

**Slide 2: Agenda- Ken**

Good morning and thank you for joining us for our fourth quarter earnings conference call. On the call today, Ed Tilly, our Chairman and CEO, will discuss our performance for the quarter and provide an update on our strategic initiatives. Then, Brian Schell, our Executive Vice President, CFO and Treasurer, will provide an overview of our financial results for the quarter as well as discuss our 2023 financial outlook. Following their comments, we will open the call to Q&A. Also joining us for Q&A will be Chris Isaacson, our Chief Operating Officer, Dave Howson, our President, and our Chief Strategy Officer, John Deters.

I would like to point out that this presentation will include the use of slides. We will be showing the slides and providing commentary on each. A downloadable copy of the slide presentation is available on the Investor Relations portion of our website.

**Slide 3: Forward-Looking Statements**

During our remarks, we will make some forward-looking statements, which represent our current judgment on what the future may hold, and while we believe these judgments are reasonable, these forward-looking statements are not guarantees of future performance and involve certain assumptions, risks and uncertainties. Actual outcomes and results may differ materially from what is expressed or implied in any forward-looking statements. Please refer to our filings with the SEC for a full discussion of the factors that may affect 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, after this conference call.

During the call this morning, we will be referring to non-GAAP measures as defined and reconciled in our earnings materials. Now, I'd like to turn the call over to Ed.

#### **Slide 4: Ed Tilly, Chairman and CEO**

Thank you, Ken.

Good morning and thanks for joining us today.

#### **Slide 5: 4Q22 – Record Levels of Record Net Revenue & Adjusted Earnings in Q4 Cap Record Year**

I'm pleased to report on record fourth quarter and full-year results for Cboe Global Markets. During the quarter, we grew net revenue 17% year-over-year to a record \$457 million and adjusted diluted EPS by 6% to a record \$1.80.

These results capped a record year, which saw us grow net revenue 18% to a record \$1.7 billion and adjusted diluted EPS 15% to a record \$6.93. Our outstanding results were driven by strong volumes across our global network, led by our derivatives complex and continued growth in our data and access solutions business.

Our Derivatives business delivered another outstanding quarter, driven by robust performance in our index options franchise, where average daily volume increased 55% year-over-year, while multi-list options trading increased 6% year-over-year to an ADV of 11.2 million contracts.

We saw record volume across our suite of S&P 500 index options products, with fourth quarter ADV in the SPX contract increasing 73% year-over-year to 2.7 million contracts. Our Mini-SPX options contract, known by the ticker XSP and 1/10<sup>th</sup> the size of the SPX options contract, increased 188% year-over-year to an ADV of nearly 66,000 contracts. Additionally, ADV for VIX Options increased 7% year-over-year in the fourth quarter.

During the quarter, net revenue in our Cash and Spot Markets business decreased 5%, while we saw a 13% increase in net revenue for our Data and Access Solutions business, including strong organic net revenue growth of 10% year-over-year.

#### **Slide 6: Top Strategic Growth Priorities**

We continued to execute on the transformational opportunities we saw in our business: Derivatives, Data and Access Solutions, and Cboe Digital. I'll touch on Derivatives and Data and Access Solutions in a moment, but first I want to provide an update on Cboe Digital.

In November we completed the syndication of minority equity interests with a group of 13 firms announced as investor partners in the Cboe Digital business. Our investor partners include many of the most sophisticated and active participants in fiat and digital asset markets globally and contribute to the momentum of the franchise. We are actively onboarding these partners to the Cboe Digital platform and look forward to working together to bring trust and transparency to the digital asset marketplace. Now more than ever, we believe the experience that established market operators provide, with the benefits of their regulated framework, is critical to helping enable the opportunities afforded by this asset class.

With the onboarding of new participants and marketplace evolution, we have seen continued volume increase and industry-leading spreads on Cboe Digital to start the year, with January average daily notional value topping a record \$71 million.

