

December 16, 2022

**Submitted via CFTC Portal**

Secretary of the Commission  
Office of the Secretariat  
Commodity Futures Trading Commission  
Three Lafayette Centre  
1155 21<sup>st</sup> Street, N.W.  
Washington, D.C. 20581

Re: *TeraExchange, LLC – Regulation 40.2 Certification of USD SOFR vs AUD AONIA Basis Swaps*

Ladies and Gentlemen:

TeraExchange, LLC (“TeraExchange”) hereby notifies the Commodity Futures Trading Commission (the “Commission”) of its intent to list United States Dollar (“USD”) SOFR vs Australian Dollar (“AUD”) AONIA Basis Swaps (the “Contract”) on the TeraExchange swap execution facility. TeraExchange intends to list this Contract on December 19, 2022.

Pursuant to Commission Regulation 40.2, this submission includes:

1. A copy of the submission cover sheet in accordance with the instructions provided in Appendix D to Part 40 of the Commission’s regulations, attached as Exhibit A.
2. The intended listing date is December 19, 2022.
3. A certification by TeraExchange that (a) the Contract complies with the Commodity Exchange Act, as amended (the “Act”), and the Commission regulations thereunder; and (b) concurrent with this submission, TeraExchange posted on its website (i) a notice of pending certification of the Contract and (ii) a copy of this submission, attached as Exhibit B;
4. The Contract’s terms and conditions, attached as Exhibit C; and
5. An explanation and analysis of the Contract’s compliance with applicable core principles and Commission regulations, attached as Exhibit D.

Questions regarding this submission should be directed to Todd Langdon, Chief Compliance Officer, at 908-273-8277 or by e-mail at [tlangdon@teraexchange.com](mailto:tlangdon@teraexchange.com).

Sincerely,

*Christopher Rossman*  
Christopher Rossman  
Chief Operating Officer

EXHIBIT A

**SUBMISSION COVER SHEET**

**IMPORTANT:** Check box if Confidential Treatment is requested

Registered Entity Identifier Code (optional): \_\_\_\_\_

Organization: TeraExchange, LLC

Filing as a:  DCM  SEF  DCO  SDR Please note - only ONE choice allowed.

Filing Date (mm/dd/yy): 12/16/2022 Filing Description:  
New Product Certification

**SPECIFY FILING TYPE** Please note only ONE choice allowed per Submission.

**Organization Rules and Rule Amendments**

- Certification § 40.6(a)
- Approval § 40.5(a)
- Notification § 40.6(d)
- Advance Notice of SIDCO Rule Change § 40.10(a)
- SIDCO Emergency Rule Change § 40.10(h)

Rule Numbers: \_\_\_\_\_

**New Product**

Please note only ONE product per Submission.

- Certification § 40.2(a)
- Certification Security Futures § 41.23(a)
- Certification Swap Class § 40.2(d)
- Approval § 40.3(a)
- Approval Security Futures § 41.23(b)
- Novel Derivative Product Notification § 40.12(a)
- Swap Submission § 39.5

Official Product Name: USD SOFR v AUD AONIA Basis Swap

**Product Terms and Conditions (product related Rules and Rule Amendments)**

- Certification § 40.6(a)
- Certification Made Available to Trade Determination § 40.6(a)
- Certification Security Futures § 41.24(a)
- Delisting (No Open Interest) § 40.6(a)
- Approval § 40.5(a)
- Approval Made Available to Trade Determination § 40.5(a)
- Approval Security Futures § 41.24(b)
- Approval Amendments to enumerated agricultural products § 40.4(a), § 40.5(a)
- "Non-Material Agricultural Rule Change" § 40.4(b)(5)
- Notification § 40.6(d)

Official Name(s) of Product(s) Affected: \_\_\_\_\_

Rule Numbers: \_\_\_\_\_

EXHIBIT B

CERTIFICATIONS PURSUANT TO SECTION 5c OF THE COMMODITY  
EXCHANGE ACT, 7 U.S.C. §7A-2 AND COMMODITY FUTURES TRADING  
COMMISSION REGULATION 40.2, 17 C.F.R. §40.2

TeraExchange, LLC (“TeraExchange”) hereby certifies that: a) the USD SOFR vs AUD AONIA Basis Swap Contract complies with the Commodity Exchange Act, 7 U.S.C. §1 *et seq.* and the Commodity Futures Trading Commission (the “Commission”) regulations thereunder; and b) concurrent with this submission, TeraExchange, posted on its website: (i) a notice of pending certification of the Contract with the Commission; and (ii) a copy of this submission.

