

Cboe Global Markets, Inc.
Second Quarter 2020 Earnings Call - Prepared Remarks
July 31, 2020

Operator: Good morning everyone, and welcome to Cboe Global Markets' second quarter 2020 earnings conference call.

At this time, for opening introductions, I would like to turn the call over to Debbie Koopman, Vice President of Investor Relations.

Debbie Koopman - VP, Investor Relations

Good morning and thank you for joining us for our second quarter earnings conference call. On the call today, Ed Tilly, our Chairman, President and CEO, will discuss the quarter and provide an update on our strategic initiatives. Then, Brian Schell, our Executive Vice President and CFO, will provide an overview of our financial results and provide updated 2020 guidance for certain financial metrics. Following their comments, we will open the call to Q&A. Also joining us for Q&A will be our Chief Operating Officer, Chris Isaacson and our Chief Strategy Officer, John Deters.

In addition, 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.

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 course of 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.

Ed Tilly, CEO

Good morning. Thank you for joining us this morning. Before I begin, I would like to extend my sincere best wishes for the ongoing health and wellbeing of each of you and your loved ones as we continue to navigate these challenging times.

I am pleased to report solid financial results for the second quarter of 2020 at Cboe Global Markets, clearly highlighting the strength of the diversification of our revenues. Our strong results were driven by record trading volumes in U.S. cash equities and multi-listed options, fueled by growth in retail trading activity, and by continued growth in market data revenues.

You'll note I did not mention our proprietary products. I will cover those in a moment, but I want to pause here to quote a 2016 press release entitled "CBOE Holdings Agrees to Acquire Bats Global

Markets to Strengthen (the company's) Global Position in Innovative Tradable Products and Services, and Achieve Meaningful Cost and Operational Efficiencies.”

We went on to say in that release that “the [Bats] transaction will significantly expand CBOE Holdings' product line across asset classes, broaden its geographic reach with Bats' strong pan-European equities and global FX positions, and diversify its business mix with significant non-transactional revenue.” And that “CBOE expects to utilize Bats' leading proprietary trading technology by migrating trading in all of the combined company's markets onto a single, proven platform.” End quote.

This brief trip down memory lane will frame today's remarks, because no quarter more emphatically illustrates the fruits of a strategy that began four years ago than the second quarter of 2020, both in terms of our near-term financial results and in enhancing our long-term franchise value.

Our proprietary products are key to that strategy, but we have built upon them and created new revenue streams to grow in tandem with them. Our growth strategy has not changed since the close of our transformational deal; expand our product line across asset classes, broaden our geographic reach, diversify our business mix with recurring revenue and leverage our technology advantage. Let's take a look at the quarter through the lens of those growth drivers.

The Bats acquisition enabled us to strengthen our product set with new asset classes for Cboe, including U.S. and European equities and global FX, and to expand our market for multi-listed options.

Our expanded product line left us well positioned to offset unique challenges to trading in our proprietary products, in a truly unprecedented environment, with record activity in U.S. cash equities and equity options. Furthermore, these products provided the foundation to invest in scaling our proprietary market data to drive recurring revenue streams, extend our presence further across the value chain into equities clearing, and broaden the reach of our core services into a new adjacent geography – examples of investments made just this year to date.

As discussed on previous calls, we've continued to methodically strengthen equities trading at Cboe through the implementation of new trading mechanisms and market enhancements and by leveraging the ability to cross sell and competitively price our expanded offering. We saw those efforts pay off in the second quarter when U.S. equities trading at Cboe increased 82 percent over the previous year for an all-time quarterly ADV high of 2.0 billion shares traded.

Continued uptake in our Retail Priority program helped drive the record results. You'll recall we created Retail Priority to help improve execution quality and trading outcomes for individual investors and firms that facilitate their orders. Retail Priority orders have increased each month since their launch on Cboe EDGX in November 2019, and represented 12% of shares executed on Cboe EDGX in the last two months.

In another example of our focus on equity product innovation, we recently filed a proposal with the SEC to launch periodic auctions on our BYX Exchange, similar to our Cboe Europe offering. Cboe Europe Periodic Auctions, a lit order book that runs auctions throughout the day, is designed to enable investors to quickly find liquidity and trade large quantities of stock with low market impact. It has proved popular among market participants after launching in 2015 and remains the leading European periodic auction, accounting for around 2 percent of daily order book trading in European equities. We believe the U.S. market will also value executing trades in a venue designed to provide minimal market impact.

