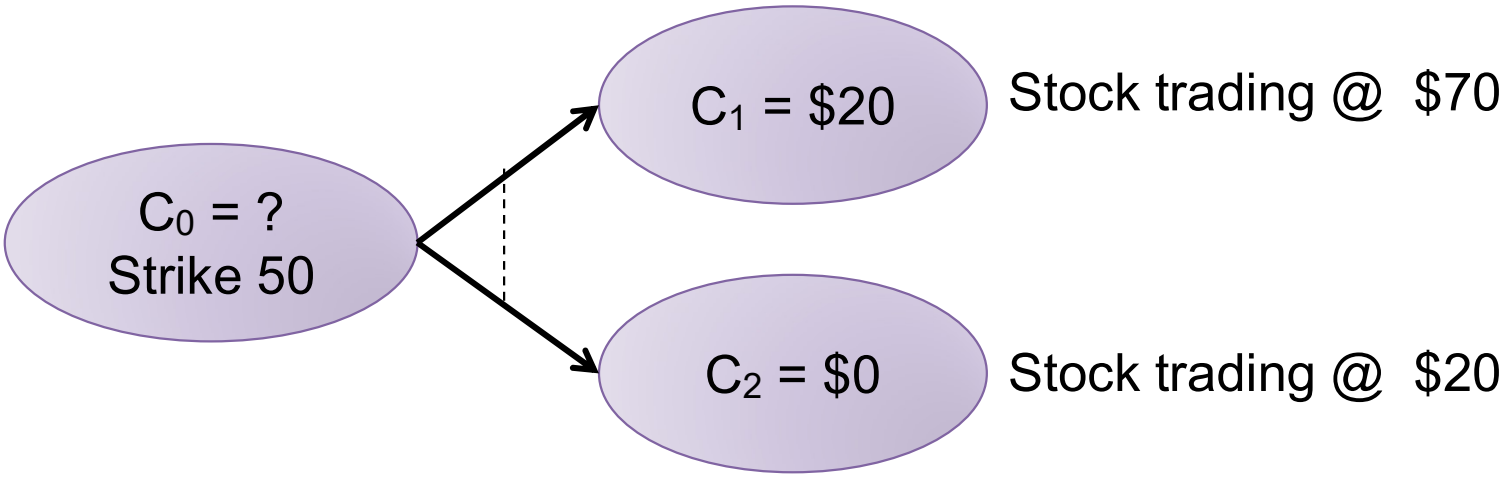
Option Trading Challenges

Call Buyer's Profit



Call Price


S_1 = $70
S_0 = $40
S_2 = $20


C_1 = $20
Stock trading @ $70
C_0 = ?
Strike 50
C_2 = $0
Stock trading @ $20

Call Replication Portfolio

B units of Bond + ∂ shares of Stock, such that portfolio value at expiration is identical to the Call value in both scenarios

Portfolio value if stock ends at 70:

$B + \partial \times 70 = 20$

Portfolio Value if stock ends at 20:

$B + \partial \times 20 = 0$

$$B = -8; \ \partial = 0.40$$

Borrow $8 at Risk-free rate and buy 0.4 shares of Stock

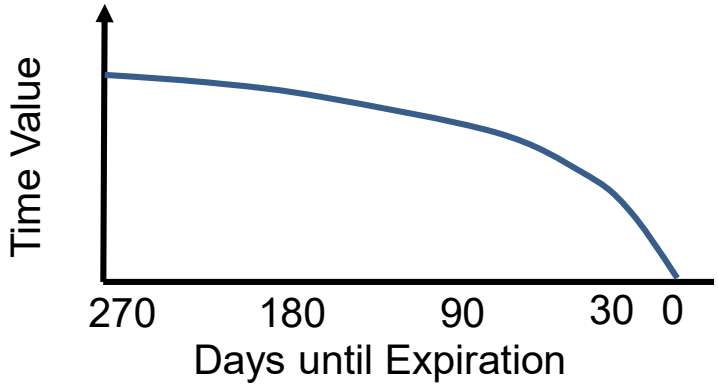
Cost of the Replication Portfolio = - $8 + 0.4 * $40 = $8

