

CBOE Holdings
Technology Integration Customer Conference Call
Tuesday, June 6, 2017
11:30 am – 12: 30 pm CT

Slide 1: Cover Slide

Operator introduction: Welcome to the second CBOE Holdings technology integration customer conference call.

[Operator script/instructions]

Please note this event is being recorded. I would now like to turn the call over to CBOE Hannah Randall, Director of Communications at CBOE. Please go ahead.

Slide 2: Agenda

HANNAH RANDALL: Thank you operator. Good morning all and thank you for your time.

Joining us for today's call are:

Chris Isaacson, Chief Information Officer
and **Eric Frait**, Vice President, Business Analysis

Following their prepared remarks, we will hold a Q&A session for customers only. Also joining us for the Q&A will be:

Eric Crampton, Senior Vice President, Global Head of Software Engineering
Troy Yeazel, Senior Vice President, U.S. Electronic Trading Operations
Anthony Montesano, Vice President, Trading Operations

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're 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.

Slide 3: Cautionary Statements Regarding Forward-Looking Information

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. Now, I'd like to turn the call over to Chris Isaacson.

Slide 4: Welcome

CHRIS ISAACSON: Thank you Hannah, and a second welcome to everyone on the call. I'll share a number of updates on our integration plans today.

As we said on the first call, our team is focused on executing a seamless technical and operational integration, and we are committed to ensuring you continue to enjoy the same great trading experience and customer service you've always had with CBOE and Bats.

To that end, I want to reiterate that your continued feedback, opinions, ideas and questions are welcome at every level of CBOE.

On today's call, Eric will provide a business update on the CBOE-Bats integration and I'll outline the next stages of the technology and operations integration, which begins with the migration of CBOE Futures Exchange (CFE), followed shortly after by C2, the first of the legacy CBOE options exchanges to move to Bats technology. With that, I'll turn it over to Eric.

Slide 5: Integration Update

ERIC FRAIT: Thank you Chris, and welcome to everybody on the call today. I'd like to take this opportunity to provide an early progress report on our integration.

Now into our fourth month as a combined company, our teams are working together to leverage the strengths across both organizations to bring a better experience to our customers.

We've reconfigured our combined business development and sales operations teams to leverage our expanded product line and geographic reach. Bats had a greater physical presence in New York and Europe, enabling us to significantly increase boots on the ground in those locations as we begin cross-promoting a broader product line globally. We've consolidated our New York and London offices, merged our account management coverage across business lines and are integrating our global sales force to more efficiently reach you and improve your customer experience.

Additionally, we have greatly expanded and reconfigured our research and product development area to comprehensively approach the tremendous opportunity we see for increased innovation. We recently launched the Multi-Asset Solutions Division to apply CBOE's innovation expertise to a much broader array of products and services.

The new Division incorporates Product Development, Market Research and Information Solutions, which includes Indexing, Data and Analytics, and Execution Services. This integrated approach positions our team to innovate across product lines and geographies and to collaborate with market participants, from index providers and customers to new partners, such as ETP issuers.

And, of course, our technology transition is well underway, led by CFE and followed by C2 and CBOE. When the migration of the CBOE exchanges to Bats technology is completed, you will have the ability to trade using a single platform with access to a variety of market models and execution venues, offering the greatest possible breadth of products available in the global marketplace today.

In the end, we believe this trading efficiency on a state-of-the-art platform, combined with our innovative product and services offerings and commitment to providing the best customer service, will give you an unparalleled trading experience.

We hit the ground running on March 1, but, as you know, the technology integration is a multi-year initiative. We will remain in close contact with you as we work through this process. It is our intention to communicate regularly and to be as transparent as we can. Please reach out to anyone on our team, at any time, with any questions or concerns you may have.

I'll be happy to take any questions later on, but for now, I'll hand it back to Chris who will provide a couple of updates before sharing the specifics on the integration plan for C2's migration.

Slide 6: EDGX Complex Book Update

CHRIS ISAACSON: Thanks, Eric. Before we dive into C2 migration details, I want to update everyone on the planned launch of Bats EDGX complex order book (aka COB) and our progress on the CFE migration.

