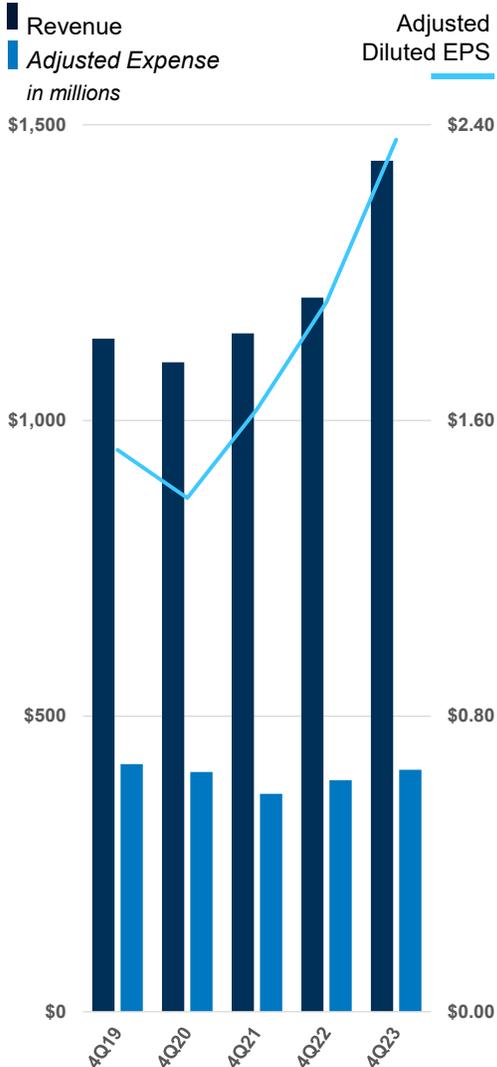


# 4Q 2023 Earnings Commentary



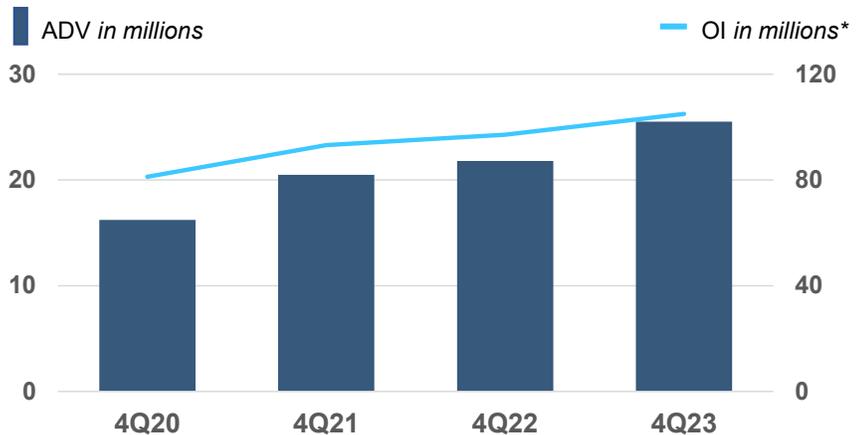
## 4Q 2023 Summary

CME Group’s strong performance in 4Q topped off the best year in the company’s history which included record revenue (+11%) and adjusted earnings (+17%) driven by record average daily volume (ADV) of 24.4 million contracts

- Delivered 19% revenue growth and 23% adjusted earnings growth in 4Q23 – representing the 10<sup>th</sup> consecutive quarter of double-digit adjusted earnings growth
- Achieved adjusted net income of \$865 million and adjusted diluted earnings per share of \$2.37
- 4Q23 average daily volume (ADV) was 25.5 million contracts up 17% year-over-year (YoY)
  - Highest of any historical fourth quarter ADV and 33% higher than the recent 5-year average for a fourth quarter
  - Double-digit ADV growth across 4 of 6 asset classes
- 4Q23 Interest Rates ADV grew 36% to 13.3 million contracts – the highest 4Q ADV on record
  - Treasury futures and options (F/O) ADV increased 44% to a record 7.7 million
- 4Q23 non-U.S. ADV grew to 7.2 million contracts, up 28% YoY with growth across 5 of 6 asset classes
- 4Q23 Options ADV increased 30% to 5.4 million contracts with double-digit growth across 5 of 6 asset classes, and 28% revenue growth YoY
  - Record Equity Index options ADV, up 31%
  - Energy options up 59%

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### Notes:

- Where “adjusted” is used with regard to financial metrics, we are referring to non-GAAP figures. A reconciliation of the non-GAAP (“Adjusted”) financial results mentioned to the respective GAAP figures can be found within the Reconciliation of GAAP to Non-GAAP Measures chart at the end of CME Group’s financial statements
- Adjusted operating expense within graphics represents total operating expense excluding licensing and other fee agreements which is the basis for expense guidance
- All growth rates included in this document refer to 4Q23 vs. 4Q22, unless otherwise noted. Additionally, all global data/statistics exclude the open outcry venue. Any 2024 to date references/graphics are through February 8, 2024
- OI within the charts throughout this document (both in total and for the individual Energy asset class) includes only benchmark products within the Energy asset class (Crude Oil, Natural Gas and Refined Products)