Call Price: $8

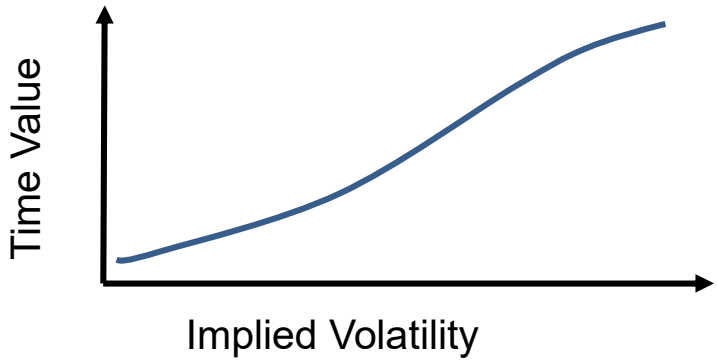
Option Price Dynamics

Strike Price from Current Price

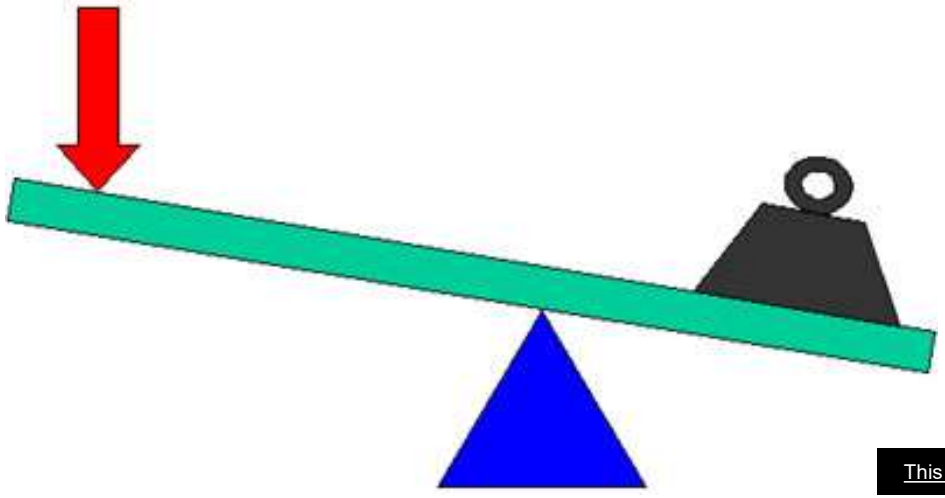
Expiration Period



Expected Volatility



Option and Leverage



Investment	Purchase Price	Final Value	Gain	% Gain
Stock	40	70	+30	+75%
Call @ 50	8	20	+12	+150%

Investment	Purchase Price	Final Value	Loss	% Loss
Stock	40	20	-20	-50%
Call @ 50	8	0	-8	-100%

Situation – Speculative Itch

Chart Source: Fidelity Research

XLE Jan 2022 Call @ Strike **55**

ETF rose 130% from bottom

Call rose 1375% from bottom

Mimic Index Annuity

Amount to Invest:	$40K
SPY Price:	$400
Risk-free Annual Interest Rate:	2%
Guaranteed Rate of Return:	0%
SPY 400 Call:	$20

Ordinary Portfolio	**IA-like Portfolio**
Buy **100** SPY shares for $40,000	Buy Zero-coupon bond for $39,200 Buy **40** SPY 400 Calls for $800
100% market participation in upside and downside	40% (**40/100**) participation in upside 0% participation in downside

Outcomes

Market Rises 10%

SPY closes at $440

Each Call is worth $40

Ordinary Portfolio: $44,000

IA-like Portfolio: $41,600

40 Calls ($1,600)

Bonds ($40,000)