### **Slide 7: Global Derivatives – Extending the Market Potential**

Our Derivatives business delivered strong results as we continued to expand access to our unique product set to customers around the globe leveraging our extended distribution network. For the year, a record 558.4 million SPX contracts were traded, with an ADV of 2.2 million contracts, a 63% increase year-over-year.

We continue to see increased demand from our non-U.S. customers and liquidity providers for the ability to trade or hedge broad U.S. market and global equity volatility conveniently across all time zones, day and night. As a result, we have seen a sizable increase in SPX volume during our Global Trading Hours session with ADV increasing 216% year-over-year during the fourth quarter to nearly 55,000 contracts, capping off a record year for Global Trading Hours with total volumes up three times over 2021 levels. This year is off to an even stronger start as January volumes ran approximately 55% above 2022 levels.

In December, we also added XSP to our Global Trading Hours session, enabling customers to trade this product nearly 24 hours a day, five days a week and providing the ability to adjust positions around the clock with even greater precision and flexibility.

With the addition of Tuesday and Thursday expirations late last year for XSP, both SPX and XSP now offer options that expire every weekday. We continued to see increased demand for same day trading in SPX, with many market participants opening and trading positions on the same day the options expire as they engage in tactical trading strategies around market events. ADV for SPX options opened on the same day of expiration increased 83% throughout 2022 and comprised over 43% of overall SPX volumes in the fourth quarter.

With the utility and flexibility that options provide in any market environment, as well as the varied trading strategies utilized by a diverse customer base, we believe we will continue to see sustained momentum in options trading as customers continue to tap the benefits this product offers.

Turning to our VIX products, ADV for VIX Options increased 7% year-over-year to over 550,000 contracts traded in the fourth quarter. During Global Trading Hours we saw VIX Options volumes increase, with ADV up 72% year-over-year in the fourth quarter, and we have seen strong momentum to start the year as January volumes ran 56% above 2022 levels.

## **Slide 8: Data and Access Solutions – Driving Durable Growth**

Our Data and Access Solutions business posted strong results during the fourth quarter with the integration of our recent acquisitions continuing to fuel the durability of this business. Through our bundled data offerings and cloud strategy we are able to package high-quality data from across our markets and deliver it to customers globally in a consistent and cost-effective manner, extending the reach of our content and the opportunity for this business.

Additionally, we continued to see strong customer uptake of Cboe Global Cloud, a real-time data streaming service that provides simple, efficient access to Cboe's robust suite of market data. We now have 25 customers connected to the service, with 52% of revenue coming from the Asia Pacific region and 38% from Europe. Additionally, many customers are subscribing to multiple data products offered via Cboe Global Cloud. This diverse customer base reaffirms that our strategy of providing simple, efficient access to our market data is resonating with customers who want access to a global set of market data through a single unified service.

Additionally, we have seen solid customer adoption of the Cboe One Canada Feed, a real-time market data feed that provides a comprehensive view of Canadian equities market data, since launching last Fall. As we integrate Cboe Australia and Cboe Japan post-technology migration, we look forward to further expanding our portfolio of market data solutions globally.

## **Slide 9: Building and Unrivaled Global Derivatives and Securities Network**

Through product innovation, thoughtful integration, and superior customer service we continue to expand our ecosystem as we build one of the world's largest and most comprehensive derivatives and securities networks.

In our global FX business, net revenues were up 14% year-over-year in the fourth quarter as the business expanded spot market share to a record 18.4%, with average daily spot notional value traded of nearly \$41 billion. Our non-deliverable forward volumes on Cboe SEF also grew significantly, with annual ADNV of \$836 million last year, compared with \$406 million in 2021.

In Europe, the Cboe Europe Equities business continued to perform exceptionally well with overall market share reaching 24.9% in the fourth quarter. While we saw increased adoption of our services in Europe, it was our Lit order books that predominately drove our market share gains with lit-only market share rising from 21.9% at the start of the year to 27.3% in December 2022.