TeraExchange, LLC

By: Christopher Rossman

Name: Christopher Rossman

Title: Chief Operating Officer

Date: December 16, 2022

## EXHIBIT C

### Terms and Conditions

USD SOFR vs AUD AONIA BASIS IRS	
General	
Swap Structure	A fixed notional, float for float Interest Rate Swap whose value is based upon the difference between a stream of floating interest payments that are tied to a floating reference rate, over a term to maturity.
Currency	AUD
*Quoting Convention	Spread over Floating Leg 1 (000.0)
*Price Increment	0.001 points = 0.1 basis points
*Minimum Notional Size	AUD 1,000.00
*Minimum Notional Size Increment	AUD 1,000.00
Trading Conventions	Buy = Pay Spread Sell=Receive Spread
Trading Hours	00:01 - 24:00 Sunday - Friday (Eastern Time)
Last Trade Day	Available to trade on every US business day
*Effective Date	The Effective Date is the first date for which fixed and floating payments accrue. For spot starting instruments, the Effective Date is Trade Date + 1, subject to adjustment based on Modified Following convention. For forward starting instruments, the Effective Date is Trade Date + 1 + Forward Starting Period, subject to adjustment based on Modified Following convention.
*Maturity Date	The Maturity Date (also referred to as the Termination Date) is the final date to which fixed and floating amounts accrue. For spot starting instruments, this date is Effective Date + Tenor.
*Forward Starting Date	As agreed by the counterparties
Tenor	As agreed by the counterparties
*Upfront Payment	Standard: None
Block Size	As set forth in Appendix F to Part 43 of the CFTC Regulations
Settlement Procedure	Bilateral, or as per the Clearing Venue Specifications
Position Accountability	As may be determined and published by TeraExchange under CFTC Regulation 37.600 (c)
Float Leg 1	
*Reset Frequency	1 Month, 3 Month, 6 Month
*Payment Frequency	1 Month, 3 Month, 6 Month
*Compounding	Daily Compounding
*Day Count Convention	Act/365.FIXED
*Business Day Convention	Modified Following
*Reset Dates	Reset Dates define the beginning and end of accrual periods. Floating Rate Reset Dates facilitate the determination of the Reference Rate Fixing Dates. Each Reset Date is subject to adjustment based on Modified Following.
Fixing Date	New York Business Day that coincides with the Reset Date
*Floating Rate Index	USD-SOFR-COMPOUND (3 Month)
*Fixing Date Holiday Calendar	US Government Securities (USGS)
Float Leg 2	
*Reset Frequency	Daily
*Payment Frequency	1 Month, 3 Month, 6 Month
*Compounding	Daily Compounding
*Day Count Convention	Act/365.FIXED
*Business Day Convention	Modified Following
*Reset Dates	Reset Dates define the beginning and end of accrual periods. Floating Rate Reset Dates facilitate the determination of the Reference Rate Fixing Dates. Each Reset Date is subject to adjustment based on Modified Following.
Fixing Date	Sydney Business Day that coincides with the Reset Date
*Floating Rate Index	AUD-AONIA-OIS-COMPOUND
*Fixing Date Holiday Calendar	Sydney (AUSY)
<p>*The above items represent the customary attributes of the swap agreements; those marked with an asterisk "*" may be customized but only in conformance with the Clearing Venue Specifications.</p>	

## EXHIBIT D

### EXPLANATION AND ANALYSIS OF THE CONTRACT'S COMPLIANCE WITH APPLICABLE CORE PRINCIPLES AND COMMISSION REGULATIONS

As required by Commission Regulation § 40.2(a), the following analysis, in narrative form, demonstrates that the USD SOFR vs AUD AONIA Basis Swap (the "Contract") is consistent with the requirements of the Commodity Exchange Act, as amended (the "Act"), and the Commission regulations and guidance thereunder (in particular, Appendix B to Part 37 and Appendix C to Part 38).

