

# Interest Rate futures and options

Trading and liquidity review of 2024

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# Introduction

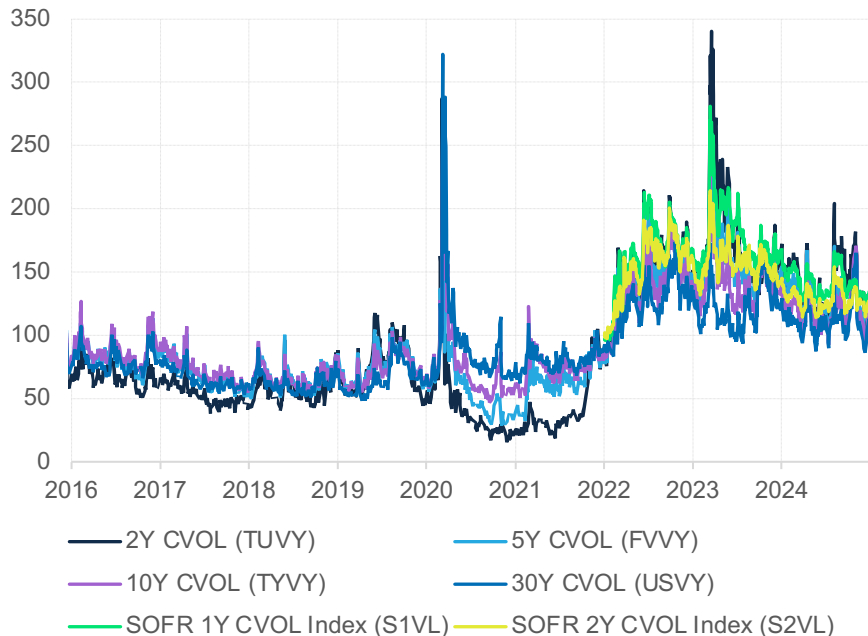
Interest rate risk management again took center stage in 2024 as shifting monetary policy, historic debt levels/issuance, geopolitics and other events drove persistent volatility across the curve.

Through it all, CME Group was the venue of choice for managing risk, providing participants with deep liquidity across short-, medium, and long-term rates, and safe and efficient markets anchored by CME Clearing.

In this deck we summarize the resiliency of liquidity in these markets by analyzing key measures of liquidity:

- ADV: quantifies demand for risk transfer daily
- OI: is the total size of open positions that are being managed by market participants
- LOIH: a fair proxy for breadth of market participation among firms holding significant positions
- Cost to trade: Book depth and bid-ask spreads relative to volatility

## Elevated volatility persisted throughout 2024 across the interest rate curve



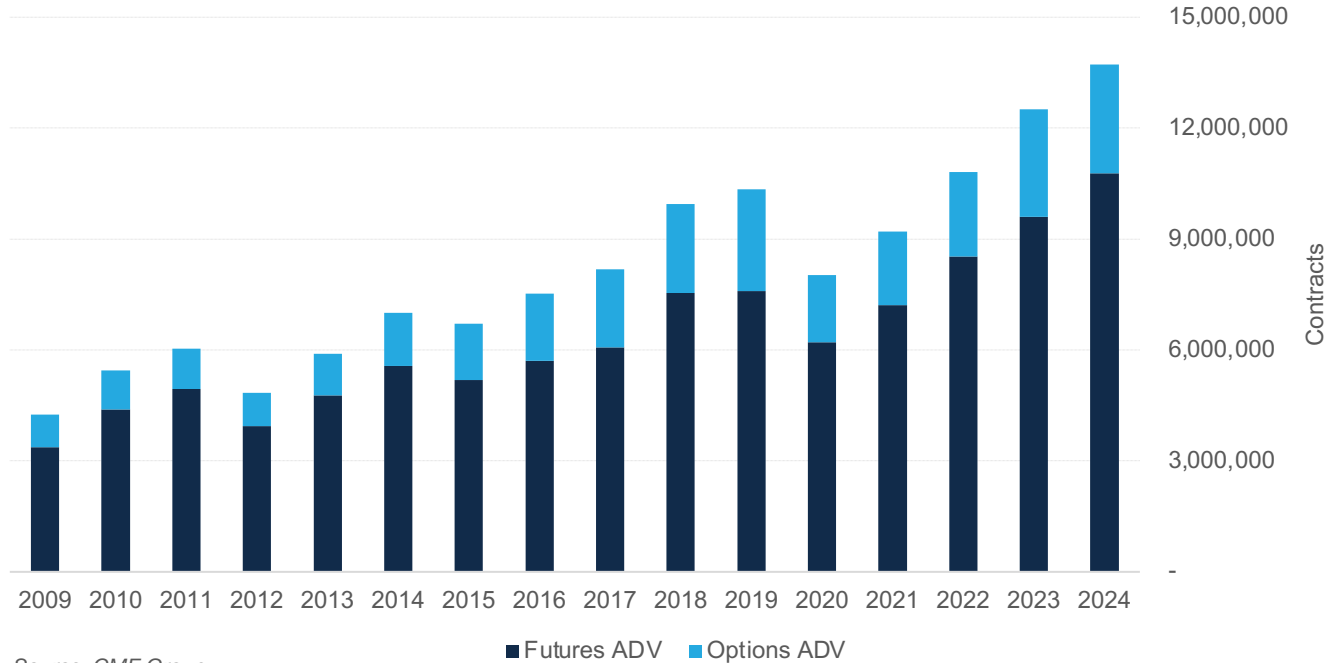
Source: CME Group

# Liquidity analysis

*Liquidity can be defined broadly as a market participant's ability to convert assets into cash or to enter/exit a position with ease; and is therefore proportional to indicators such as volume, open interest, breadth of participation and cost to trade. The following summarizes performance in those four key liquidity measures.*