Market Drops 10%

SPY closes at $360

Calls expire worthless

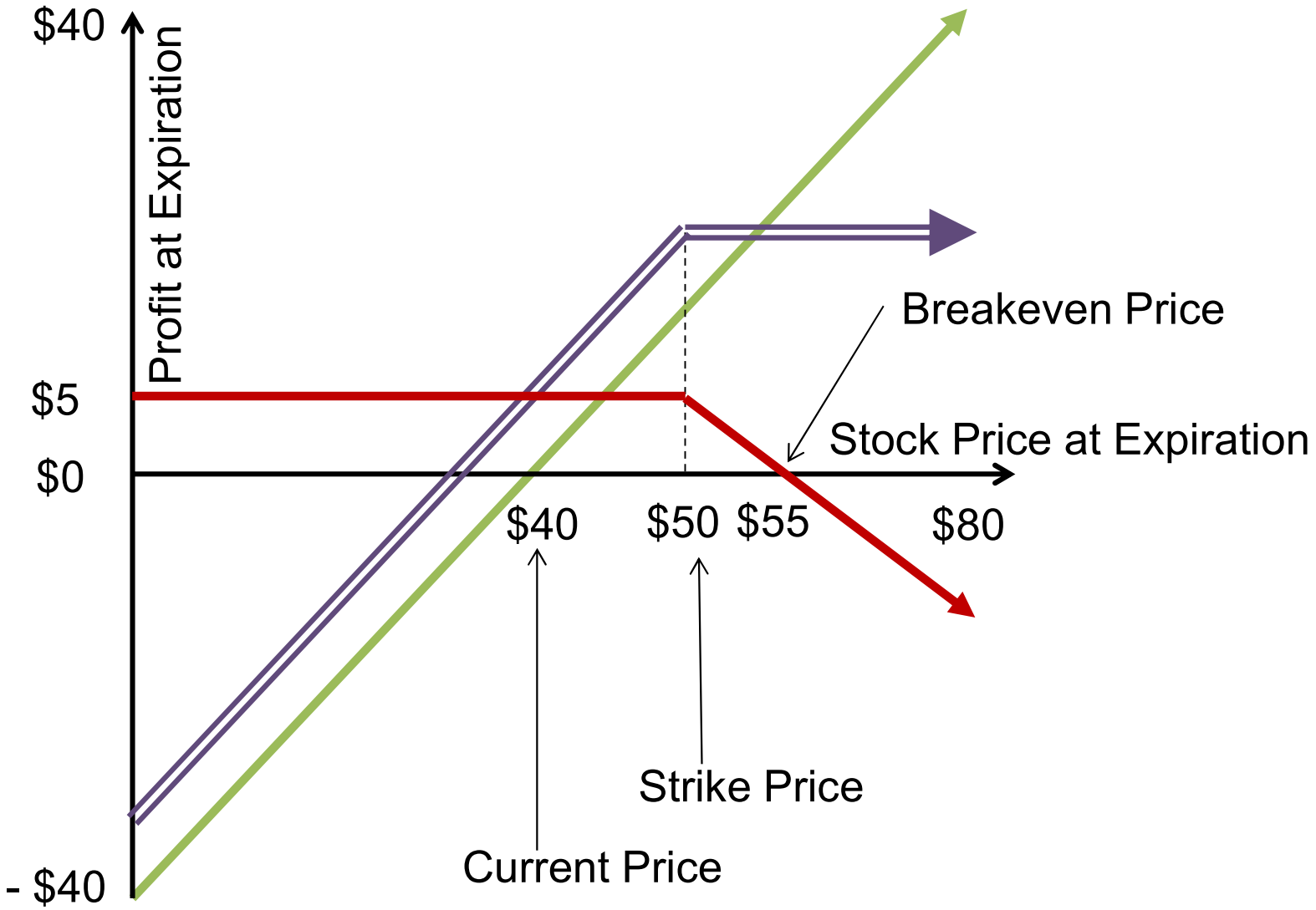
Ordinary Portfolio: $36,000

IA-like Portfolio: $40,000

40 Calls ($0)

Bonds ($40,000)

Call Writer's Payoff



Caution! Selling Options

- Small profits at the risk of Large loss
- Requires Collateral - Cash, Margin or Underlying
- More profitable at fearful times