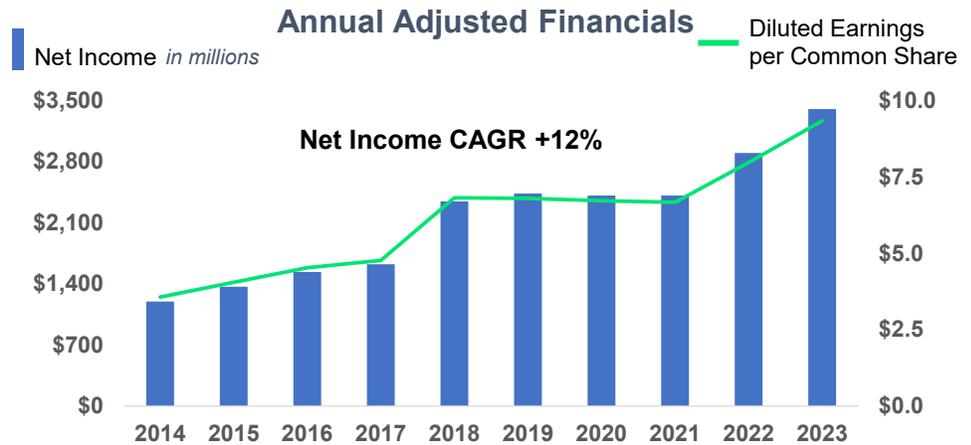
# 4Q 2023 Highlights & Commentary

(ADV and open interest (OI) stated in contracts, except for cash markets)

## CME Group's strategic execution drove double-digit adjusted earnings growth for the 10<sup>th</sup> consecutive quarter in 4Q 2023

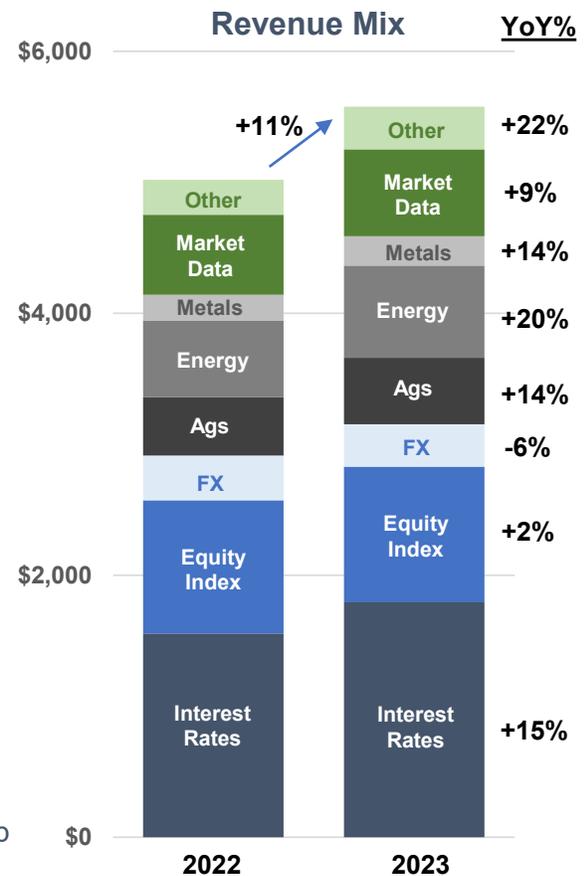
### Adjusted Financials 4Q23 vs. 4Q22

- Revenue up 19%
- Operating Income up 28%
- Operating Margin grew to 66% from 62%
- Net Income up 24%
- Diluted Earnings Per Share up 23%



