Cboe Global Markets

Technology Integration
Customer Conference Call

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CORPORATE PARTICIPANTS

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Anthony Montesano – *Vice President, Market Structure and Functionality*

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PRESENTATION

Operator
Good day, everyone, and welcome to the Cboe Global Markets technology integration customer conference call. All participants will be in a listen-only mode. Should you need assistance, please signal a conference specialist by pressing the star key followed by zero.   After today's presentation, there will be an opportunity to ask questions. The Q&A is intended for customers only. To ask a question, you may press star and then one on your touchtone phones. To withdraw your question, you may press star and two. Those listening through the webcast may submit questions throughout the event by typing your question in the submit question box on your screen. Questions will be addressed after the prepared remarks have ended. Please note today's event is being recorded. At this time, I would like to turn the conference call over to Gary Compton, Vice President of Corporate Communications at Cboe Global Markets. Please go ahead.

Gary Compton
Thank you, operator, and thank all for your time today.

Joining us for today's call are Chris Isaacson, Executive Vice President and Chief Operating Officer, Andy Lowenthal, Executive Vice President and Co-Head Markets Division, and Eric Crampton, Senior Vice President and Chief Technology Officer.

Following their prepared remarks, we will hold a Q&A session for customers only. Also joining us for the Q&A will be Troy Yeazel, Senior Vice President, U.S. Operations, and Anthony Montesano, Vice President, Market Structure and Functionality.

Customers on the phone can queue up for questions by following the operator instructions at the end of today's remarks. If you are online, you may submit a question via the box and "submit question" button on the right-hand side of your screen.

If you are a journalist or analyst, please reach out to our corporate communications and investor relations teams and they will address any questions you may have separately.

As a preliminary note, you should be aware that this presentation contains forward-looking statements, which involve some risks and uncertainties; actual results may vary. Please refer to our filings with the SEC for more detailed information about the risks and uncertainties.

Also note that references made to the planned migration of the Cboe Options Exchange are subject to regulatory review. All planned dates and timelines are subject to change without notice.

Now I would like to turn the call over to Chris Isaacson.

Chris Isaacson
Thank you, Gary. And welcome everyone; thank you for joining us today for the call.

The planned migration of the Cboe Options Exchange, or C1, to Bats technology is now under three months away and we are sprinting toward the October 7 finish line. This will be our penultimate customer call. We plan to host our final migration customer call on September 12. It is critical that you continue to engage with us and share feedback as we work alongside you during your final preparations for the C1 migration.

Like we did on our last call in May, I will cover the timeline and milestones, Andy will provide a

business update, and Eric will touch on our continued rollout of the nine feature packs. With that, let's get right to the timeline.

As we have highlighted previously, we are accepting new 1G and 10G physical connections to the new C1 platform. C1 will have a dedicated network infrastructure and customer connections separate from our other U.S. equities, options and futures exchanges.

Please note that Equinix is offering a waiver for the initial cross connect install fee and up to six months of the Equinix Monthly Recurring Charges for cross connects run to the new C1 latency equalized network. Please be sure to contact your Equinix representative directly to obtain the paperwork necessary to receive the waivers. And, of course, Cboe will not bill for these connections prior to October.

Also, do not hesitate to reach out to Greg Nelson, Account Director at Equinix, with any additional questions you may have about these waivers. His email address is gnelson@equinix.com.

All C1 TPHs, vendors and ISVs must certify to the new platform. If you have not done so, now is the time to get connected and to order certification logical sessions using the Logical Port Request Form available on the Customer Web Portal. This is the first step in your ability to test in advance of the migration.

Logical order entry sessions (FIX, BOE, or BOE Quoting) have been created for each participant in the new production environment. The customer order entry sessions in the new production environment were created based on logins in use on the legacy C1 platform as of April 2.

By now, you should have reviewed your logical order entry sessions on the new platform to ensure the number of ports is appropriate and default settings are acceptable. Port settings from the legacy Cboe platform were not carried over to the new Bats technology platform. Any sessions existing on the new platform will become billable in October.

Firms are also now able to order additional logical ports or request unnecessary ports be deleted in the new production environment within the Customer Web Portal.

Daily production trading of test symbols in the new C1 NY5 production environment is ongoing and we encourage you to participate and begin testing as soon as possible. We hope you will take advantage of the certification and production testing environments to conduct numerous wide-ranging tests to ensure you are properly prepared for migration.