Situation – Stuck with tax liability

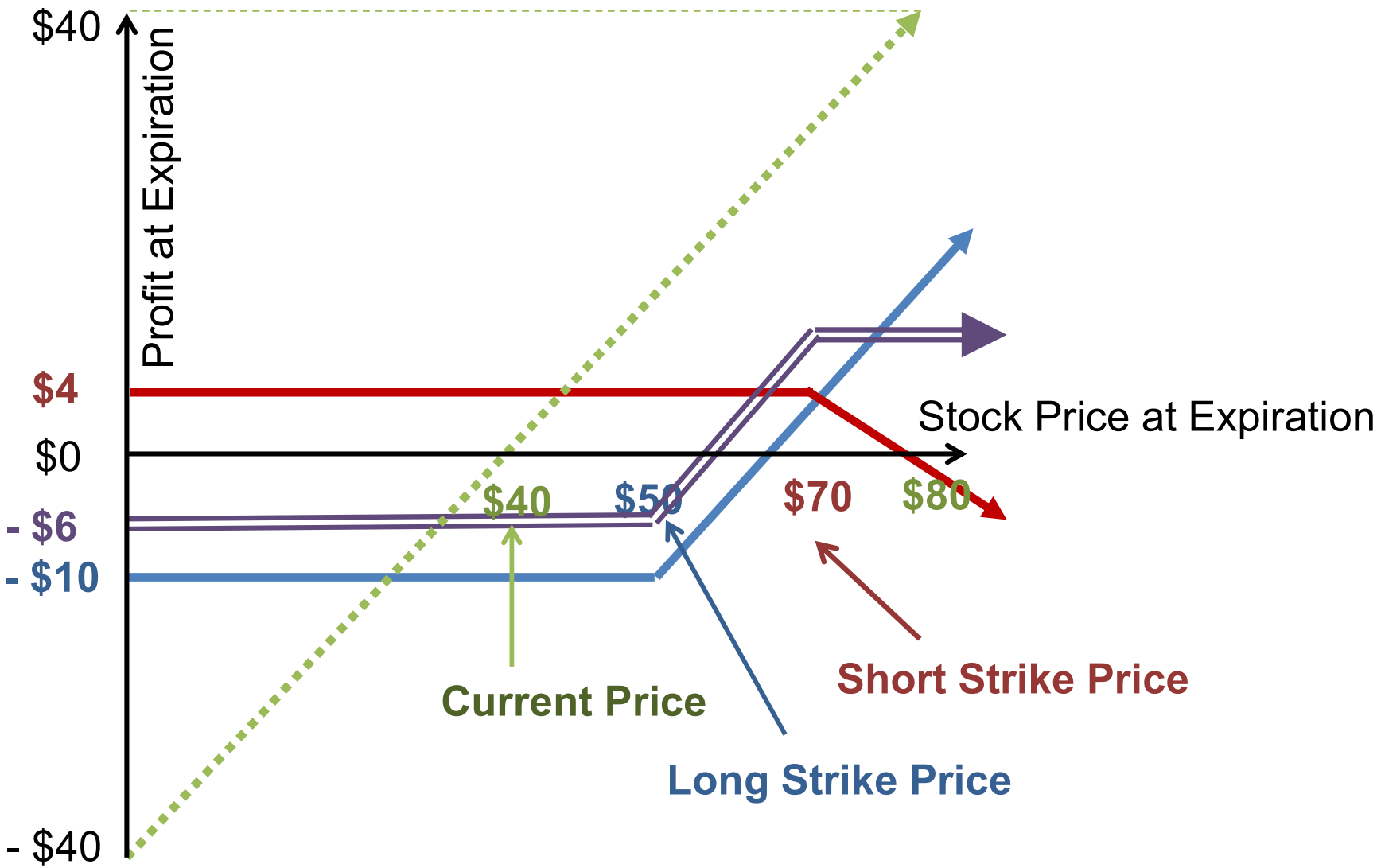
Covered Call as a disposal strategy

MSFT Current Price: $300
Tax liability: $30 (15% LTCG on $100 cost-basis)

Premium + Additional Gain >= $30

Expiration in months	Strike	Additional Gain	Premium	Extra Profit if Assigned
2	330	30	2	32
3	330	30	3.25	33.25
4	325	25	6.25	31.25
6	320	20	12	32
9	310	10	22	32
12	300	0	31.5	31.5