## CME Group's highly diverse product set positions the company well for varying macroeconomic backdrops

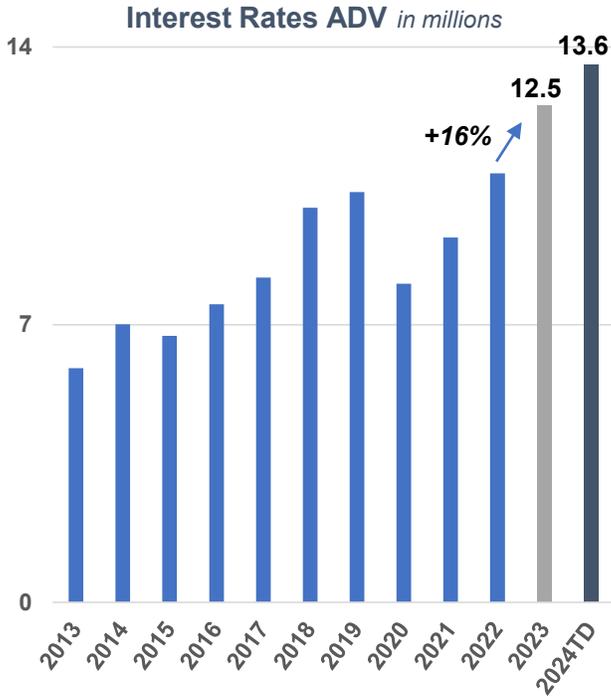
- In 2023, STIR F/O volumes were boosted by significant uncertainty around the pace and magnitude of FOMC target rate hikes, which continued into 4Q as market participants priced in potential FOMC target rate cuts for 2024. Regardless of whether the FOMC target rate is going up or down, volumes are typically higher during periods when the size and speed of rate change is uncertain, as is the case today. Interest Rates ADV was up 16% in 2023 with four FOMC target rate hikes during 1H23, building off record volume levels in 2022. In contrast to the view that a rising rate environment is optimal for our Interest Rates complex, volume growth accelerated since the Fed stopped raising rates in July 2023. In the six months from August 2023 through January 2024, our Interest Rates ADV was up 24% YoY. Furthermore, LTIR F/O ADV rose across tenors as the yield curve saw significant shifts in 4Q
- Even with a substantial decline in equity market volatility from the same period last year, CME Group delivered strong Equity Index ADV of 6.9M, following record ADV levels in 2022, and included record options ADV
- Despite volatility trending down from historically elevated levels in the second half of 2022, FX F&O ADV was up slightly YOY, and EUR FX futures reached record OI in mid December illustrating the continued adoption of EUR futures by institutional customers as well as the deep liquidity available in our marketplace
- Fourth-quarter showed strong performance across all Commodities asset classes with ADV up 21%, and continued robust options activity
  - Geopolitical tension, rising interest rates, slowing global economy, and supply disruption caused by OPEC+ contributed to uncertainty throughout 2023, and global crude oil supply has recovered. In 4Q, activity in the crude oil markets surged due to the outbreak of the Israel-Hamas War and worries of potential supply disruptions developed
  - Uncertainty around weather patterns along with production changes continued to add to Henry Hub price volatility in 4Q



Note - 4Q23 FX includes EBS (~\$33M) / 4Q23 Interest Rates includes BrokerTec (~\$38M) and Interest Rate Swaps Clearing (~\$19M)

- Gold prices reached new highs late in 2023 as the Fed hiking cycle looked to end, helping activity in metals
- Geopolitical tensions, renewable fuel demand and export trends have continued to contribute to significant growth in options volumes across the Grain & Oilseed complex

**CME Group’s diverse product portfolio shined as ongoing market uncertainty and geopolitical factors drove growing demand for risk management across several asset classes in 4Q23**



**4Q23 Interest Rates ADV up 36% to 13.3M, the highest 4Q ADV on record**

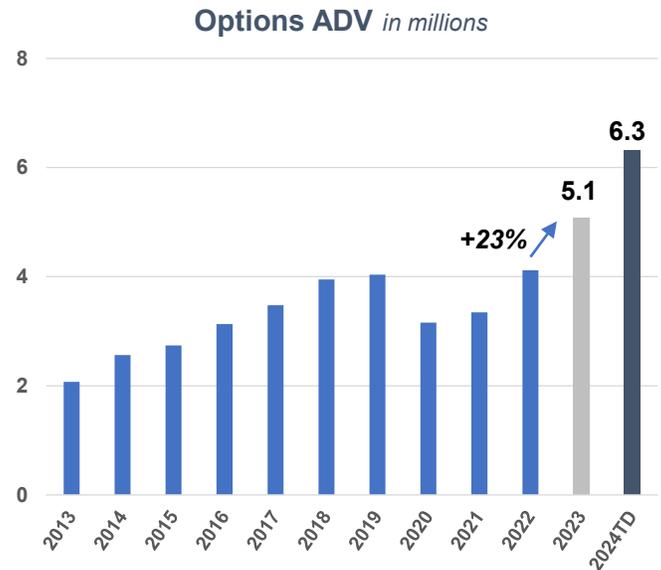
- Record Treasury F/O ADV up 44% to 7.7M
  - Futures up 46% to 6.5M / Options up 33% to 1.3M
  - Quarterly ADV records across 2-Year, 5-Year, Ultra 10-Year, 30-Year Bond, Ultra Treasury Bond, and Micro 10-Year Yield futures
  - Treasury futures OI hit a record 21.4M contracts on 11/24/23
- SOFR futures ADV up 70% to 3.6M
- SOFR options ADV up 88% to 1.7M
- Interest Rates large open interest holders (LOIH) reached a new peak of 3,238 on October 24<sup>th</sup>
- Record quarterly BrokerTec US Repo average daily notional of \$294 billion
- OTC Interest Rate Swap Clearing revenue up 29% YoY driven in part by strong average daily notional cleared in Latin American OTC interest rates swaps of \$51B

**4Q23 Options ADV increased 30% to 5.4M**

- Interest Rates ADV up 26% to 2.9M
- Equity Index ADV up 31% to a record 1.7M
- Energy ADV up 59% to 359K
- Agricultural Products ADV up 38% to 269K
- Metals ADV up 46% to 88K
- Non-U.S. Options ADV up 60% to 1.2M

**4Q23 Equity Index ADV of 6.9M, 34% higher than the recent 5-year annual average, despite 27% lower implied volatility compared with the average over the same 5-year period**

