Micro E-mini Futures and Options Webinar

March 2023

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Why active traders are trading the Micro product suite at CME Group

- Execution costs & Liquidity
- Capital efficiencies
- Around the clock trading
- Strategic reasons
- Pure direct participation in “markets” and asset classes
- Full offset with E-mini futures (micro E-mini indexes)
- Clearing house margining system forces active risk management
- More precisely scale in or out of positions to fine tune exposure
- Tax considerations
- Technical indicators used for stocks/ETFs applicable to Micros
- CME Group has been in business nearly two centuries

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E-mini Futures – Product Specifications

	E-mini S&P 500	E-mini Nasdaq-100	E-mini Russell 2000	E-mini S&P MidCap 400	E-mini S&P SmallCap 600	E-mini Dow
Ticker	ES	NQ	RTY	EMD	SMC	YM
Contract Unit	$50 x S&P 500 Index	$20 x Nasdaq-100 Index	$50 x Russell 2000 Index	$100 x S&P MidCap 400 Index	$100 x S&P SmallCap 600 Index	$5 x DJIA Index
Initial Margin Requirement	$10,600	$15,800	$5,800	$13,500	$9,400	$7,500
Contract Notional Value	$200,900	$250,600	$100,000	$240,000	$117,000	$170,000
Minimum Price Fluctuation (Tick)	0.25 index points ($12.50)	0.25 index points ($5.00)	0.10 index points ($5.00)	0.10 index points ($10.00)	0.10 index points ($10.00)	1.00 index point ($5.00)
Contract Months	1st 5 months in March quarterly cycle					1st Four months in the March quarterly cycle
Trading Hours	CME Globex: 5pm to 4pm Sunday – Friday					

Source: CME Group

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Micro E-mini Futures – Launched May 6, 2019

2B+

Contracts Traded Across Four Indices

MES ◦ MNQ ◦ MYM ◦ M2K

900M+

Micro E-mini S&P 500 Futures Contracts Traded

871M+

Micro E-mini Nasdaq-100 Futures Contracts Traded

125M+

Micro E-mini Dow Futures Contracts Traded

104M+

Micro E-mini Russell 2000 Futures Contracts Traded

3.2M+

Average Daily Volume (2022)

700K+

Average Daily Contracts Traded Before U.S. Cash Open

190+

Countries Trading

Source: CME Group as of 3/17/2023

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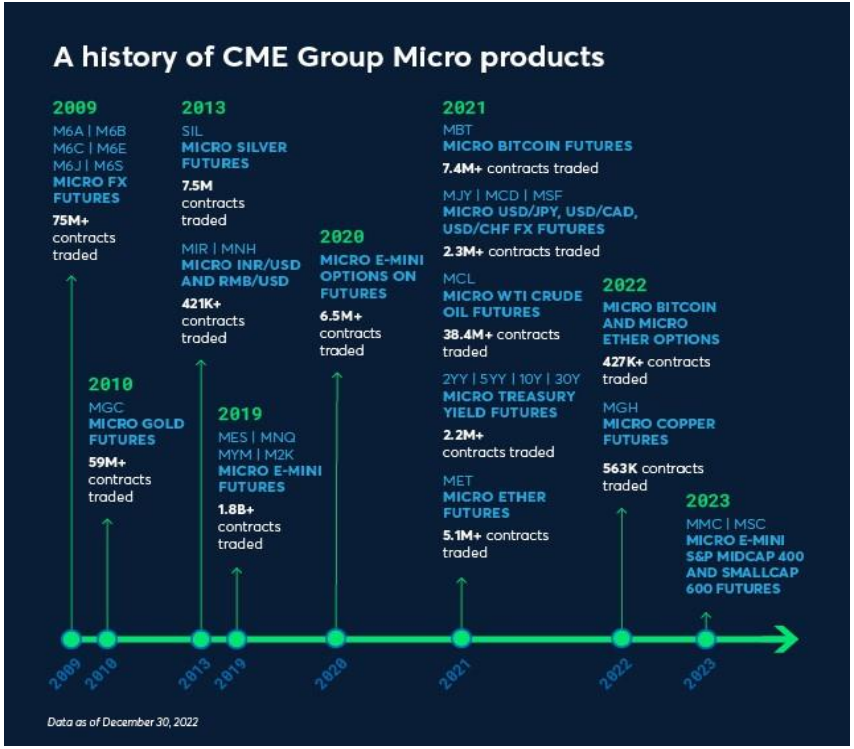
Micro History – CME Group