# Average daily volume increased to a record 13.7 million contracts per day

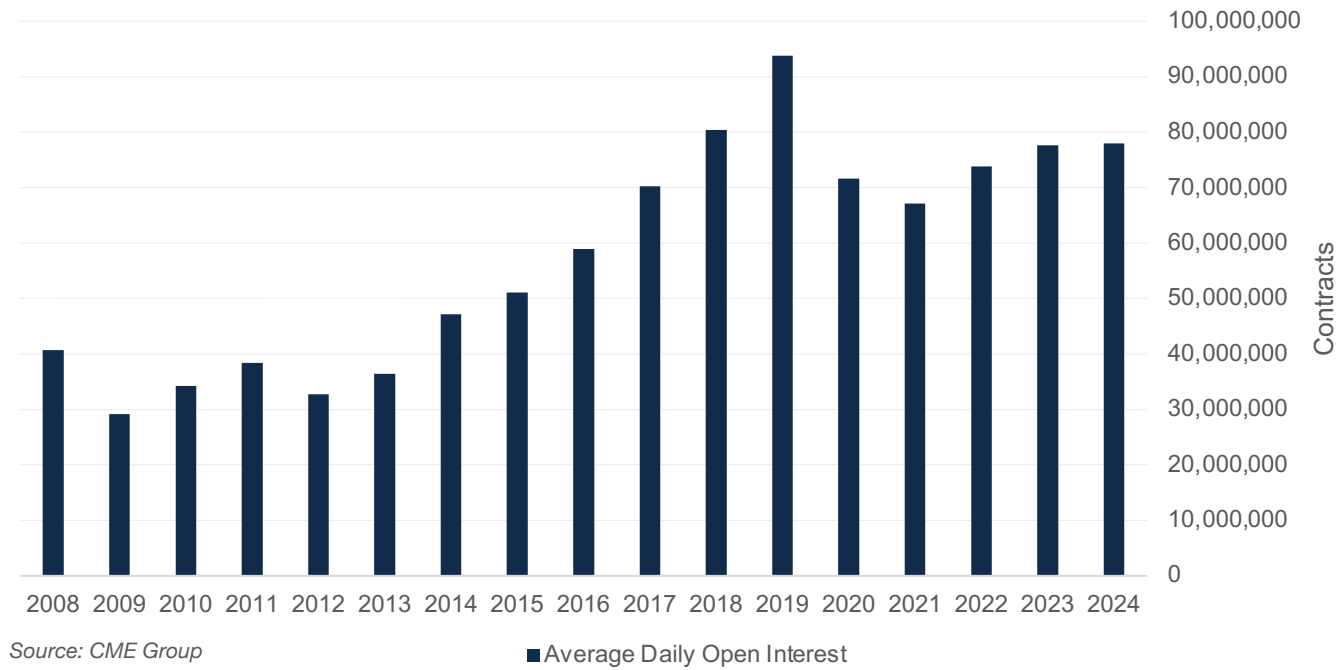
## Interest Rates ADV



Source: CME Group

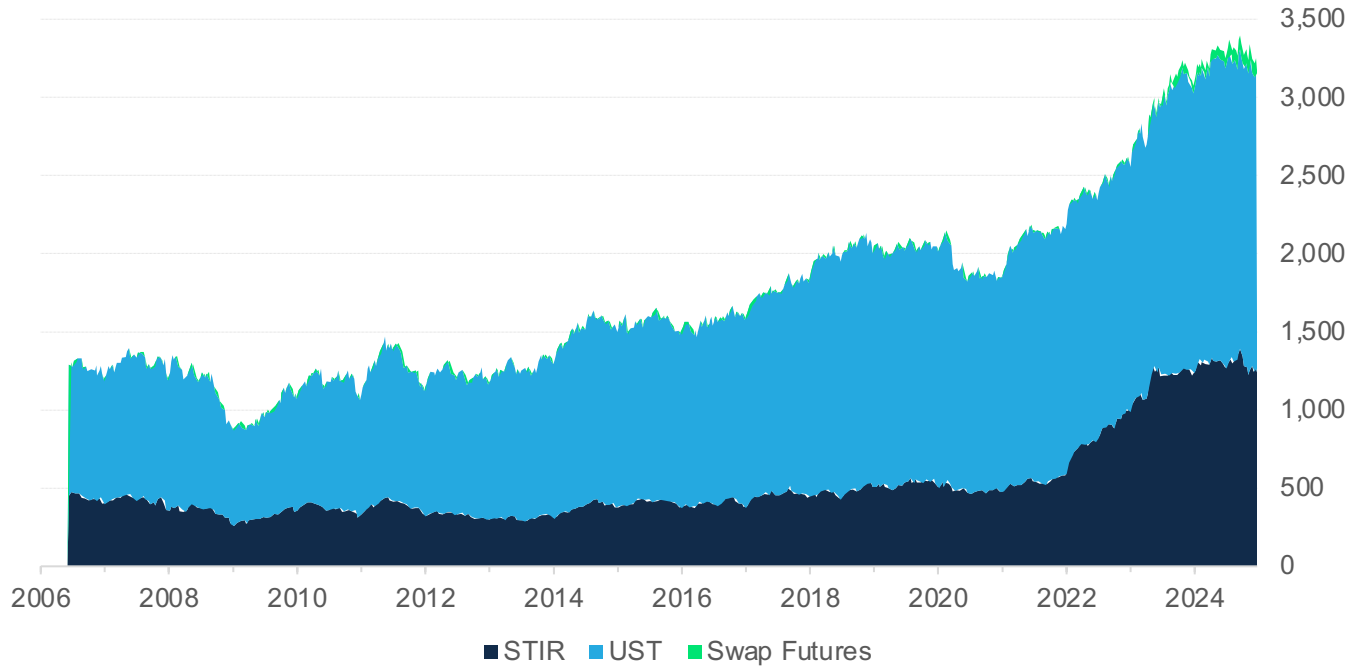
# Average daily open interest was the third highest all-time

## Interest Rates Open Interest



# Large open interest holders expanded to record levels

## Large Open Interest Holders



Source: CFTC Commitments of traders Report

## Cost to trade fell despite record demand

Analysis into market liquidity considers three interconnected metrics: market conditions, demand, and supply.

These factors, taken together, demonstrate how liquidity and the Cost-to-Trade (CTT) are impacted by changing market dynamics and increased demand as measured by the volume throughput of the order book.

- Market Conditions (Daily True Range)
- Supply (Cost to Trade in the contract)
- Demand (Volume in the contract)

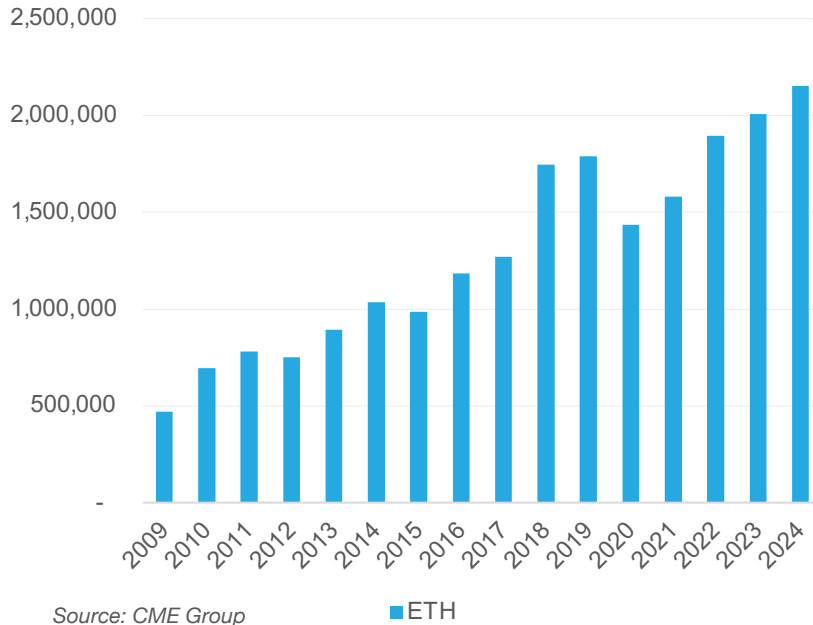
	2022	2023	2024
<b>2-Year T-Note Futures</b>			
Avg. Daily True Range	64.53 (ticks)	66.35 (ticks)	<b>45.82 (ticks)</b>
Avg. Daily Volume	0.68M	0.81M	<b>1.01M</b>
Avg. Cost to Trade, 1000 Lots	1.81 (ticks)	1.75 (ticks)	<b>1.27 (ticks)</b>
<b>5-Year T-Note Futures</b>			
Avg. Daily True Range	81.51 (ticks)	73.59 (ticks)	<b>52.36 (ticks)</b>
Avg. Daily Volume	1.30M	1.56M	<b>1.74M</b>
Avg. Cost to Trade, 1000 Lots	1.85 (ticks)	1.58 (ticks)	<b>1.24 (ticks)</b>
<b>10-Year T-Note Futures</b>			
Avg. Daily True Range	61.52 (ticks)	52.65 (ticks)	<b>39.62 (ticks)</b>
Avg. Daily Volume	1.84M	1.99M	<b>2.35M</b>
Avg. Cost to Trade, 500 Lots	1.13 (ticks)	1.06 (ticks)	<b>1.02 (ticks)</b>