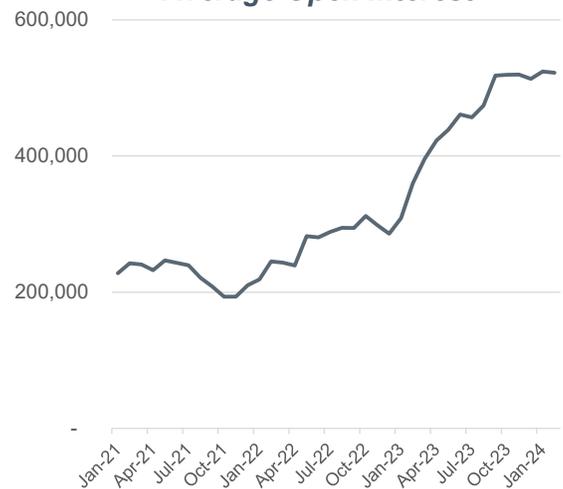
- Record Equity Index options ADV of 1.7M, up 31%
  - Record E-mini S&P 500 options ADV of 1.6M, up 28%
- Premium priced OTC alternative products (including Total Return futures, Commodity Index products, BTIC, Dividend futures and Select Sector futures) continue to gain momentum and added over 104K ADV to the Equity Index activity for 4Q, up 23% YoY



**Energy ADV increased 18% to 2.2M**

- WTI Crude Oil F/O ADV of 1.1M, up 11%
- Henry Hub Natural Gas F/O ADV of 670K, up 42%
- Refined Products F/O ADV of 308K, up 6%
- OI in CME Group’s main WTI contract (CL) plus the Gulf Coast Argus WTI-linked contracts reached 2.1M at quarter-end
- WTI Crude Oil options ADV of 166K, up 36%
- Natural Gas options ADV of 182K, up 82%

**Crude Gulf Coast Futures (HTT/WTT) Average Open Interest**



### Agricultural ADV up 26% to 1.5M, the highest 4Q ADV on record

- Grain and Oilseeds F/O ADV of 1.3M, up 25%
  - Corn ADV up 11%    – Soybean Oil ADV up 10%
  - Wheat ADV up 30%    – Record Soybean Meal ADV
  - Soybean ADV up 32%    up 55%
- Livestock futures and options ADV of 168K, up 32%, including record Live Cattle options ADV of 21K

### Metals ADV increased 20% to 609K

- Precious Metals ADV up 20% to 487K
  - Precious Metals options ADV grew 50% to 83K
- Base Metals ADV up 19% to 121K
  - Aluminum F/O ADV growth of 164%, and represented 7<sup>th</sup> consecutive quarterly ADV record
  - Copper F/O ADV growth of 15%

### 4Q23 non-U.S. ADV of 7.2 million contracts was up 28% and primarily driven by strong growth in Interest Rates and Commodities

- Non-U.S. Interest Rates ADV up 50%
  - EMEA Interest Rates up 59%
  - APAC Interest Rates up 24%
  - Greater LatAm Interest Rates up 63%
- Non-U.S. Agricultural products ADV up 48%
  - EMEA Agricultural up 60%
  - APAC Agricultural up 23%
- Non-U.S. Energy ADV up 39%
  - EMEA Energy up 53%
  - Canada Energy up 57%
- Non-U.S. Metals ADV up 27%

### CME Group continues to innovate and leverage the powerful characteristics of our business model to create more opportunities and provide liquid markets for our current and new clients

Driven by deep and consistent liquidity, efficiency and meeting the market's risk management needs, Interest Rates trading at CME Group hit new records in 2023 across numerous products. €STR and TBA mortgage futures had their debuts in late 2022 and made great progress in building towards critical mass last year, with sequential growth in 4Q23 of 62% and 14%, respectively. In 4Q, we continued to launch new products with both [T-Bill futures](#) and [Monday/Wednesday weekly options expiries for US Treasury futures](#) having launched in October. Other 4Q highlights include:

- Following 3Q23 regulatory approvals, our [enhanced cross-margining arrangement with The Depository Trust & Clearing Corporation \(DTCC\)](#) went live January 23, enabling capital efficiencies for clearing members that trade and clear both U.S. Treasury securities and CME Group Interest Rate futures. With the new arrangement implemented, eligible clearing members of CME Group and the Government Securities Division (GSD) of DTCC's Fixed Income Clearing Corporation (FICC) can now cross-margin an expanded suite of products, including CME Group SOFR futures, Ultra 10-Year U.S. Treasury Note futures and Ultra U.S. Treasury Bond futures, with FICC-cleared U.S. Treasury notes and bonds. Repo transactions that have Treasury collateral with more than one year remaining to maturity will also be eligible. These improved efficiencies increase the CME value proposition and expand clients' capacity for increased risk management and trading
- Announced launch of [€STR options](#) (1Q 2024) - With consistently strong volumes, OI in our €STR futures has continued growing exponentially during 2023 and represented 75% of the total share of market-wide €STR futures OI in Q4. Adding options to our growing €STR futures contracts will provide clients with the first holistic €STR derivatives solution that allows them to navigate continued economic uncertainty and more accurately manage their risk in European interest rate markets