#### **Appendix B to Part 37**

#### **CORE PRINCIPLE 3 OF SECTION 5H OF THE ACT - SWAPS NOT READILY SUSCEPTIBLE TO MANIPULATION; CORE PRINCIPLE 4 OF SECTION 5H OF THE ACT - MONITORING OF TRADING AND TRADE PROCESSING**

**The swap execution facility shall permit trading only in swaps that are not readily susceptible to manipulation.**

**(a) *Guidance.***

**(1) In general, a swap contract is an agreement to exchange a series of cash flows over a period of time based on some reference price, which could be a single price, such as an absolute level or a differential, or a price index calculated based on multiple observations. Moreover, such a reference price may be reported by the swap execution facility itself or by an independent third party. When listing a swap for trading, a swap execution facility shall ensure a swap's compliance with Core Principle 3, paying special attention to the reference price used to determine the cash flow exchanges. Specifically, Core Principle 3 requires that the reference price used by a swap not be readily susceptible to manipulation. As a result, when identifying a reference price, a swap execution facility should either: Calculate its own reference price using suitable and well-established acceptable methods or carefully select a reliable third-party index.**

**(2) The importance of the reference price's suitability for a given swap is similar to that of the final settlement price for a cash-settled futures contract. If the final settlement price is manipulated, then the futures contract does not serve its intended price discovery and risk management functions. Similarly, inappropriate reference prices cause the cash flows between the buyer and seller to differ from the proper amounts, thus benefitting one party and disadvantaging the other. Thus, careful consideration should be given to the potential for manipulation or distortion of the reference price.**

The reference rates for the floating legs of the Contract include the widely used USD Secured Overnight Financing Rate ("SOFR") and AUD Overnight Index Average ("AONIA") rate. The SOFR and AONIA rates are administered and calculated by regulated third-party providers using specific guidelines as described below.

The Contract is not readily susceptible to manipulation. The Contract trades in a large, well-established and highly liquid market. Price manipulation in such deep markets is exceedingly difficult to achieve. In addition, TeraExchange has established exchange rules and an enforcement infrastructure to prevent manipulation. TeraExchange staff conduct real-time market surveillance and perform comprehensive trade practice and market surveillance compliance review on a T+1 basis.

### ***Calculation of Secured Overnight Financing Rate (“SOFR”)***

The reference rate for the floating leg of the swap is the Secured Overnight Financing Rate (“SOFR”), which is a broad measure of the cost of borrowing cash overnight collateralized by Treasury securities. The SOFR includes all trades in the Broad General Collateral Rate plus bilateral Treasury repurchase agreement (“repo”) transactions cleared through the Delivery-versus-Payment service offered by the Fixed Income Clearing Corporation (“FICC”), which is filtered to remove a portion of transactions considered “specials”. The SOFR is calculated by the Federal Reserve Bank of New York as a volume-weighted median of transaction-level tri-party repo data collected from the Bank of New York Mellon as well as General Collateral Finance Repo transaction data and data on bilateral Treasury repo transactions cleared through FICC's DVP repo service, which are obtained from DTCC Solutions LLC, an affiliate of the Depository Trust & Clearing Corporation.

SOFR is calculated as a volume-weighted median, which is the rate associated with transactions at the 50th percentile of transaction volume. Specifically, the volume-weighted median rate is calculated by ordering the transactions from lowest to highest rate, taking the cumulative sum of volumes of these transactions, and identifying the rate associated with the trades at the 50th percentile of dollar volume. At publication, the volume-weighted median is rounded to the nearest basis point. The 1st, 25th, 75th, and 99th percentiles for SOFR are also calculated using the same volume-weighted methodology and similarly rounded to the nearest basis point. Volume is calculated as the sum of overnight transaction volume used to calculate each reference rate, rounded to the nearest \$1 billion. These additional summary statistics reflect the inputs included in the rate calculation, and will only be revised on the day of initial publication if amendments to the data result in a same-day revision to SOFR. For each rate, the Federal Reserve Bank of New York excludes trades between affiliated entities, when relevant and when the data to make such exclusions are available. To the extent possible, “open” trades, for which pricing resets daily (making such transactions economically similar to overnight transactions), are included in the calculation of the rates. The Audit Group of the Federal Reserve Bank of New York has concluded that the internal control structure over the production of the SOFR is effective and in compliance with the IOSCO Principles for Financial Benchmarks. An internal Oversight Committee periodically reviews and provides challenge on the rate production process.