Source: CME Group

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Micro E-mini Futures – Product Specifications

	Micro E-mini S&P 500	Micro E-mini Nasdaq-100	Micro E-mini Russell 2000	Micro E-mini Dow
Ticker	MES	MNQ	M2K	MYM
Contract Unit	$5.00 x S&P 500 Index	$2.00 x Nasdaq-100 Index	$5.00 x Russell 2000 Index	$0.50 X DJIA Index
Initial Margin Requirement	$1,060	$760	$325	$550
Contract Notional Value	$20,900	$25,600	$10,000	$17,000
Minimum Price Fluctuation (Tick)	0.25 index points ($1.25)	0.25 index points ($.50)	0.10 index points ($0.50)	1.00 index point ($0.50)
Contract Months	1st 5 months in March quarterly cycle			1st Four months in the March quarterly cycle
Trading Hours	CME Globex: 5pm to 4pm Sunday – Friday			

Source: CME Group

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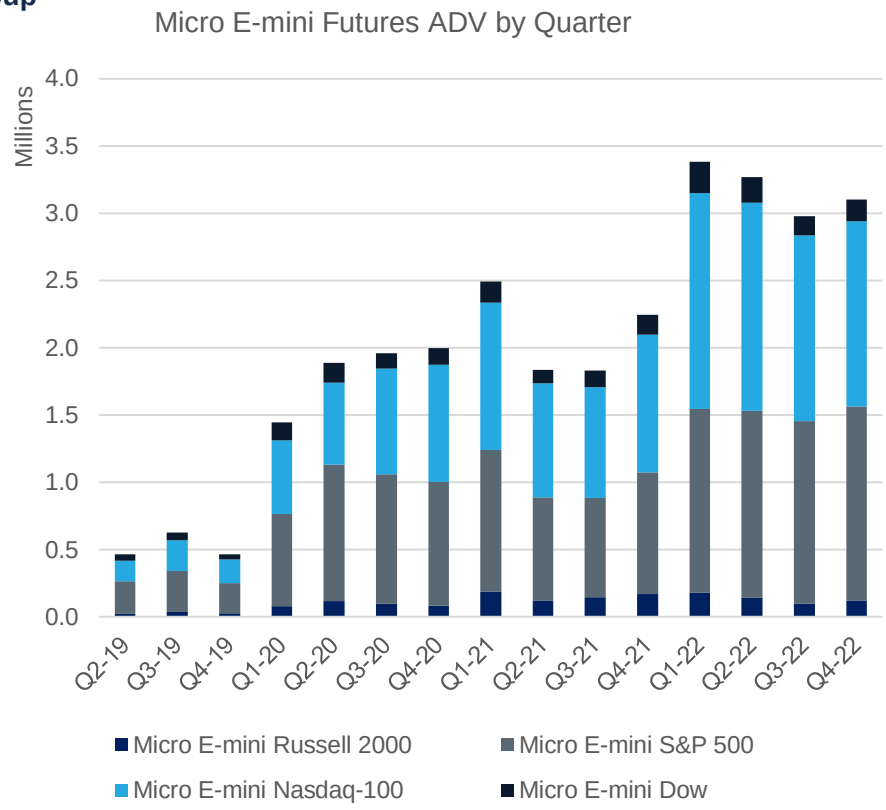
Micro E-mini Futures Highlights

Since launch, 1.8B+ Micro E-mini futures have traded at CME Group

- 2022 ADV of 3.2M (+52% vs. 2021)
  - Micro S&P 500 (MES): 1.4M
  - Micro Nasdaq-100 (MNQ): 1.5M
  - Micro Dow (MYM): 183K
  - Micro Russell 2000 (M2K): 135K
- Trading occurs around the clock, with 22% of the activity occurring between the U.S. cash open
- An international product, with trades from 190+ countries and 26% of the volume occurring outside the U.S. in 2022
- Over 550K unique accounts have accessed Micro E-mini Futures since their launch in May 2019