In FX, we announced several efforts related to improving market efficiency and enhancing centralized liquidity

- Announced October 2024 plan (subject to regulatory approval) for a [unified global NDF trading venue](#), combining our two non-deliverable forward (NDF) liquidity pools on the EBS Market platform onto a single trading venue, improving access for global participants while expanding liquidity, improving price discovery and providing operational efficiencies for the marketplace
- Announced 2H 2024 Launch (subject to regulatory approval) of [FXSpot+](#), a new, all-to-all spot FX marketplace that will connect cash market participants with the company's FX futures liquidity. For the first time, spot FX participants will be able to access CME FX futures liquidity in OTC spot terms within an open, transparent, central limit order book environment, while FX futures market users will see expanded access to OTC FX liquidity, increasing trading opportunities across both venues

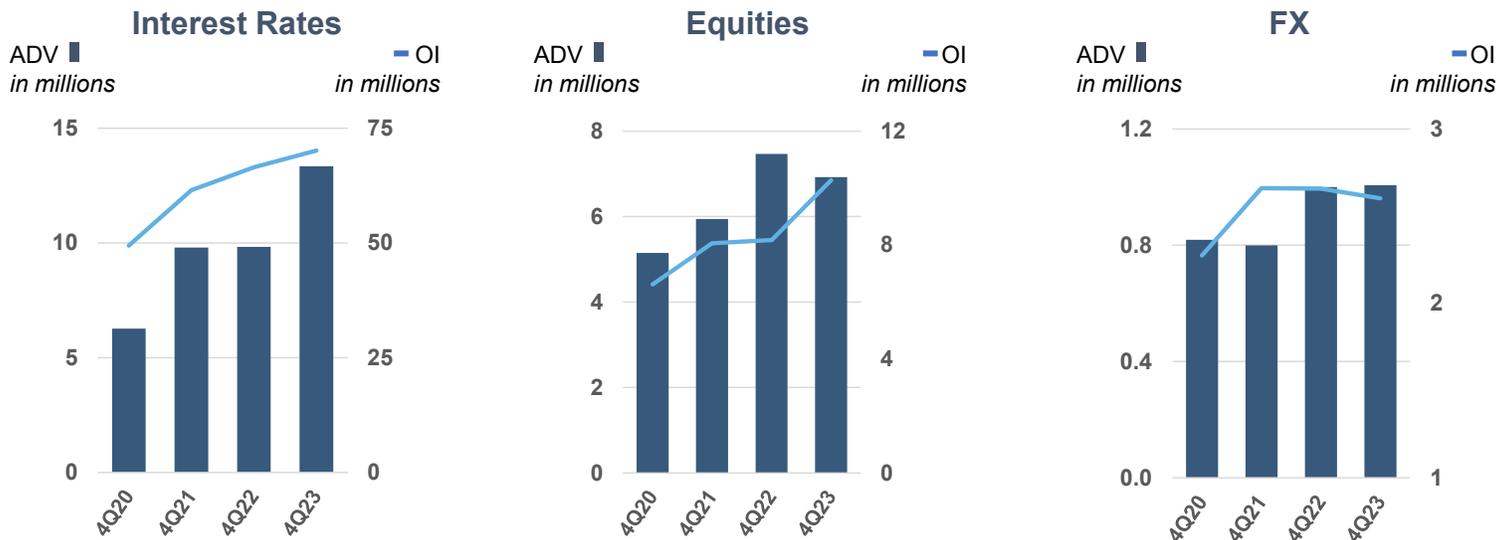
On the Commodities side, options activity continued to surge, with 49% YoY ADV growth in 4Q. Furthermore, environmental products remain a key focus for the future, as CME Group is well positioned with a healthy network of market participants across traditional energy, metals and agricultural benchmark products which bodes well with the inter-relatedness of many of the sustainable products across various commodity asset classes

- Announced the January 22, 2024 launch of [Tuesday/Thursday weekly options expiries for Gold, Silver and Copper](#)
- The launch of [Monday and Wednesday WTI weekly options](#) helped to drive record volume and open interest in 2023, with participation up 44% to 2022 in Q4 alone. Along with the Friday expiry, these contracts allow traders to precisely manage volatility arising from weekend headline risk, OPEC+ meetings, unexpected weather events, cargo loading windows and mid-week announcements
- Following the early 4Q launch of our third and fourth [battery metals futures contracts](#), the asset class continues to grow with year-end OI near 16K