Each business day, the Federal Reserve Bank of New York publishes SOFR on its website at approximately 8:00 a.m. EST. Additional information on how SOFR is calculated, data contingencies and exclusions, and oversight of the production process may be found at <https://www.newyorkfed.org/markets/treasury-repo-reference-rates-information>.

### ***Calculation of AUD Overnight Index Average (“AONIA”)***

The reference rate for the floating leg of the swap is the AUD Overnight Index Average (“AONIA”), the commonly used acronym for the Australian interest rate benchmark known as the Interbank Overnight Cash Rate (“Cash Rate”). The Cash Rate is the Reserve Bank of Australia’s operational target for monetary policy and was declared by the Australian Securities and Investments Commission (“ASIC”) to be a significant financial benchmark for regulatory purposes. It is calculated as the weighted average of the interest rate at which overnight unsecured funds are transacted in the Australian interbank money market. The Reserve Bank of Australia serves as the AONIA Administrator. Since 2016 the Reserve Bank collects information on all cash market transactions occurring on the Reserve Bank Information and Transfer System (“RITS”) for each day that RITS is open for interbank settlement. The Cash Rate is then calculated as the volume-weighted average interest rate at which cash market transactions were settled. The Cash Rate, rounded to two decimal places, is published by the Reserve Bank at 9:20am each day that RITS is open for interbank settlement. Additional information, including the Cash Rate Procedures Manual, which details AONIA governance, benchmark design, data collection and procedures for errors, may be found at <https://www.rba.gov.au/mkt-operations/resources/cash-rate-methodology/cash-rate-procedures-manual.html>.

**(3) For swaps that are settled by physical delivery or by cash settlement refer to the guidance in**

appendix C to part 38 of this chapter—Demonstration of Compliance That a Contract is not Readily Susceptible to Manipulation, section b(2) and section c(4), respectively.

Please see below.

**Appendix C to Part 38 - Demonstration of Compliance That a Contract Is Not Readily Susceptible to Manipulation**

**(c) Futures Contracts Settled by Cash Settlement. (1) Cash settlement is a method of settling certain futures or option contracts whereby, at contract expiration, the contract is settled by cash payment in lieu of physical delivery of the commodity or instrument underlying the contract. An acceptable specification of the cash settlement price for commodity futures and option contracts would include rules that fully describe the essential economic characteristics of the underlying commodity (e.g., grade, quality, weight, class, growth, issuer, maturity, source, rating, description of the underlying index and index's calculation methodology, etc.), as well as how the final settlement price is calculated. In addition, the rules should clearly specify the trading months and hours of trading, the last trading day, contract size, minimum price change (tick size) and any limitations on price movements (e.g., price limits or trading halts).**

***Essential Economic Characteristics of the Contract Terms***

The terms and conditions of the Contract, listed in Exhibit C, follow industry convention and match the terms of basis swaps that are commonly offered in the market.

***Calculation of Cash Settlement Price***

The Contract is an agreement to exchange cash flow streams by applying two different floating interest rates to a specified notional amount (determined by the counterparties) over a term of maturity (also determined by the counterparties). As such, the cash settlement price will be calculated based on the following variables:

- Floating Leg 1: The payment amount is based on the following: Notional Amount, Payment Frequency, Day Count Convention, Floating Interest Rate Index and Floating Reset Dates.
- Floating Leg 2: The payment amount is based on the following: Notional Amount, Payment Frequency, Day Count Convention, Floating Interest Rate Index and Floating Reset Dates.

All payments are settled in accordance with the payment frequency of the swap. The detailed settlement procedure will be agreed to by the counterparties or determined by the clearing venue.