Source: CME Group

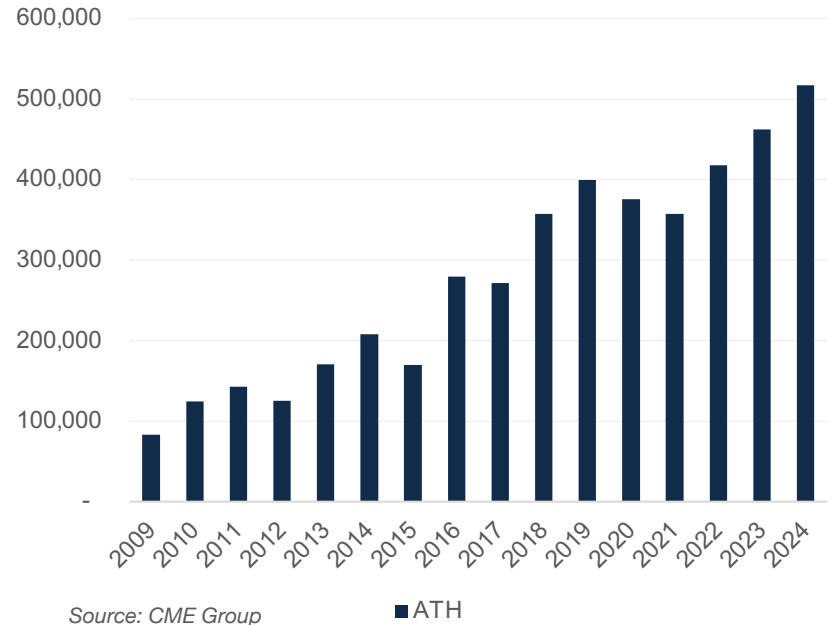


# Near 24-hour liquidity enabled efficient risk transfer across time-zones

## Interest Rates ADV – European Trading Hours

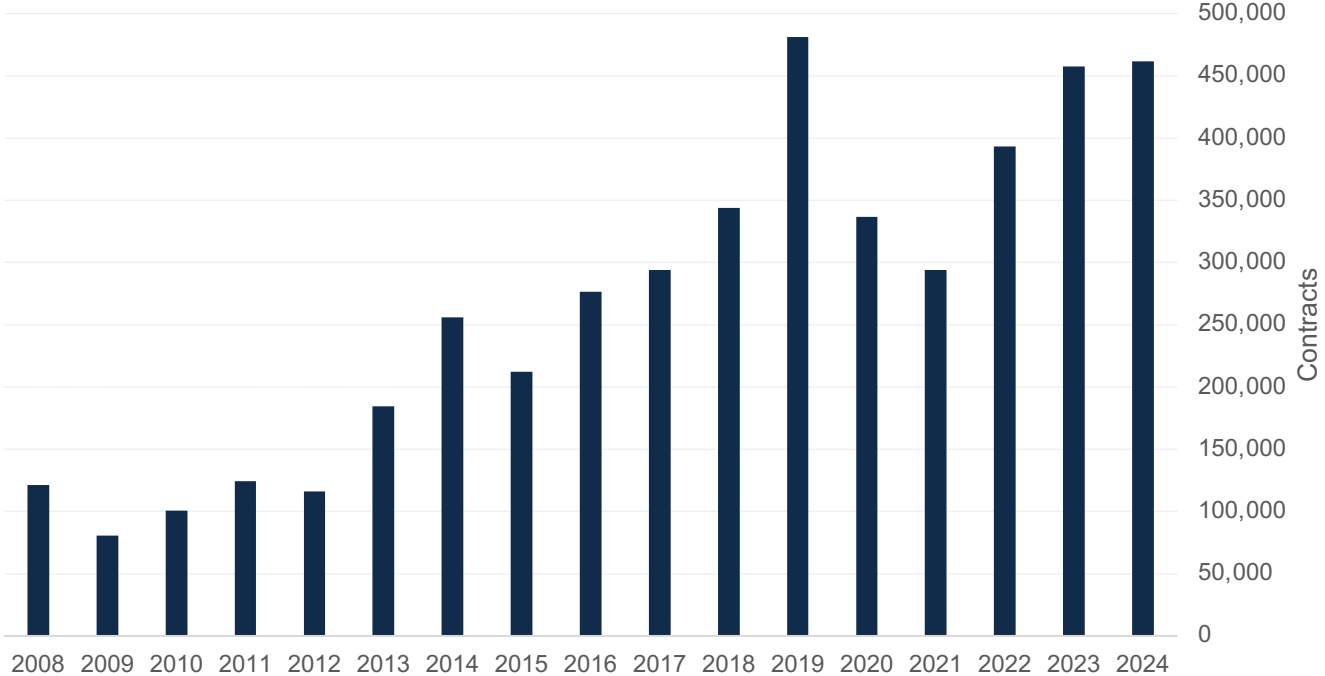


## Interest Rates ADV – Asian Trading Hours



# Active bilateral markets (blocks, EFRs, EFPs) complimented CLOB liquidity

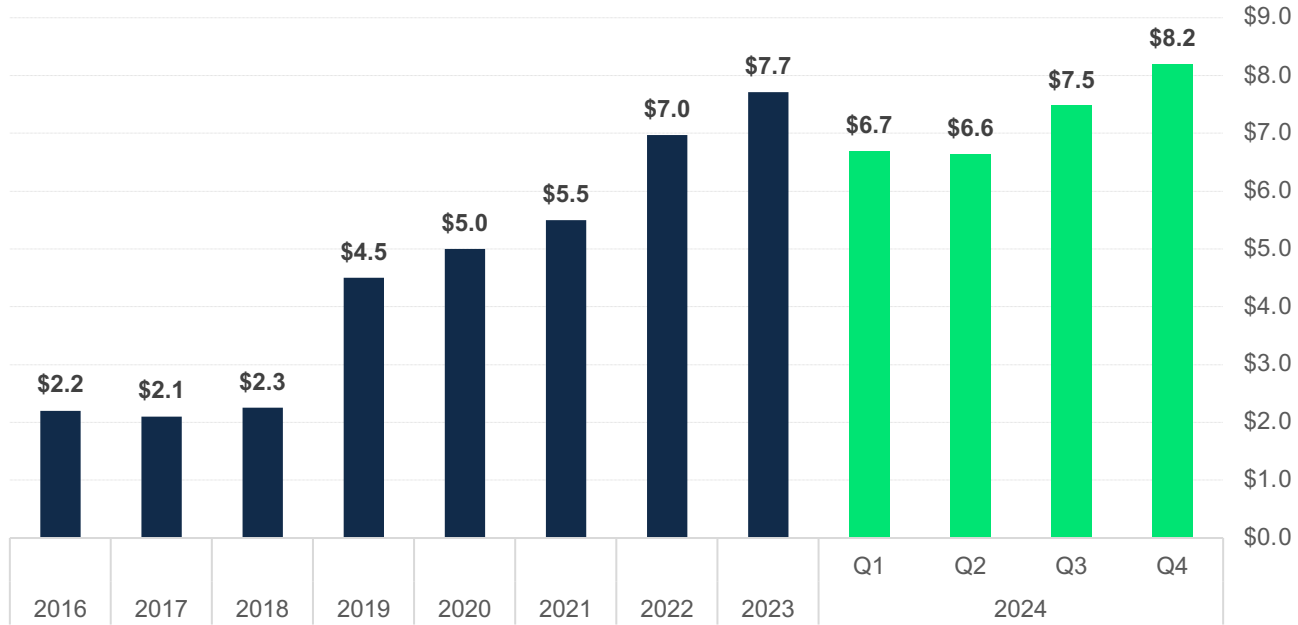
Interest Rates ADV via blocks and EFRPs



Source: CME Group

# Portfolio Margining of cleared swaps vs. listed F&O delivered unrivaled capital efficiencies

## Average Daily Portfolio Margining Savings (\$B)

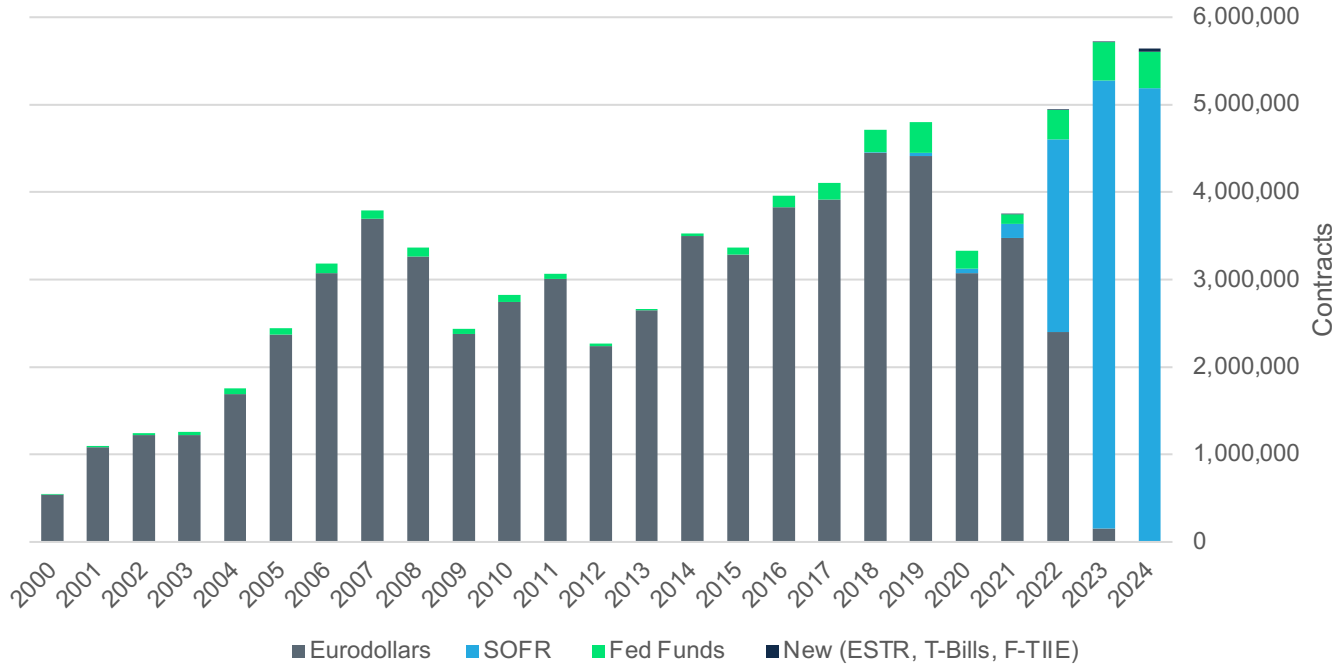


Source: CME Group, Q4 data through November