Source: CME Group as of 3/17/2023



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Micro E-mini Futures – Tick Size

Tick size example

CC	Product	Description	Status	+	Qty	Bid	Ofr	Qty	Pin	Last	Change	Settlement	High	Low	Volume	Net Ch...
Bitcoin Future																
ES	E-Mini S&P 500 Future	Jun23	Open	+	43	3,973.00	3,973.25	6		3,973.25	+26.25	3,947.00	3,989.50	3,897.25	1,423,574	+0.67%
MES	Micro E-mini S&P 500 Future	Jun23	Open	+	55	3,973.00	3,973.25	26		3,973.25	+26.25	3,947.00	3,989.25	3,897.00	1,153,990	+0.67%

Notional Value Calculation

- Multiplier X Current Price
  - E-mini S&P 500 = 50*3,973.25 = $198,662.50
  - Micro E-mini S&P 500 = 5*3,973.25 = $19,866.25

Tick Size Calculation

- Minimum Tick = smallest allowable increment between best bid and offer
  - In E-mini and Micro E-mini S&P 500 = .25
    - E-mini S&P 500 = $12.50 | Micro E-mini S&P 500 = $1.25
      - E.g. E-mini S&P 500 = 3,973.00 bid @ 3,973.25 offer
      - (3973.00*50)= $198,650 bid @ (3973.25*50) = $198,662.50 offer

Source: CME Direct 3/20

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Micro E-mini Equity futures—Margin and Notional Value

Futures	Maintenance Margin	Margin as a %	Futures Price	Multiplier	Notional Value
MES	$1,060	5.36%	3,956	$5	$19,780
MNQ	$1,580	6.24%	12,667	$2	$25,334
MYM	$750	4.67%	32,145	$0.50	$16,073
M2K	$580	6.66%	1,743	$5	$8,715
MMC	$1,350	5.64%	2,395	$10	$23,950
MSC	$940	8.06%	1,166	$10	$11,660

Source: CME Group. Margins are set by CME Clearing and are subject to change. Data as of 3/17/2023

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Two New Micro E-mini Futures

	Micro E-mini S&P MidCap 400	Micro E-mini SmallCap 600
Ticker	MMC	MSC
Contract Unit	$10.00 x S&P 400 Index	$10.00 x S&P 600 Index
Initial Margin Requirement	TBD	TBD
Contract Notional Value	$27,000	$13,000
Minimum Price Fluctuation (Tick)	0.10 index points ($1.00)	0.10 index points ($1.00)
Contract Months	1st 5 months in March quarterly cycle	
Trading Hours	CME Globex: 5pm to 4pm Sunday – Friday	

Source: CME Group

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What are the S&P MidCap 400 and S&P SmallCap 600?

- The S&P 500, S&P MidCap 400, and S&P SmallCap 600 indexes are mutually exclusive

- The S&P MidCap 400 index encompasses companies with an average market capitalization of $5.87 billion
  - Typically have an established business model and foothold in their respective industries
  - Potential to experience greater growth as they expand market share vs. growth opportunities associated with more mature large cap stocks

- The S&P SmallCap 600 index encompasses companies with an average market capitalization of $1.69 billion
  - Provides access to companies often still navigating early stages of growth
  - Have high growth potential
  - Pure play on the US economy as opposed to large caps which are more multi-national in nature and better diversified and thus more closely align to the global economy
  - Typically less financially stable than large cap stocks
  - Are potentially more agile than largecap stocks and thus can adapt in periods of economic stress
  - Index profile typically can have heightened volatility and, by extension, more trading opportunities