Vertical Spread

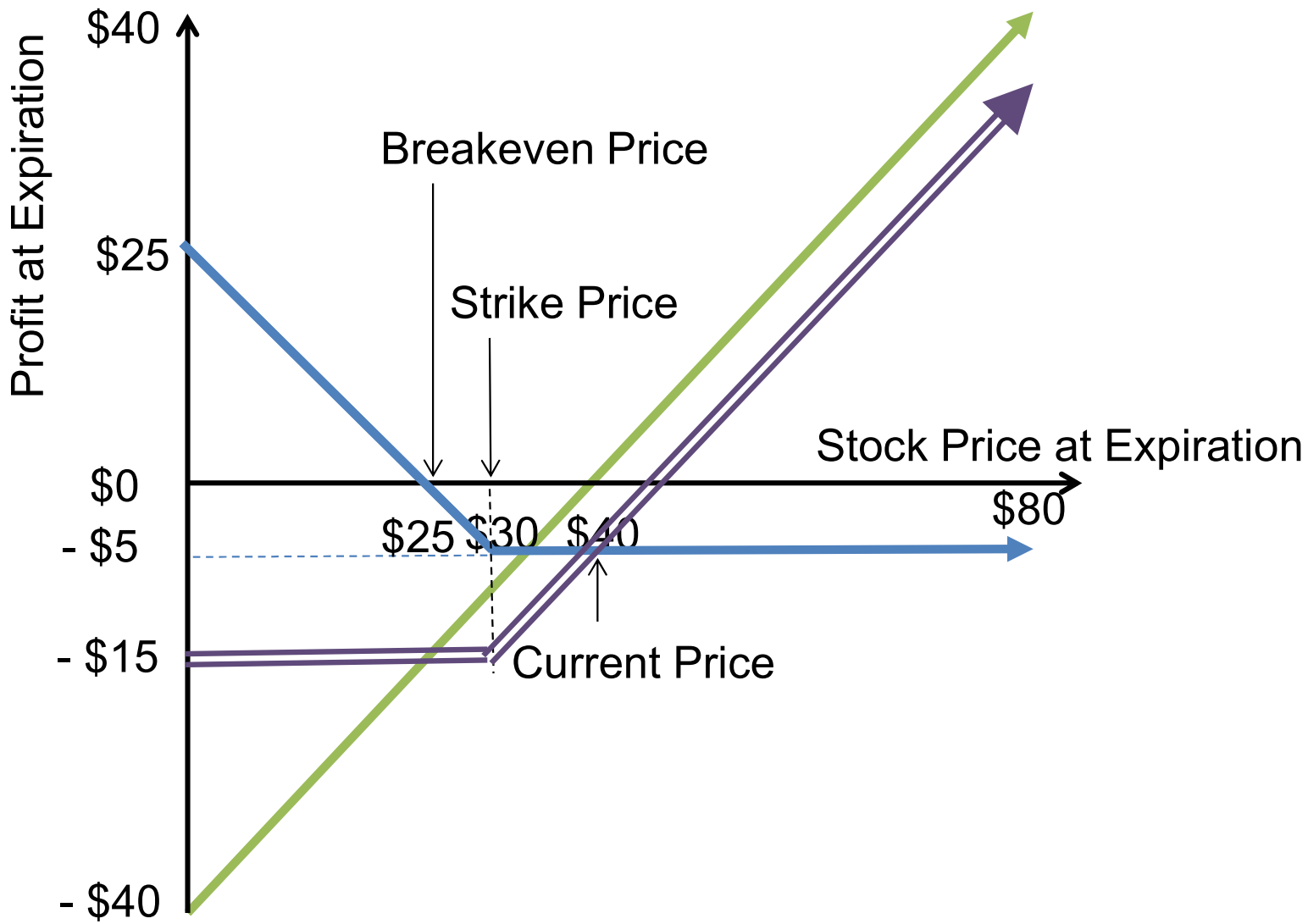


Mimic Index Annuity – Full Participation

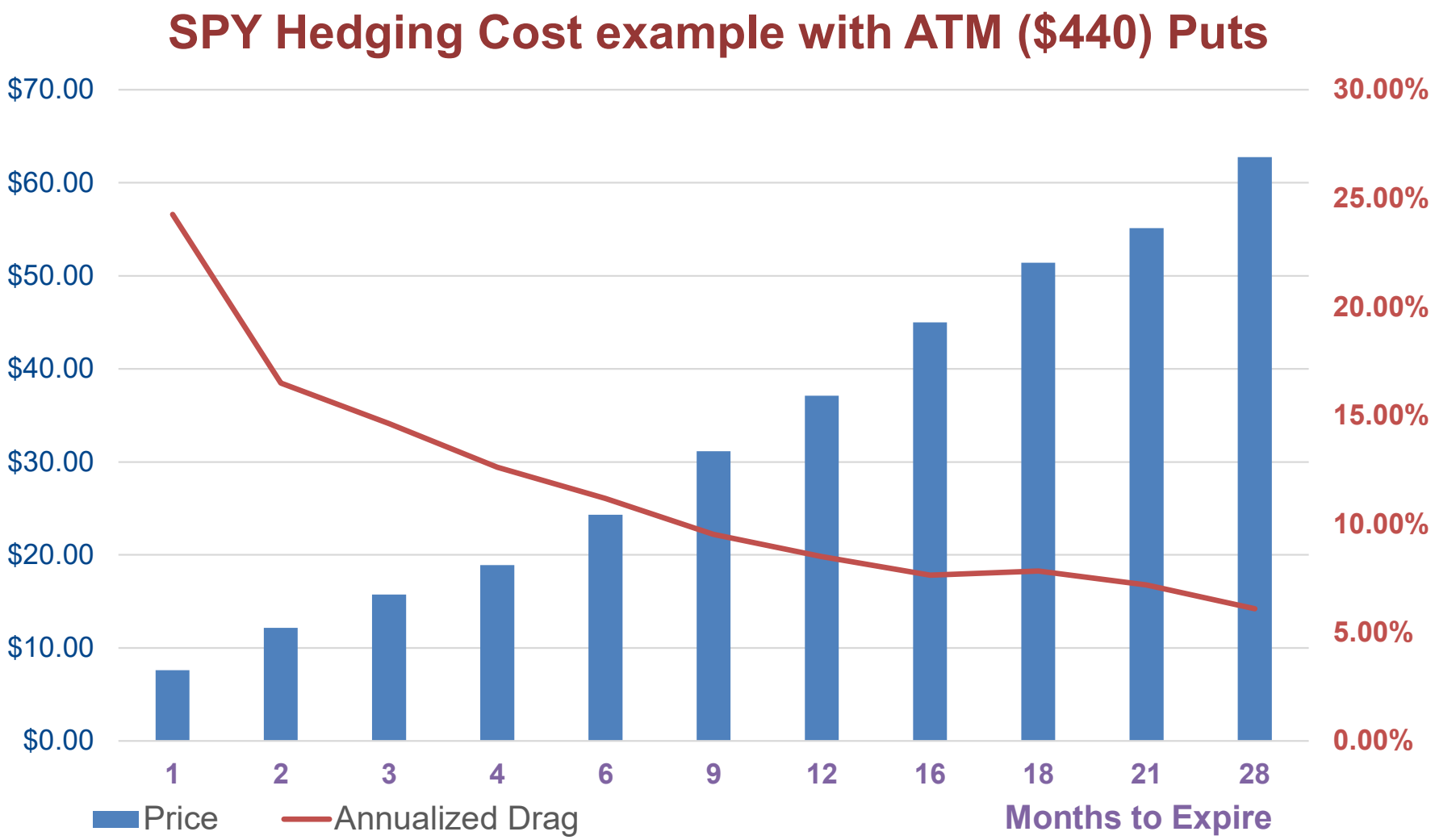
Amount to Invest:	$40K
SPY Price:	$400
Risk-free Annual Interest Rate:	2%
Guaranteed Rate of Return:	0%
SPY 400 Call:	$20
SPY 420 Call:	$12

