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CME Group

S&P vs Nasdaq vs Russell in 2023: Getting More Selective With Your US Stock Index Strategy

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ASSET MANAGEMENT

S&P, Nasdaq, Russell in 2023

Value vs Growth and Large vs Small with Futures & Options

by **Tariq Dennison**

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About Tariq Dennison TEP

- Independent Advisor Managing Accounts on the IBKR platform
 - US Advisor: GFM Asset Management LLC
 - HK Advisor: GFM Group Limited
- In the market since 1998
 - Commerzbank (NY, London, Frankfurt)
 - Bear Stearns (NY)
 - J.P. Morgan (NY)
 - Canadian Imperial Bank of Commerce
 - Societe Generale (HK)
- Masters in Financial Engineering
 - University of California at Berkeley
- Lecturer at ESSEC Singapore
 - Fixed Income
 - Alternative Assets
- Balances America, Asia & Europe
- Author “Invest Outside the Box”



S&P vs Nasdaq vs Russell

- Why they matter
- How they've moved
- What's in them
 - Overlaps
 - Differences
- Some key numbers
- Futures & options vs other ways of trading these benchmarks

Futures & Options Strategies

- How Futures Work
- Futures vs ETFs
- Futures spreads
- Simple puts and calls
- Option spreads

Options involve risk and are not suitable for all investors. Multiple leg strategies, including spreads, will incur multiple transaction costs.

Why these benchmarks matter

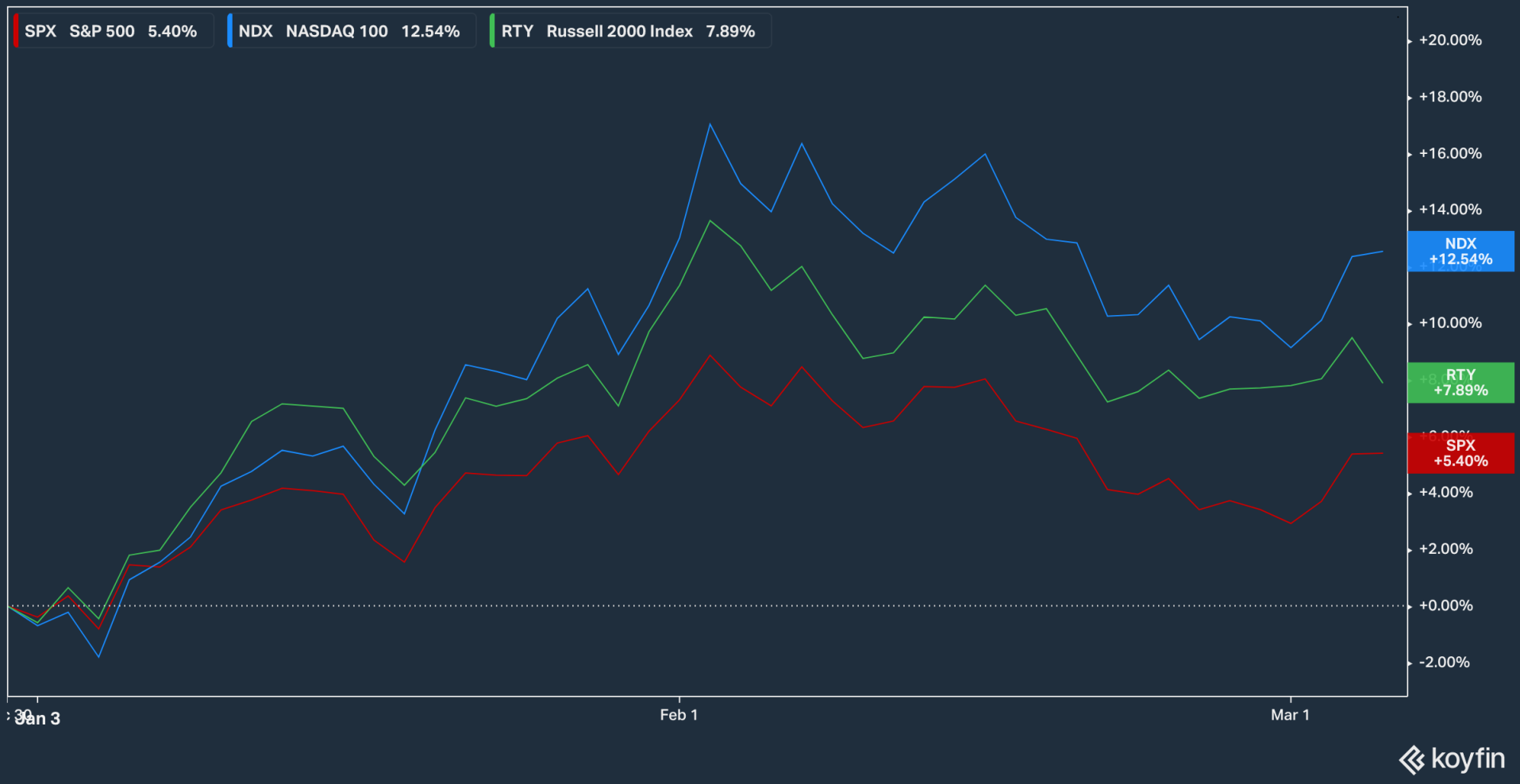
- S&P 500 is by far the most liquid stock market benchmark in the world, with its components making up around 50% of global market cap¹.
- Nasdaq 100 is a liquid subset of Nasdaq composite, which tends to be used as a proxy for the “high growth” half of the S&P 500.
- Russell 2000 is the most widely used proxy for US small-cap stocks – the smallest 2000 in the Russell 3000.

¹ Source: Holdings of S&P 500 Index funds crossed against total world stock market funds

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How these benchmarks have moved over time

Year to date in 2023:



Source: Koyfin, 6 March 2023

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After this move in 2022:



Source: Koyfin

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Zooming out to look at the past 5 years:

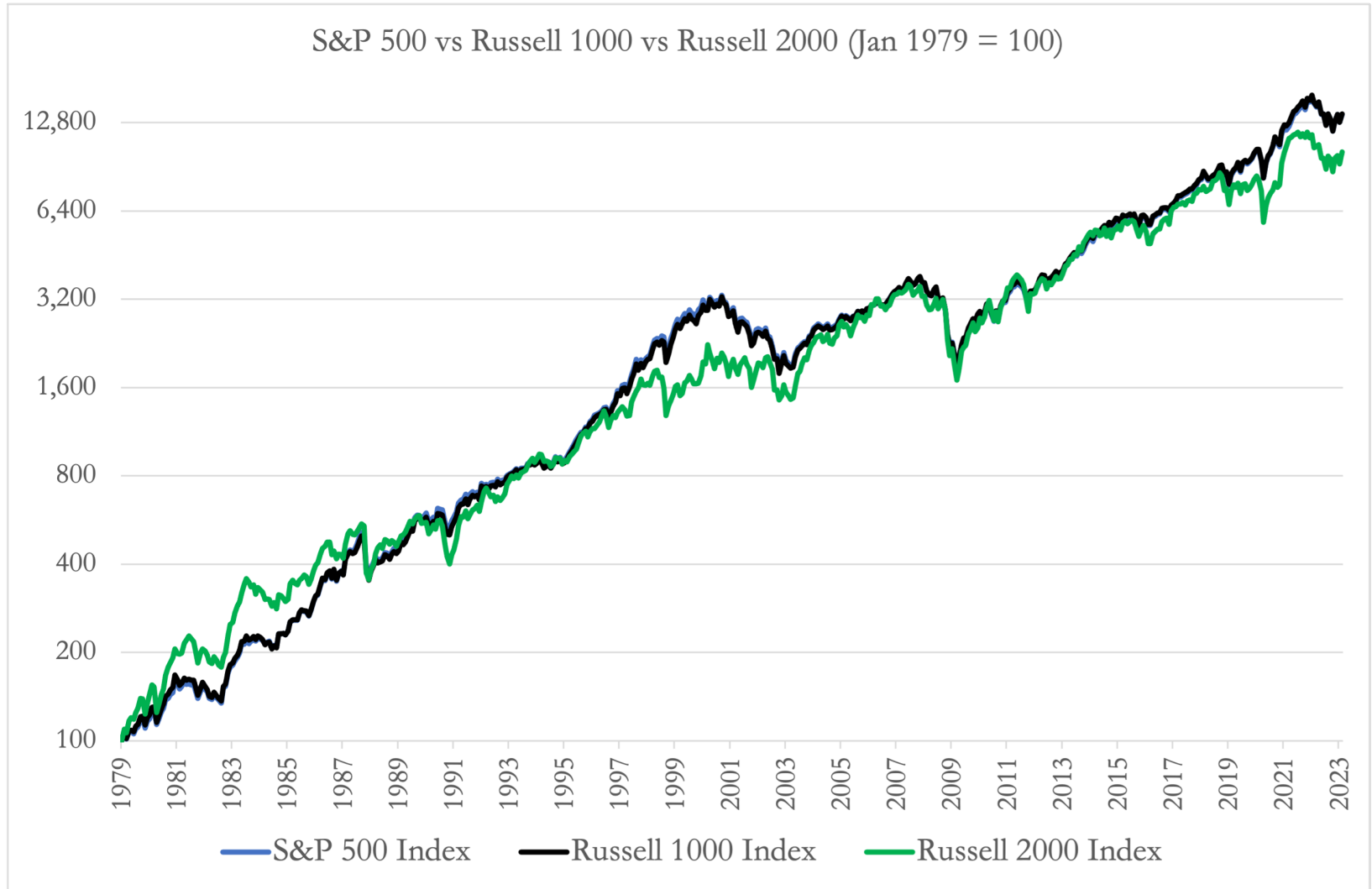


Source: Koyfin, 6 March 2023

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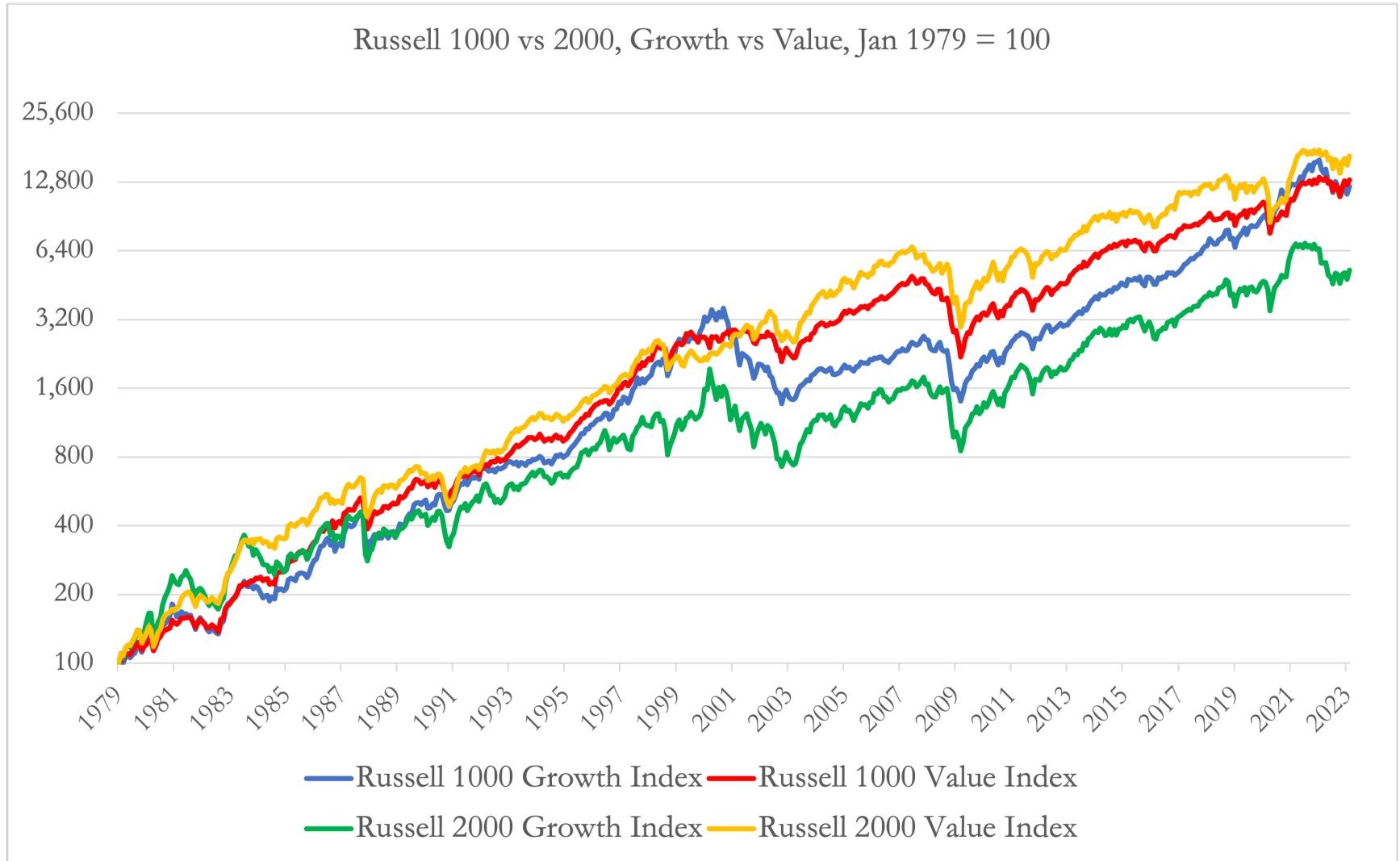
Going back 44 years, on the size factor:



Source: Koyfin

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Russell's Growth vs Value Indexes:



Source: Koyfin

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Looking inside these indexes: S&P vs Nasdaq 1st, Then Russell

S&P 500

- 500 firms (506 stocks)
- NYSE & NASDAQ
- US-based firms
- 11 sectors
- Profitability criteria

Nasdaq 100

- 100 firms
- NASDAQ-only
- Mostly, not all, US firms
 - ASML & AZN European
 - JD & PDD Chinese
- Financials clearly excluded

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Top overlaps between S&P 500 and Nasdaq 100

Overlapping Holdings

Show 10 entries

Search:

Company	Weight in S&P 500	Weight in Nasdaq 100	Overlap
 APPLE INC	6.2%	11.7%	6.2%
 MICROSOFT CORP	5.4%	11.9%	5.4%
 AMAZON.COM INC	2.6%	6.6%	2.6%
 ALPHABET INC. CLASS A	1.8%	4.0%	1.8%
 ALPHABET INC. CLASS C	1.6%	4.0%	1.6%
 NVIDIA CORP	1.3%	3.8%	1.3%
 TESLA MOTORS INC	1.1%	2.8%	1.1%
 META PLATFORMS INC	0.9%	2.7%	0.9%
 PEPSICO INC	0.7%	2.0%	0.7%
 BROADCOM INC.	0.7%	2.0%	0.7%

Source: <https://www.etfrc.com/funds/overlap.php>

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Top Differences Between S&P 500 vs Nasdaq











Note that all top 10 Nasdaq components are also in the S&P, only at about half the weight

Position Highlights (Non-Overlapping Exposures)

S&P 500 overweight vs Nasdaq 100

	BERKSHIRE HATHAWAY INC-CL B	1.7%
	EXXON MOBIL CORP	1.4%
	UNITEDHEALTH GROUP INC	1.4%
	JOHNSON & JOHNSON	1.3%
	JPMORGAN CHASE & CO	1.2%
	VISA INC-CLASS A SHARES	1.1%
	PROCTER & GAMBLE CO/THE	1.0%
	HOME DEPOT INC	1.0%
	CHEVRON CORP	1.0%
	MASTERCARD INC-CLASS A	1.0%

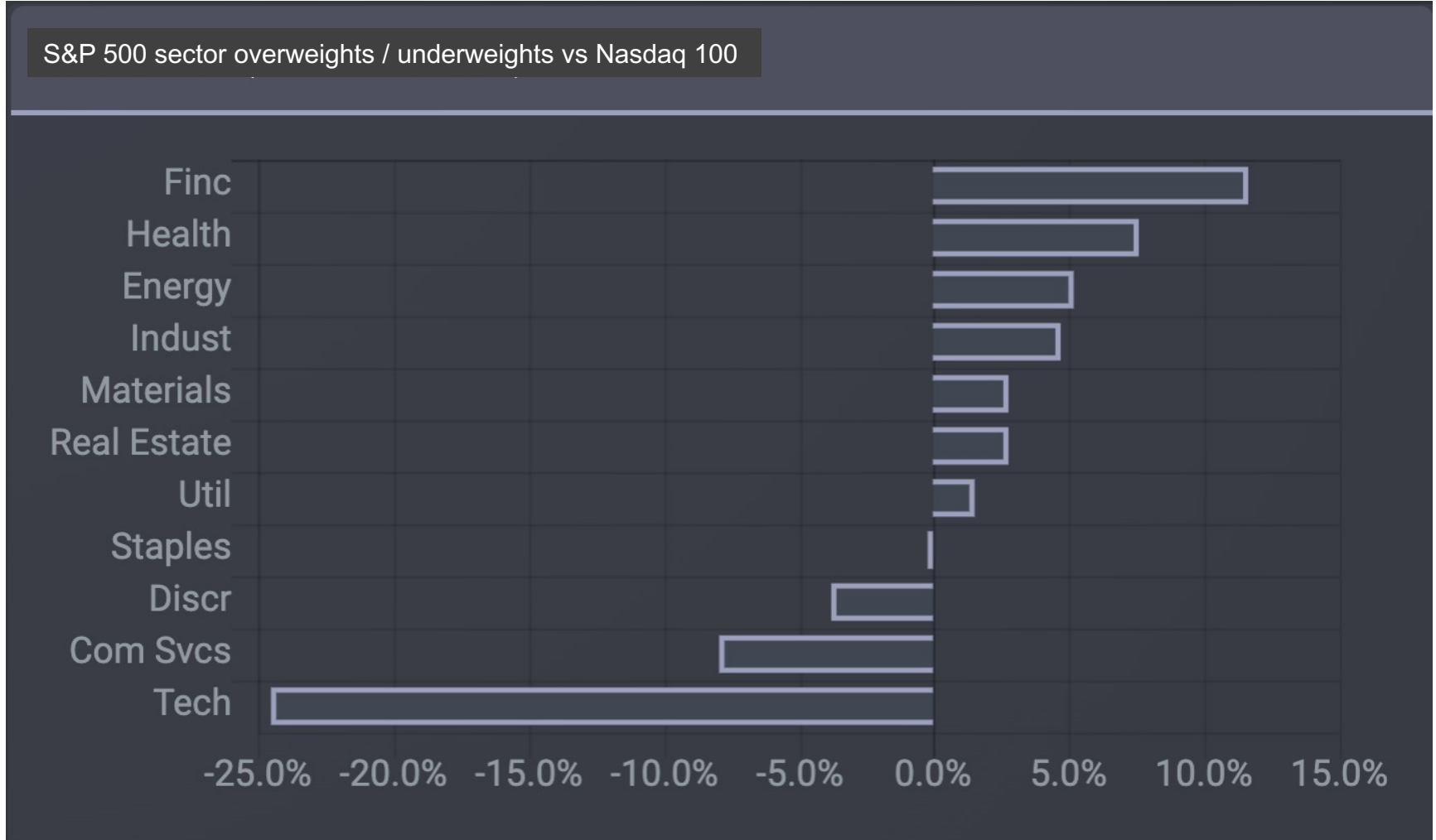
S&P 500 underweight vs Nasdaq 100

	MICROSOFT CORP	-6.5%
	APPLE INC	-5.6%
	AMAZON.COM INC	-4.0%
	NVIDIA CORP	-2.5%
	ALPHABET INC. CLASS C	-2.4%
	ALPHABET INC. CLASS A	-2.2%
	META PLATFORMS INC	-1.8%
	TESLA MOTORS INC	-1.7%
	PEPSICO INC	-1.3%
	BROADCOM INC.	-1.3%

Source: <https://www.etfrc.com/funds/overlap.php>

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S&P 500 vs Nasdaq sector exposures