# Short-Term Interest Rates (STIRs)

# Short-Term Interest Rate (STIR) volumes nearly matched 2023's record

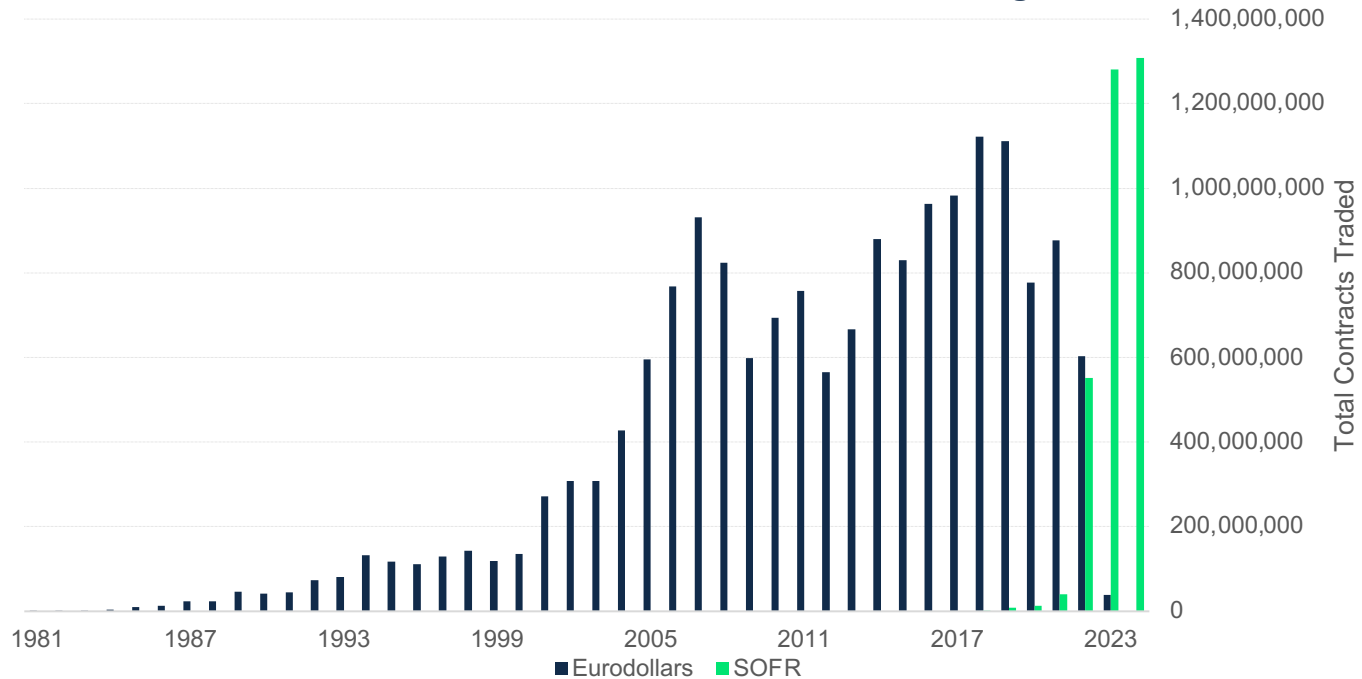
## STIR futures and options ADV



Source: CME Group

# SOFR futures and options volume topped 1.3 billion contracts (5.2M ADV)

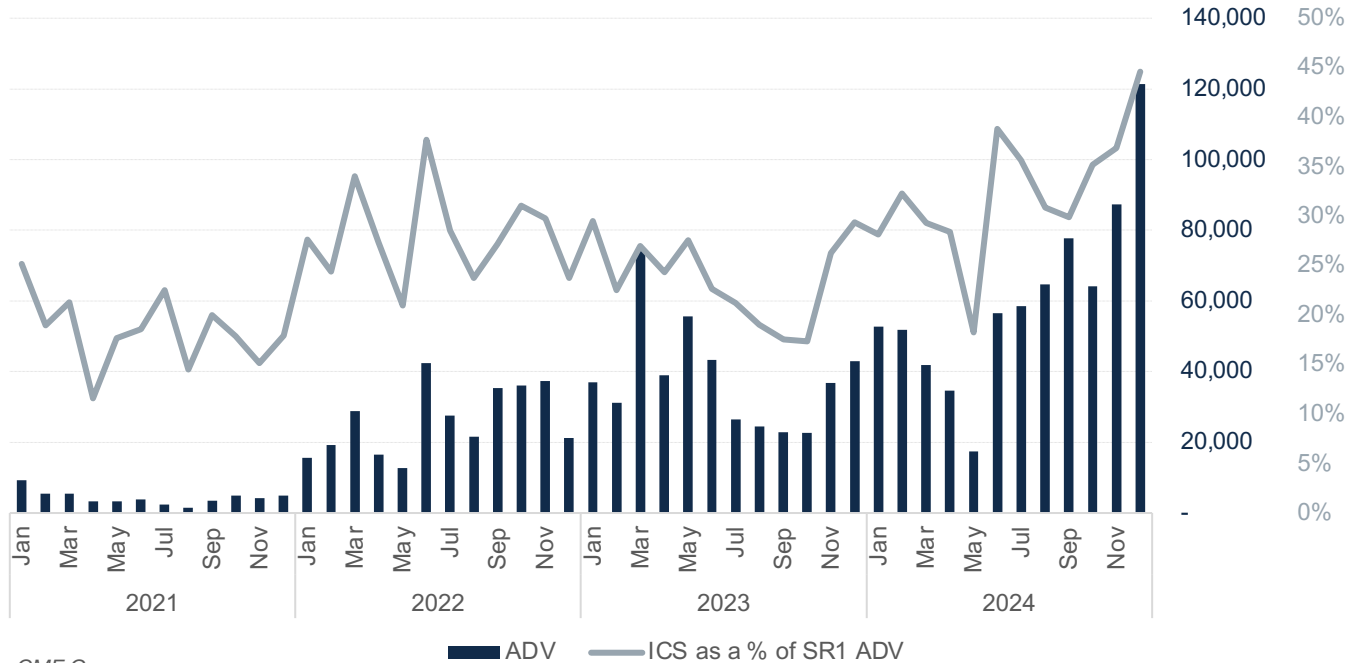
## SOFR volumes reached a new all-time high



Source: CME Group

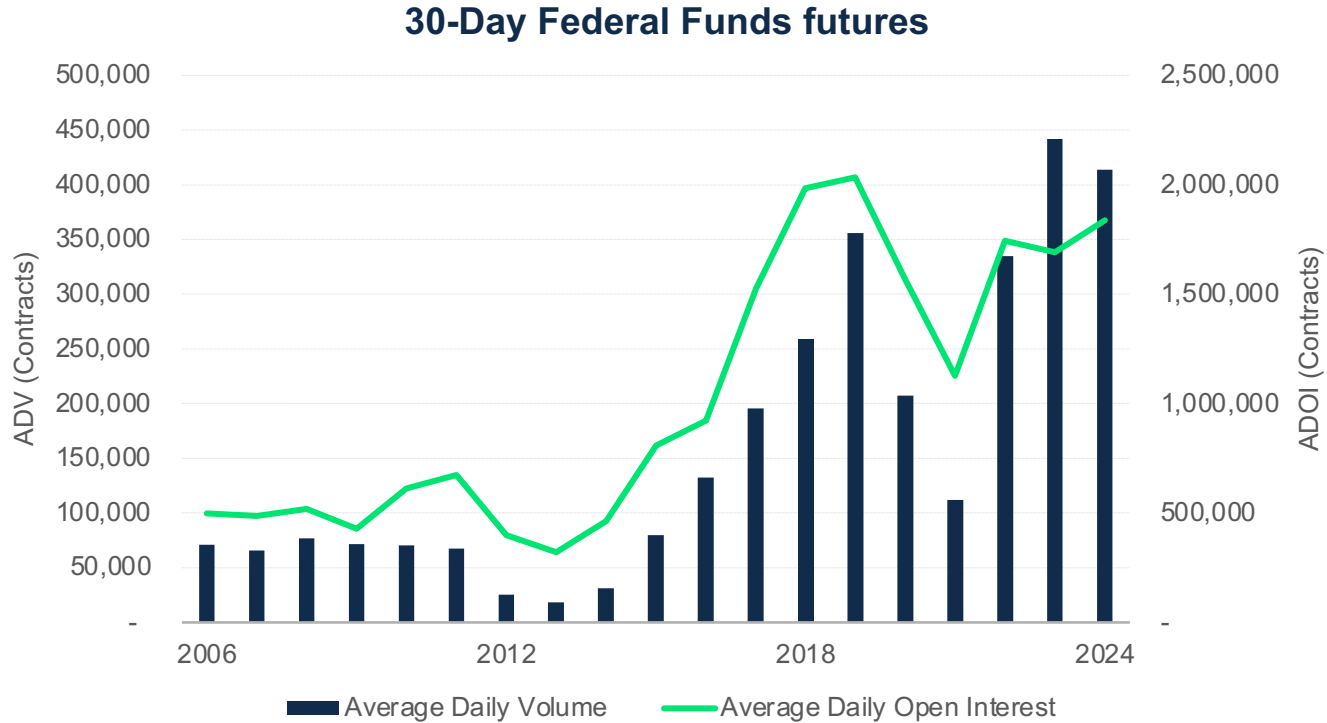
# 1M SOFR vs. Fed Funds futures saw record basis trading via Inter-Commodity Spreads (ICS)

## 1M SOFR vs. Fed Funds ICS



Source: CME Group

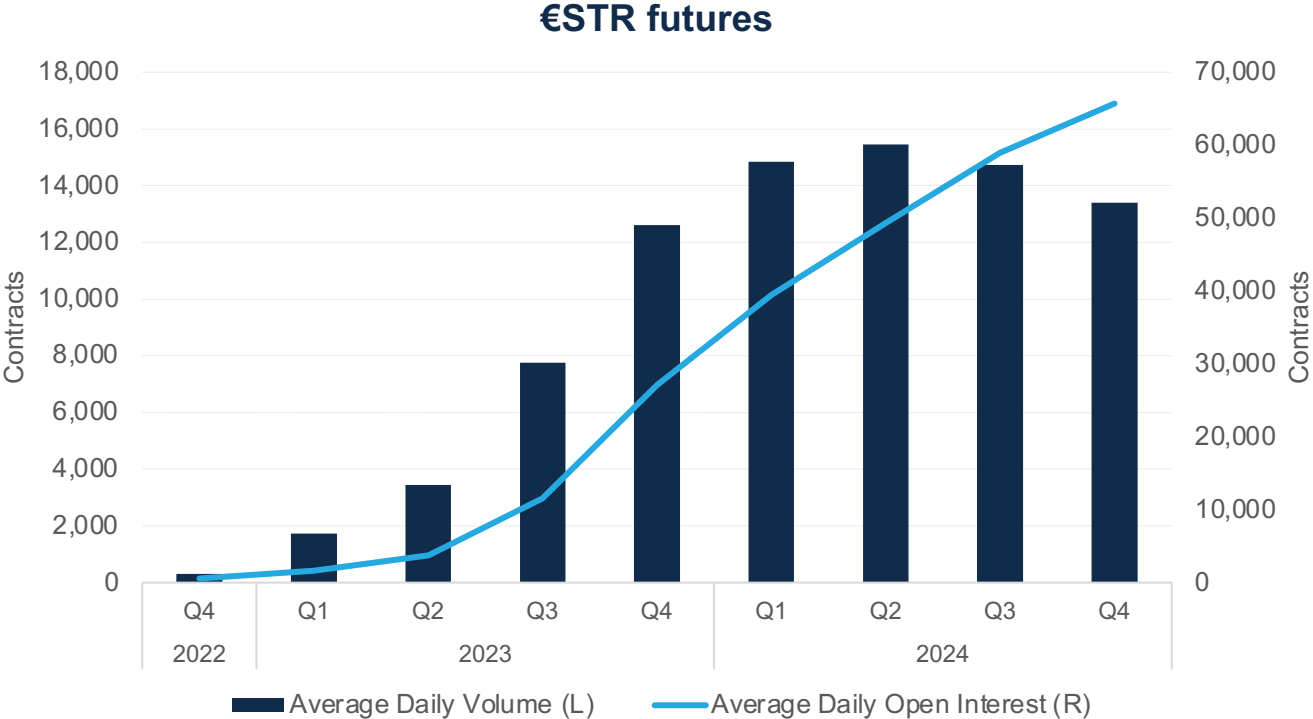
# Fed Funds futures ADV exceeded 400K, average open interest rose 9% YoY