Additionally, Cboe BIDS Europe remained the largest block trading platform during the fourth quarter, with 34.5% market share of the European block-trading market. At the end of 2022, the BIDS Europe platform had over 600 active traders across 243 buy-side firms and 28 sell-side participants and we expect to have a strong pipeline of new firms this year. This strong foundation of participants utilizing Cboe BIDS Europe will help create opportunities as we continue to expand the Cboe BIDS network around the globe.

Moving to North America, the power of the BIDS network helped propel Cboe BIDS Canada to another record quarter with 65 million shares traded. Overall equities market share in Canada grew to 13.6% in the fourth quarter, while U.S. equities market share was 13.1%.

Turning to Asia Pacific, Cboe Australia market share grew to 17.2% in the fourth quarter, up from 16.1% in the previous year. We remain on track to extend the BIDS network to the region with the launch of Cboe BIDS Australia this month. Our experience bringing BIDS into new markets globally, including Europe and Canada, has enabled us to perfect our approach and we are very excited about the demand we have seen from local participants for this distinctive block-trading platform.

We also remain on track to launch Cboe BIDS Japan in the fourth quarter of this year, further extending our reach of the BIDS network into another key global equity market. Additionally, in Japan we saw our equities market share grow to 3.6% during 2022, up from 2.7% in 2021.

#### **Slide 10: M&A Integration Leading to Long-Term Growth Opportunities**

We continue to be in full integration mode since announcing our last acquisition more than 14 months ago. As mentioned, subject to regulatory approvals, we plan to migrate Cboe Australia and Cboe Japan to Cboe technology this year, with the Australian migration happening later this month alongside the launch of Cboe BIDS Australia. We've been working with our customers closely over the last year in preparation for the migrations and look forward to the benefits of bringing both of these critical markets onto our technology, creating a seamless and consistent experience for clients, and unlocking value for our global market participants.

We have also continued to make solid progress enhancing the framework of our global listings business since welcoming NEO, a Canadian exchange, last year. Our goal is to provide issuers with access to an integrated and global network of capital formation and secondary liquidity while working to harmonize our processes and create efficiencies for our customers around the globe. Building on our strong foundation as the second-largest ETP listing venue in the U.S., we are enthusiastic about both the near and long-term opportunities to grow and expand our Listings business globally and believe we have momentum as we kick off 2023.

#### **Slide 11: Harvesting Investments Across Seasons to Drive Consistent Growth**

We are excited by the many growth opportunities we see across our ecosystem today. Brian will do a deeper dive on this in a moment, but this excitement is fueling our attractive 2023 revenue growth targets. Specifically, we anticipate total organic net revenues will increase in the range of 7-9% in 2023, above our medium-term guidance range of 5-7%. We anticipate that our Data and Access Solutions organic net revenues will grow at a robust 7-10% in the year ahead. While we expect to invest behind the meaningful opportunities we see in the market today, we expect that the investments we make this year will help position Cboe to grow in 2023 and beyond.

I'll turn it over to Brian to share more.

## Slide 12: Brian Schell Title Slide

Thanks Ed, and good day to all of you. Let me remind everyone that unless specifically noted, my comments relate to 4Q22 as compared to 4Q21 and are based on our non-GAAP adjusted results

## Slide 13: 4Q Financial Summary

As Ed highlighted, Cboe posted another incredibly strong quarter to cap off a record year. Adjusted diluted earnings per share for the fourth quarter was up 6% on a year-over-year basis to a record \$1.80. The strong performance was again characterized by the continued growth of our derivatives franchise, as well as a steady contribution from our data and access solutions business. Over the course of the year, we made meaningful progress advancing our numerous initiatives - - plans that spanned multiple asset classes and geographies. We see these investments as driving growth at Cboe, as reflected in our 2022 record results and in the healthy forward outlook we have for our businesses. I want to quickly touch on some of the high-level takeaways from the fourth quarter before delving into the segment performance:

- Our fourth quarter net revenue increased 17%, setting another quarterly record at \$457 million, led by the strength in our Derivatives Markets category and robust results from our Data and Access Solutions business. Specifically:
  - Derivatives Markets produced 33% year-over-year organic net revenue growth in the fourth quarter as innovations like Tuesday-Thursday expirations continued to resonate with customers and fuel same day trading in our SPX complex.
  - Data and Access Solutions net revenues increased 13%, up 10% on an organic basis, finishing a very strong year where DnA organic revenue increased by a very healthy 12%.
  - Cash and Spot Markets net revenues decreased 5% during the quarter, or 7% on an organic basis.
- Adjusted operating expenses increased 28% to \$177 million;
- Adjusted EBITDA of \$292 million, also notched a quarterly high, up 11% from the fourth quarter of 2021;
- And, as noted previously, our adjusted diluted earnings per share was a record \$1.80, up 6% compared to last year's quarterly result.

## Slide 14: 4Q22 Net Revenue by Segment and Key Drivers

Turning to the key drivers by segment. Our press release and the appendix of our slide deck include information detailing the key metrics for each of our business segments, so I'll just provide summary thoughts:

- Our options segment was a standout for the quarter, again delivering the strongest growth with net revenue increasing 35%. The results were driven by robust volumes in our index business and stronger revenue per contract – or RPC – given the favorable mix shift trends:
  - Total options ADV was up 15% as our higher-priced index options ADV increased 55% over 4Q21 levels,
  - RPC moved 25% higher given a continued positive mix shift to index products, and a stronger mix of higher-priced SPX options in our index business,
  - And lastly, we continued to benefit from another quarter of double-digit growth in market data and access and capacity fees, up 34% and 15%, respectively, as compared to 4Q21.
- North American equities net revenue increased by 5% year-over-year. Results benefitted from NEO, which was acquired in June of 2022, contributing \$5.5 million in net revenue during the quarter. In addition, access and capacity fees increased 10% as compared to 4Q21 and market data was up 4%. Net transaction fees fell by 4% given a mixed volume environment across our businesses, softer market share and capture rates.
- The Europe and APAC segment reported a year-over-year decline in net revenue for the fourth quarter of 15%. However, adjusting for a \$5.6 million FX impact given the stronger dollar during the quarter, net revenue fell by a more modest 4% on a constant-currency basis, impacted by softer industry volumes in Europe. The lower activity levels were partially offset by a 5.1 percentage point increase in market share on a year-over-year basis, making Cboe Europe the largest stock exchange in Europe again for the quarter.
- Fourth quarter net revenue decreased 10% in the Futures segment as transaction fees declined 15% on a year-over-year basis. Lower volumes were the primary driver of the decline, falling 16% in the fourth quarter 2022 as compared to the fourth quarter of 2021. Non-transaction revenues continued to tick higher with access and capacity fees up 2% and market data up 25% as compared to 4Q21.

- And finally, net revenues in the FX segment were up a strong 14% as compared to 4Q21, capping a very strong year for FX where net revenues grew an impressive 18%. Net transaction and clearing fees in the fourth quarter benefited from a 21% increase in average daily notional value and higher levels of market share, hitting another quarterly record of 18.4%.

#### **Slide 15: Grew Data and Access Solutions Net Revenue 13% YoY**

Turning now to Cboe's Data and Access Solutions business, organic net revenues were up an impressive 12% for the full year. Net revenues were up 13% year-over-year in the fourth quarter, up 10% on an organic basis. As we have seen in past quarters, net revenue growth continues to be driven by additional subscriptions and units, accounting for over 90% of access fee growth and 58% of the market data growth. In our data and access businesses we saw:

- Robust physical and logical port usage in our options and equities businesses driven by increased demand for trading capacity.
- And on the market data side, the equities top-of-book and options depth of book products continued to perform well. Cboe Global Indices Feed also benefited from some pricing enhancements during the quarter.