Regarding the PAR workstations on the trading floor, the Cboe Floor Support Team continues to work with users to prepare for the final migration. The second phase, or PAR 3.0, which is planned to launch with the C1 migration, will integrate with Bats technology and will incorporate exchange platform changes that are expected to enhance order handling and market data delivery to PAR.

Product demonstrations and opportunities to interact with PAR 3.0 are available at the Reporting Desk at Post 10 throughout the rollout period as new functionality is added.

We remind our on-floor TPHs that new tools will replace those that are currently used to review and manage order history, clearing records and printed tickets, in addition to PAR functionality. Training sessions will be scheduled with each floor broker group and certification of the new floor support technology will be required for each group. We also remind our Market-Maker firms that

MMTN messaging will be part of the certification.

Leading up to migration, we will conduct a series of six weekend tests in the new C1 production environment. 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 in advance. TPHs must certify in the C1 certification environment before participating in weekend testing.

Please note that since the last call, we've added an additional weekend test on September 28 specifically to allow customers to functionally test the secondary, or disaster recovery, data center for the new C1 platform, which is in Chicago. Additionally, basic connectivity testing to the new DR logical sessions is available effective immediately on a continual 24x7 basis.

We held our first weekend test on Saturday, June 15. The test encompassed both floor and electronic trading. FLEX trades were submitted via the Cboe Silexx trader workstation and Cboe LiveVol supplied the information for the data walls. As we have noted on our last call, we also simulated a VIX settlement featuring the planned enhancements to the opening process used to calculate the settlement price for VIX futures and options and the data that is available and disseminated during the auction process on expiration days for VIX derivatives.

We have updated all our technical and process specifications to reflect the planned enhancements to the VIX settlement, which include additional pre-open transparency through auction messages, new order types designed specifically for the settlement auction, and a systematic cutoff at a specified time for other order types. I encourage you to read the latest notices and specifications for all the details and specifications.

For a first test, we were extremely pleased with the results on June 15. Fourteen customers participated and their readiness for the test and engagement during it was encouraging. The VIX settlement enhancements worked as planned, and like any productive test, we identified some potential challenges that we're troubleshooting and plan to have resolved by the next weekend test a few weeks from now. All in all, it was a huge success. I would like to offer a special thank you to those customers that participated in this first pivotal weekend test.

We now look forward to our next weekend test on July 27. And following that, we will have monthly tests leading up to the migration in October - on August 24, September 14, September 28 and October 5, the final Saturday before migration. Please ensure these testing dates are on your calendar if you have not already made note of them.

To facilitate effective testing, OPRA and OCC will participate in each weekend test. Customers should plan to participate in as many of these weekend tests as possible. If customers want to reconcile trades from a weekend test with the OCC, they need to notify the OCC one week in advance of the weekend test to arrange this testing.

If you have a question related to notifying the OCC, or a migration question in general, please reach out to the Cboe Trade Desk at 913-815-7001 or tradedesk@cboe.com.

Now I will turn it to over to Andy to share a brief business update.

Andy Lowenthal
Thanks Chris, and let me add my welcome to everyone on the call today. It is nice to speak with you all again. I would like to share three quick updates, starting first with some organizational changes to our Markets division, which is led by Bryan Harkins and me.

Arianne Criqui, Senior Vice President and Global Head of Derivatives and Global Client Services will now oversee both our options and future business lines with John Palmer, leading our multi-list and proprietary product option strategy, and Matt McFarland, heading up our futures effort.

Rob Hocking, Senior Vice President, moves over to head our Multi-Asset Solutions Division, which focuses on providing seamless trading solutions to customers through product development, index creation, data analytics and education.

And lastly, a few weeks ago, we were pleased to announce the appointment of Adam Inzirillo as Head of our U.S. Equities business. Adam joins Cboe from Bank of America Merrill Lynch, where most recently he served as Managing Director, Head of Order Routing and Execution Products.

We believe these organizational changes further streamline our operations and enable us to better align our products and services with your needs.

Shifting gears, I would like to provide an update on our mini-SPX contract, or XSP, which I first highlighted on our call back in March. I shared with you then that we were looking forward to expanding our SPX product complex with the additional listing of XSP options on our Cboe EDGX Options Exchange in April.