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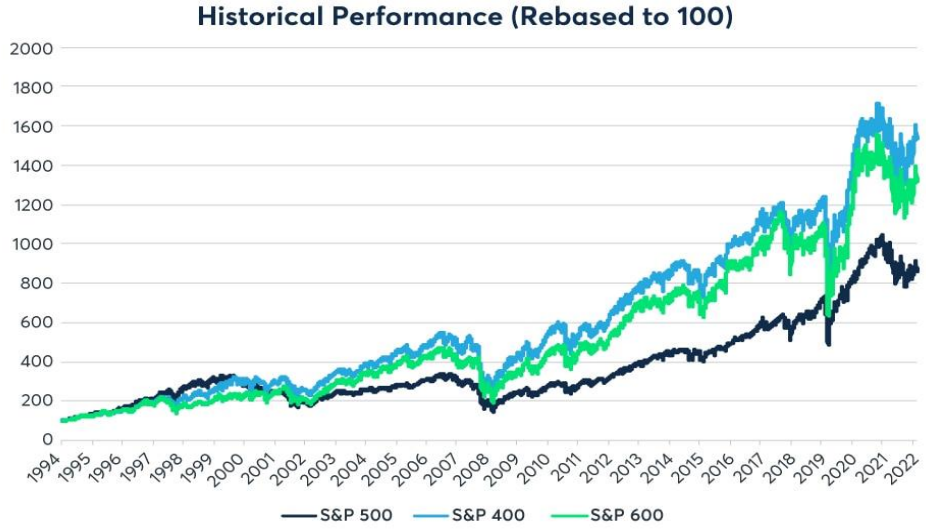
Historical outperformance

- Historically, MidCap and SmallCap stocks have outperformed large cap names
- The indices have distinct characteristics, and this results in divergent performance with differing risk/reward profiles.
- Thus, index choice matters when investing and having increased breadth in the range of indices available via Micro E-mini contracts provides further trading opportunities.



Source: Bloomberg

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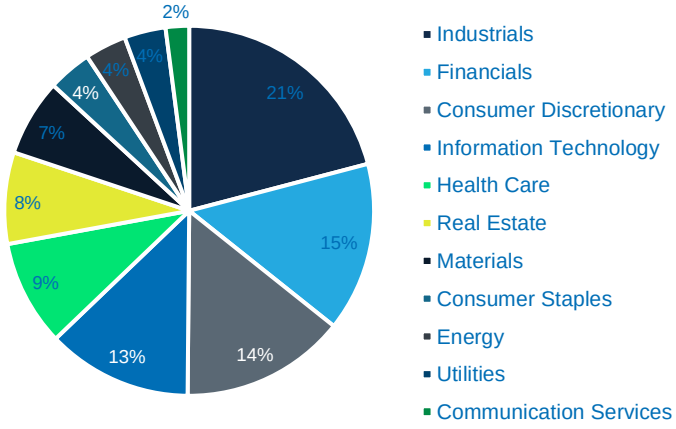
Why Should you be interested in MidCap 400 and SmallCap 600?

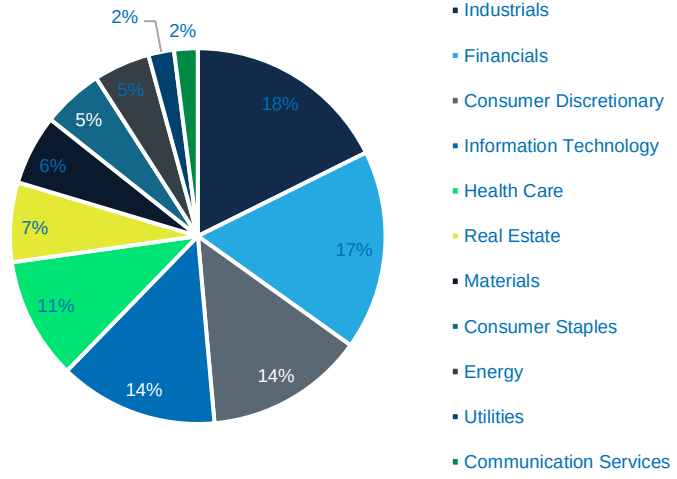
S&P MidCap 400

- The S&P MidCap 400 provides investors with a benchmark for mid-sized companies.
- Firms you be familiar with in the Index: Texas Roadhouse, Crocs, Under Armour, Interactive Brokers Group, Williams-Sonoma, Macy's, Kohl's, Sonoco, Nordstrom, Wendy's, Voya Financial, GameStop, and Wingstop



S&P SmallCap 600

- The S&P SmallCap 600® seeks to measure the small-cap segment of the U.S. equity market.
- Firms you may be familiar with in the index: American Eagle, Bed, Bath, and Beyond, Cushman and Wakefield, Dave & Busters Entertainment, Jack in the Box, RE/MAX Holdings, and Shake Shack, and Ruth's Hospitality Group



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Example Case Study #1: Price Movement

Right as the Covid-19 Pandemic breaks out in early 2020, an individual traders believes that the U.S. equities market will increase over time prior to the June-20 contract expiration. The trader is deciding between executing a view on the S&P 500, Dow, or S&P MidCap 400.

