

Cboe Technology Integration Customer Conference Call



July 9, 2019

- ❖ **Chris Isaacson, Executive Vice President, Chief Operating Officer**
 - Welcome and update on timeline and key milestones for C1 migration
- ❖ **Andy Lowenthal, Executive Vice President, Co-Head, Markets Division**
 - Business update
- ❖ **Eric Crampton, Senior Vice President and Chief Technology Officer**
 - Update on feature packs across options exchanges
- ❖ **Questions and Answers**
 - Chris Isaacson
 - Andy Lowenthal
 - Eric Crampton
 - Troy Yeazel, Senior Vice President, U.S. Operations
 - Anthony Montesano, Vice President, Market Structure and Functionality

Cautionary Statements Regarding Forward-Looking Information



This presentation contains forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995 that involve a number of risks and uncertainties. You can identify these statements by forward-looking words such as “may,” “might,” “should,” “expect,” “plan,” “anticipate,” “believe,” “estimate,” “predict,” “potential” or “continue,” and the negative of these terms and other comparable terminology. All statements that reflect our expectations, assumptions or projections about the future other than statements of historical fact are forward-looking statements. These forward-looking statements, which are subject to known and unknown risks, uncertainties and assumptions about us, may include projections of our future financial performance based on our growth strategies and anticipated trends in our business. These statements are only predictions based on our current expectations and projections about future events. There are important factors that could cause our actual results, level of activity, performance or achievements to differ materially from those expressed or implied by the forward-looking statements.

We operate in a very competitive and rapidly changing environment. New risks and uncertainties emerge from time to time, and it is not possible to predict all risks and uncertainties, nor can we assess the impact of all factors on our business or the extent to which any factor, or combination of factors, may cause actual results to differ materially from those contained in any forward-looking statements.

Some factors that could cause actual results to differ include: the loss of our right to exclusively list and trade certain index options and futures products; economic, political and market conditions; compliance with legal and regulatory obligations; price competition and consolidation in our industry; decreases in trading volumes, market data fees or a shift in the mix of products traded on our exchanges; legislative or regulatory changes; potential difficulties in our migration of trading platforms and our ability to retain employees as a result of the acquisition of Bats Global Markets, Inc.; our ability to protect our systems and communication networks from security risks, cybersecurity risks, insider threats and unauthorized disclosure of confidential information; increasing competition by foreign and domestic entities; our dependence on and exposure to risk from third parties; fluctuations to currency exchange rates; our index providers’ ability to maintain the quality and integrity of their indexes and to perform under our agreements; our ability to operate our business without violating the intellectual property rights of others and the costs associated with protecting our intellectual property rights; our ability to attract and retain skilled management and other personnel, including those experienced with post-acquisition integration; our ability to accommodate trading volume and transaction traffic, including significant increases, without failure or degradation of performance of our systems; misconduct by those who use our markets or our products; challenges to our use of open source software code; our ability to meet our compliance obligations, including managing potential conflicts between our regulatory responsibilities and our for-profit status; damage to our reputation; the ability of our compliance and risk management methods to effectively monitor and manage our risks; our ability to manage our growth and strategic acquisitions or alliances effectively; restrictions imposed by our debt obligations; our ability to maintain an investment grade credit rating; impairment of our goodwill, investments or intangible assets; and the accuracy of our estimates and expectations. More detailed information about factors that may affect our actual results to differ may be found in our filings with the SEC, including in our Annual Report on Form 10-K for the year ended December 31, 2018 and other filings made from time to time with the SEC.

We do not undertake, and we expressly disclaim, any duty to update any forward-looking statement whether as a result of new information, future events or otherwise, except as required by law. Readers are cautioned not to place undue reliance on these forward-looking statements, which speak only as of the date hereof.

The planned migration of the Cboe Options Exchange is subject to regulatory review. All planned dates and timelines are subject to change without notice.

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C1 technology migration planned for October 7*

- ❖ New physical connections to the C1 platform accepted
- ❖ C1 will have dedicated network infrastructure and customer connections separate from U.S. equity, options and futures exchanges
- ❖ Equinix offering waiver for initial cross connect install fee and up to six months of Equinix monthly recurring charges
- ❖ Cboe will not bill for connections prior to October
- ❖ Contact your Equinix representative directly to obtain paperwork for waivers

- ❖ Alternate Equinix Contact: Greg Nelson, Account Director
 - Phone: 312-994-3906
 - Email: gnelson@equinix.com

C1 certification and production environments available for testing

- ❖ All C1 TPHs, vendors and ISVs must certify to the new platform
- ❖ Logical order entry sessions created in new production environment
 - Based on logins in use on the legacy C1 platform as of April 2
 - Port settings from legacy Cboe platform were not carried over
 - Firms can now order additional logical ports or request unnecessary ports be deleted in the new production environment
- ❖ Daily production trading with test symbols ongoing
- ❖ PAR 3.0 planned to launch with the C1 migration
 - Certification of the new floor support technology will be required for each floor broker group