Source: <https://www.etfrc.com/funds/overlap.php>

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S&P 500

Cheaper

Price/Earnings	18.00
Price/Book	3.30
Price/Sales	2.02
Price/Cash Flow	10.53
Dividend Yield %	1.94
Long-Term Earnings %	13.12
Historical Earnings %	16.62
Sales Growth %	11.41
Cash-Flow Growth %	8.07
Book-Value Growth %	4.66

Investment as of Mar 03, 2023 | Category: Large Blend

Nasdaq 100

Price/Earnings	22.69
Price/Book	5.15
Price/Sales	3.30
Price/Cash Flow	13.94
Dividend Yield %	1.00
Long-Term Earnings %	11.46
Historical Earnings %	12.44
Sales Growth %	14.09
Cash-Flow Growth %	6.17
Book-Value Growth %	10.57

Investment as of Mar 06, 2023 | Category: Large Growth

Faster growth

Source: Morningstar, <https://www.morningstar.com/etfs/xnas/qqq/portfolio>

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One near-term (< 5 years) driver of this spread



Source: Koyfin, 6 March 2023

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Another futures for your watchlist: discount rates, which may drive valuation multiples of growth stocks



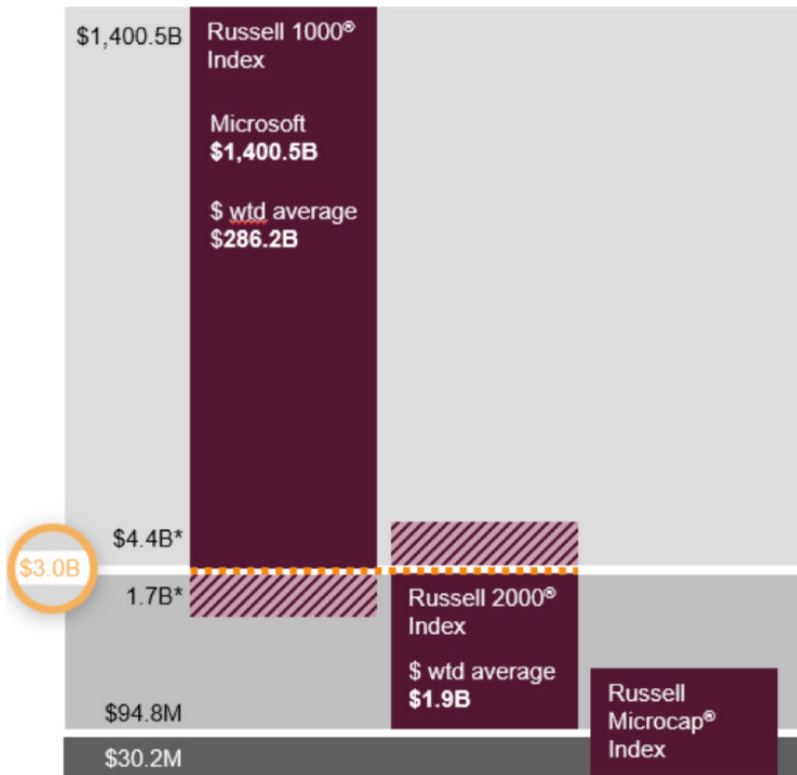
Source: Koyfin, 6 March 2023

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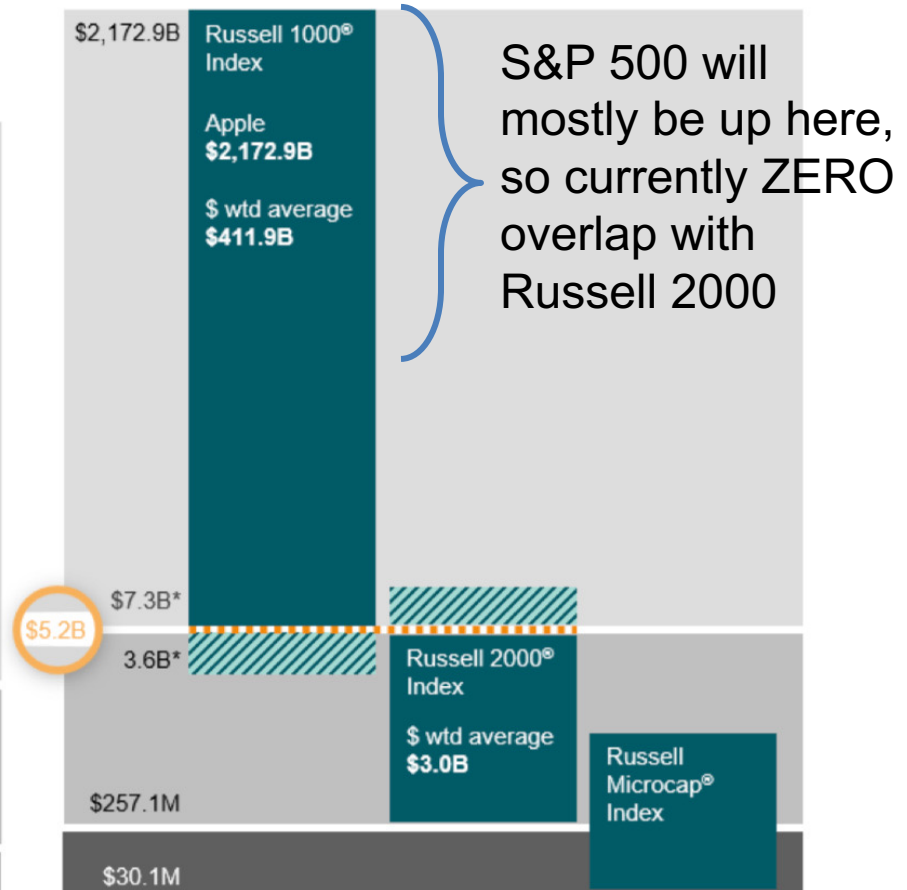


How the Russell 2000 covers a different part of the US market

2020 market cap range



2021 market cap range



Source: <https://www.cmegroup.com/education/articles-and-reports/2021-russell-index-reconstitution-results.html>

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S&P 500

Russell 2000

Cheaper

Price/Earnings	18.00	Price/Earnings	13.29
Price/Book	3.30	Price/Book	1.76
Price/Sales	2.02	Price/Sales	1.00
Price/Cash Flow	10.53	Price/Cash Flow	4.83
Dividend Yield %	1.94	Dividend Yield %	1.70
Long-Term Earnings %	13.12	Long-Term Earnings %	18.70
Historical Earnings %	16.62	Historical Earnings %	21.52
Sales Growth %	11.41	Sales Growth %	9.41
Cash-Flow Growth %	8.07	Cash-Flow Growth %	2.71
Book-Value Growth %	4.66	Book-Value Growth %	11.58

Investment as of Mar 03, 2023 | Category: Large Blend

Investment as of Mar 02, 2023 | Category: Small Blend

Faster growth only in sales and cash flow

Source: Morningstar, <https://investor.morningstar.com/quotes/0P00002D92>

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Futures & Options Basics

MES & MNQ Futures Description

DESCRIPTION File Configure

Stock Description

Micro E-Mini S&P 500 Stock Price Index

Security Type	FUT
Underlying	MES IND
Contract Month	MAR23
Expiration Date	MAR 17 '23
Last Trading Date	MAR 17 '23 08:30 CST
Currency	USD
Multiplier	5
Exchange	CME
Trading Class	MES
Symbol	MESH3
Product Type	Equity Index
Settlement Method	Cash

Trading Schedule: November 30, 2022 [Calendar](#)

Regular Trading Session	08:30 - 16:00 (22:30 - 06:00 your time)
Total Available Hours	<i>17:00*</i> - 16:00 (07:00 - 06:00 your time)
Exchange Time Zone	US/Central

** Times in italics are on the calendar date preceding trade date*

Margin Information

Margin Requirements Per Contract [More](#)

Initial	1870.25 USD
Maintenance	1700.23 USD

DESCRIPTION File Configure

Stock Description

Micro E-Mini Nasdaq-100 Index

Security Type	FUT
Underlying	MNQ IND
Contract Month	MAR23
Expiration Date	MAR 17 '23
Last Trading Date	MAR 17 '23 08:30 CST
Currency	USD
Multiplier	2
Exchange	CME
Trading Class	MNQ
Symbol	MNQH3
Product Type	Equity Index
Settlement Method	Cash

Trading Schedule: November 30, 2022 [Calendar](#)

Regular Trading Session	08:30 - 16:00 (22:30 - 06:00 your time)
Total Available Hours	<i>17:00*</i> - 16:00 (07:00 - 06:00 your time)
Exchange Time Zone	US/Central

** Times in italics are on the calendar date preceding trade date*

Margin Information

Margin Requirements Per Contract [More](#)

Initial	2724.42 USD
Maintenance	2476.75 USD

Source: IBKR

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M2K (no options) vs RTY (w/options) Descriptions

DESCRIPTION	File	Configure	DESCRIPTION	File	Configure
Stock Description			Stock Description		
Micro E-Mini Russell 2000 Index			E-mini Russell 2000 Index		
Security Type	FUT		Security Type	FUT	
Underlying	M2K IND		Underlying	RTY IND	
Contract Month	MAR23		Contract Month	MAR23	
Expiration Date	MAR 17 '23		Expiration Date	MAR 17 '23	
Last Trading Date	MAR 17 '23 08:30 CST		Last Trading Date	MAR 17 '23 08:30 CST	
Currency	USD		Currency	USD	
Multiplier	5		Multiplier	50	
Exchange	CME		Exchange	CME	
Trading Class	M2K		Trading Class	RTY	
Symbol	M2KH3		Symbol	RTYH3	
Product Type	Equity Index		Product Type	Equity Index	
Settlement Method	Cash		Settlement Method	Cash	
Trading Schedule: February 1, 2023 Calendar			Trading Schedule: February 1, 2023 Calendar		
Regular Trading Session	08:30 - 16:00 (22:30 - 06:00 your time)		Regular Trading Session	08:30 - 16:00 (22:30 - 06:00 your time)	
Total Available Hours	17:00* - 16:00 (07:00 - 06:00 your time)		Total Available Hours	17:00* - 16:00 (07:00 - 06:00 your time)	
Exchange Time Zone	US/Central		Exchange Time Zone	US/Central	
<i>* Times in italics are on the calendar date preceding trade date</i>			<i>* Times in italics are on the calendar date preceding trade date</i>		
Margin Information			Margin Information		
Margin Requirements Per Contract More			Margin Requirements Per Contract More		
Initial	893.82 USD		Initial	8938.21 USD	
Maintenance	715.06 USD		Maintenance	7150.57 USD	