As they anticipated, equities increased over the three month period, but to varying degrees:

Range 03/16/2020 - 06/19/2020 Period Daily

	Security	Currency	Price Change
1)	MID Index	USD	33.78%
2)	SPX Index	USD	29.82%
3)	INDU Index	USD	28.15%
4)			

How did our trader do?

Bought one MMC at 1403.0 and sold one MMC at 1786.50:
1786.50 – 1403.50 = 383.50 index points where $10x Index Points x $383.50 per tick = **$3835.00 profit.**

Source: Bloomberg

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Example Case Study #2: price movement

Right after the Q3-2022 roll, you anticipate two rate increases in Q4 and expect small-cap indices to outperform large-cap indices (especially tech) for the duration of the year.

As they anticipated, there was a divergence in index performance in Q4-2022



How did our trader do?

Bought one MSC at 1145.0 and sold one MSC at 1156.50:
1156.50 – 1145.0 = 11.50 index points where $10x Index Points x $11.50 per tick = **$115.00 profit.**

Additionally, the trader shorted 1 MNQ future over the same period, selling 1 MNQ future at 11860.0 and later buying 1 MNQ future at 11345.0 = **$1,030 profit**

Source: Bloomberg

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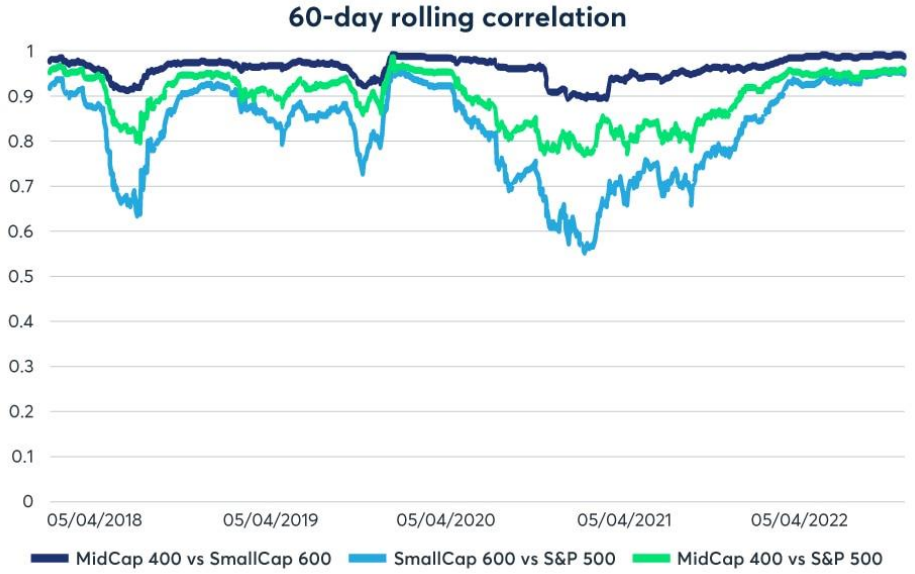
Correlations in Equity Indices

As mentioned in the previous case study, index choice matters when you decide which indices you would like to use to reflect an opinion on the market

For example, below are the 60-day correlations between the 3 indices. There have been notable periods where the indices have been performing differently to each other.



Source: Bloomberg

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Precisely Scale Index Exposure Up or Down--ES vs MES…an Illustration

A technical trader at small CTA firm sells 1 June E-mini at the breach of the neckline of H&S pattern (arrow) at 2826.50

He covers at any RSI reading (on 5 minute chart) below 30

The market goes in his direction and he covers roughly an hour later at 2815.25.



Source: CME Group

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Precisely Scale Index Exposure Up or Down--ES vs MES…an Illustration

What if the trader instead of doing 1 ES, executed 10 Micro E-minis

He could have bought covered a partial position at RSI of 30 and left a few contracts run for greater profit (with proper stop loss order).

This is one of many reasons to trade the micros!!