Turning now to record trading in equity options. As you know, multi-listed options trading became highly competitive over the past decade in a market that became increasingly crowded with new entrants. We remained committed to being a leader in the space through the operating leverage inherent in our business model, as equity options trading represented both incremental volume and revenue, complementing our proprietary product line.

With that backdrop, it was something of a revelation when we were kicking the tires at Bats and saw the enviable profitability they achieved in equity options by leveraging the efficiencies of their superior technology. The addition of EDGX and BZX options to Cboe and C2 meant we could not only compete with a broader array of market models, but that we could offer all four markets on the same advanced technology, further expanding our profit margin. This operating leverage provides differentiated investment capacity and the flexibility to further capitalize on the opportunities inherent in each of our strategic growth drivers.

In addition to expanding our product line by asset class, we continue to expand and leverage our global footprint. As you know, we closed our acquisition of EuroCCP on July 1st, which enhances our European equities offering and enables us to extend our business into trading and clearing European derivatives. We plan to launch Cboe Europe Derivatives in the first half of 2021 with futures and options on six key European equity indices.

The development of derivatives products and markets is a sweet spot for us, and we see a significant opportunity to expand the market for European equity derivatives through the introduction of a transparent, efficient, lit pan-European market. Our entire team is excited to bring our derivatives expertise to the European marketplace.

We also announced our plans in Q2 to acquire MATCHNow, Canada's largest Alternative Trading System, which will enable us to broaden our North American equities business and expand our geographic reach. MATCHNow offers a profitable, innovative equities platform in a key capital market and a strategic pathway to build a more comprehensive equities platform in Canada. As I discussed earlier, this step into Canada demonstrates our commitment to profitable global expansion, thereby strengthening our combined offering, contributing to incremental scale and allowing us to reach important new market participants. We expect to close the deal this quarter.

Slide 10: Diversify Business Mix with Incremental Recurring Revenues

Another promise we made to the marketplace through our acquisition of Bats was to optimize and diversify our business mix with recurring revenue through trading tools and market data services that help attract repeat users to our markets. We've worked to steadily increase the market data revenues afforded us by the Bats deal, while successfully building out Cboe Information Solutions, our comprehensive suite of data solutions, analytics and indices. So much so that non-transaction related services were a key driver of our second quarter revenue growth.

Understanding risk has never been more important, and the groundwork we laid over the past few years enabled us to effectively respond to the heightened demand for historical datasets and sophisticated analytics. And we continued to expand our toolbox. Last quarter we discussed our recent acquisitions of Hanweck and FT Options, which similar to our previous Silexx investment, highlight our commitment to investing in tools to grow the utility of our product suite and markets.

In June, we acquired Trade Alert, a real-time alerts and order flow analysis service provider, which allows us to deliver real-time trade data, market information and Cboe content directly to customers. Importantly, our integration of Trade Alert along with Hanweck and FT options now allows us to interact with the client throughout the life cycle of a transaction -- pre-trade, at-trade, post-trade -- with insights, alpha opportunities, portfolio optimizations and seamless workflows.

Each of these investments complements and strengthens our comprehensive suite of data and analytics solutions, and we've made great strides on their integration and optimization. We have enhanced LiveVol and Silexx with Hanweck volatility and Greek data and have seen demand increase for Trade Alert, especially since our acquisition. We're also incorporating Hanweck data within our growing indices offering and plan to use Hanweck to drive real time data in Silexx, beginning this quarter.

Turning now to our proprietary products. As noted, we grew our quarterly revenues and earnings despite an unprecedented environment that offered institutions limited opportunity to trade volatility or broad-based indexes.

The COVID-19 pandemic continues to severely impact the global marketplace. The failure thus far to contain the virus in the U.S, recent increases in unemployment and historic declines in GDP, among other key events, continued to drive elevated levels of market uncertainty.

The average daily closing price of the VIX index in 2Q 2020 was 34.5. A higher quarterly value than any quarter over the past 5 years and levels not observed since the 2008 financial crisis. We are finding that the increased levels of uncertainty that drove institutional investors to de-risk and resulted in record volumes in the first quarter are now keeping institutional investors on the sidelines, waiting for more clarity around the longer-term impacts of the COVID-19 virus. This resulted in lower second quarter volumes for most of our proprietary products compared to record first quarter numbers. As we've said before, when these participants have clear views on where the market is headed, we expect to once again see elevated volumes.