Old IA-like Portfolio	**New IA-like Portfolio**
(40% participation, no cap)	(100% participation, 5% cap)
Buy Zero-coupon bond for $39,200	Buy Zero-coupon Treasury for $39,200
Buy **40** SPY 400 Calls for $800	Buy **100** SPY 400-420 Call-spread
40% (**40/100**) participation in upside	100% upside participation with 5% cap [(420-400) / 400 = 5%]

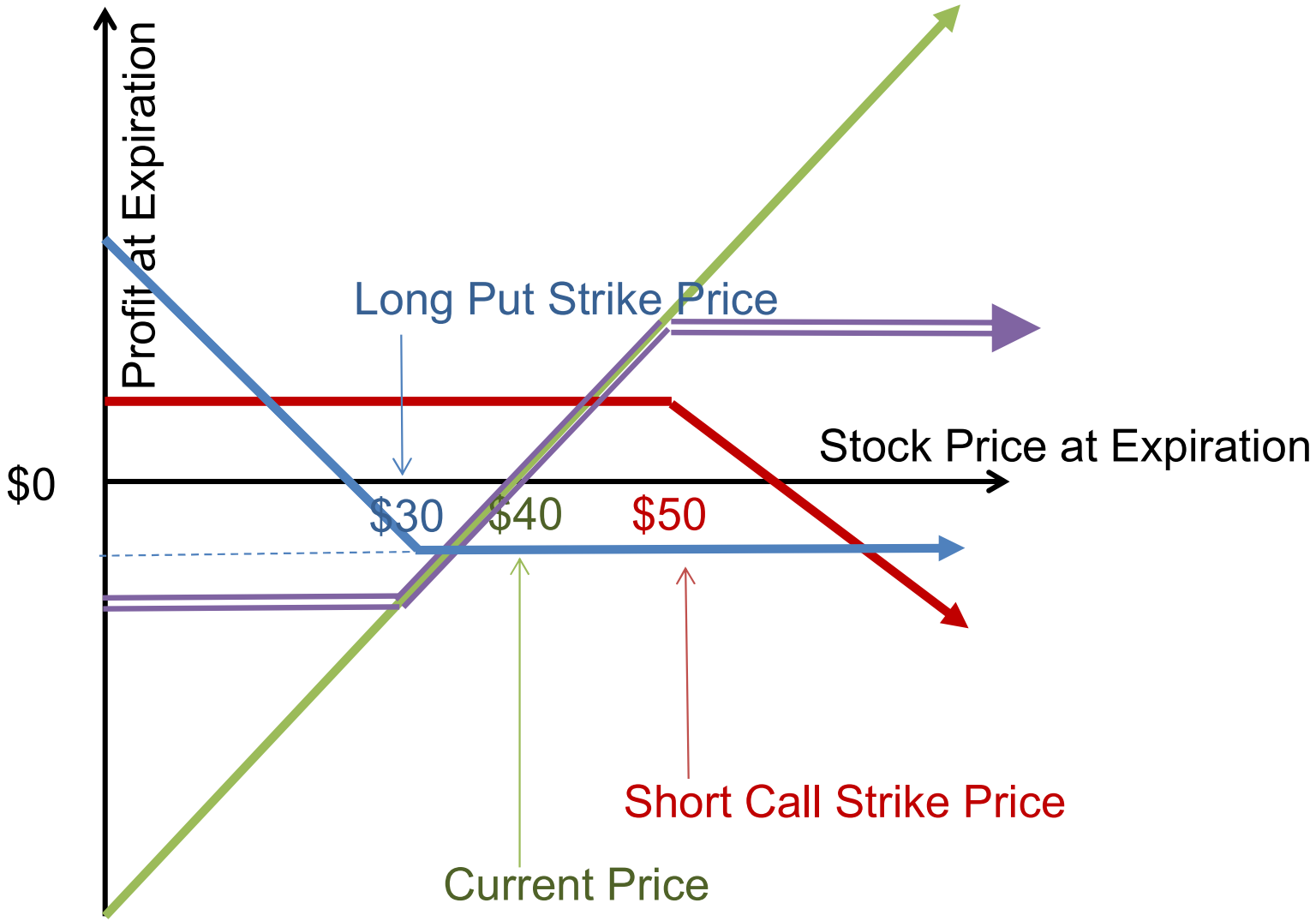