**(2) Cash settled contracts may be susceptible to manipulation or price distortion. In evaluating the susceptibility of a cash-settled contract to manipulation, a designated contract market should consider the size and liquidity of the cash market that underlies the listed contract in a manner that follows the determination of deliverable supply as noted above in (b)(1). In particular, situations susceptible to manipulation include those in which the volume of cash market transactions and/or the number of participants contacted in determining the cash-settlement price are very low. Cash-settled contracts may create an incentive to manipulate or artificially influence the data from which the cash-settlement price is derived or to exert undue influence on the cash-settlement price's computation in order to profit on a futures position in that commodity.**

**The utility of a cash-settled contract for risk management and price discovery would be significantly impaired if the cash settlement price is not a reliable or robust indicator of the value of the underlying commodity or instrument. Accordingly, careful consideration should be given to the potential for**

**manipulation or distortion of the cash settlement price, as well as the reliability of that price as an indicator of cash market values. Appropriate consideration also should be given to the commercial acceptability, public availability, and timeliness of the price series that is used to calculate the cash settlement price. Documentation demonstrating that the settlement price index is a reliable indicator of market values and conditions and is commonly used as a reference index by industry/market agents should be provided. Such documentation may take on various forms, including carefully documented interview results with knowledgeable agents.**

The Contract operates in a very liquid market with numerous participants. Also, the cash settlement price is not easily susceptible to manipulation or distortion as the method of determining the price is based on factors that are fixed at the start of the particular Contract (i.e., payment frequency, day count conventions and floating reset dates) and USD SOFR and AUD AONIA. Additionally, the SOFR and AONIA reference rates are widely accepted by market participants and readily available through numerous public sources.

**(3) Where an independent, private-sector third party calculates the cash settlement price series, a designated contract market should consider the need for a licensing agreement that will ensure the designated contract market's rights to the use of the price series to settle the listed contract.**

**(i) Where an independent, private-sector third party calculates the cash settlement price series, the designated contract market should verify that the third party utilizes business practices that minimize the opportunity or incentive to manipulate the cash-settlement price series. Such safeguards may include lock-downs, prohibitions against derivatives trading by employees, or public dissemination of the names of sources and the price quotes they provide. Because a cash-settled contract may create an incentive to manipulate or artificially influence the underlying market from which the cash-settlement price is derived or to exert undue influence on the cash-settlement computation in order to profit on a futures position in that commodity, a designated contract market should, whenever practicable, enter into an information-sharing agreement with the third-party provider which would enable the designated contract market to better detect and prevent manipulative behavior.**

As described above, the cash settlement price will be calculated through a cash settlement method that is not easily susceptible to manipulation.

**(ii) Where a designated contract market itself generates the cash settlement price series, the designated contract market should establish calculation procedures that safeguard against potential attempts to artificially influence the price. For example, if the cash settlement price is derived by the designated contract market based on a survey of cash market sources, the designated contract market should maintain a list of such entities which all should be reputable sources with knowledge of the cash market. In addition, the sample of sources polled should be representative of the cash market, and the poll should be conducted at a time when trading in the cash market is active.**

Please see above.

**(iii) The cash-settlement calculation should involve computational procedures that eliminate or reduce the impact of potentially unrepresentative data.**

**(iv) The cash settlement price should be an accurate and reliable indicator of prices in the underlying cash market. The cash settlement price also should be acceptable to commercial users of the commodity contract. The registered entity should fully document that the settlement price is accurate, reliable, highly regarded by industry/market agents, and fully reflects the economic and commercial conditions of the relevant designated contract market.**



Please see above.

**(v) To the extent possible, the cash settlement price should be based on cash price series that are publicly available and available on a timely basis for purposes of calculating the cash settlement price at the expiration of a commodity contract. A designated contract market should make the final cash settlement price and any other supporting information that is appropriate for release to the public, available to the public when cash settlement is accomplished by the derivatives clearing organization. If the cash settlement price is based on cash prices that are obtained from non-public sources (e.g., cash market surveys conducted by the designated contract market or by third parties on behalf of the designated contract market), a designated contract market should make available to the public as soon as possible after a contract month's expiration the final cash settlement price as well as any other supporting information that is appropriate or feasible to make available to the public.**

The USD SOFR and AUD AONIA reference rates are readily available via a number of public sources. Please see above regarding the calculation of the cash settlement price.