We have been encouraged, not only by the initial traction we are seeing XSP gain on EDGX, but also the continued growth of the mini and standard size SPX options on C1. Particularly noteworthy is that the growth is being driven, in part, by increased use of FLEX options.

XSP options, at 1/10th the size of the standard SPX contract, provide an alternative to SPY options. We believed putting the retail-focused mini-SPX contract on our retail-focused EDGX Options Exchange would be an attractive offering to customers, and three months in, we are seeing volume build and trading flow develop.

We have been equally pleased to see continued growth in XSP options at C1, and in particular, increased institutional interest in the contract. This volume uptick in the mini contract is occurring alongside continued growth in the standard-size SPX contract. In short, we are pleased to see new volume flowing into each of the three.

In June, total volume, average daily volume and open interest for XSP options on C1 and EDGX combined reached new all-time highs. Total volume was 2.2 million contracts, ADV was nearly 110,000 contracts and open interest peaked at more than 3 million contracts.

In SPX options, total volume in June was 25.7 million contracts and ADV of 1.3 million contracts was up six percent from a year ago. Open interest was more than 20 million contracts, its highest level since December 2018.

One final note before handing it over, as part of the C1 migration, Cboe Silexx will replace the current C-FLEX order entry system. To become familiar with the new system, current C-FLEX users should request Certification and Production login credentials. Production login credentials are required to participate during weekend tests. To request login credentials, or for any other Cboe Silexx inquiries, please contact silexx-sales@cboe.com.

I will be happy to take any questions at the conclusion of our prepared remarks, but for now, I will hand it over to Eric, who will discuss the remaining feature packs in detail.

Eric Crampton

Thanks, Andy. Rollout of the feature packs is ongoing. As we've mentioned previously, the nine feature packs are in preparation for the C1 migration, and are being rolled out in an effort to unify our options functionality as much as possible across our four options exchanges.

The first seven feature packs have now been deployed, with feature pack seven, global trading hours and the opening process, launched on the C2 Options Exchange for Dow Jones Industrial Average Index options (DJX) on June 17 and on Cboe EDGX Options Exchange for mini-SPX options (XSP) on June 27.

The GTH session for both runs from 8:30 a.m. until 9:15 a.m. Eastern Time.

Additionally, a new price-forming opening process, along with supporting order entry and protection features and market data changes were introduced for all products on C2 and EDGX Options Exchanges.

Turning to the final two feature packs…

Testing for feature pack eight is now available in the BZX, C2 and EDGX Options Exchange certification environments and is planned to go live later this week on Friday, July 12.

Feature pack eight will introduce enhancements to complex crossing. Specifically, it will include: Market and Limit on Close orders; Complex AIM and Complex QCC will be available only on the EDGX Options Exchange.

Feature pack nine, which relates to complex orders with stock legs, is currently available in the EDGX Options Exchange certification environment. We are planning a weekend test for feature pack nine on Saturday, July 27, the same day as our next C1 weekend test. We plan to release feature pack nine on Monday, July 29. For all the latest information, refer to Integration website. With that, I'll hand it back to Chris.

Chris Isaacson

Thanks Eric.

As Eric just mentioned, I would like to remind you of the integration website at batsintegration.cboe.com/C1. It is where you can find all of the resources related to the C1 migration, including the technical specifications, an FAQ, the planned migration timeline, the platform change matrix, new platform features and downloadable implementation guides. The website also continues to be the source to find complete information on our series of customer calls - dates, times and call-in or webcast details for upcoming calls, along with archived materials from previous calls.

We are regularly adding to and refining the resources on the integration site, so I encourage you to look there often for updates.

As always, we have covered a lot today on the call, so before we begin the Q&A session, let me quickly recap the key points we touched on.

It will be a critical three months as we prepare for the planned C1 migration to Bats technology on October 7. The deadline is quickly approaching, and we still have work ahead of us. Rest

assured we are laser-focused on delivering on the target date of October 7. We will continue working closely with you to ensure you are ready for day one.

As a reminder, the new certification environment is available for testing. All C1 TPHs and vendors/ISVs must certify to the new platform using BOE or FIX, so we encourage all participants to connect as soon as possible if you have not done so already.

Logical order entry sessions have been created in the new production environment. And customers should be reviewing existing logical ports on the new platform.

Daily trading of test symbols in the new C1 production environment is ongoing. We encourage you to participate and begin testing as soon as you are able.