Many active traders and seasoned pros use scaling in and out for more precise trading execution



Source: CME Group

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Options on Micro E-mini Futures – Product Specifications

	Micro E-mini S&P 500	Micro E-mini Nasdaq-100
Contract Unit	1 MES futures contract	1 MNQ futures contract
Minimum Price Fluctuation	Regular Tick: 0.25 index points = $1.25 for premium above 5.00 index points Reduced Tick: 0.05 index points = $0.25 premium at or below 5.00 index points	Regular Tick: 0.25 index points = $0.50 for premium above 5.00 index points Reduced Tick: 0.05 index points = $0.10 premium at or below 5.00 index points
Product Code	Monday Weekly: X1A-X5A Tuesday Weekly: X1B-X5B Wednesday Weekly: X1C-X5C Thursday Weekly: X1D-X5D Friday Weekly: EX1-EX4 EOM: EX Quarterly: MES	Monday Weekly: D1A-D5A Tuesday Weekly: D1B-D5B Wednesday Weekly: D1C-D5C Thursday Weekly: D1D-D5D Friday Weekly: MQ1-MQ4 EOM: MQE Quarterly: MNQ
Listing Cycle	European Style, PM Expiring Options: 1 Monday, Tuesday, Wednesday, and Thursday Option 3 Friday Week 1,2, and 4 Options 3 End-of-Month Options 6 Friday Week 3 Options (S&P 500) 3 Friday Week 3 Options (Nasdaq-100) American Style, AM Expiring Options: 2 Quarterly Options (Mar, Jun, Sep, Dec cycle)	
Options Style	Quarterly: American Weeklies, EOM: European	

Source: CME Group

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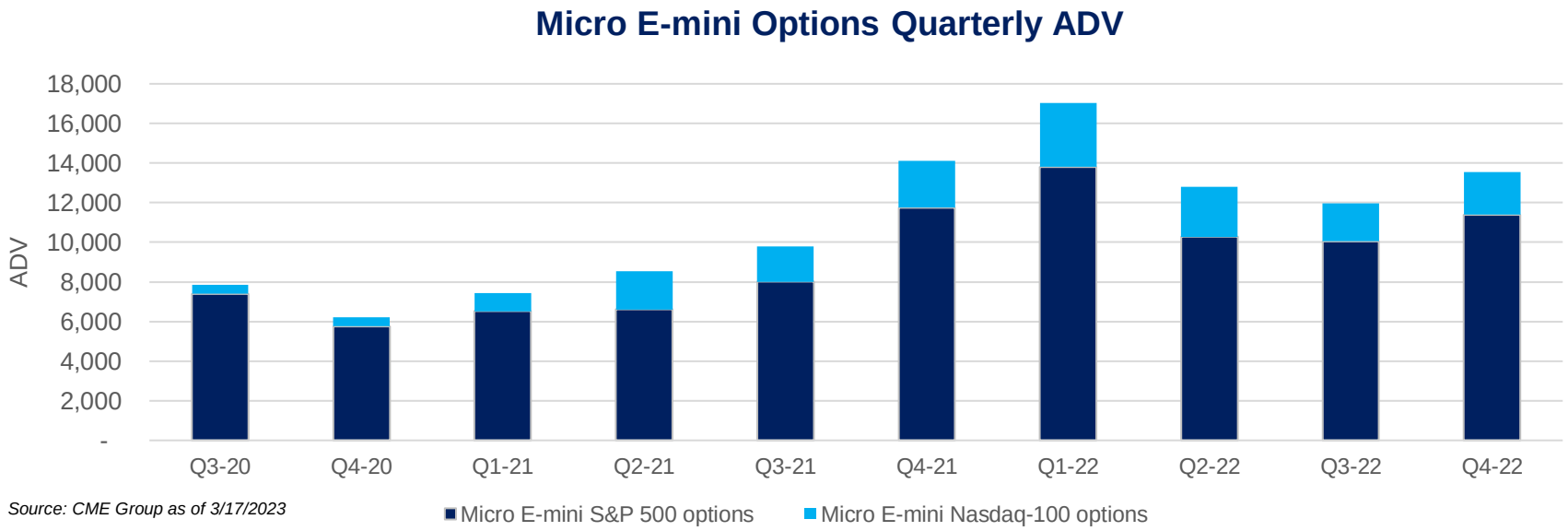
Options on Micro E-mini Futures – Volume since Launch