As announced last month, we plan to launch new complex order functionality on our EDGX Options Exchange beginning October 23rd, pending regulatory approval. Designed with the goal of creating the most efficient and adaptable complex order book, EDGX's complex order functionality will include new order handling, risk management and trade-through protections. We believe this expanded functionality will be additive to our overall very strong position in the U.S. options market.

I'm especially excited to note that this new functionality will form the foundation for all complex order handling by CBOE markets, once migrated to Bats technology.

We'll be rolling out the COB functionality this fall. On August 1st, we'll begin certification testing and on September 16th and October 21st, we'll conduct weekend testing, before the October 23rd go-live on EDGX Options.

For additional information and to see the technical specifications, please refer to our complex order book microsite at www.bats.com/COB.

Slide 7: CFE Migration Update

Turning to CFE's migration, as announced on our March 29th call, we are targeting a go-live date of February 25th, 2018. Work is progressing well and we remain on schedule.

On that call, we provided a detailed roadmap and schedule, so, quickly, I want to highlight some upcoming planned key dates. Beginning July 3rd, CFE TPHs may begin to request access to the Customer Web Portal, which will provide tools for ordering physical and logical connectivity per the integration schedule. Additionally, firms may begin ordering new physical connectivity directly into the latency-equalized network infrastructure for the new CFE production trading platform.

In September, CFE TPHs may begin ordering logical ports within the new certification environment, and basic connectivity testing using new CFE certification logical ports in NY5 will be available. These CFE certification logical ports can be used for heart beating and limited functional testing of the Bats technology platform within the certification environment in NY5.

Beginning October 16th, full functional testing of the new trading platform within the certification environment will be available. All CFE TPHs and Vendors/ISVs must certify to the new platform, so we encourage all participants to do this as early as possible starting in October. This will ensure your readiness for the migration.

In November, we will start CFE weekend dress rehearsals for CFE TPHs. We encourage all customers to participate in one or all of these Saturday tests.

The dates for these tests are: November 18th, December 9th, January 20th, February 10th and February 24th. Also starting in November, we will allow TPHs to trade test symbols in the new CFE production environment each and every day. We strongly encourage customers to use these daily testing opportunities along with the scheduled weekend tests.

Lastly, I'd like to remind CFE TPHs to refer to the integration website where you can find all the resources related to CFE's migration, including the timeline, the platform change matrix, technical specifications and a host of other materials. As a reminder, the URL for the website is batsintegration.cboe.com/cfe.

Slide 8: C2 Roadmap

Turning to C2 Options Exchange, C2 will be the second CBOE market to migrate onto Bats technology with a targeted switch-over date of Monday, May 14th, 2018. Until then, C2 will continue to operate as it does today. The migration date for CBOE onto Bats technology will be announced at a later date.

Today we published a C2 Technical Integration FAQ. Topics include connectivity, certifications, market data and billing. In September, we plan to issue updated technical specifications and a platform change matrix summarizing all C2 platform feature updates. Both will be posted to the integration website which can be found at batsintegration.cboe.com/c2.

C2 customers will be allowed to utilize latency-equalized connectivity to existing Bats markets to access the new C2 platform for both certification and production. Customers can start ordering cross connects for C2 on August 1st, heartbeat to C2 certification on November 1st, and start certifying to the new platform on December 1st.

Finally, throughout the first quarter of 2018 and running into the second quarter, there will be a number of technical dress rehearsals to ensure preparedness for C2's switch-over on Monday, May 14th, 2018.

These dress rehearsal dates can be found on the integration microsite and are February 24th, March 17th, April 14th, and May 12th for reference. It's also important to note, starting March 5th 2018, we will allow customers to trade test symbols/series in the new C2 production environment on a daily basis. We strongly encourage customers to use these daily testing opportunities in addition to the weekend tests.

Slide 9: C2 Roadmap (cont.)

It is worth stating that while C2 is migrating to Bats technology, there are no plans to change its existing priority and allocation method for single-leg orders. C2 will continue to be straight Pro-Rata without any Market Maker or Customer Priority overlays. However, the matching algorithm for complex orders will change to prioritize complex orders ahead of single-leg orders at a given price. There are no anticipated changes to trading hours.