We continued to see uptake, however, in our Cboe iBoxx iShares High Yield Corporate Bond Index futures, where we've seen gradual but steady market adoption since their launch in 2018. In response to investor demand, we recently announced our planned launch of Mini-VIX futures on August 10th, subject to regulatory review. The smaller VIX futures contract is designed to provide additional flexibility in volatility risk management and greater precision when allocating among smaller, managed accounts. iBoxx and Mini-VIX futures exemplify our ability to continue to expand our proprietary product offering.

In other proprietary product news, Cboe further strengthened its strategic relationship with FTSE Russell by extending its 2015 exclusive licensing agreement through 2030. We are excited to continue to work side-by-side with FTSE Russell in providing exclusive access to a suite of Russell derived products. The extension of our agreement further solidifies Cboe's vantage point as the home to every major index provider.

Turning now to the trading floor. On June 15th we successfully and safely reopened the C1 trading floor and resumed hybrid trading. The return to Cboe's best-in-class hybrid trading once again provides investors unparalleled access to liquidity across the wide range of Cboe products.

Our ability to quickly transition to an all-electronic trading environment, then to reconfigure our floor for a safe and orderly re-opening is a credit to the ongoing collaboration with our trading floor

community. I would like to thank them for their efforts and willingness to work with us through those two historic “firsts.”

I would also like to thank the entire Cboe team for a great quarter, despite a backdrop of a global pandemic that continued to proliferate alongside a historic uprising against racial injustice. The spotlight on racial inequity, past and present, has prompted us as a team to listen, reflect and define how Cboe can play a greater role in the solution by supporting organizations that fight for social justice and by redoubling our efforts internally to strengthen our culture of diversity and inclusivity.

Our continued ability to generate positive financial results, reward shareholders, create new products and services, close highly strategic deals and integrate new teams and services, all within an environment we could never have imagined, is a testimony to the expertise, discipline and competitive spirit of the Cboe team.

Our disciplined approach and technology advantage have enabled us to expand and enhance our products and services, which include additional streams of complementary recurring revenue, reinforce our leading industry operating efficiency, and provide the flexibility to invest, organically and inorganically, in new growth vectors to sustain underlying momentum in the business.

Thank you, and with that I will turn it over to Brian.

Brian Schell, CFO

Thanks Ed, and good morning everyone. I hope everyone and their families are remaining safe and healthy. And I'd also like to thank all of the Cboe associates for their hard work and dedication in helping make these results possible.

Let me remind everyone that unless specifically noted, my comments relate to 2Q20 as compared to 2Q19 and are based on our non-GAAP adjusted results. As Ed noted, we reported strong financial results for the quarter, highlighting the diversification of our revenue streams and the contributions from our investments, delivering on our strategic initiatives:

- Our net revenue increased 5%, with:
 - net transaction fees up 2%, and
 - non-transaction revenue up 7%;
- Adjusted operating expenses decreased 7%, which combined with our revenue growth, resulted in adjusted EBITDA growth of 9%, resulting in an expanded margin of over 71%;
- The adjusted EBITDA margin on incremental net revenue was 127%;
- And finally, our adjusted diluted earnings per share increased 16% to \$1.31.

We grew our quarterly recurring revenue stream of proprietary market data and access and capacity fees by 8% compared to second-quarter 2019, slightly above our prior guidance. This increase includes over \$3 million in market data revenue attributed to our first-quarter acquisitions of Hanweck and FT Options. Organic growth was 10%, which excludes the acquisitions and the shift of approximately \$1 million in revenue reported in access and capacity fees in 2Q19, which is now reported in transaction fees as well as the temporary realignment of fees associated with the trading floor closure of over \$3 million. The growth in proprietary market data and access and capacity fees continued to be driven by incremental subscriptions and units, accounting for 83% and 69% of the growth this quarter, respectively.