In 2023, we anticipate that trends will remain resilient as we are forecasting 7-10% organic net revenue growth for Data and Access Solutions, in line with our medium-term guidance range outlined at our November 2021 investor day.

#### **Slide 16: 4Q22 Adjusted Operating Expenses Up 28%, Driven by Acquisitions and Compensation and Benefits**

Turning to expenses, total adjusted operating expenses were approximately \$177 million for the quarter, up 28% compared to last year. Excluding the impact of acquisitions owned less than a year, adjusted operating expenses were up 21% or \$28 million for the quarter, largely reflecting higher headcount as compared to the fourth quarter of last year, as well as some inflationary comp adjustments and additional incentive compensation in 4Q22.

#### **Slide 17: Adjusted Operating Expense Bridge**



## Expense Guidance

Moving to our expense guidance, we are introducing a full year 2023 expense guidance range of \$769 to \$779 million, this compares to our 2022 expense base of \$652 million. There are three basic components to the year-over-year increase outlined on slide 17 of our earnings presentation that I want to walk through in detail – namely – expenses from 2022 acquisitions, revenue-enhancing investments we are making in our business and core expense growth.

The first component is the normalization for the two transactions, ErisX and NEO, we completed in 2022. We anticipate these deals will add approximately \$36 to 38 million in incremental expenses in 2023.

In our expense base, we are again calling out growth-generating investments we are making given the numerous attractive growth opportunities we see today. These are costs we expect to drive incremental revenue to our bottom line, furthering the robust growth trends we have enjoyed over the past few years. Specifically, we are investing in global listings, DnA expansion, a more aggressive marketing campaign given our 50-year anniversary as a company and targeted R&D efforts across our ecosystem. In 2023, we expect revenue-enhancing investments to be in the range of \$28-30mn, accounting for roughly four and a half percentage points to our 2023 adjusted expense growth.

The last component, and the largest portion of the year-over-year increase, is our core expense growth, totaling approximately \$53-59mn, or 8 to 9% of our expense increase in 2023. I think it is important to understand the moving pieces within our core expense base.

- First, we continue to invest in the infrastructure of our business. As we strengthen our footprint as a multi-asset class, global exchange and services provider, we will continue to invest behind our robust technology offering to deliver a best-in-class client experience. Roughly 2% of our expense growth in 2022 was related to core infrastructure and we would expect a similar contribution this year as we continue to build a cohesive offering around the globe. Facilitating expanded capacity, access and distribution of our products and services globally is important to our success and we will continue to ensure Cboe can meet the needs of our clients.

- Unrelated to our infrastructure spend is an incremental 2 percentage points of expense growth we are attributing to the Consolidated Audit Trail (CAT) project. These costs, which we have limited direct control over, are expected to add an incremental \$10-15mn to our 2023 expense base, based on our initial estimates.
- The remaining core piece is related to our day-to-day cost of doing business. In 2022 we talked about some inflationary pressures impacting these expenses. And while we do still feel some of those pressures today, we expect core, day-to-day expenses to be up a modest 4% in 2023, down from the 7% growth we saw in 2022.

Cboe has enjoyed some of the most consistent and most durable revenue growth, operating margins and earnings generation in the industry. The expense forecast we are providing today highlights the continued investment we are making to sustain those trends moving forward.

To state this more directly, it is because of the investments we have made in our business that we generated record 2022 results and are able to guide to a robust 7 to 9 percentage point increase in organic total net revenue in the year ahead. We believe that the investments we make in 2023 will position us well to generate attractive returns for years to come.

#### **Slide 18: Updated 2023 Guidance**

Now turning to a summary of full-year guidance on the next slide, I want to call out some highlights for 2023 following our record net revenue results in 2022. For Data and Access Solutions we expect net revenue growth to be in the 7 to 10 percent range for 2023, in line with the medium-term guidance of 7 to 10 percent we introduced at our investor day a little more than a year ago.