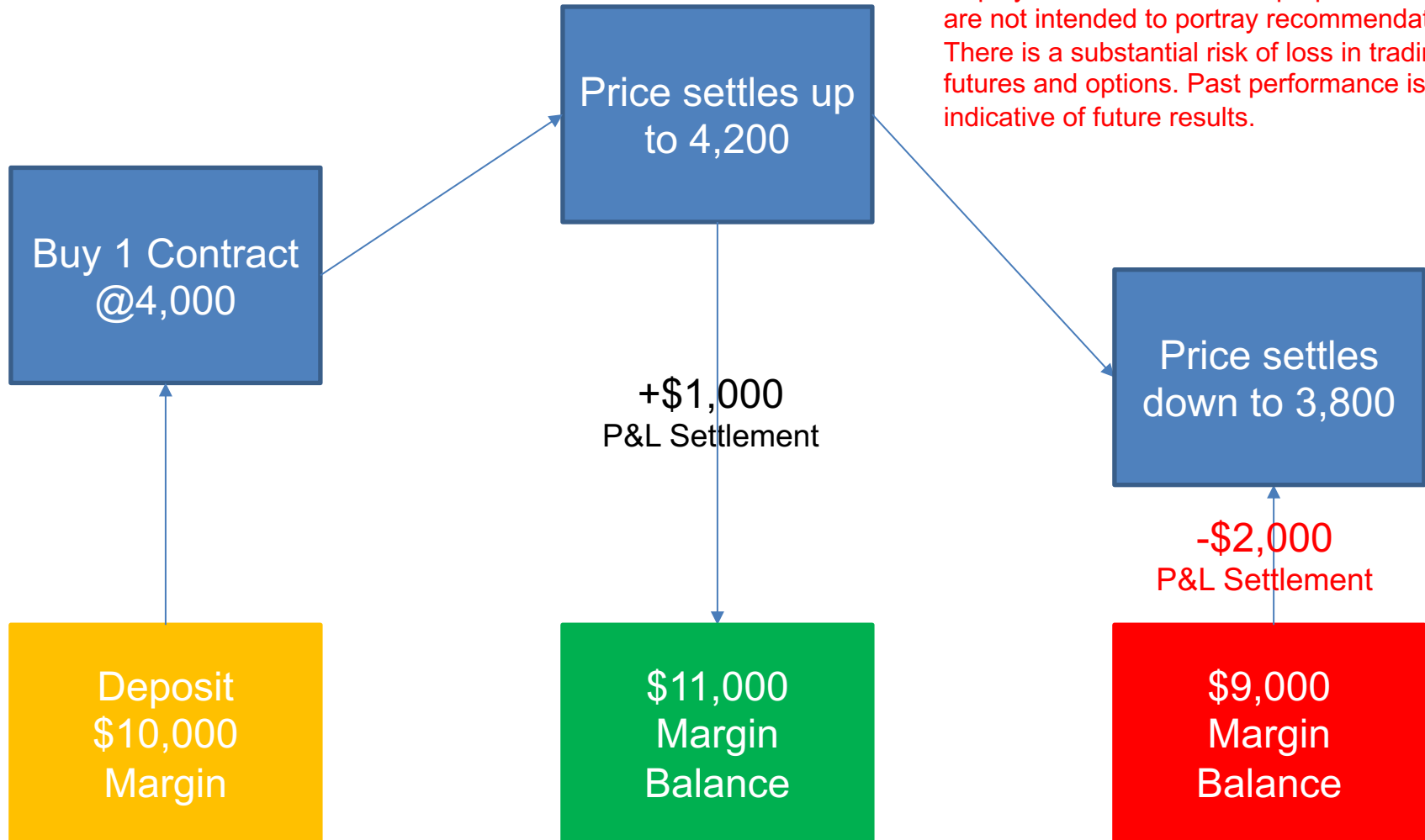
Source: IBKR

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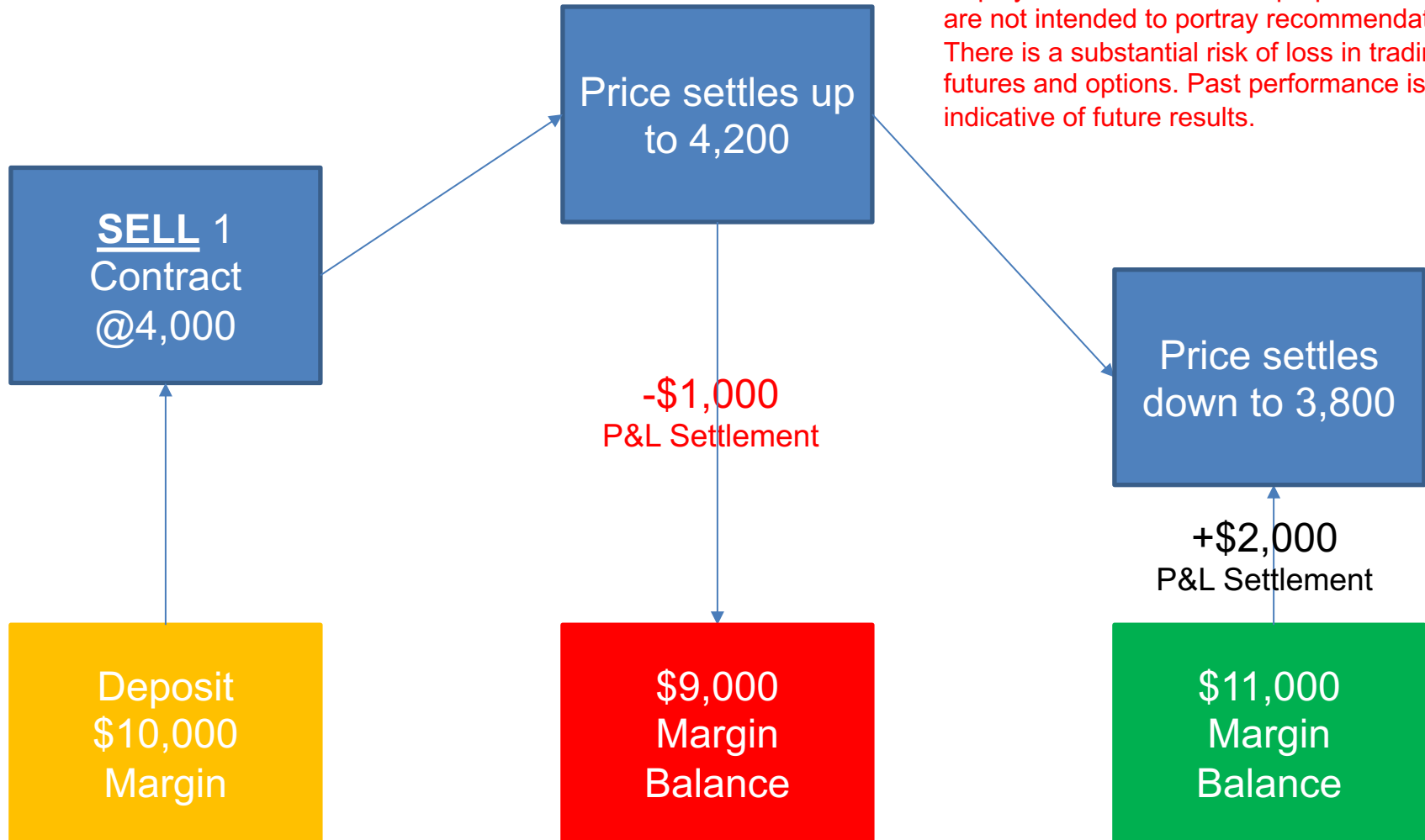
Quick recap: how long futures trades work

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How short selling futures works

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Index Future

- Small initial margin
- Dividends implied in futures price
 - §1256 for US taxpayers
- Short just as easy as long
- Must roll quarterly

Index Fund or ETF

- Pay or finance full value
- Dividend payments may be subject to withholding tax
- Short requires borrow
- Easy to buy and hold

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Sample trade: Buy 1xMES@4,075, Sell 2xM2K@1,935

S500 \ R2K	1,685	1,735	1,785	1,835	1,885	1,935	1,985	2,035	2,085	2,135	2,185
4,875	6,500	6,000	5,500	5,000	4,500	4,000	3,500	3,000	2,500	2,000	1,500
4,775	6,000	5,500	5,000	4,500	4,000	3,500	3,000	2,500	2,000	1,500	1,000
4,675	5,500	5,000	4,500	4,000	3,500	3,000	2,500	2,000	1,500	1,000	500
4,575	5,000	4,500	4,000	3,500	3,000	2,500	2,000	1,500	1,000	500	0
4,475	4,500	4,000	3,500	3,000	2,500	2,000	1,500	1,000	500	0	-500
4,375	4,000	3,500	3,000	2,500	2,000	1,500	1,000	500	0	-500	-1,000
4,275	3,500	3,000	2,500	2,000	1,500	1,000	500	0	-500	-1,000	-1,500
4,175	3,000	2,500	2,000	1,500	1,000	500	0	-500	-1,000	-1,500	-2,000
4,075	2,500	2,000	1,500	1,000	500	0	-500	-1,000	-1,500	-2,000	-2,500
3,975	2,000	1,500	1,000	500	0	-500	-1,000	-1,500	-2,000	-2,500	-3,000
3,875	1,500	1,000	500	0	-500	-1,000	-1,500	-2,000	-2,500	-3,000	-3,500
3,775	1,000	500	0	-500	-1,000	-1,500	-2,000	-2,500	-3,000	-3,500	-4,000
3,675	500	0	-500	-1,000	-1,500	-2,000	-2,500	-3,000	-3,500	-4,000	-4,500
3,575	0	-500	-1,000	-1,500	-2,000	-2,500	-3,000	-3,500	-4,000	-4,500	-5,000
3,475	-500	-1,000	-1,500	-2,000	-2,500	-3,000	-3,500	-4,000	-4,500	-5,000	-5,500
3,375	-1,000	-1,500	-2,000	-2,500	-3,000	-3,500	-4,000	-4,500	-5,000	-5,500	-6,000
3,275	-1,500	-2,000	-2,500	-3,000	-3,500	-4,000	-4,500	-5,000	-5,500	-6,000	-6,500