Six weekend tests scheduled leading up to final migration

- ❖ All TPHs with a floor presence are required to participate in the **final** production readiness weekend test in addition to at least one other test
- ❖ TPHs must certify in the C1 certification environment before participating in weekend tests
- ❖ Additional weekend test added on September 28 to functionally test the secondary (DR) data center for the new C1 platform
- ❖ DR logical sessions available on a continual 24x7 basis
- ❖ Successful first weekend test on Saturday, June 15
 - FLEX trades submitted via Cboe Silexx trader workstation
 - Cboe LiveVol supplied information for the data walls
 - VIX settlement enhancements worked as planned
 - Identified potential challenges and plan to resolve prior to July 27 test
- ❖ Thank you to the customers that participated in our first weekend test

Six weekend tests scheduled leading up to final migration

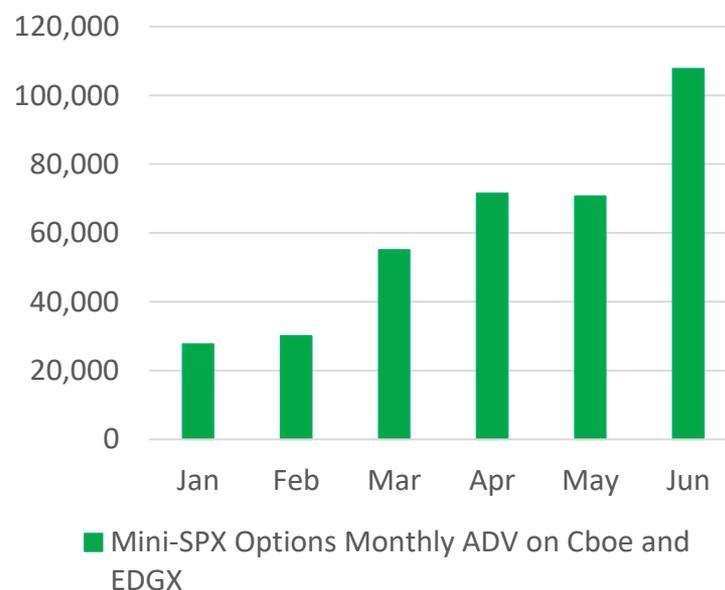
Upcoming weekend test dates:

- **July 27**
 - **August 24**
 - **September 14**
 - **September 28** (DR)
 - **October 5** (the final Saturday before migration)
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- ❖ OPRA and OCC to participate in each weekend test
 - ❖ Customers should participate in as many weekend tests as possible
 - ❖ Notify the OCC one week in advance of the weekend test if you want to reconcile trades from a weekend test with the OCC
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- ❖ Cboe Trade Desk:
 - Phone: 913-815-7001
 - Email: tradedesk@cboe.com

We remain focused on our commitments to product innovation, seamless trading solutions and leading-edge technology

- ❖ Organizational changes to Cboe Markets Division to streamline our operations, enable us to better align our products and services with your needs
- ❖ Expanded SPX product complex with listing of Mini-SPX options on Cboe EDGX Options Exchange
- ❖ Volume and trading flow developed on EDGX, while volume in mini and standard sized contracts at Cboe also up, increased use of FLEX options
- ❖ In June, total volume, average daily volume and open interest for Mini-SPX options on Cboe and EDGX reached new all-time highs
- ❖ As part of C1 migration, Cboe Silex will replace current CFLEX order entry system
 - Contact: silex-sales@cboe.com

Mini-SPX Options Monthly
ADV in 2019



Feature packs aim to unify functionality across our four options exchanges

- ❖ First seven feature packs have been deployed
- ❖ **Feature pack seven:** Relates to global trading hours (GTH) and the opening process
 - **June 17:** GTH for DJX options available on C2 Options Exchange
 - **June 27:** GTH for Mini-SPX options available on EDGX Options Exchange
 - New price-forming opening process, with supporting order entry and protection features and market data changes introduced
- ❖ **Feature pack eight*:** Enhancements to complex crossing
 - Testing now available in BZX, C2 and EDGX Options certification environments
 - Will include: Market and Limit on Close orders;
 - Complex AIM and Complex QCC available only on EDGX Options Exchange
 - **Available July 12**
- ❖ **Feature pack nine*:** Complex orders with stock legs
 - Testing now available in EDGX Options Exchange certification environments
 - **Available July 29**

Integration website houses all resources related to C1 migration

- ❖ Technical specifications
- ❖ Comprehensive FAQ
- ❖ Planned migration timeline
- ❖ Platform change matrix
- ❖ New platform features
- ❖ Downloadable implementation guides
- ❖ Information on previous and upcoming customer calls

- ❖ batsintegration.cboe.com/c1

Our team is hard at work and remains focused on executing a seamless technical and operational integration

- ❖ New certification environment available for testing
- ❖ Logical order entry sessions created in new production environment, customers should be reviewing existing logical ports on new platform
- ❖ Daily production trading with test symbols ongoing
- ❖ Successful first weekend test on June 15, next weekend test on July 27
- ❖ Successfully rolled out seven of nine feature packs
- ❖ **July 12:** Feature pack eight will go live on BZX, C2 and EDGX Options Exchanges*
- ❖ **July 29:** Feature pack nine will go live on EDGX Options Exchange*
- ❖ Work on PAR 3.0 is underway, demos available at Post 10
- ❖ **October 7:** Planned migration for C1*, there will be no parallel production period
- ❖ For all information, visit: batsintegration.cboe.com/c1

Q&A





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