Our first weekend test on June 15 was a big success and we are looking forward to our next weekend test on July 27. There will be a weekend test each month leading up to migration in October and we strongly encourage you to participate in as many as possible.

The first seven of our nine feature packs have been rolled out. Later this week, on July 12, we will go live with feature pack eight, which relates to complex crossing. And we are planning to launch feature pack nine, which is related to complex orders with stock legs, on July 29.

Work is underway on PAR 3.0, the second phase of upgrades to the PAR workstations on the trading floor. Product demonstrations and opportunities to interact with PAR 3.0 are available at the Reporting Desk at Post 10 throughout the rollout period. Training sessions will be scheduled with each floor broker group, and certification of the new floor support technology will be required by each group.

And, as a reminder, the C1 migration to Bats technology on October 7 will be a hard cut-over without a parallel production period.

Finally, you can find the complete information and resources related to the C1 migration at our dedicated migration website, batsintegration.cboe.com/C1.

As always, our team is hard at work on this migration and remains focused on executing a seamless technical and operational integration. As we enter these final three critical months, we will continue working alongside you to ensure you are making the necessary preparations to be ready on day one. The more feedback you can share with us along the way, the better we will be able to assist you throughout the certification and testing phases in our lead up to October 7.

With the migration of C1, we look forward to providing a better trading experience with proven technology that seamlessly integrates electronic and open outcry trading. We also look forward to being able to provide our customers with a single, world-class trading experience across all our equities, options and futures markets.

Working with all of our customers, our goal is to continue defining the markets of tomorrow through cutting-edge technology that meets your evolving needs.

Before I hand it over to the operator to begin the Q&A session, I am going to ask Troy Yeazel to answer the questions that were submitted online ahead of the call.

Troy Yeazel
Thank you, Chris. We have three questions that came in.

Starting with question number one: Will the Early Trading Hours (ETH) session continue to be supported on the new platform? If so, would members need separate credentials or can existing credentials be used? And will there be any differences between how ETH works today compared to post migration?

The answer to this question is yes, but note the early trading hour session is now referred to as the Global Trading Hours session (or GTH) trading session. One benefit of the new platform is that new and different logical order entry sessions are no longer required to participate in the GTH session. Additionally, and as a result one material change will be that once the GTH session concludes, open orders will no longer be cancelled back and will transition to be queued to participate in the Regular Trading Hours (RTH) opening process.

Question number two: It looks like the new flip process will be done via Cboe Web API. Do you by chance know if a spec similar to the current flip process will be built for the flip messages to go back to C1?

The answer is that while the current C1 platform allows for clearing edits to be submitted via FIX, as noted in the Platform Change Matrix, this support will only be available via the Cboe Secure Web API on the new C1 platform. This will unify support for this functionality to be common with how clearing edits are electronically managed on C2, EDGX and BZX Options today. Support for manual Clearing Edits will also be available within the Customer Web Portal.

Question number three: The new C1 Bats FIX spec does not specify the length of ExecID (17) that is the equivalent of the RTC Transaction ID field. Will there be a change from the current C1 RTC Transaction ID field which is seven characters?

The answer is yes, the ExecID field on the Bats technology platform, will be set to nine characters in length.

With that, let me turn it over to our operator to begin the Q&A session.

QUESTIONS AND ANSWERS

Operator
Ladies and gentlemen, we will now begin the question and answer session. To ask a question, you may press star and then one on your touchtone phones. If you are using a speakerphone, we ask you to please pick up your handset before pressing the keys. To withdraw your question, you may press star and two. You can also submit your questions through the webcast by typing your question in the submit question box on your screen. At this time, we will pause momentarily to assemble the roster. Once again, if you would like to ask a question, please press star and one.

Chris Isaacson
Operator, at this point, there are no questions online.

Operator
And ladies and gentlemen, I am also showing no questions on the audio side.

CONCLUSION

Chris Isaacson
Well, hearing and seeing no questions, I just want to thank everyone for joining the call today regarding this pivotal migration. We know we have had many calls, many feature packs and that there is a lot of information for you to go through to prepare for this migration, we appreciate all your effort. We ask that you continue to give us your input and critical feedback and make sure you are ready to participate in those weekend tests that are coming up fast and furious. Thanks again for joining us on the call and have a great day.

Operator
Ladies and gentlemen, the conference has now concluded. Thank you for attending today's presentation. You may now disconnect your lines.