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Source: Author's calculation

Going from futures to option chains on TWS

	LAST	VLM	CHANGE	
MES ∞ Dec16'22 @GLOBEX	3859.00	359K	-60.25	-1.54%
MNQ ∞ Dec16'22 @GLOBEX	11794.75	464K	-212.75	-1.77%

New Window | IBot | FYI ¹⁹ | Advisor Setup

Search

For You

- Option Chain
- Probability Lab
- OptionTrader

General Tools

- Order Entry
- Portfolio
- Watchlist
- Quote Details
- Trade History
- Alerts
- Market Depth (Level II)
- BookTrader
- Toolbox
- Chart
- Order Management
- Time & Sales
- Scanners
- Forex

Information System

- Fundamentals Explorer
- Impact Dashboard
- Calendar
- Daily Lineup
- News
- Analyst Research and Market Commentary
- Templates

Option Tools

- Option Chain
- OptionTrader
- Option Analysis
- Advanced Option Tools

Education

- Video Tutorials
- FAQs
- News@IBKR

Other Tools

- IBot - type to trade
- Templates
- Portfolio Tools
- More Advanced Tools

MITSUBISHI ESTATE CO LTD - FWB2

- Stock (SMART)
- Combinations

Micro E-Mini S&P 500 Stock Price Index - GLOBEX

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MES SEP	Sep16'22	3860.75
MES DEC	Dec16'22	3872.00
MES MAR	Mar17'23	3888.00
MES ∞ DEC	Continuous (Dec)	3872.00

More/Multiple Futures Spreads

Source: TWS

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Micro S&P 500 Option Chain (MES)

MES Mar17'23 @CME PUT/CALLS (Side by Side) 4081.25 -8.75 (-0.21%)

APR EX3 / JUN EX3 5 79 DAYS | APR EX / JUN EX 5 86 DAYS | JUN / JUN MES 5 135 DAYS | MORE

TABBED VIEW PUT/CALL 3.0 SD CME TRADING CLASS 5

CALLS						PUTS						
OPTN O...	VOLU...	BD SZ	BID x ASK	DELTA	ASK SZ	STRIKE	OPTN O...	VOLU...	BD SZ	BID x ASK	DELTA	ASK SZ
		32	695.00 x 697.75	0.889	32	3450	33	1	32	36.00 x 36.75	-0.112	32
4		32	649.75 x 652.50	0.875	32	3500	77	2	32	40.50 x 41.25	-0.125	32
3		32	605.25 x 608.00	0.861	32	3550	28		32	45.75 x 46.25	-0.140	32
17		32	561.50 x 564.00	0.842	32	3600			32	51.50 x 52.25	-0.158	32
1		32	518.50 x 521.00	0.824	32	3650	23		32	58.00 x 58.75	-0.177	32
9		32	476.50 x 478.75	0.802	32	3700	303	42	32	65.50 x 66.25	-0.199	32
		32	435.50 x 437.75	0.778	32	3750	696		32	73.75 x 74.50	-0.222	32
6		32	395.50 x 397.50	0.752	32	3800	76	1	32	83.00 x 84.00	-0.248	32
17		32	356.25 x 358.50	0.724	32	3850	66		32	93.50 x 94.25	-0.277	32
8		32	318.50 x 320.50	0.692	32	3900	61		32	105.00 x 106.00	-0.309	32
9		32	282.00 x 284.00	0.658	32	3950	21		32	117.75 x 119.00	-0.343	32
48		32	247.00 x 248.75	0.620	32	4000	411	33	32	132.00 x 133.00	-0.381	32
15		32	213.75 x 215.25	0.580	32	4050	19		32	148.00 x 149.00	-0.422	32
38	2	32	182.25 x 183.75	0.536	32	4100	15	1	32	165.75 x 167.25	-0.466	32
13	1	32	153.25 x 154.50	0.490	32	4150	13		32	185.75 x 187.25	-0.513	32
40		32	126.25 x 128.00	0.440	32	4200	21	3	32	208.50 x 210.25	-0.563	32
28		32	102.75 x 104.00	0.390	32	4250	4		32	234.00 x 235.75	-0.615	32
302	35	32	82.00 x 83.00	0.339	32	4300	14	3	32	262.50 x 264.25	-0.667	32
27		32	64.25 x 65.00	0.288	32	4350	2		32	294.00 x 296.00	-0.718	32
57	2	32	49.25 x 50.25	0.241	32	4400	3		32	328.50 x 330.75	-0.767	32
84		32	37.25 x 38.00	0.198	32	4450	1		32	366.00 x 368.25	-0.812	32
113	2	32	28.00 x 28.50	0.158	32	4500	2		32	406.00 x 408.75	-0.854	32
55		32	20.50 x 21.25	0.125	32	4550				x	-0.890	

IV: 17.5%

OFF Strategy Builder

Source: IBKR TWS, 1 Feb 2023

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Description of MES & MNQ options

DESCRIPTION	
Micro E-Mini S&P 500 Stock Price Index	
Product	MES
Security Type	FOP
Underlying	MESZ2 DEC 16 '22 FUT
Contract Month	DEC22
Expiration Date	DEC 16 '22
Last Trading Date	DEC 16 '22 08:30 CST
Strike	4000
Right	Call
Currency	USD
Multiplier	5
Exchange	GLOBEX
Symbol	MESZ2 C4000
Trading Class	MES
Product Type	Equity Index
Settlement Method	Physical Delivery
Exercise Style	American
Trading Schedule: September 2, 2022 Calendar	
Regular Trading Session	08:30 - 16:00 (21:30 - 05:00 your time)
Total Available Hours	<i>17:00*</i> - 16:00 (06:00 - 05:00 your time)
Exchange Time Zone	US/Central
<small>* Times in italics are on the calendar date preceding trade date</small>	

DESCRIPTION	
Micro E-Mini Nasdaq-100 Index	
Product	MNQ
Security Type	FOP
Underlying	MNQZ2 DEC 16 '22 FUT
Contract Month	DEC22
Expiration Date	DEC 16 '22
Last Trading Date	DEC 16 '22 08:30 CST
Strike	12500
Right	Call
Currency	USD
Multiplier	2
Exchange	GLOBEX
Symbol	MNQZ2 C1250
Trading Class	MNQ
Product Type	Equity Index
Settlement Method	Physical Delivery
Exercise Style	American
Trading Schedule: September 2, 2022 Calendar	
Regular Trading Session	08:30 - 16:00 (21:30 - 05:00 your time)
Total Available Hours	<i>17:00*</i> - 16:00 (06:00 - 05:00 your time)
Exchange Time Zone	US/Central
<small>* Times in italics are on the calendar date preceding trade date</small>	

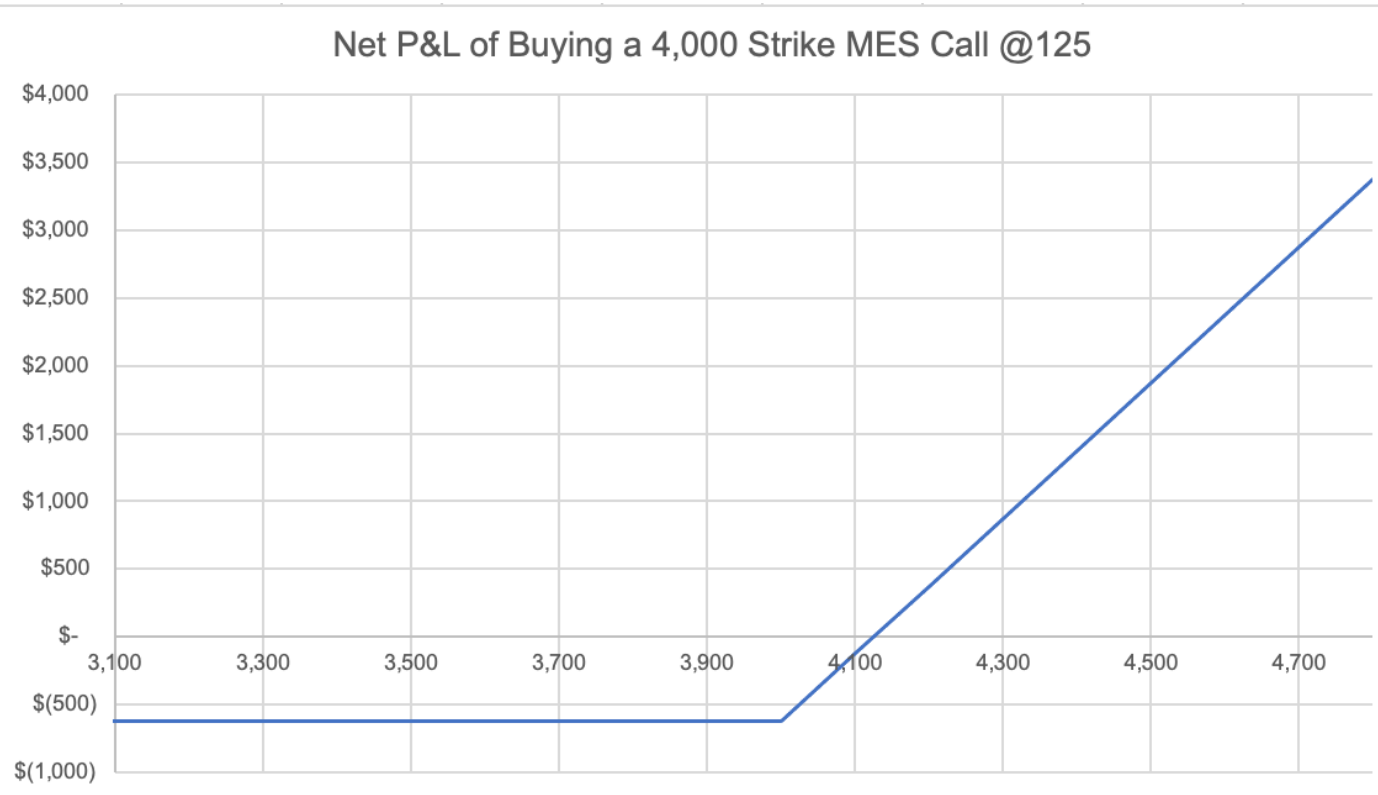
Source: IBKR

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Sample payoff diagram: Buying an MES call (\$5/point)