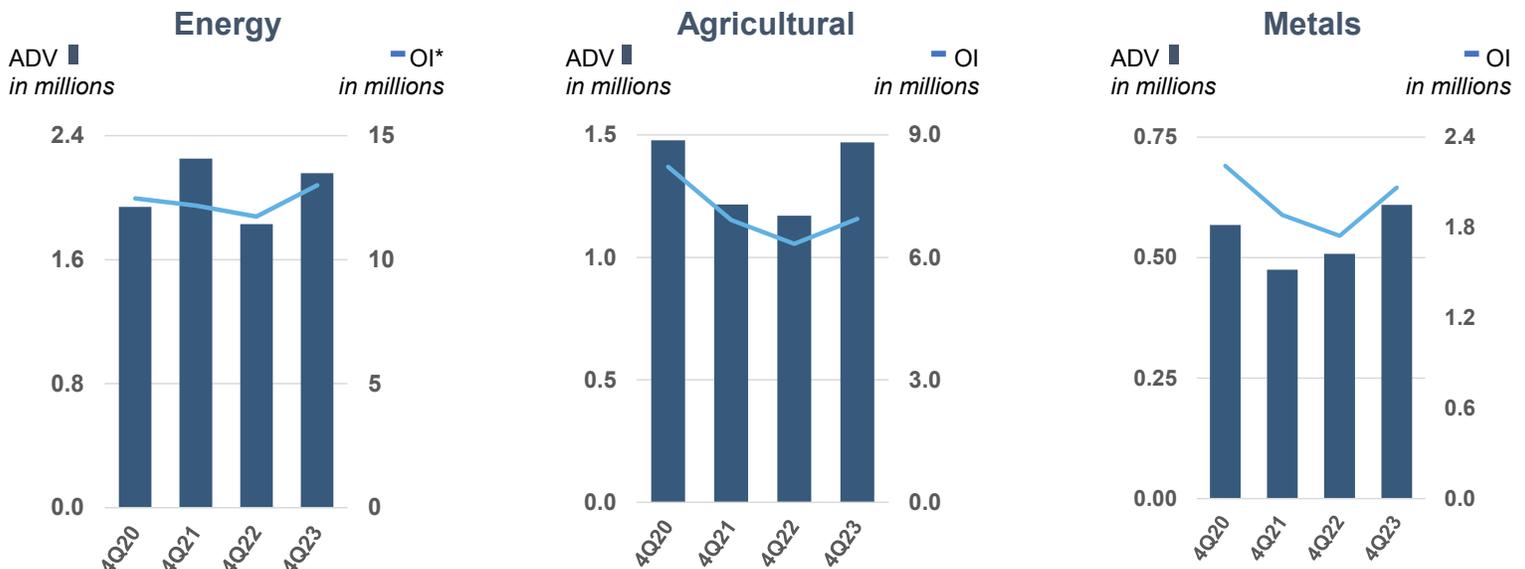
**ADV off to a strong start in 1Q24 to date with January 2024 ADV of 25.2 million, up 16% YoY and the highest January ADV on record**

- Record January Interest Rates ADV of 13.1 million contracts, up 27%
- Record January options ADV of 6.1 million contracts, up 26%

**4Q 2023 Product Detail - Financials**



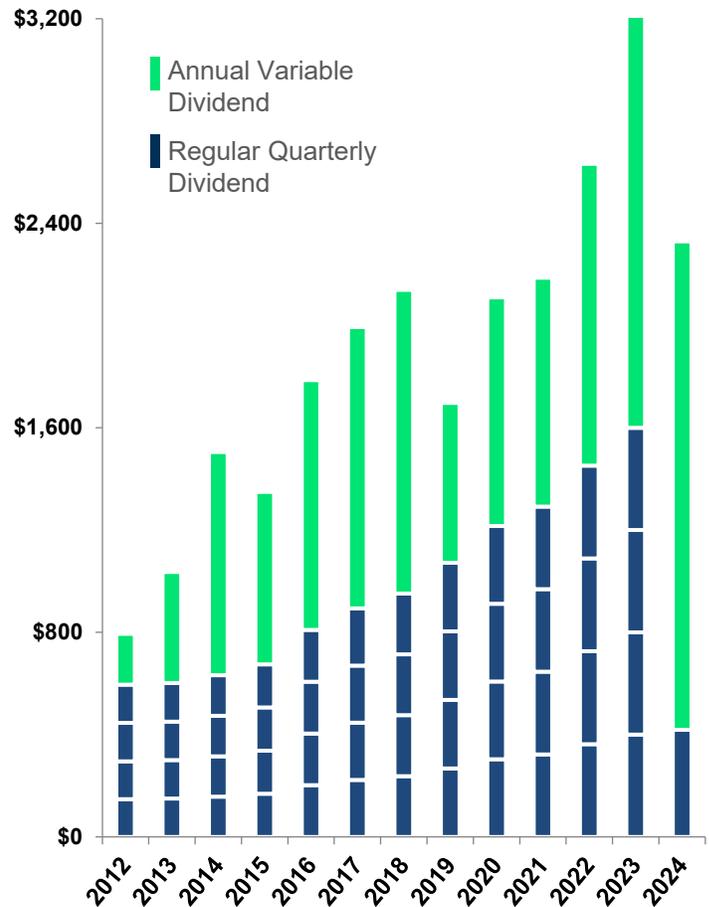
**4Q 2023 Product Detail - Commodities**