We expect acquisitions held less than a year to contribute around half a percentage point to total net revenue growth in 2023.

Most importantly, we are guiding our organic total net revenue growth in the range of 7 to 9 percent for 2023. This is above our medium-term guidance of 5 to 7 percent introduced at our investor day a little more than year ago, a

function of our confidence in the durable growth of our business and the progress we are seeing behind the investments we have made to increase the access and distribution of our products and markets globally.

New this year we are introducing an expected contribution of \$27-33 million from minority investments benefiting our other income line. Cboe has made, and will look to continue to make, investments in businesses that align with our strategic vision. Our 4Q21 investment in 7RIDGE with Cboe becoming a limited partner in the acquisition of Trading Technologies is a great example of how we plan to utilize our network of partners to invest in strategic assets. We look for the impact of these investments to become a more regular contributor to company earnings and are providing our best estimate of the benefit we anticipate in 2023.

We are introducing full year guidance on depreciation and amortization of \$48-52 million and expect the effective tax rate on adjusted earnings (under the current tax laws) to come in at 28.5 to 30.5% in 2023.

#### Interest Expense

Outside of our annual guidance, interest expense for the fourth quarter of 2022 was \$15.7 million. Moving forward, we expect interest expense to be in the range of \$14.5-15.5 million for 1Q23.

#### **Slide 19: Efficient Allocation of Capital to Create Long-Term Shareholder Value**

On the capital front, our focus has been, and remains, maximizing shareholder value through the effective use of our capital. In the fourth quarter, we returned a total of \$53 million to shareholders in the form of a \$0.50 per share quarterly dividend and \$15 million in the form of share repurchases. Year-to-date 2023, we've also re-purchased \$30 million of our shares. We remain well positioned to invest in the business, support our dividend, and opportunistically repurchase shares - with \$188 million in remaining capacity on our share repurchase authorization as of January 31, 2023.

Our leverage ratio decreased to 1.5x at the end of the fourth quarter, down from 1.7x at September 30 and from 1.9x from June 30, reflecting our significant growth in earnings as well as the repayment of \$120 million of our term loan facility in 4Q22. And through prudent debt capital markets transactions, we have also locked in low medium to longer term fixed rates, averaging below 3%, on over 80% of our total debt.

Overall, we remain committed to maintaining a flexible balance sheet and striving to put capital to work in the most value enhancing way possible for shareholders. Given where we are today in our capital structure, we plan to shift slightly to prioritize opportunistic share repurchases over further debt paydown given our leverage ratio at 1.5x at the end of 4Q22.

#### **Slide 20: Positioned to Innovate, Integrate and Grow to Create Value**

In summary, 2022 was a tremendous year of record revenue generation and earnings growth. We expect that momentum to continue, fueled by the attractive investments we are making across our ecosystem. We are incredibly pleased with the start to 2023 and look forward to delivering attractive returns to our shareholders in the quarters ahead.

Now I'd like to turn it back over to Ed for some closing comments before we open it up to Q&A.

#### **Closing Remarks**

In summary, Cboe delivered a very strong fourth quarter to close the year. And 2022's record results give us increased confidence that if we continue to invest in high-value growth initiatives that further expand the Cboe ecosystem, we can continue to deliver strong long-term results for investors.

I am also proud of the work we did to advance our corporate ESG initiatives in 2022. We will continue to look for opportunities to support our communities and associates, while driving for a more sustainable future.

I would like to thank our team for the incredible results achieved during the fourth quarter to cap off a fantastic year. As we enter our 50<sup>th</sup> year of business, we are more optimistic than ever about the future. Our history of innovation, client service and good citizenship will be the foundation for building trusted markets for the next 50 years. I am extremely proud to lead this incredible team and organization as we continue to push Cboe to new heights.