Final Index Level	P&L
4,800	\$ 3,375
4,700	\$ 2,875
4,600	\$ 2,375
4,500	\$ 1,875
4,400	\$ 1,375
4,300	\$ 875
4,200	\$ 375
4,100	\$ (125)
4,000	\$ (625)
3,900	\$ (625)
3,800	\$ (625)
3,700	\$ (625)
3,600	\$ (625)
3,500	\$ (625)
3,400	\$ (625)
3,300	\$ (625)
3,200	\$ (625)
3,100	\$ (625)
3,000	\$ (625)

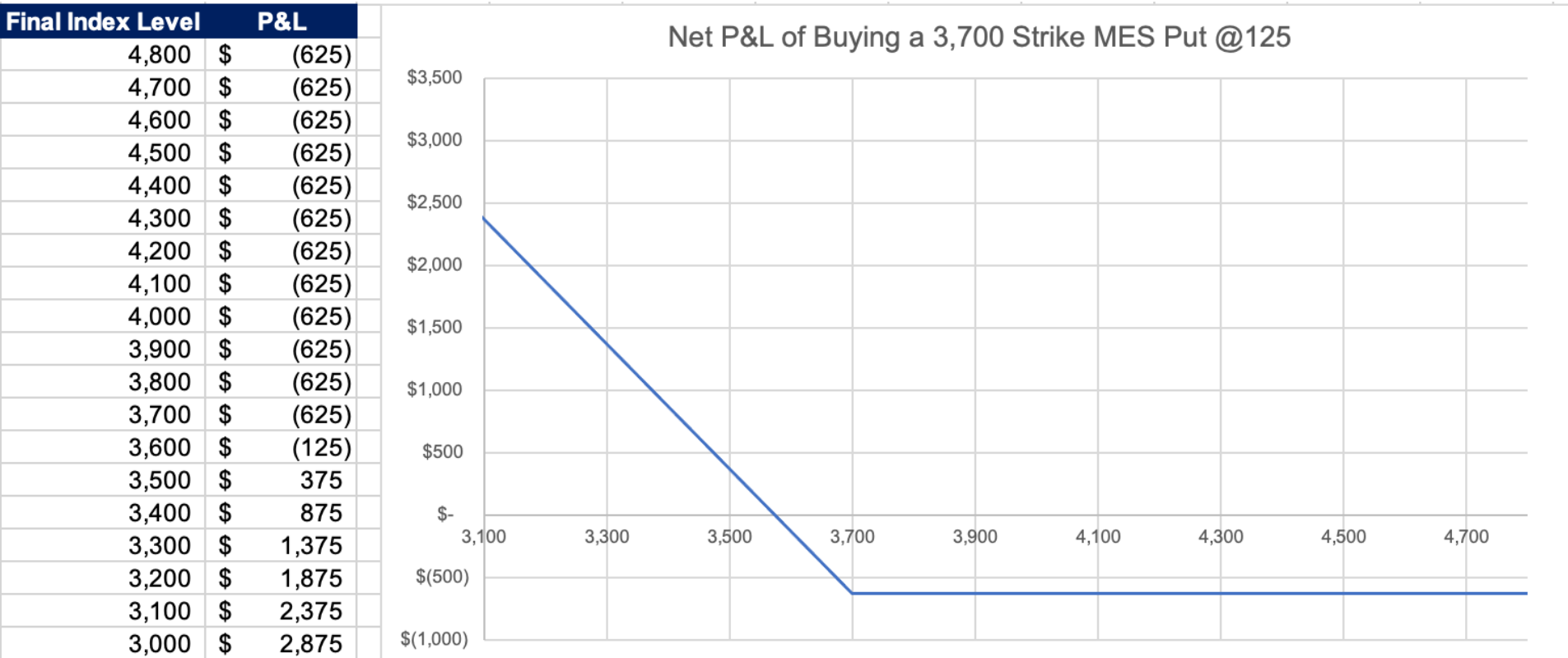


Source: Author's calculation

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Sample payoff diagram: Buying an MES put (\$5/point)



By combining calls and puts, you can make very creative payoff profiles, as we'll see later

Source: Author's calculation

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Using options to trade one index vs another

Sample spread trade: Buy 10,800 MNQ Put + Sell 3,700 MES Put, @~Zero

S500 \ N100	9,550	9,800	10,050	10,300	10,550	10,800	11,050	11,300	11,550
4,800	\$ 2,500	\$ 2,000	\$ 1,500	\$ 1,000	\$ 500	\$ -	\$ -	\$ -	\$ -
4,700	\$ 2,500	\$ 2,000	\$ 1,500	\$ 1,000	\$ 500	\$ -	\$ -	\$ -	\$ -
4,600	\$ 2,500	\$ 2,000	\$ 1,500	\$ 1,000	\$ 500	\$ -	\$ -	\$ -	\$ -
4,500	\$ 2,500	\$ 2,000	\$ 1,500	\$ 1,000	\$ 500	\$ -	\$ -	\$ -	\$ -
4,400	\$ 2,500	\$ 2,000	\$ 1,500	\$ 1,000	\$ 500	\$ -	\$ -	\$ -	\$ -
4,300	\$ 2,500	\$ 2,000	\$ 1,500	\$ 1,000	\$ 500	\$ -	\$ -	\$ -	\$ -
4,200	\$ 2,500	\$ 2,000	\$ 1,500	\$ 1,000	\$ 500	\$ -	\$ -	\$ -	\$ -
4,100	\$ 2,500	\$ 2,000	\$ 1,500	\$ 1,000	\$ 500	\$ -	\$ -	\$ -	\$ -
4,000	\$ 2,500	\$ 2,000	\$ 1,500	\$ 1,000	\$ 500	\$ -	\$ -	\$ -	\$ -
3,900	\$ 2,500	\$ 2,000	\$ 1,500	\$ 1,000	\$ 500	\$ -	\$ -	\$ -	\$ -
3,800	\$ 2,500	\$ 2,000	\$ 1,500	\$ 1,000	\$ 500	\$ -	\$ -	\$ -	\$ -
3,700	\$ 2,500	\$ 2,000	\$ 1,500	\$ 1,000	\$ 500	\$ -	\$ -	\$ -	\$ -
3,600	\$ 2,000	\$ 1,500	\$ 1,000	\$ 500	\$ -	\$ (500)	\$ (500)	\$ (500)	\$ (500)
3,500	\$ 1,500	\$ 1,000	\$ 500	\$ -	\$ (500)	\$ (1,000)	\$ (1,000)	\$ (1,000)	\$ (1,000)
3,400	\$ 1,000	\$ 500	\$ -	\$ (500)	\$ (1,000)	\$ (1,500)	\$ (1,500)	\$ (1,500)	\$ (1,500)
3,300	\$ 500	\$ -	\$ (500)	\$ (1,000)	\$ (1,500)	\$ (2,000)	\$ (2,000)	\$ (2,000)	\$ (2,000)
3,200	\$ -	\$ (500)	\$ (1,000)	\$ (1,500)	\$ (2,000)	\$ (2,500)	\$ (2,500)	\$ (2,500)	\$ (2,500)
3,100	\$ (500)	\$ (1,000)	\$ (1,500)	\$ (2,000)	\$ (2,500)	\$ (3,000)	\$ (3,000)	\$ (3,000)	\$ (3,000)
3,000	\$ (1,000)	\$ (1,500)	\$ (2,000)	\$ (2,500)	\$ (3,000)	\$ (3,500)	\$ (3,500)	\$ (3,500)	\$ (3,500)

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Source: Author's calculation

Put vs put has the advantage that the short leg has limited liability

Before we
continue, a quick
word on “the
greeks”

Useful Greek letters for option traders:

* **Delta** = Change in option price vs change in index

* **Theta** = “Time Decay” = Change in option price vs passage of time

Not a greek, but “implied volatility” is a key variable in option pricing, and “volatility skew” is the reason the probability curves above are not symmetrical.