As is the case with CFE, most order types and functionality will be supported by Bats technology. This is based on customer demand, so I would like to take this opportunity again to ask all of you to maintain an open dialogue with our business development and operations teams so we can create a marketplace that best serves your trading needs. We plan to provide more details within the new technical specifications when we make them available in September.

We see no need for existing C2 TPHs to complete new registration materials. We anticipate each TPH will have a single permit and in situations where a firm has multiple permits, they will likely be consolidated.

Slide 10: Order Entry and Clearing

Once C2 migrates, the existing concept of a login will be eliminated in favor of logical order entry sessions (BOE or FIX).

Each TPH may maintain as many of these sessions as they are willing to purchase.

These order entry sessions allow for a substantially higher message bandwidth, as well as for multiple Executing Firm IDs (or EFIDs) to be associated with a session for clearing purposes.

EFIDs must be associated with a session and submitted to properly identify the clearing relationships for each respective order. These will be managed by the Trade Desk.

As highlighted in our March customer call, the Bats FIX and BOE order entry protocols will be the standard protocols for C2.

Slide 11: Market Making and Quoting

C2 Market Maker Registrations, currently referred to as appointments, will continue to apply on a product basis following the migration to Bats technology, though from that point onward, they will be completed using the CBOE Bats US Customer Web Portal.

Market Maker quoting obligations will remain unchanged following the migration, but if any decisions are made to change these obligations, we will provide ample notice.

Post migration, only C2 appointed Market Makers will be allowed to utilize BOE Bulk ports, which will replace the current C2 quoting interface.

All essential C2 Quote Risk Management (or QRM) functionality will be migrated to Bats technology. Management of these controls will be available using the Risk Management Tool within the CBOE-Bats U.S. Customer Web Portal or through the Secure Web API.

The details of QRM can be found in the Risk Management specification, which will also be made available on the integration microsite in September.

Slide 12: Data Center and Disaster Recovery

As with all CBOE trading platforms, C2 will be relocated to Equinix NY5 after its migration. In addition, we will allow all customers to access C2 and all the Bats equities and options platforms from a single cross connect.

C2 will remain in its current location at NY4 until its migration in May 2018.

After that date, CBOE will maintain a network Point-of-Presence (PoP) in NY4 indefinitely so that current C2 TPH physical connections in NY4 can continue to be used to access C2 to test and connect to the exchange, albeit with slightly higher latency.

In addition, TPHs will also be able to use the Bats PoP in NJ2 to access C2 once it is moved to NY5.

Further, existing Bats latency equalized connectivity in NY5 may be used to access C2 once it moves to the same location.

We encourage you to use existing latency equalized access to NY5, or to order new latency equalized connectivity, to ensure the fastest access. It's worth noting that TPHs can use one connection for both order entry and receipt of market data.

Until the new trading platforms are activated for live production trading, physical ports dedicated to C2 will not be assessed a fee.

Finally, as it pertains to our Business Continuity and Disaster Recovery Plans, there are no planned changes to our Disaster Recovery centers in Chicago prior to the completion of migration. The CBOE, C2 and CFE DR markets will remain in 400 South LaSalle and all of the Bats markets will remain in 350 East Cermak. Customers will be able to access any of our Chicago DR markets from either 400 South LaSalle or 350 East Cermak to allow maximum reuse and connectivity of your DR infrastructure.

TPHs using legacy physical connections in Chicago to access the new C2 platform will be required to either use public IP address space, or change their private addressing to ranges assigned by the CBOE Bats NOC.

Slide 13: Certification and Connectivity

Since C2 will run on Bats technology, it is important to note that all existing C2 certification sessions are being decommissioned and cannot be used to certify to the new trading platform. There will be no automatic transfer of certification sessions from the legacy platform to the new platform.

Once a firm has established physical connectivity within either the NY5 or NY4 data center, free of charge certification order entry, market data and drop sessions may be requested via the Logical Port Request form found on the Customer Web Portal. Firms must specify any desired port settings other than the port defaults. These defaults can be found in the FIX or BOE specifications located on the Integration microsite.