## Financial Results

- 4Q23 revenue was \$1.4 billion. 4Q23 clearing and transaction fees revenue totaled approximately \$1.2 billion including ~\$71 million of transaction revenue generated from cash markets businesses (~\$33 million from EBS / ~\$38 million from BrokerTec)
- Overall 4Q23 futures and options RPC was 68.2 cents, down from 70.7 cents in 3Q23, primarily due to higher volume, a lower proportion of commodities products, and an increase in member contribution
- Market Data revenue in 4Q23 was \$167 million, up 9% compared with 4Q22, due to the pricing adjustment that went into effect at the start of the year, as well \$2 million in episodic audit revenue, and slightly higher subscriber counts
- 4Q23 other revenue was \$88 million, up from \$73 million in 4Q22 primarily driven by returns on our non-cash collateral holdings
- 4Q23 expenses on an adjusted basis were \$490 million and \$393 million excluding license fees and approximately \$16 million in cloud migration costs
- 4Q23 adjusted operating margin expanded to 66% up over 400 basis points compared to the same period last year
- 4Q23 adjusted non-operating income was \$155 million, down from \$160 million in 4Q22, primarily driven by lower cash levels held at our clearing house
- The adjusted 4Q23 effective tax rate was 21.7%
- Adjusted net income was \$865 million, up 24% from \$698 million in 4Q22, and adjusted diluted earnings per share were \$2.37
- Capital expenditures for 4Q23 totaled approximately \$23 million
- As of December 31, the company had ~\$3.1 billion in cash (including ~\$175 million deposited with Fixed Income Clearing Corporation which is included in other current assets) and \$3.4 billion of debt. The company declared dividends during 2023 of \$3.5 billion, including the annual variable dividend of \$1.9 billion. The company has returned over \$24.3 billion to shareholders in the form of dividends since implementing the variable dividend policy in early 2012

## Dividends Declared \$ in millions



- On February 8, 2024, the company declared a first-quarter dividend of \$1.15 a 5% increase from the prior level of \$1.10 per share

## Notes & Guidance

### 2023

- Annual adjusted operating expenses, excluding license fees but including \$56 million related to our cloud migration, were approximately \$1.526 billion which was \$9 million below our annual guidance

### 2024

- Full-year adjusted operating expense, excluding license fees but including our investment related to the Google partnership, is expected to be approximately \$1.585 billion
- Full-year capital expenditures, net of leasehold improvement allowances, expected to be approximately \$85 million
- Adjusted effective tax rate expected to be between 23% and 24%

# Financial Results

## Appendix

### Micro Product Quarterly Details

ADV in thousands / RPC in cents except for Micro Crypto

Micro Equity Index Products (including Micro Crypto)	4Q21	1Q22	2Q22	3Q22	4Q22	1Q23	2Q23	3Q23	4Q23
ADV	2,286	3,437	3,319	3,025	2,963	2,725	2,099	2,169	2,250
RPC	17.6	19.7	21.7	21.4	22.2	27.8	31.1	30.6	29.7
% of total Micro Equity Index ADV	38.5%	43.2%	42.8%	40.6%	39.7%	37.3%	33.8%	34.1%	32.5%
Micro FX Products	4Q21	1Q22	2Q22	3Q22	4Q22	1Q23	2Q23	3Q23	4Q23
ADV	49	55	58	67	67	58	44	47	49
RPC	11.1	16.2	19.6	20.7	21.3	20.1	19.1	16.6	20.9
% of total FX ADV	6.2%	6.1%	6.1%	6.1%	6.7%	6.0%	4.9%	4.9%	4.8%
Micro Interest Rates Products	4Q21	1Q22	2Q22	3Q22	4Q22	1Q23	2Q23	3Q23	4Q23
ADV	7	6	6	6	4	5	4	6	8
RPC	NA	NA	NA	NA	17.2	NA	NA	NA	NA
% of total Interest Rates ADV	0.1%	0.0%	0.1%	0.1%	0.0%	0.0%	0.0%	0.1%	0.1%
Micro Energy Products	4Q21	1Q22	2Q22	3Q22	4Q22	1Q23	2Q23	3Q23	4Q23
ADV	79	137	115	128	100	94	99	92	111
RPC	48.4	52.5	53.9	52.3	51.1	53.6	52.5	51.7	50.1
% of total Energy ADV	3.5%	5.5%	6.0%	7.0%	5.5%	4.5%	4.7%	4.3%	5.2%
Micro Metals Products	4Q21	1Q22	2Q22	3Q22	4Q22	1Q23	2Q23	3Q23	4Q23
ADV	53	73	56	55	57	85	95	65	79
RPC	47.1	45.1	47.0	50.1	52.6	49.5	48.8	47.9	48.7
% of total Metals ADV	11.1%	12.3%	11.7%	11.0%	11.2%	13.1%	15.5%	12.3%	13.0%
Micro Crypto Products	4Q21	1Q22	2Q22	3Q22	4Q22	1Q23	2Q23	3Q23	4Q23
ADV	28	39	40	37	28	21	23	14	29
RPC	\$ 1.60	\$ 1.10	\$ 1.01	\$ 0.72	\$ 0.84	\$ 0.55	\$ 0.37	\$ 0.46	\$ 0.34
% of total Micro Equity Index ADV	0.5%	0.5%	0.5%	0.5%	0.4%	0.3%	0.4%	0.2%	0.4%

## Use of Non-GAAP Measures

A reconciliation of the non-GAAP financial results mentioned to the respective GAAP figures can be found within the Reconciliation of GAAP to non-GAAP Measures chart at the end of the financial statements and earnings presentation materials posted in the same area of the Investor Relations page on CME Group's Web site at [www.cmegroup.com](http://www.cmegroup.com).