**(4) Contract terms and conditions requirements for futures contracts settled by cash settlement.**

**(i) An acceptable specification of the terms and conditions of a cash-settled commodity contract will also set forth the trading months, last trading day, contract size, minimum price change (tick size) and daily price limits, if any.**

Please see Exhibit C for the Contract's terms and conditions.

**(A) *Commodity Characteristics:* The terms and conditions of a commodity contract should describe the commodity underlying the contract.**

The underlying USD-SOFR-COMPOUND and AUD-AONIA-OIS-COMPOUND reference rates are included in the Contract's terms and conditions. These reference rates are widely used in the market and readily available.

**(B) *Contract Size and Trading Unit:* An acceptable specification of the trading unit would be a contract size that is consistent with customary transactions in the cash market. A designated contract market may opt to set the contract size smaller than that of standard cash market transactions.**

The size of the Contract is consistent with the customary transaction sizes in the market.

**(C) *Cash Settlement Procedure:* The cash settlement price should be reliable, acceptable, publicly available, and reported in a timely manner as described in paragraphs (c)(3)(iv) and (c)(3)(v) of this appendix C.**

The cash settlement procedure and an explanation of how, in the context of the Contract, it is not readily susceptible to manipulation, is described above.

**(D) *Pricing Basis and Minimum Price Fluctuation (Minimum Tick):* The minimum price increment (tick) should be set a level that is equal to, or less than, the minimum price increment commonly observed in cash market transactions for the underlying commodity. Specifying a futures' minimum tick that is greater than the minimum price increment in the cash market can undermine the risk management utility of the futures contract by preventing hedgers from efficiently establishing and liquidating futures positions that are used to hedge anticipated cash market transactions or cash market positions.**

As agreed by the counterparties.

**(E) *Maximum Price Fluctuation Limits:*** Designated contract markets may adopt price limits to: (1) Reduce or constrain price movements in a trading day that may not be reflective of true market conditions but might be caused by traders overreacting to news; (2) Allow additional time for the collection of margins in times of large price movements; and (3) Provide a “cooling-off” period for futures market participants to respond to bona fide changes in market supply and demand fundamentals that would lead to large cash and futures price changes. If price-limit provisions are adopted, the limits should be set at levels that are not overly restrictive in relation to price movements in the cash market for the commodity underlying the futures contract. For broad-based stock index futures contracts, rules should be adopted that coordinate with New York Stock Exchange (“NYSE”) declared Circuit Breaker Trading Halts (or other market coordinated Circuit Breaker mechanism) and would recommence trading in the futures contract only after trading in the majority of the stocks underlying the index has recommenced.

As agreed by the counterparties.

**(F) *Last Trading Day:*** Specification of the last trading day for expiring contracts should be established such that it occurs before publication of the underlying third-party price index or determination of the final settlement price. If the designated contract market chooses to allow trading to occur through the determination of the final settlement price, then the designated contract market should show that futures trading would not distort the final settlement price calculation.

The last trading day will be the maturity date of each contract, which is set by the individual counterparties.

**(G) *Trading Months:*** Trading months should be established based on the risk management needs of commercial entities as well as the availability of price and other data needed to calculate the cash settlement price in the specified months. Specification of the last trading day should take into consideration whether the volume of transactions underlying the cash settlement price would be unduly limited by occurrence of holidays or traditional holiday periods in the cash market. Moreover, a contract should not be listed past the date for which the designated contract market has access to use a proprietary price index for cash settlement.

Payments are settled in accordance with the payment frequency of the Contract. The counterparties determine the payment frequency at the inception of the Contract.

**(H) *Speculative Limits:*** Specific rules and policies for speculative position limits are set forth in part 150 and/or part 151, as applicable, of the Commission’s regulations.

None required by Parts 150 or 151 of the Commission’s regulations.

**(I) *Reportable Levels:*** Refer to § 15.03 of the Commission’s regulations.

TeraExchange will adhere to the applicable reporting levels set forth in §15.03 of the Commission’s regulations.

**(J) *Trading Hours:*** Should be set by the designated contract market to delineate each trading day.

The Contract is available to trade each day during the TeraExchange hours of operation, subject to any applicable Clearing Venue Specifications or restrictions.