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Spread / Multi-leg Option Strategies

Sample MNQ put spread

MNQ Mar17'23 @CME PUT/CALLS (Side by Side) 11655.50 +16.00 (+0.14%)

JAN'23 MQE / MAR'23 MQE 2 62 DAYS
 FEB'23 MQ3 / MAR'23 MQ3 2 79 DAYS
 MAR'23 / MAR'23 MNQ 2 107 DAYS

TABBED VIEW PUT/CALL STRIKES CME TRADING CLASS 2

CALLS							PUTS									
OPTN	VOLUME	BID	SI...	BID x ASK	DELTA	IMPLD...	ASK S...	STRIKE	OPTN	VOLUME	BID	SI...	BID x ASK	DELTA	IMPLD...	ASK S...
		25	♦	2724.00 x 2738.25	0.918	37.1%	25	9000	10	1	50	♦	91.75 x 99.50	-0.082	37.2%	200
2		25	♦	2272.25 x 2287.25	0.880	35.1%	25	9500	37		50	♦	138.50 x 146.25	-0.121	35.2%	50
1		25	♦	1845.25 x 1859.75	0.827	33.3%	25	10000	27	8	50	♦	208.00 x 215.50	-0.173	33.4%	50
2		25	♦	1449.25 x 1462.75	0.758	31.6%	25	10500	11		50	♦	307.50 x 314.75	-0.242	31.6%	50
7		25	♦	1091.50 x 1103.00	0.670	30%	25	11000	35	1	50	♦	443.75 x 451.75	-0.331	30%	50
15		25	♦	777.50 x 787.75	0.566	28.5%	25	11500	23	1	50	♦	624.00 x 634.25	-0.435	28.5%	50
54	2	50	♦	516.50 x 526.75	0.449	26.8%	50	12000	32	5	50	♦	858.00 x 868.25	-0.553	26.8%	50

IV: 27.8%

Strategy Builder Strategies

ACTN	RT	LST TRD DAY	STRIKE	TYPE	DELTA	THETA	BID/ASK	SIZE	
× Leg 1 Buy	1	MAR 17 '23	11000	Put	-0.331	-3.130	443.75 x 451.75	50 x 50	Delayed
× Leg 2 Sell	1	MAR 17 '23	10000	Put	-0.173	-2.468	208.00 x 215.50	50 x 50	Delayed
Mar17 '23 11000/10000 Bear Put					-0.157	-0.662	228.25 x 243.75	50 x 50	Delayed

Clear All Legs + PROFILE + Add to Watchlists

♦ 228.25 243.75 ♦
 BID MID ASK

Order Entry LMT QTY 1 LMT PRC 0.00 DAY advanced + Margin Impact: n/a Submit Order
 Allocation: All: Available Equity

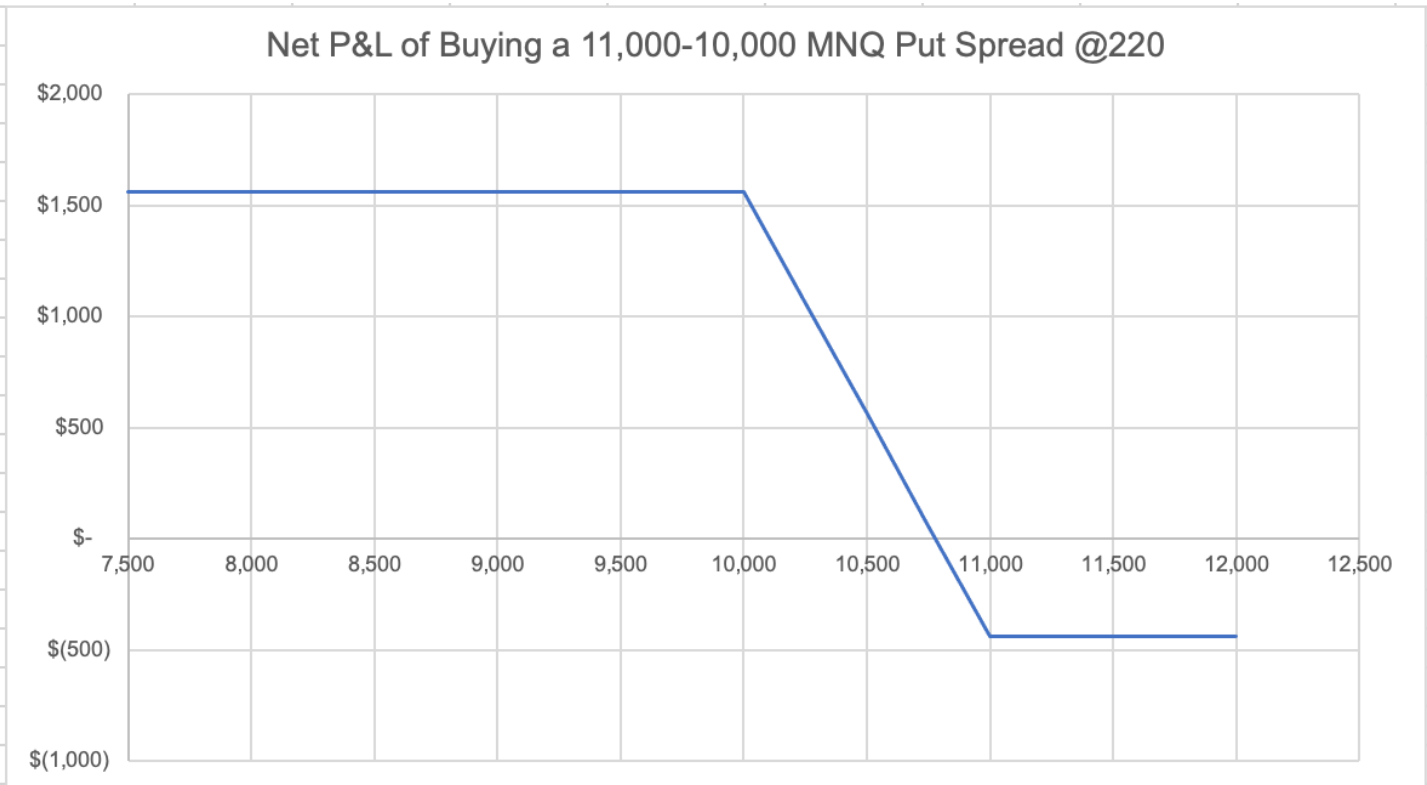
Source: TWS

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Put spread strategy: lower Delta and Theta than outright put

Final Index Level	P&L
12,000	\$ (440)
11,750	\$ (440)
11,500	\$ (440)
11,250	\$ (440)
11,000	\$ (440)
10,750	\$ 60
10,500	\$ 560
10,250	\$ 1,060
10,000	\$ 1,560
9,750	\$ 1,560
9,500	\$ 1,560
9,250	\$ 1,560
9,000	\$ 1,560
8,750	\$ 1,560
8,500	\$ 1,560
8,250	\$ 1,560
8,000	\$ 1,560
7,750	\$ 1,560
7,500	\$ 1,560



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Source: Author's calculation

Sample "1x2" costless / credit put spread

PUT/CALLS (Side by Side) ▾
11662.00
+22.50 (+0.19%)

JAN'23 MQE /
MAR'23 MQE

2
62 DAYS

FEB'23 MQ3 /
MAR'23 MQ3

2
79 DAYS

MAR'23 / MAR'23
MNQ

2
107 DAYS

MORE ▾

TABBED VIEW ▾
PUT/CALL ▾
STRIKES ▾
CME ▾
TRADING CLASS ▾ 2

CALLS								PUTS								
OPTN ...	VOLUME	BID	SI...	BID x ASK	DELTA	IMPLD...	ASK S...	STRIKE	OPTN ...	VOLUME	BID	SI...	BID x ASK	DELTA	IMPLD...	ASK S...
				25 ♦ 2732.25 x 2747.50 ♦	0.918	37.1%	25	9000	10	1	50 ♦		91.50 x 99.50 ♦	-0.082	37.2%	200
2				25 ♦ 2281.50 x 2296.25 ♦	0.880	35.1%	25	9500	37				50 ♦ 137.50 x 146.25 ♦	-0.121	35.2%	50
1				25 ♦ 1854.00 x 1868.00 ♦	0.827	33.3%	25	10000	27	8	50 ♦		206.50 x 215.50 ♦	-0.173	33.4%	50
2				25 ♦ 1457.00 x 1470.50 ♦	0.758	31.6%	25	10500	11				50 ♦ 305.50 x 314.75 ♦	-0.242	31.6%	50
7				25 ♦ 1097.75 x 1109.75 ♦	0.670	30%	25	11000	35	1	50 ♦		440.75 x 450.25 ♦	-0.331	30%	50
15				25 ♦ 782.75 x 793.75 ♦	0.566	28.5%	25	11500	23	1	50 ♦		620.25 x 630.00 ♦	-0.436	28.5%	50
54	2			50 ♦ 521.50 x 531.50 ♦	0.449	26.8%	50	12000	32	5	50 ♦		853.00 x 863.50 ♦	-0.554	26.8%	50

Strategy Builder Strategies ▾

ACTN	RT	LST TRD DAY	STRIKE	TYPE	DELTA	THETA	BID/ASK	SIZE	
× Leg 1 Buy	1	MAR 17 '23	11000	Put	-0.331	-3.131	440.75 x 450.25	50 x 50	Delayed
× Leg 2 Sell	2	MAR 17 '23	10000	Put	-0.173	-2.469	206.50 x 215.50	50 x 50	Delayed
Total					0.016	1.807	9.75 x 37.25	25 x 25	Delayed