Source: CME Group

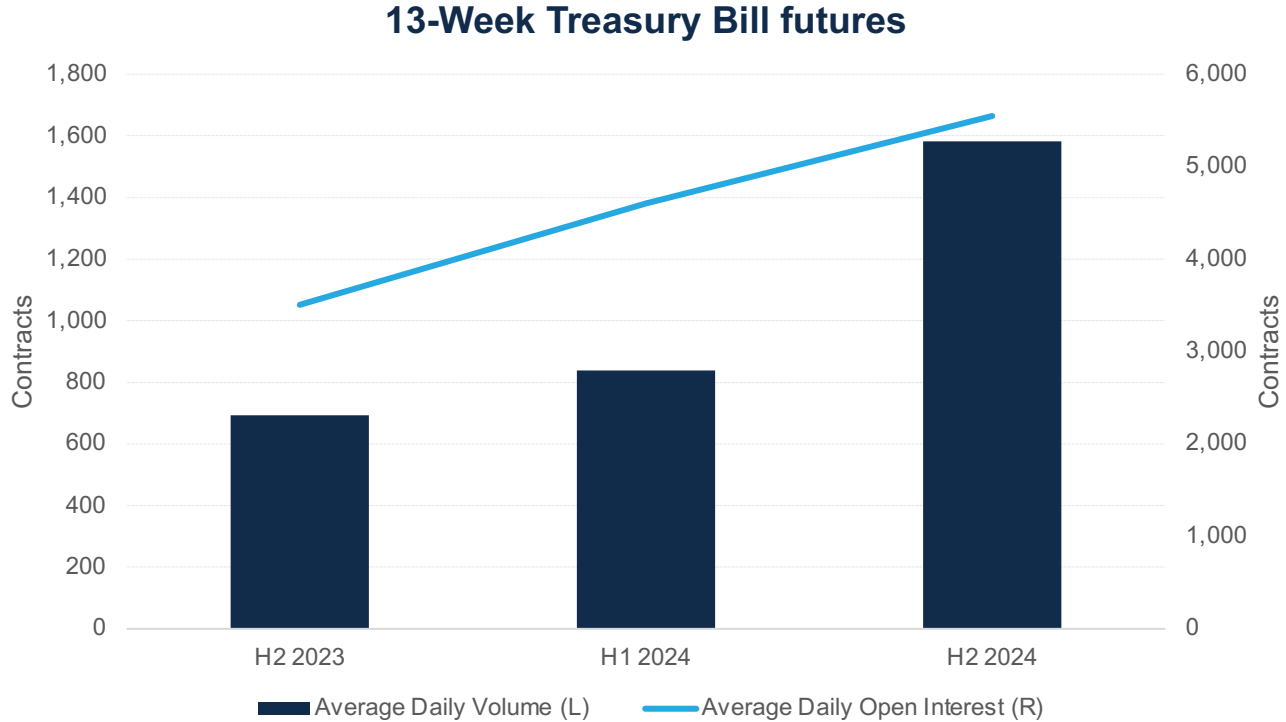


# €STR futures liquidity deepened and participation broadened



Source: CME Group

# T-Bill futures saw steady growth, aided by an active basis market vs. SOFR

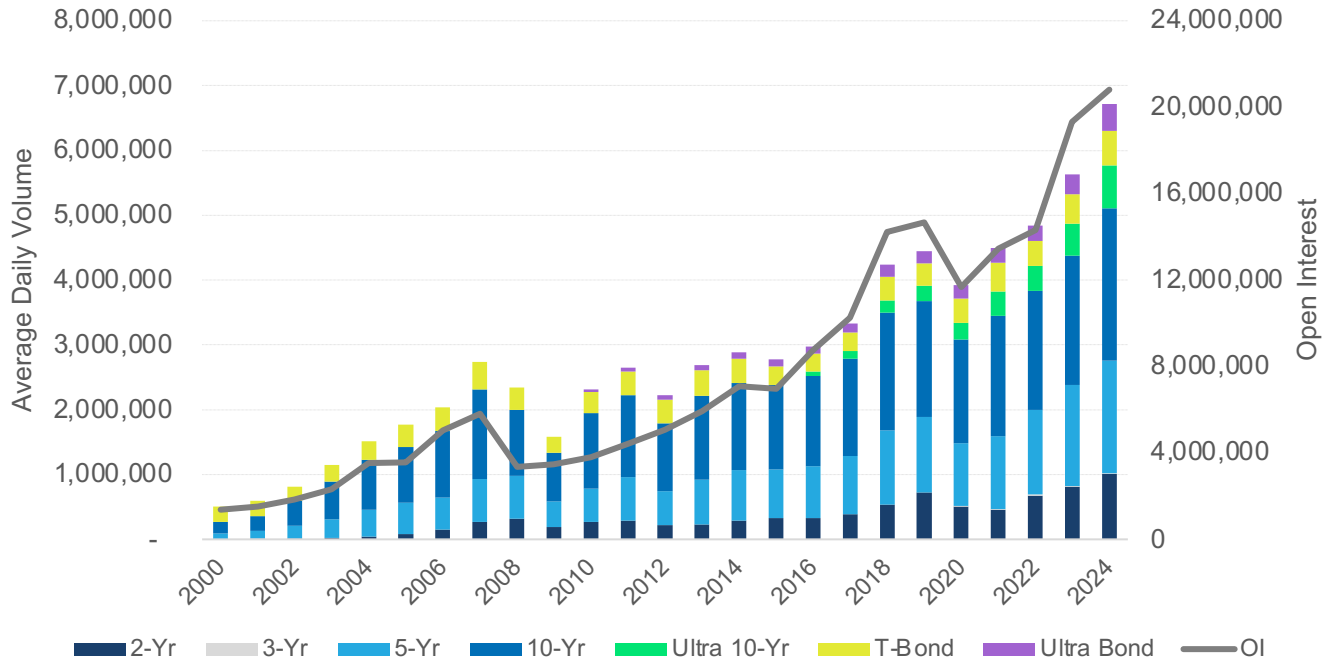


Source: CME Group

# U.S. Treasuries

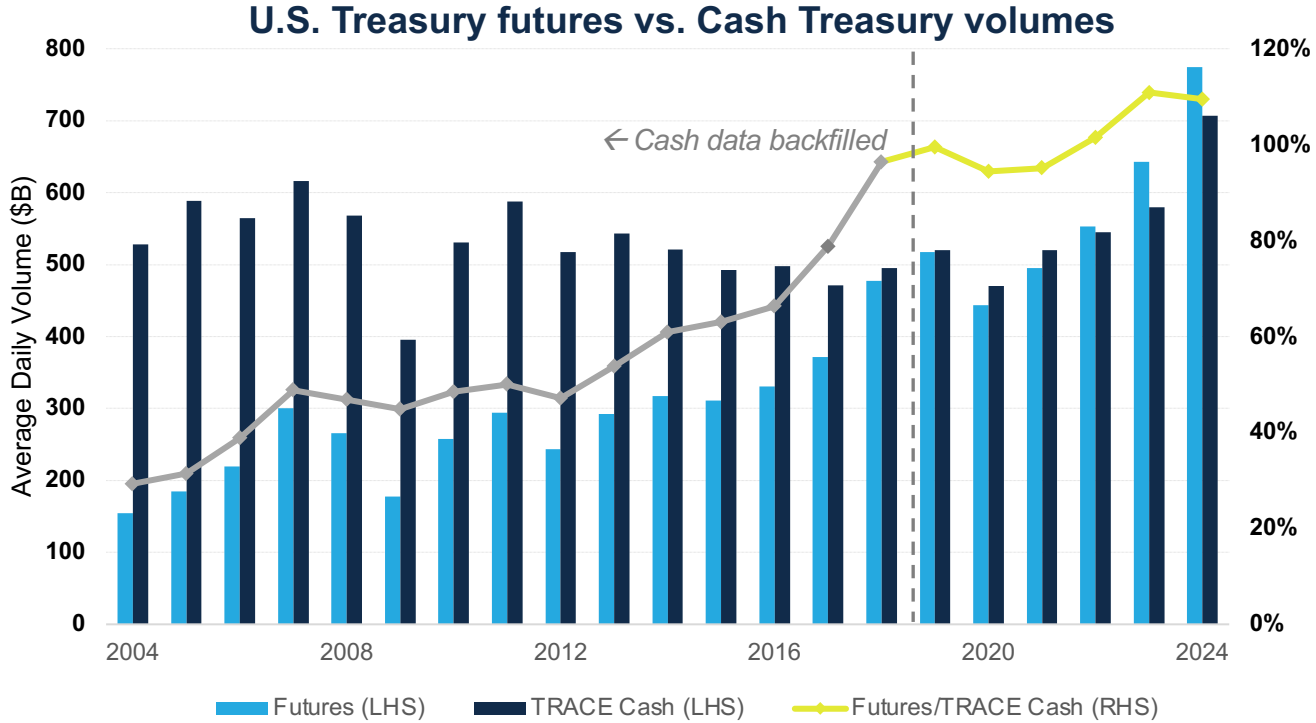
# Treasury futures trading activity surged to a 4th consecutive record year