In our last call, we noted that certain floor broker access and capacity fees were suspended due to the temporary floor closure and that we implemented comparable transaction-related fees targeted to achieve a neutral net revenue impact, all else remaining equal. This action shifted revenue in the second quarter, resulting in incremental transaction fee revenue associated with higher RPC for our index options and lower access and capacity fees. In conjunction with the floor reopening, certain floor broker fees were reinstated. Looking ahead, we now expect the underlying organic growth for the proprietary market data and access and capacity fee category to be mid-single digit; however, we now expect the reported growth rate for these non-transaction fees to be in the mid-to-high single digits versus our previous guidance of low-to-mid single digits, reflecting the reinstatement of certain fees as well as the acquisition of Trade Alert.

Now, a review of our segments.

In our options segment, the 7% or \$10 million increase in net revenue reflects growth in net transaction fees driven by our multi-listed options as well as higher market data revenue. Cboe's expanded suite of information solutions services accounted for the growth in options market data revenue, benefiting from our recent acquisitions. The average daily volume (ADV) for multi-listed options rose 57%, hitting a new quarterly high, while RPC fell 12%. The RPC decline primarily reflects higher volume rebates and a shift in volume mix compared to the second quarter of 2019. The ADV for index options declined 18% while the RPC increased by 18%, resulting in a 3% decline in index options net transaction fees. The index RPC increase was mainly due to a shift in volume mix as well as the impact of the temporary fee realignment I referenced earlier and the SPX fee increase implemented earlier this year. Assuming all else remains equal, we would expect index RPC to decline slightly in the third quarter, reflecting the reversal of certain second-quarter fee changes post the floor reopening.

Turning to futures, the 36% or \$12 million decrease in net revenue primarily reflects a 44% decline in ADV and relatively stable RPC, offset somewhat by lower royalty fees.

In U.S. Equities, net revenue increased 22% or \$17 million, primarily due to higher transaction fees, with equities volume benefiting from the surge in retail trading activity. Our market share also increased year-over-year, reflecting our focus on innovative products, with particularly strong response to retail priority, as well as enhanced direct marketing programs and greater dialogue with clients. The increase in market data revenue was driven by our higher market share as well as an increase in the total SIP revenue pool.

Net revenue for European Equities decreased 6% on a U.S. dollar basis and 2% on a local currency basis, reflecting lower market volumes and lower market share, offset somewhat by higher net capture. The higher capture resulted from continued strong periodic auction and LIS volume. The net revenue decrease reflects a 13% decrease in transaction fees and a 14% increase in non-transaction revenue. The growth in non-transaction revenue reflects increases in access and capacity fees, primarily reflecting incremental connections with the opening of our Amsterdam office in October 2019. The decline in market share was primarily a result of significant market profile shifts and short sale bans, which reduced order flow to Cboe.

Net revenue for Global FX increased 5% this quarter, reflecting higher market share and a 5% increase in net capture, offsetting a 2% decrease in ADV. The increase in market share primarily resulted from positive response to functionality enhancements, and the increase in net capture reflects a mix shift in volume by customer type. We set a new market share high and continue to reach new ADV highs in our full amount offering as well as on Cboe SEF for NDF's.

Turning to expenses, total adjusted operating expenses were about \$96 million for the quarter, down 7% against last year's second quarter. The key expense variances include:

- 1) a \$7 million decrease in professional fees and outside services, primarily a result of lower legal fees;
- 2) a \$2 million decrease in travel and promotional expenses, reflecting the COVID-19 impact on travel and event sponsorships;
- 3) offsetting these declines somewhat, compensation and benefits increased by \$3 million, resulting from the net impact of:
 - a \$4 million increase in bonus expense this quarter
 - a \$3 million increase resulting from lower capitalized wages relating to software development; and
 - a \$4 million decline in benefits expense due in part to a decrease in the adjustment of deferred compensation plan assets compared to second quarter of 2019. Note that there is an offsetting charge in other income, resulting in no impact to earnings.

Looking ahead to the second half of 2020, we have updated guidance to include EuroCCP and expenses related to our European derivatives growth initiative. We increased our guidance for 2020 adjusted operating expenses to a range of \$436 to \$444 million, up \$17 million from our previous range of \$419 to \$427 million, reflecting expenses of \$24 million predominantly relating to our new initiatives in Europe, offset somewhat by expense reductions of \$7 million, primarily in compensation and benefits and travel and entertainment. I will also note that the 2020 expense guidance related to EuroCCP and the derivatives build out includes one-time expenses of about \$3 million that will not recur next year. We still expect total expenses to ramp up in the second half of the year as we redeploy some cost savings into marketing and promotional programs and we complete our Chicago headquarters buildout. Available in the appendix, we updated the detailed 2019 to 2020 expense bridge we provided in our last earnings call, indicating that we now expect core expense growth to be down 1% to 2% versus our initial guide that assumed an increase of 4% to 5%.