Put Buyer's Payoff



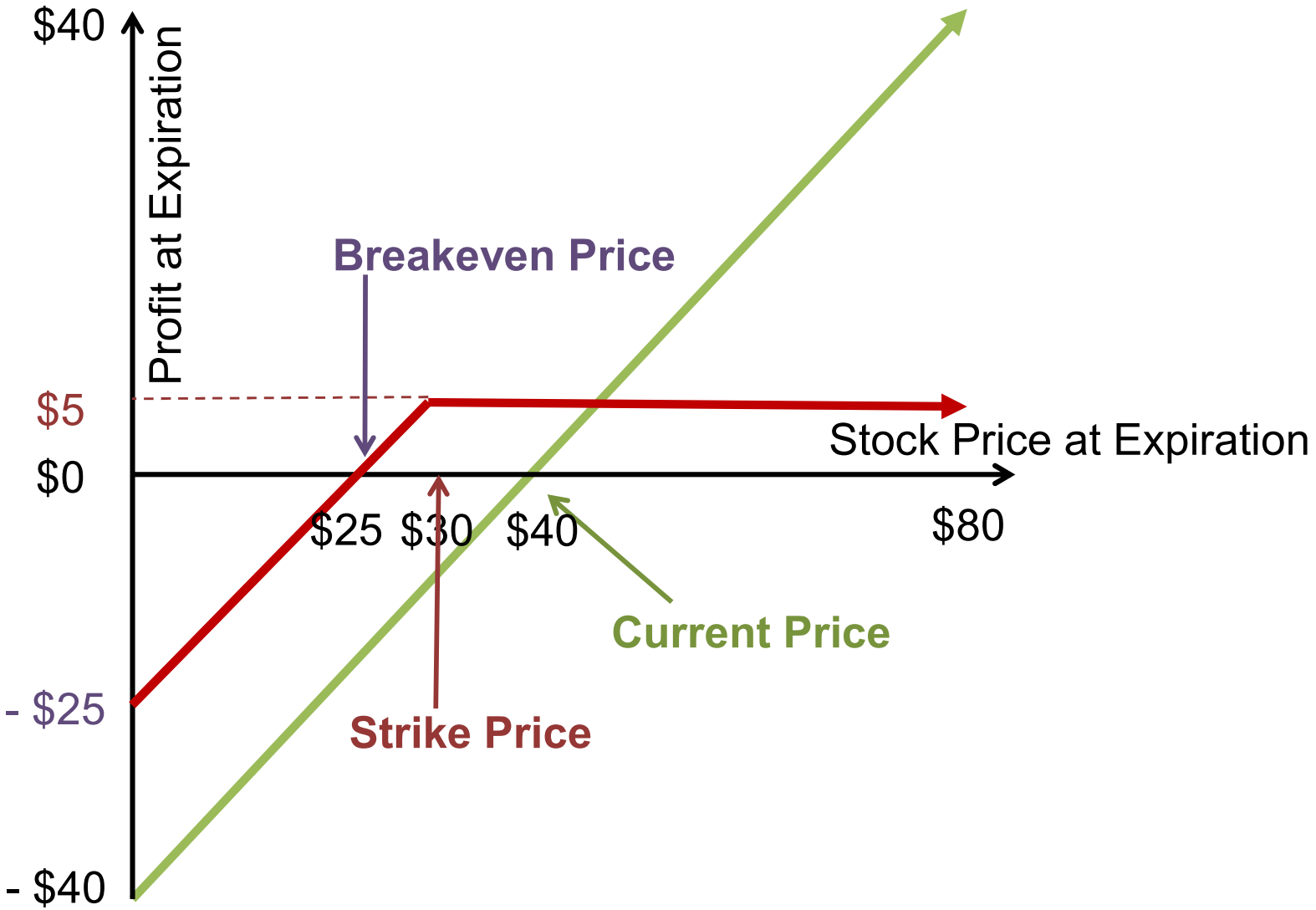
Put Protection is Expensive



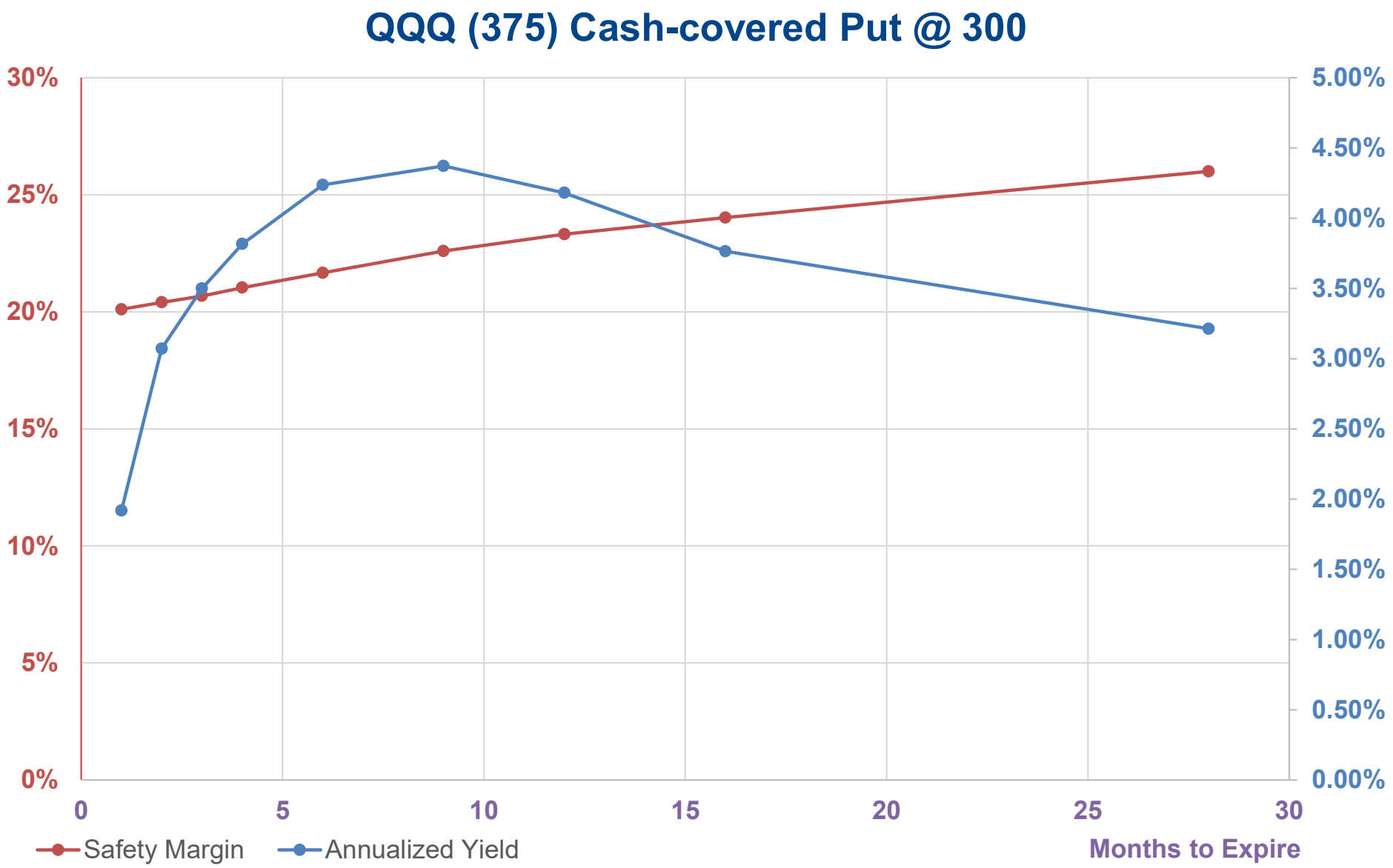
Collar – Sell Upside to Insure



Put Seller's Payoff



Buy stock for less



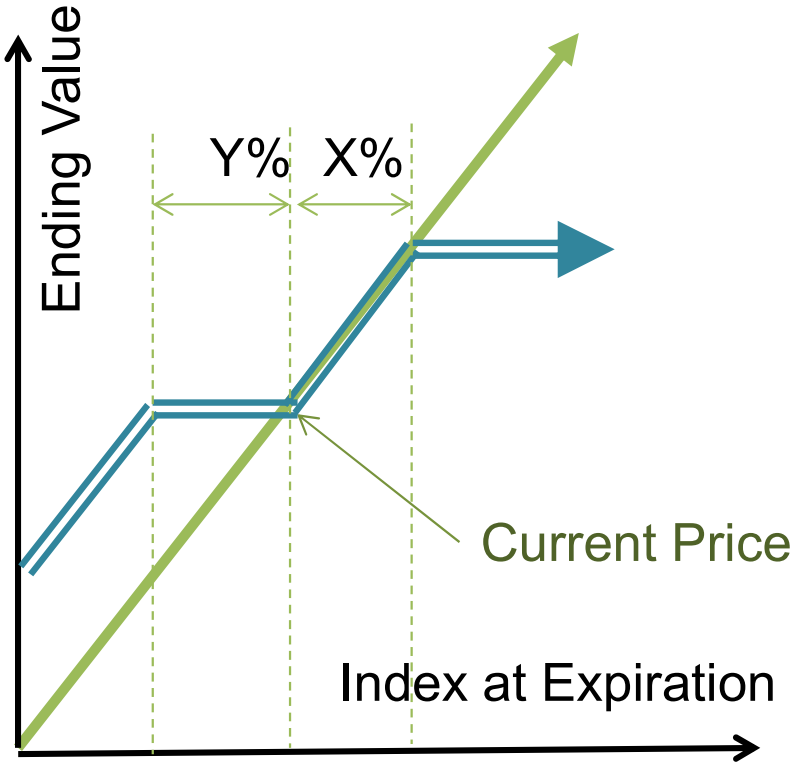
Shock-absorbing Buffer ETFs

Captures Index Gain

- Capped to X%

Absorbs Shock

- First Y% drop



- Long Deep ITM call (uncapped Index exposure)
- Long ATM put (unlimited downside protection)
- Short X% OTM call (caps upside to X%)
- Short Y% OTM put (pass on downside beyond Y%)

Resources

Options as a Strategic Investment by *Lawrence G McMillan*

https://www.optionseducation.org/

https://www.investopedia.com/options-basics-tutorial-4583012

https://www.cboe.com/us/indices/benchmark_indices/

Thank You

Questions / Comments:

sanjibs@live.com