## U.S. Treasury futures ADV and OI



Source: CME Group

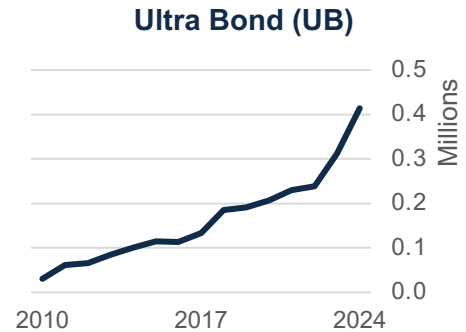
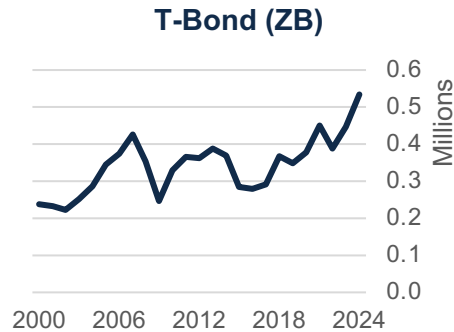
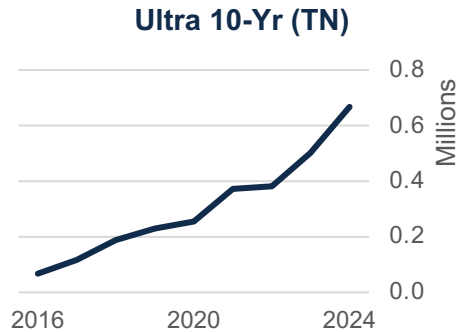
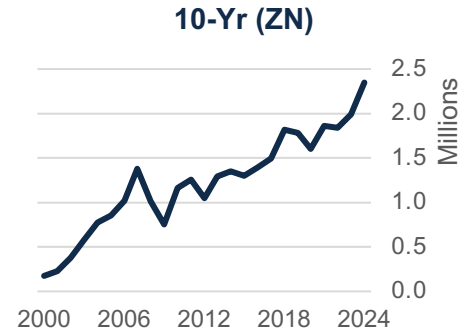
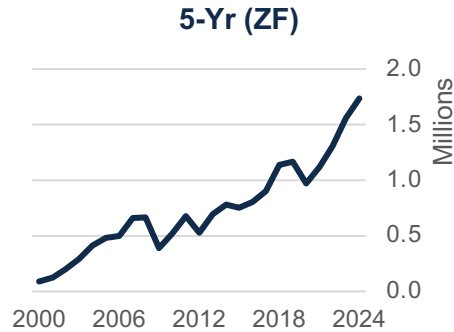
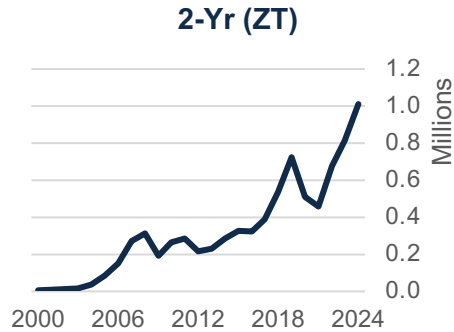
# Treasury futures averaged \$774B notional/day or 109% of the cash market



Source: CME Group, TRACE, FRBNY

\*Prior to 2019, TRACE Cash is backfilled as 120% of primary dealer volumes reported by the FRBNY.