A portion of the decline in the core expense growth is definitely attributable to the COVID-19 environment and its impact on travel and promotional, professional fees and to a certain extent, compensation expenses – but it was truly enabled by our migration of the C1 platform in 2019.

Turning to income taxes, our effective tax rate on adjusted earnings for the quarter was 26.7%, at the lower end of our guidance range and below last year's second quarter rate of 27.7%. The year-over-year tax rate decrease was primarily due to higher tax benefits recognized related to foreign-derived intangible income in the second quarter of 2020 versus 2019.

We are reaffirming our 2020 full-year tax rate on adjusted earnings, which is expected to be in a range of 26.5% to 28.5%, however, we expect third quarter to be at the higher end of that range.

We are reaffirming our capital spending guidance for 2020 of \$65 to \$70 million. While our move into our new Chicago headquarters has been delayed due to COVID-19, capital spending for this project is expected to be completed this year. Furthermore, we still expect depreciation and amortization to be \$34 to \$38 million for 2020, which excludes amortization of intangibles of approximately \$120 million in 2020.

Turning to capital allocation, let me underscore, we remain focused on investing in the growth of our business to build upon our diversified business model while returning excess cash to shareholders through dividends and share repurchases. Our financial position remained strong, we had excellent cash flow generation capabilities and a solid balance sheet. During the second quarter, we returned \$100 million to shareholders through share repurchases and \$39 million through dividends and at June 30, our share repurchase authorization available was nearly \$330 million, reflecting an additional \$250 million authorized in June.

At quarter end, our debt remained at \$875 million and we had \$250 million in availability under our revolver, if a short-term funding need arises. Our leverage ratio remained at 1.0 times at quarter-end and we ended the quarter with adjusted cash of \$176 million.

Summarizing the quarter:

- 1) we reported very strong quarterly financial results despite muted volumes in our proprietary products;
- 2) we continue to deploy capital into strategic investments, which Ed highlighted;
- 3) we successfully reopened our trading floor with a modified floor layout; and
- 4) Cboe's team of associates have shown perseverance and a keen ability to adapt in this extended work from home environment – all while continuing to deliver on our long-term growth initiatives. The entire leadership team and I couldn't be prouder of what we've accomplished thus far this year.

In closing, Cboe's financial strength and cash flow generating capabilities have positioned us well. We intend to remain opportunistic as we execute on our growth initiatives and focus on serving the needs of our customers and delivering sustainable returns to our shareholders, while guarding the health and welfare of our associates.

With that, I will turn it over to Debbie, for instructions on the Q&A portion of the call.

Cautionary Statements Regarding Forward-Looking Information and Trademarks:

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 impact of the novel coronavirus ("COVID-19") pandemic, including changes to trading behavior broadly in the market; 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; 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; our ability to minimize the risks, including our credit risk, associated with operating a European clearinghouse; 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, long-lived assets, 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, 2019 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.

This presentation includes market share, financials and industry data that we obtained from industry publications and surveys, reports of governmental agencies, third-parties and internal company surveys. Industry publications and surveys generally state that the information they contain has been obtained from sources believed to be reliable, but we cannot assure you that this information is accurate or complete. We have not independently verified any of the data and financials from third-party sources nor have we ascertained the underlying economic assumptions relied upon therein. Statements as to our market position are based on the most currently available market data. While we are not aware of any misstatements regarding industry data and financials presented herein, our estimates involve risks and uncertainties and are subject to change based on various factors.

Trademarks: Cboe®, Cboe Global Markets®, Bats®, BZX®, BYX®, EDGX®, EDGA®, EuroCCP®, Cboe Volatility Index® and VIX® are registered trademarks and 3CSM, FT OptionsSM, HanweckSM, and Trade AlertSM are service marks of Cboe Global Markets, Inc. and its subsidiaries. All other trademarks and service marks are the property of their respective owners. MSCI® and the MSCI index names are service marks of MSCI Inc. or its affiliates and have been licensed for use by Cboe Exchange, Inc. MSCI does not sponsor, promote or market investment products based on the MSCI indexes and will not have any liability with respect thereto.