♦ 9.75 37.25 ♦

BID MID ASK

Order Entry LMT ▾ QTY 1 LMT PRC 0.00 DAY ▾ advanced +

Allocation: All: Available Equity ▾

Margin Impact: n/a

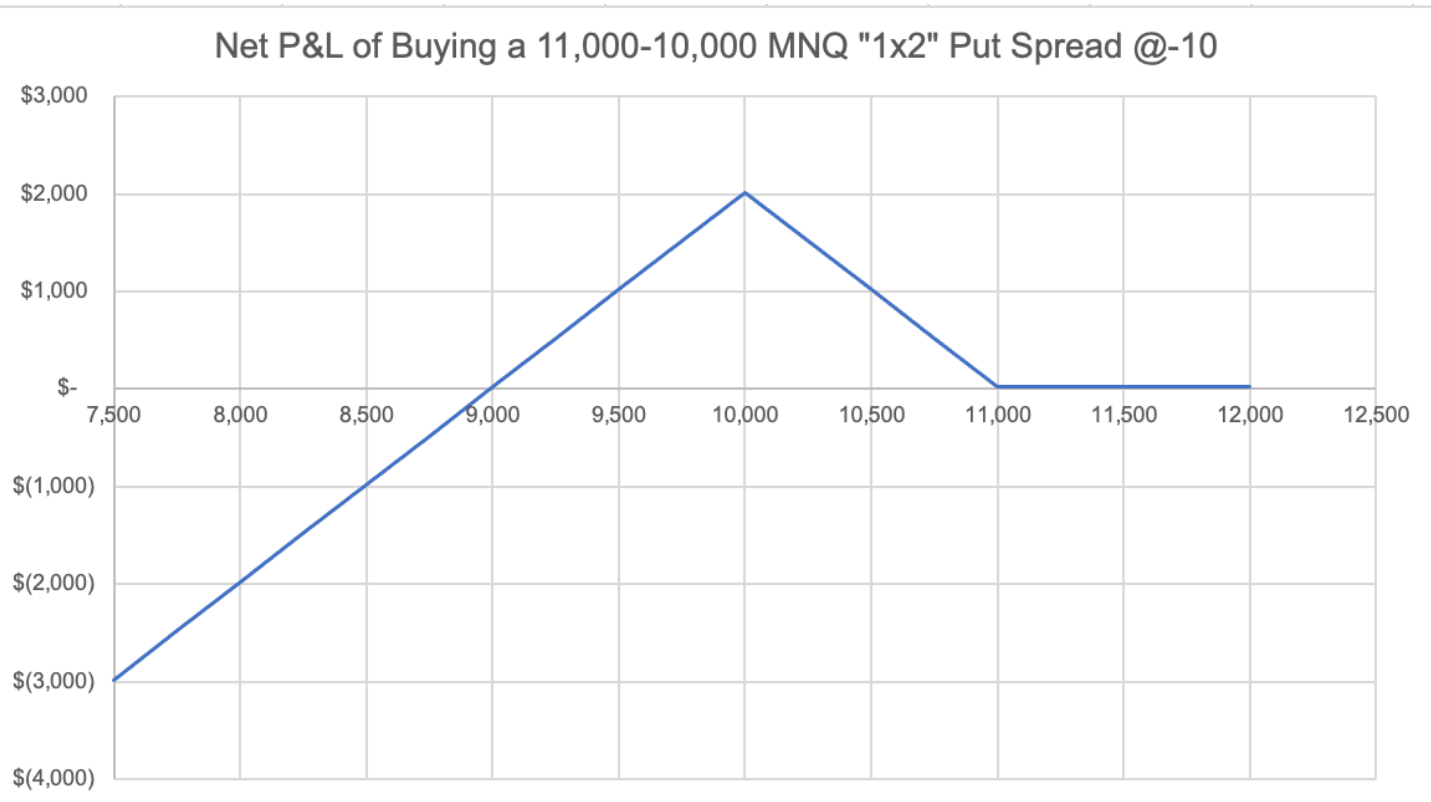
Source: TWS

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Sample payoff diagram: Delta and theta initially positive, can flip negative

Final Index Level	P&L
12,000	\$ 20
11,750	\$ 20
11,500	\$ 20
11,250	\$ 20
11,000	\$ 20
10,750	\$ 520
10,500	\$ 1,020
10,250	\$ 1,520
10,000	\$ 2,020
9,750	\$ 1,520
9,500	\$ 1,020
9,250	\$ 520
9,000	\$ 20
8,750	\$ (480)
8,500	\$ (980)
8,250	\$ (1,480)
8,000	\$ (1,980)
7,750	\$ (2,480)
7,500	\$ (2,980)



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Source: Author's calculation

Sample "Straddle"

MES Mar17'23 @CME PUT/CALLS (Side by Side)
3982.00 -13.00 (-0.33%)

JAN'23 EX3 / MAR'23 EX3
5
51 DAYS

JAN'23 EX3 / MAR'23 EX3
5
62 DAYS

FEB'23 EX3 / MAR'23 EX3
5
79 DAYS

MAR'23 / MAR'23
MES
5
107 DAYS

MORE ▾

TABBED VIEW ▾
PUT/CALL ▾
STRIKES ▾
CME ▾
TRADING CLASS ▾ 5

CALLS

OPTN	VOLUME	BID	ASK	DELTA	IMPLD	ASK	STRIKE
3	131	451.50	456.00	0.784	26.1%	131	3600
9	136	412.25	416.75	0.758	25.6%	136	3650
13	141	374.25	378.50	0.729	25.1%	141	3700
1	148	337.50	341.00	0.698	24.7%	148	3750
114	155	302.25	306.25	0.665	24%	155	3800
17	163	268.25	271.50	0.629	23.6%	163	3850
461	174	236.00	239.00	0.591	22.9%	174	3900
20	1	206.25	207.75	0.551	22.4%	50	3950
94	8	177.50	179.00	0.509	21.8%	253	4000

PUTS

OPTN	VOLUME	BID	ASK	DELTA	IMPLD	ASK	STRIKE
108	2	534	73.50	74.75	-0.217	26.2%	122
28	115	84.00	85.25	-0.243	25.7%	486	
71	7	100	95.50	96.75	-0.272	25.1%	436
264	9	86	108.25	109.50	-0.303	24.7%	392
60	4	79	122.25	123.50	-0.336	24.1%	79
418	64	137.75	139.00	-0.372	23.6%	64	
40	57	154.75	156.25	-0.410	22.9%	57	
591	50	173.75	175.00	-0.451	22.5%	50	
62	2	50	194.50	196.00	-0.493	21.8%	50

Strategy Builder Strategies ▾

ACTN	RT	LST TRD DAY	STRIKE	TYPE	DELTA	THETA	BID/ASK	SIZE	
✗ Leg 1	Buy	1 MAR 17 '23	3900	Put	-0.410	-0.876	154.75 x 156.25	57 x 57	Delayed
✗ Leg 2	Buy	1 MAR 17 '23	3900	Call	0.591	-0.861	236.00 x 239.00	174 x 174	Delayed
Mar17 '23 3900 Straddle					0.181	-1.737	390.75 x 395.25	57 x 57	Delayed

Clear All Legs
+ PROFILE
+ Add to Watchlists

◆ 390.75 395.25 ◆

BID MID ASK

Order Entry

LMT ▾ QTY 1 LMT PRC 0.00 DAY ▾ advanced +

Allocation: All: Available Equity ▾

Margin Impact: n/a

Submit Order

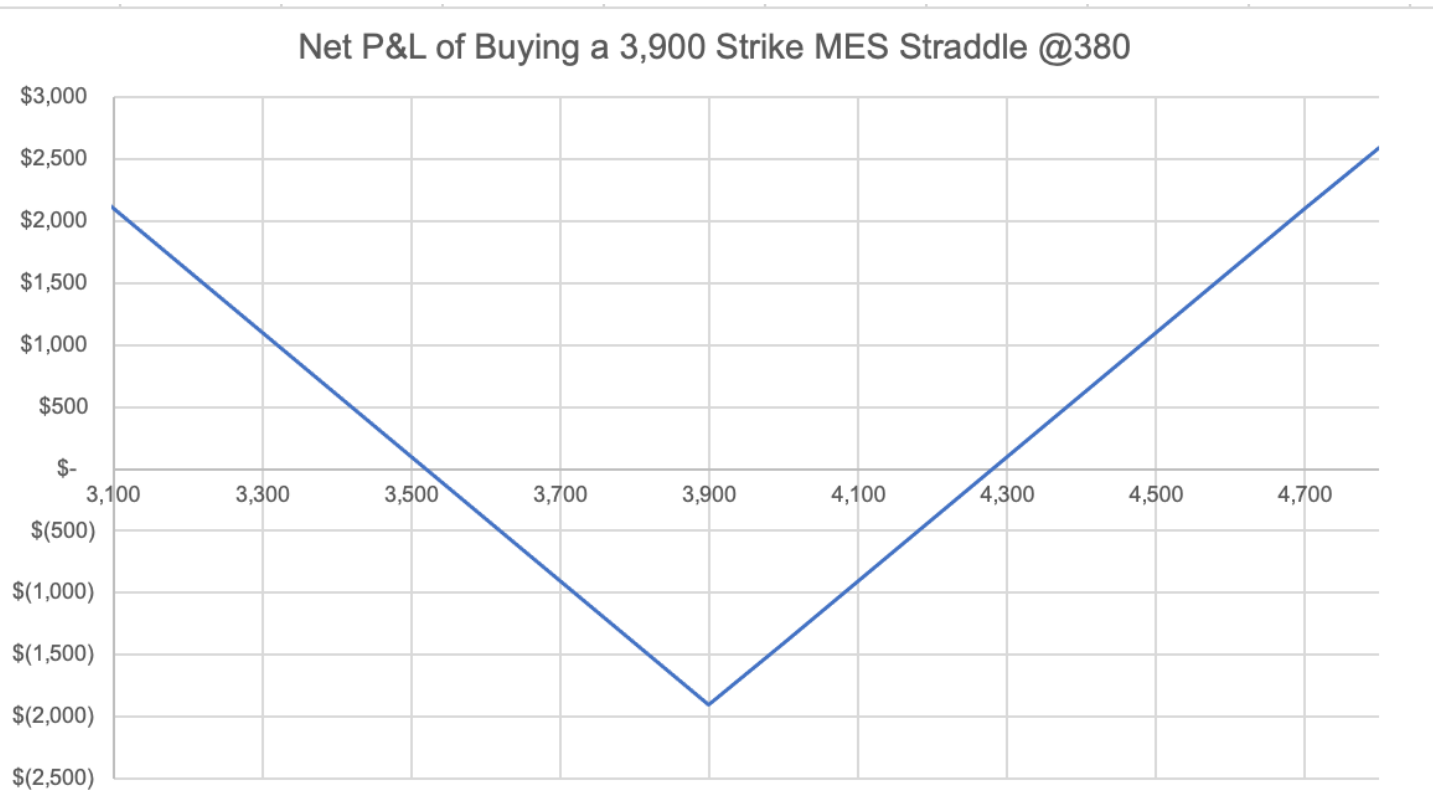
Source: TWS

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Sample payoff diagram: Near-zero initial delta, high theta

Final Index Level	P&L
4,800	\$ 2,600
4,700	\$ 2,100
4,600	\$ 1,600
4,500	\$ 1,100
4,400	\$ 600
4,300	\$ 100
4,200	\$ (400)
4,100	\$ (900)
4,000	\$ (1,400)
3,900	\$ (1,900)
3,800	\$ (1,400)
3,700	\$ (900)
3,600	\$ (400)
3,500	\$ 100
3,400	\$ 600
3,300	\$ 1,100
3,200	\$ 1,600
3,100	\$ 2,100
3,000	\$ 2,600



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Source: Author's calculation

Forming your Index Strategy

- Do you have an absolute view on the overall market, or a relative view between two parts of the market (e.g. Growth vs Value, Large vs Small)
- Is your desired exposure linear (futures), or does it cap out at certain levels (options)
- Do you already have a plan for what you will do next after this first futures or options trade expires?

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Questions?

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