# All six benchmark tenors hit new ADV records

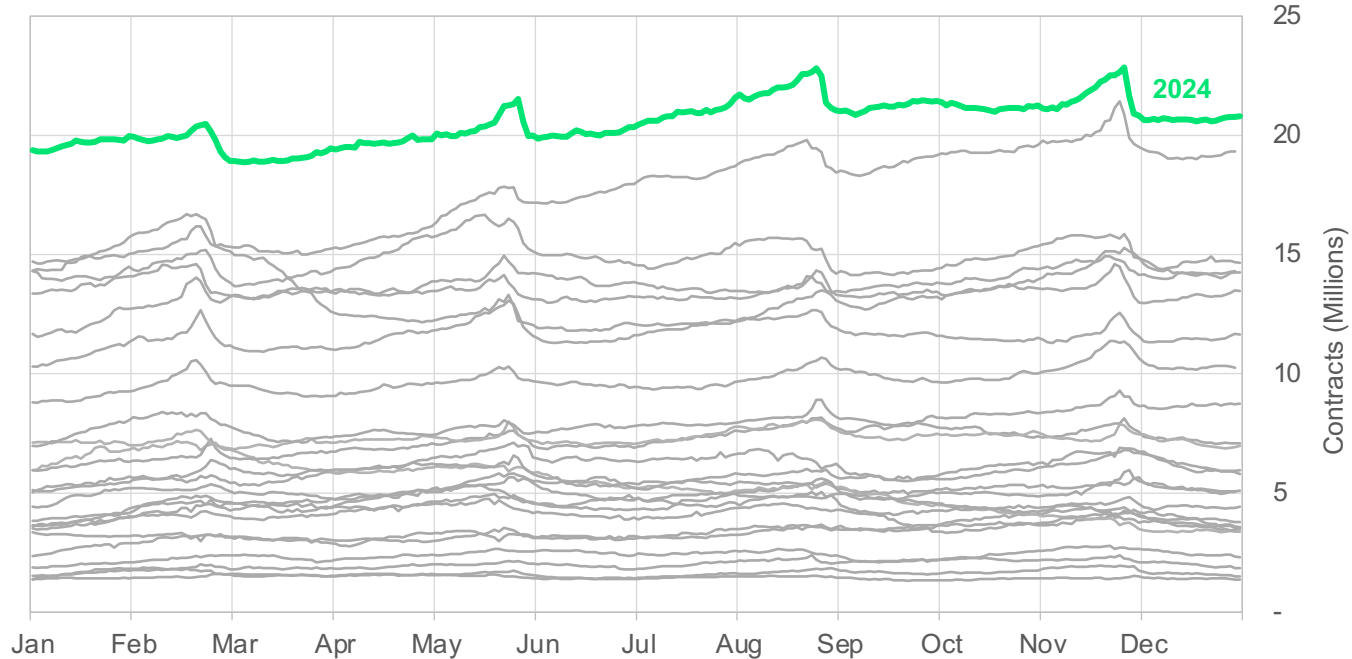


Source: CME Group

# Open interest surged to unprecedented levels

## Treasury futures Open Interest YoY

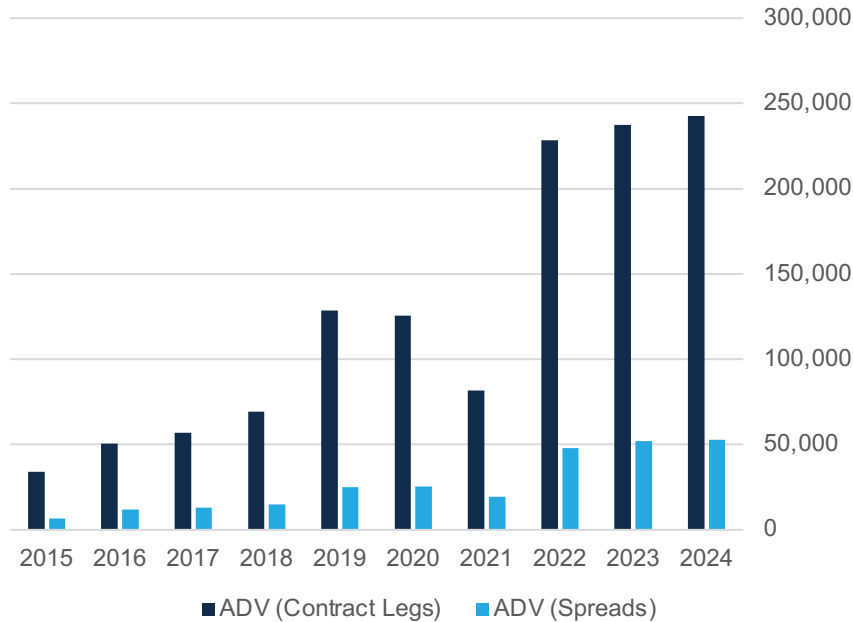
Grey lines: 2000-2023



Source: CME Group

# Curve trading via inter-commodity spreads reached new highs

## Treasury futures Inter-Commodity Spreads (ICS)



## Top pairs traded in 2024

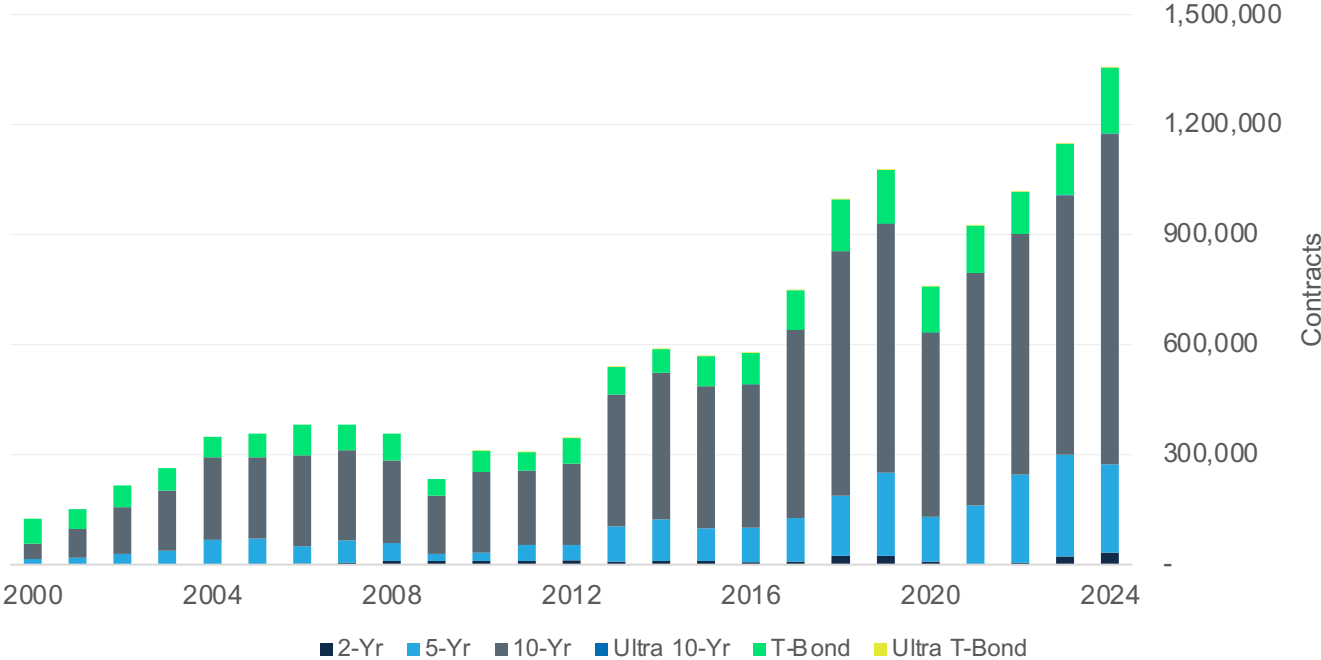
Pair	ICS instrument(s)	2024 ADV (Contract Legs)	2024 ADV (Spreads)
5Y/10Y	FIT/FYT	82,007	17,111
2Y/5Y	TUF/TFY	74,416	16,101
10Y/Ultra10Y	TEX	24,437	2,036
10Y/30Y	NOB	16,920	5,640
Ultra10Y/30Y	NCB	12,745	2,549

Source: CME Group



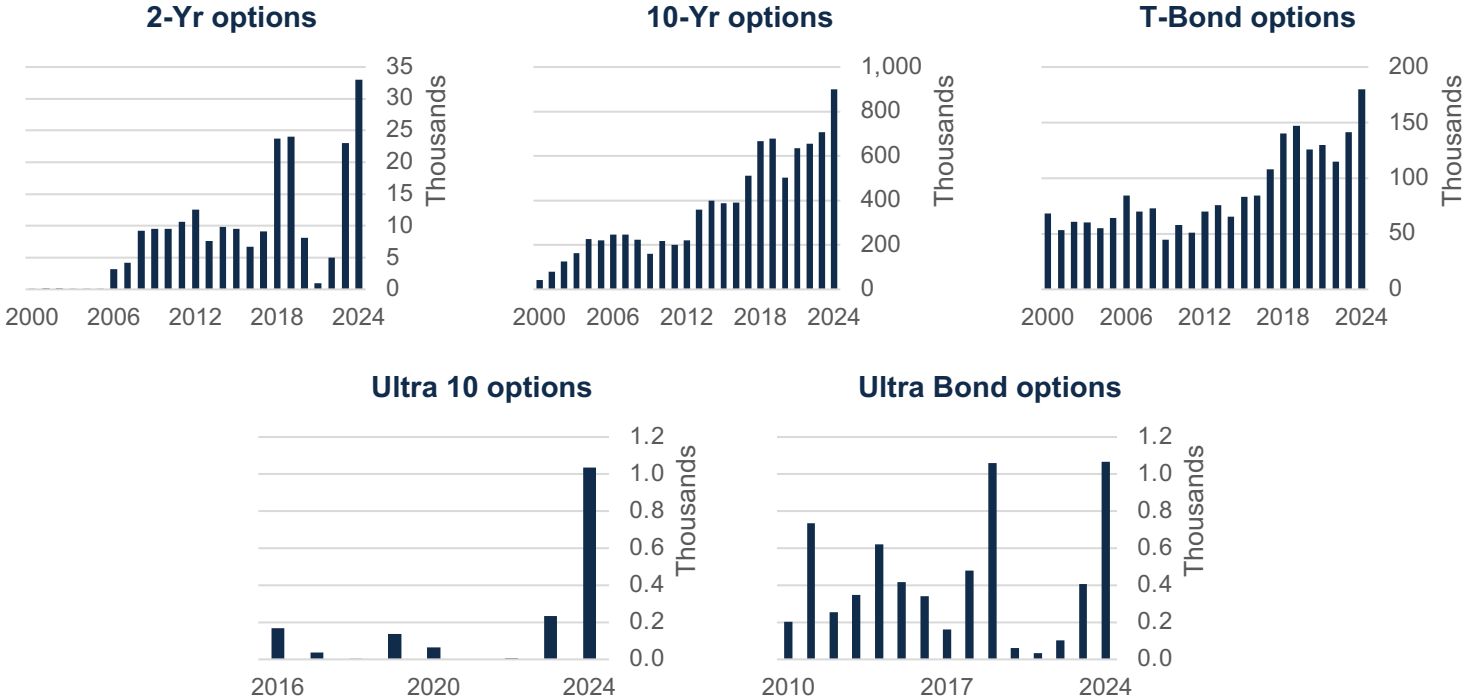
# Treasury options trading activity jumped to a 2<sup>nd</sup> consecutive record year

## Treasury options ADV



Source: CME Group

# 2-Year, 10-Year, Ultra 10, Bond, and Ultra Bond options all saw record ADV



Source: CME Group

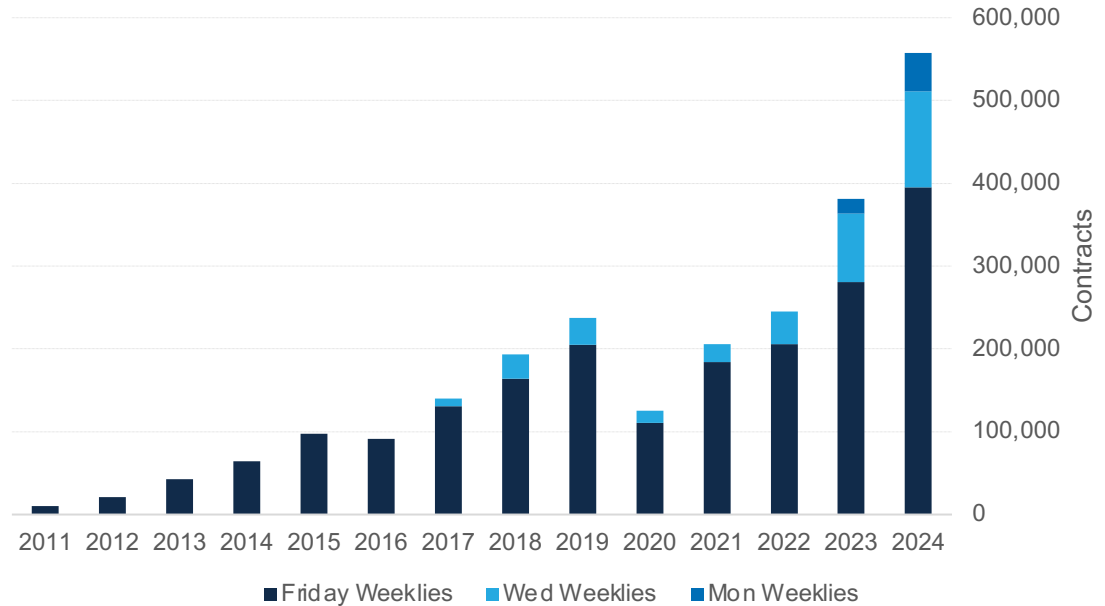
# Weekly Treasury options saw outsized growth, providing key liquidity and short-term flexibility for hedging event risks

**Monday**-expiring weeklies filled demand as a precise hedge for weekend risk, averaging 50K contracts per day in their first full year of trading

**Wednesday** weeklies were paramount as a hedging tool for FOMC and CPI. ADV grew to a record 115K contracts in 2024, +39% vs. 2023's prior record.

**Friday** weeklies remained the key tool for managing Non-Farm Payrolls, with ADV reaching a record 395K contracts, +41% YoY.