The iBoxx® iShares® \$ High Yield Corporate Bond Index and the iBoxx® iShares® \$ Investment Grade Corporate Bond Index (the “Indexes”) referenced herein are the property of Markit Indices Limited (“Index Sponsor”) and have been licensed for use in connection with Cboe® iBoxx® iShares® \$ High Yield Corporate Bond Index Futures and Cboe® iBoxx® iShares® \$ Investment Grade Corporate Bond Index Futures. Each party to a Cboe® iBoxx® iShares® \$ High Yield Corporate Bond Index Futures or Cboe® iBoxx® iShares® \$ Investment Grade Corporate Bond Index Futures transaction acknowledges and agrees that the transaction is not sponsored, endorsed or promoted by the Index Sponsor. The Index Sponsor makes no representation whatsoever, whether express or implied, and hereby expressly disclaims all warranties (including, without limitation, those of merchantability or fitness for a particular purpose or use), with respect to the Indexes or any data included therein or relating thereto, and in particular disclaims any warranty either as to the quality, accuracy and/or completeness of the Indexes or any data included therein, the results obtained from the use of the Indexes and/or the composition of the Indexes at any particular time on any particular date or otherwise and/or the creditworthiness of any entity, or the likelihood of the occurrence of a credit event or similar event (however defined) with respect to an obligation, in the Indexes at any particular time on any particular date or otherwise. The Index Sponsor shall not be liable (whether in negligence or otherwise) to the parties or any other person for any error in the Indexes, and the Index Sponsor is under no obligation to advise the parties or any person of any error therein.

The Index Sponsor makes no representation whatsoever, whether express or implied, as to the advisability of purchasing or selling Cboe® iBoxx® iShares® \$ High Yield Corporate Bond Index Futures and Cboe® iBoxx® iShares® \$ Investment Grade Corporate Bond Index Futures, the ability of the Indexes to track relevant markets’ performances, or otherwise relating to the Indexes or any transaction or product with respect thereto, or of assuming any risks in connection therewith. The Index Sponsor has no obligation to take the needs of any party into consideration in determining, composing or calculating the Indexes. No party purchasing or selling Cboe® iBoxx® iShares® \$ High Yield Corporate Bond Index Futures or Cboe® iBoxx® iShares® \$ Investment Grade Corporate Bond Index Futures, nor the Index Sponsor, shall have any liability to any party for any act or failure to act by the Index Sponsor in connection with the determination, adjustment, calculation or maintenance of the Indexes.

iBoxx® is a service mark of IHS Markit Limited.

The iBoxx® iShares® \$ High Yield Corporate Bond Index and the iBoxx® iShares® \$ Investment Grade Corporate Bond Index (the “Indexes”) and futures contracts on the Indexes (“Contracts”) are not sponsored by, or sold by BlackRock, Inc. or any of its affiliates (collectively, “BlackRock”). BlackRock makes no representation or warranty, express or implied to any person regarding the advisability of investing in securities, generally, or in the Contracts in particular. Nor does BlackRock make any representation or warranty as to the ability of the Index to track the performance of the fixed income securities market, generally, or the performance of HYG, LQD or any subset of fixed income securities.

BlackRock has not calculated, composed or determined the constituents or weightings of the fixed income securities that comprise the Indexes (“Underlying Data”). BlackRock is not responsible for and has not participated in the determination of the prices and amounts of the Contracts, or the timing of the issuance or sale of such Contracts or in the determination or calculation of the equation by which the Contracts are to be converted into cash (if applicable). BlackRock has no obligation or liability in connection with the administration or trading of the Contracts. BlackRock does not guarantee the accuracy or the completeness of the Underlying Data and any data included therein and BlackRock shall have no liability for any errors, omissions or interruptions related thereto.

BlackRock makes no warranty, express or implied, as to results to be obtained by Markit or its affiliates, the parties to the Contracts or any other person with respect to the use of the Underlying Data or any data included therein. BlackRock makes no express or implied warranties and expressly disclaims all warranties of merchantability or fitness for a particular purpose or use with respect to the Underlying Data or any data included therein. Without limiting any of the foregoing, in no event shall BlackRock have any liability for any special, punitive, direct, indirect or consequential damages (including lost profits) resulting from the use of the Underlying Data or any data included therein, even if notified of the possibility of such damages.

iShares® is a registered trade mark of BlackRock Fund Advisors and its affiliates.