## Forward-Looking Statements

Statements in this document that are not historical facts are forward-looking statements. These statements are not guarantees of future performance and involve risks, uncertainties and assumptions that are difficult to predict. Therefore, actual outcomes and results may differ materially from what is expressed or implied in any forward-looking statements. We want to caution you not to place undue reliance on any forward-looking statements. We undertake no obligation to publicly update any forward-looking statements, whether as a result of new information, future events or otherwise. Among the factors that might affect our performance are increasing competition by foreign and domestic entities, including increased competition from new entrants into our markets and consolidation of existing entities; our ability to keep pace with rapid technological developments, including our ability to complete the development, implementation and maintenance of the enhanced functionality required by our customers while maintaining reliability and ensuring that such technology is not vulnerable to security risks; our ability to continue introducing competitive new products and services on a timely, cost-effective basis, including through our electronic trading capabilities, and our ability to maintain the competitiveness of our existing products and services; our ability to adjust our fixed costs and expenses if our revenues decline; our ability to maintain existing customers at substantially similar trading levels, develop strategic relationships and attract new customers; our ability to expand and globally offer our products and services; changes in regulations, including the impact of any changes in laws or government policies with respect to our products or services or our industry, such as any changes to regulations and policies that require increased financial and operational resources from us or our customers; the costs associated with protecting our intellectual property rights and our ability to operate our business without violating the intellectual property rights of others; decreases in revenue from our market data as a result of decreased demand or changes to regulations in various jurisdictions; changes in our rate per contract due to shifts in the mix of the products traded, the trading venue and the mix of customers (whether the customer receives member or non-member fees or participates in one of our various incentive programs) and the impact of our tiered pricing structure; the ability of our credit and liquidity risk management practices to adequately protect us from the credit risks of clearing members and other counterparties, and to satisfy the margin and liquidity requirements associated with the BrokerTec matched principal business; the ability of our compliance and risk management methods to effectively monitor and manage our risks, including our ability to prevent errors and misconduct and protect our infrastructure against security breaches and misappropriation of our intellectual property assets; our dependence on third-party providers and exposure to risk through third parties, including risks related to the performance, reliability and security of technology used by our third-party providers and third party providers that our clients rely on; volatility in commodity, equity and fixed income prices, and price volatility of financial benchmarks and instruments such as interest rates, equity indices, fixed income instruments and foreign exchange rates; economic, social, political and market conditions, including the volatility of the capital and credit markets and the impact of economic conditions on the trading activity of our current and potential customers; our ability to accommodate increases in contract volume and order transaction traffic and to implement enhancements without failure or degradation of the performance of our trading and clearing systems; our ability to execute our growth strategy and maintain our growth effectively; our ability to manage the risks, control the costs and achieve the synergies associated with our strategy for acquisitions, investments and alliances, including those associated with the performance of our joint ventures with S&P Dow Jones (S&P Dow Jones Indices LL) in index services and in trade processing/post trade services (OSTTRA), our primary business and distribution partners' actions and our partnership with Google Cloud; variances in earnings on cash accounts and collateral that our clearing house holds for its clients; impact of CME Group pricing and incentive changes; impact of aggregation services and internalization on trade flow and volumes; any negative financial impacts from changes to the terms of intellectual property and index rights; our ability to continue to generate funds and/or manage our indebtedness to allow us to continue to invest in our business; industry, channel partner and customer consolidation and/or concentration; decreases in trading and clearing activity; the imposition of a transaction tax or user fee on futures and options transactions and/or repeal of the 60/40 tax treatment of such transactions; increases in effective tax rates, borrowing costs, or changes in tax policy; our ability to maintain our brand and reputation; and the unfavorable resolution of material legal proceedings. For a detailed discussion and additional information concerning these and other factors that might affect our performance, see our other recent periodic filings, including our Annual Report on Form 10-K for the year ended December 31, 2022 as filed with the Securities and Exchange Commission ("SEC") on February 27, 2023, under the caption "Risk Factors".

### Q&A Conference Call Details:

CME Group will hold a live Q&A teleconference to take questions related to fourth-quarter 2023 results at 8:30 a.m. Eastern Time today. A live audio Webcast of the Q&A teleconference will be available on the Investor Relations section of CME Group's Web site, [www.cmegroup.com](http://www.cmegroup.com). Following the conference call, an archived recording will be available at the same site. Those wishing to listen to the live Q&A teleconference via telephone should dial 1-800-926-7510 if calling from within the United States or +1-212-231-2903 if calling from outside the United States, at least 10 minutes before the call begins.

Analysts and investors are encouraged to review the Company's recent filings with the U.S. Securities and Exchange Commission, as well as the quarterly earnings reference documents posted to the Investor Relations page of CME Group's Web site.