## Weekly Treasury options ADV

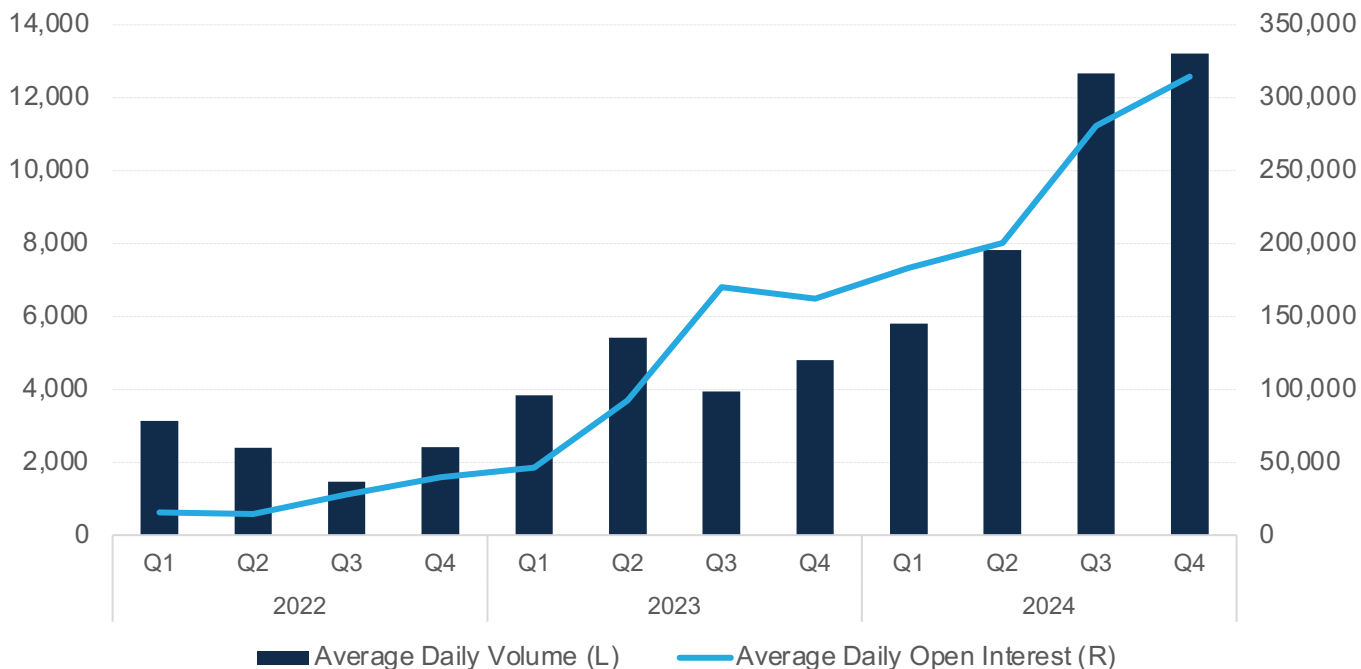


Source: CME Group

# Swap futures

# Eris SOFR Swap futures gained popularity among regional banks, ALM desks, mortgage services/originators and private lenders

## Eris SOFR Swap futures

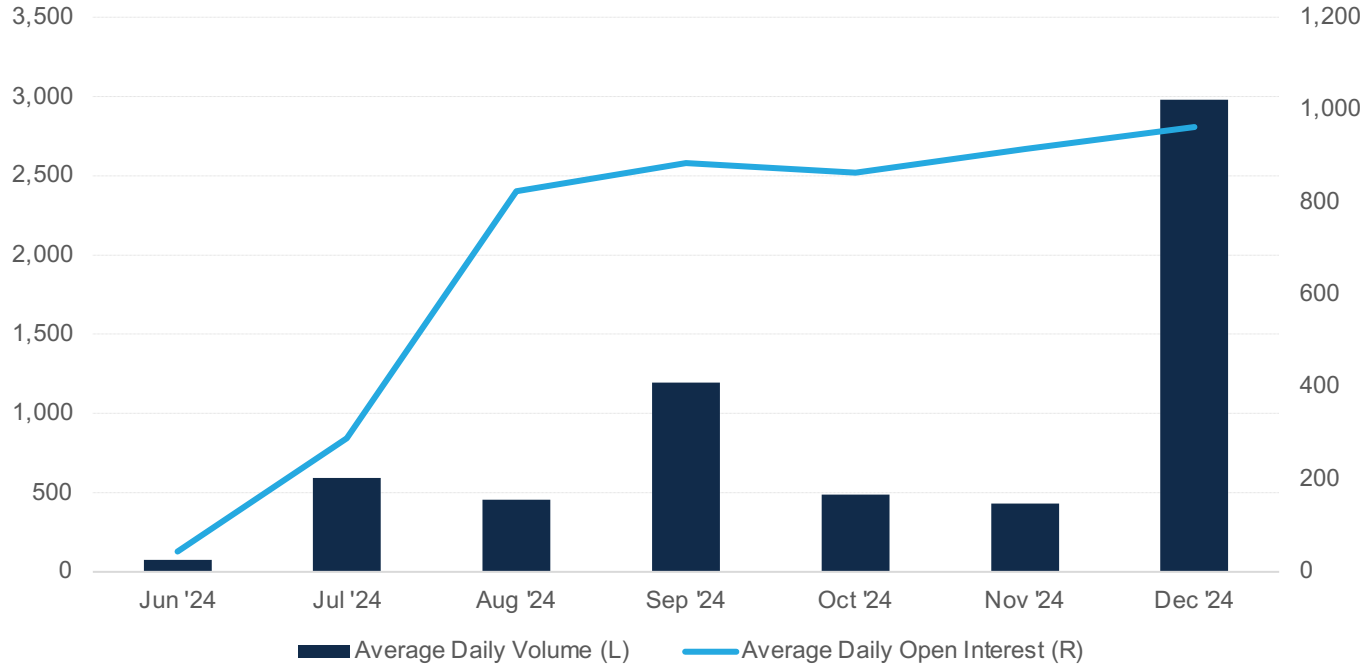


Source: CME Group

# Credit futures

# Growing buyside adoption helped Credit futures crescendo into year-end

## Bloomberg Credit Futures



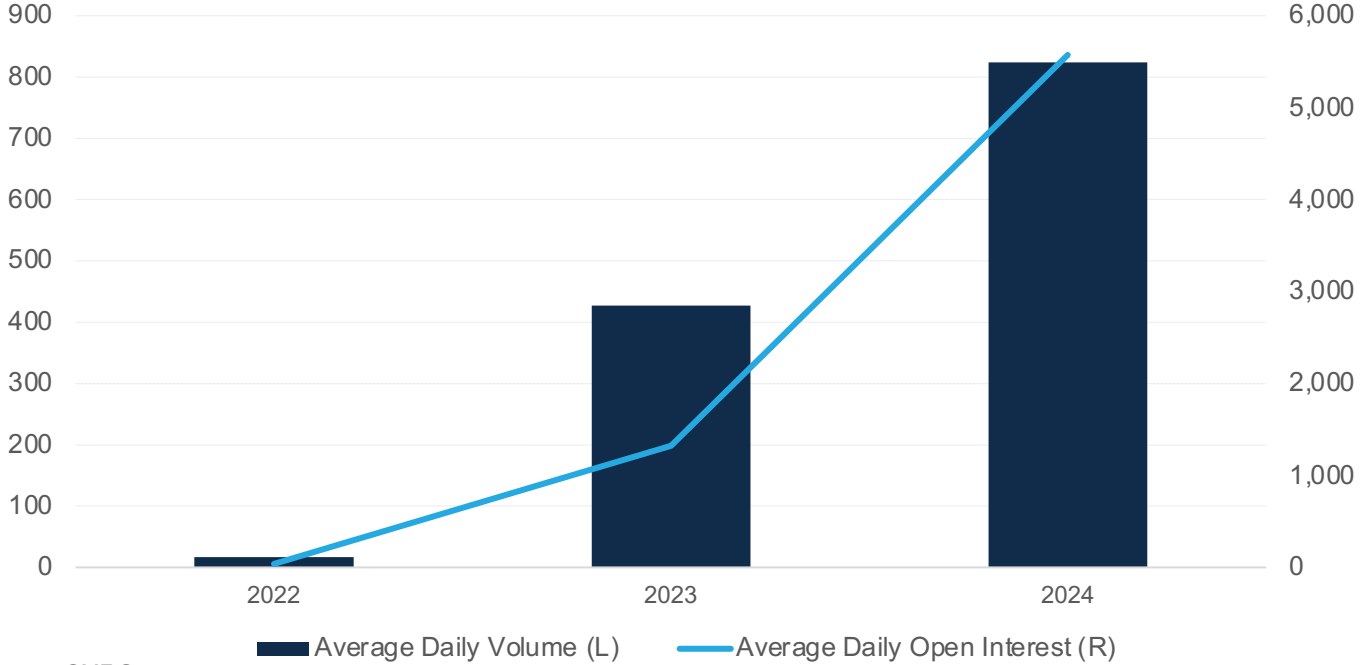
Source: CME Group

# Mortgage futures



# The TBA futures market saw strong growth, bringing efficient, all-to-all, electronic access to the second largest fixed income market in U.S.

### 30-Year UMBS TBA futures



Source: CME Group

# Disclaimer

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