Firms can trade all symbols available in production on their certification sessions. We expect firms to complete sufficient unattended testing prior to a formal Trade Desk certification appointment. This can be secured by emailing the Trade Desk at tradedesk@bats.com. You must include in that email a completed certification questionnaire, which will also be provided on the Integration microsite.

All firms will be required to certify for basic functionality, including establishing and maintaining connectivity, order entry and disconnect recovery. Firms should certify for all functionalities they expect to use, but are only required to certify for order types and order modifiers they intend to use in production.

Notwithstanding C2's migration to Bats technology, firms certified on one of the legacy Bats exchanges must still complete additional certification for C2. It is important that all participants are properly certified for functionality unique to the exchanges to which they will be submitting production orders.

Slide 14: Post Certification Checklist

Post-certification, please be aware of the following. Once certified, firms will receive an emailed copy of their completed certification script. From that point, firms will be able to request and connect to FIX or BOE sessions created in the production NY5 data center with those functionalities enabled.

It is important to note that on February 5th, a snapshot of a firm's existing logins on the legacy C2 platform will be taken. For every FIX and CMI2 login that exists on that date, a production FIX session and BOE session will be created on the new C2 platform.

All new production sessions will be created with the Bats default session settings – regardless of any prior production or certification settings. Firms may request updates to default port settings for logical sessions that are automatically created via the Customer Web Portal and may also request adjustments to default settings anytime a new session is requested.

A list of default port settings will be included in the certification script and is also available within the FIX and BOE specifications located on the integration website. Firms can also view all their ports and port settings through the Customer Web Portal, within the Port Status tool.

Slide 15: Billing

As is the case today, C2 will issue a bill to TPHs for all transaction and non-transaction fees, which will be collected through the OCC.

However, billing will be migrated to the same system used to support all existing Bats U.S. equities and options exchanges, with invoices accessible through the CBOE-Bats U.S. Customer Web Portal.

Preview versions of the new C2 invoices for transaction fees will be distributed in advance of invoice updates at a date to be announced. These previews will be drafts only, allowing you time to prepare for the new look of the invoices.

It is worth noting that banking information for all exchanges will remain the same.

Slide 16: Summary

We've given you a lot of information in relatively short order, so while the operator prepares for questions, I'd like to sum up the most salient points at this stage...

Our team remains laser focused on executing a seamless technical and operational integration.

We remain committed to ensuring you continue to enjoy the same great trading experience and customer service you've always enjoyed working with CBOE and Bats.

The complex order book functionality will be launched on our EDGX options exchange on October 23rd. Our microsite at bats.com/COB has complete details.

Our migration of CFE to Bats technology is progressing well and remains on track for our planned February 25th, 2018 launch. The next key milestone occurs in July when TPHs can begin requesting access to the Customer Web Portal and ordering new physical connectivity. Our microsite at batsintegration.cboe.com/cfe has details.

C2 will be the second market to migrate onto Bats technology with a target date of Monday, May 14th, 2018, following shortly after CFE. Until their respective switch-overs, both markets will operate as they do today. Our microsite at batsintegration.cboe.com/C2 has these details.

Our detailed integration roadmap, including C2, along with a host of other resources, will be available on the main integration website today.

Please don't hesitate to contact our business development or operations teams with any questions you have on the integration.

With that, I'll hand the call over to our operator to begin the Q&A session.

Slide 17: Q&A

[OPERATOR INSTRUCTIONS FOR Q&A]

OPERATOR: This concludes our Question and Answer session. I would like to turn the conference back over to Chris Isaacson for closing remarks.

CHRIS ISAACSON: Thank you operator, and thank you all once again for dialing into today's call. As with everything we do, your continued input, ideas and guidance are critical and we are grateful to enjoy such thoughtful and additive conversations with you all. Our phone lines and emails remain open for you throughout this process. With that, have a great afternoon.

OPERATOR: The conference call has now concluded. Thank you for attending today's presentation. You may now disconnect.

-END-