- Launched August 31, 2020, over 7.5M options on Micro E-mini S&P 500 and Micro E-mini Nasdaq-100 futures have traded since launch
- 17% of the flow is coming outside of the U.S. with trades submitted from 100+ countries
- On average, 24% of volume is traded during Non-US hours before the U.S cash open



Source: CME Group as of 3/17/2023

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Options on Micro E-mini Futures – Trade Example



Open...	Volu...	Settle	Last	Vol	Δ	QS	+	C...	C Bid	Theo	C Ofr	C...	Strike	P...	P Bid	Theo	P Ofr	P...	+	QS	Δ	Vol	Last	Settle	Volu...	Open...
+ EX3H3 17 Mar 2023 (0.25 DTE) Micro E-Mini S&P 500 Weekly Option Wk3; MESM3: 3,976.50													ATM		3975.00 ▼ ▲		10 strikes − +									
− X3AH3 20 Mar 2023 (3.25 DTE) Micro E-Mini S&P 500 Monday Weekly Option Wk3; MESM3: 3,976.50													ATM		3975.00 ▼ ▲		10 strikes − +									
Micro E-mini S&P 500 Future Jun23														54	3,976.00		3,976.50	45	+				− 3,97...	3,994.50	353,...	86,617
2		54.50		-	-	QS		36	41.25	-	42.00	36	3955.00	64	20.25	-	21.00	64		QS	-	-	22.50	15.00	1	2
5	3	51.00	47.25	-	-	QS	+	43	38.25	-	39.00	43	3960.00	57	22.00	-	22.75	57	+	QS	-	-	↓ 22.00	16.50	52	47
3	3	47.50	32.50	-	-	QS		43	35.25	-	36.00	43	3965.00	57	24.00	-	24.75	57		QS	-	-	32.50	18.00	7	2
2	30	44.00 ↓	33.00	-	-	QS	+	50	32.25	-	33.00	50	3970.00	50	26.00	-	26.75	50	+	QS	-	-	↑ 37.00	19.50	2	6
1	12	40.75 ↓	30.00	-	-	QS	+	50	29.50	-	30.25	50	3975.00	50	28.25	-	29.00	50	+	QS	-	-	↓ 26.00	21.25	4	3
11	6	37.50 ↓	25.00	-	-	QS	+	50	26.75	-	27.50	50	3980.00	50	30.75	-	31.50	50	+	QS	-	-	↑ 27.75	23.00	10	3
2	25	34.50 ↑	26.00	-	-	QS	+	50	24.50	-	25.25	50	3985.00	50	33.25	-	34.00	50	+	QS	-	-	↓ 35.50	25.00	9	3
5	17	31.50 ↑	23.00	-	-	QS	+	57	22.00	-	22.75	57	3990.00	43	35.75	-	36.50	43	+	QS	-	-	↑ 31.25	27.00	13	
2	9	28.75 ↑	21.00	-	-	QS	+	57	19.75	-	20.50	57	3995.00	43	38.50	-	39.25	43	+	QS	-	-	↑ 35.50	29.25	3	4
23	20	26.25 ↓	18.00	-	-	QS	+	64	17.75	-	18.50	64	4000.00	36	41.25	-	42.25	36	+	QS	-	-	↑ 48.50	31.75	7	3
+ X3BH3 21 Mar 2023 (4.25 DTE) Micro E-Mini S&P 500 Tuesday Weekly Option Wk3; MESM3: 3,976.50													ATM		3975.00 ▼ ▲		10 strikes − +									

- An individual trader is bearish on the S&P 500 over the next week. She decides to use a call-spread to express her position
- Because of the elevated implied volatility level in the market, she decides to be a net seller of options
- She sells 5 calls at the strike price of 3975 at a price of 30.00 and, in order to define her max risk on the trade, buys 5 3990 Calls for 22.5, collecting 37.5 points ((30-22.5)*5)
  - Because each full point = $5.00, the trader collects $187.50
- ***On March 20, 2023 the fixing price is 3960.***
- *Both options expire worthless and our trader keeps the $187.50*

Source: CME Direct 3/17

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