UBS

The Financial Industry Regulatory Authority (FINRA) and Trade Reporting and Compliance Engine (TRACE)

Client Education Guide

This education document may be used by you as a guide to identify your taxable fixed income TRACE-Eligible[1] securities transactions executed by UBS Financial Services Inc. (the firm) and help you compare your bond price to other prices in the same security reported to TRACE by other broker-dealers. This guide will also help you understand the information disseminated on TRACE by FINRA on its website.

In July 2007, the Securities and Exchange Commission (SEC) consolidated the National Association of Securities Dealers (NASD) and certain regulatory functions of the New York Stock Exchange (NYSE) to form FINRA, an independent Self-Regulatory Organization (SRO). FINRA regulates U.S. registered broker-dealers and is dedicated to protecting investors by writing and enforcing rules, examining for compliance, fostering market transparency and providing investor education.

To promote transparency in the taxable fixed income securities marketplace, FINRA implemented TRACE (Trade Reporting and Compliance Engine) in 2002. TRACE serves as the vehicle that facilitates the mandatory reporting of over-the-counter primary and secondary market transactions in eligible fixed income securities by registered broker-dealers to FINRA. Beginning with only corporate bonds, TRACE-Eligible securities now include certain agency debt securities, securitized products (asset-backed securities) and U.S. Treasury securities.

Given that the firm is a registered broker-dealer and FINRA member firm, the firm has the obligation to report all dealer and customer executions in primary and secondary market transactions in corporate bonds, agency debt, securitized products and U.S. Treasury securities to TRACE in a timely manner. Subsequently, FINRA will disseminate certain transaction data reported by registered broker-dealers for investors to view and compare market prices via their website at FINRA.org.

This education document includes a few examples of transaction data and pricing information that FINRA disseminates on TRACE for a corporate bond. You can also search Agency Debt, unregistered 144A securities and Securitized Products (asset-backed securities) in the same manner described in this document. U.S. Treasury securities are not disseminated by FINRA.

When you purchase or sell a taxable fixed income security, the firm will provide you with a confirmation of the transaction. One of the data elements included on the confirmation is the CUSIP number (Committee on Uniform Securities Identification Procedures), which is a nine-character alphanumeric code that identifies the issuer and type of financial instrument. This CUSIP identifier enables you to identify and view a security-specific transaction and related pricing data when using FINRA's website at FINRA.org.

The "Market Data Center" Bond Search box located on FINRA's website home page under the "For Investors" section is where you should go to search security-specific pricing data. To conduct such a search, please follow the steps described below:

Step 1: Click FINRA.org
Step 2: Go to the "Investors Section" found on FINRA's home page
Step 3: Scroll down to the Market Data Center Bond Search
Step 4: Click the security type within the Bond Search box (we use a corporate bond in our examples below)
Step 5: Enter your CUSIP (the corporate CUSIP 5T505XZQ3 in our example is fictional and used for illustration purposes)
Step 6: Select the "Bonds" radio button
Step 7: Click the Search box

MARKET DATA CENTER

Bond Search

Agency | **Corporate** | BTDS 144A | Securitized Products |

Issuer Name

5T505XZQ3

Show results as   ○ Bonds   ○ Trades

Search

After clicking the red "Search" button, you will see the bond's details such as credit ratings, specific issue information and other bond elements. Next, you should click *Trade History* on the Bond Detail page in order to view TRACE-reported transaction and pricing data. Doing so will bring you to the Bond Trade Activity Search Results page and you will see information formatted similar to the data box included on page 4* of this guide.

The examples below will help define and illustrate some of the data elements being disseminated in TRACE.

When looking at TRACE data, it is important to know that the data is reported and disseminated from the dealer perspective. This means that a dealer is either buying or selling to another dealer or a customer. For example, looking at the data box below, the first trade of the day reported to TRACE on 10/3/17 reflects a dealer (designated as "D" under the column labeled "Reporting Party Type") selling (designated by the "S" under the column labeled "Side") 2,900 bonds to a customer (designated as "C" under the column labeled "Contra Party Type") at a price of 99.964. Looking at this from the customer perspective, this transaction involved a purchase of 2,900 bonds by a customer at a price of 99.964. You should be aware that FINRA does not disseminate the dealer buy report so you will not see "B" in the "Side" column on dealer-to-dealer transactions.

Some other disseminated data elements to understand are that Time of Execution is in military time format and the Quantity is in par value. Dividing the par value by 1,000 will provide the number of bonds transacted. In addition, TRACE disseminates whether a broker/dealer added a mark-up/mark-down or commission to the customer transaction. If a broker/dealer charged a mark-up/mark-down or commission for a transaction, it will be denoted in the

Remuneration column as "M." No mark-up/mark-down or commission charge in a trade is denoted as "N." A blank field represents a dealer-to-dealer transaction. The Remuneration indicators can help clients better compare their price to others reported to TRACE. Finally, FINRA only disseminates secondary market transactions on TRACE even though registered broker-dealers are required to report primary market or new issue bond transactions.

In our next example, a dealer-to-dealer trade (see data box on page 4) was reported with an execution time of 10:31:22 on 10/3/2017. Here dealer A is selling 20 bonds ($20,000 par value) to dealer B at a price of 99.00. We can determine that because the Contra Party Type in the trade report is also a dealer (designated as "D"). Dealer B subsequently sells the 20 bonds to a customer at a price of 100.00, which indicates that a mark-up of 100 basis points or 1% was charged by dealer B for the transaction. We can determine that because the other trade report at 10:31:22 by dealer B (Reporting Party Type "D") indicated customer (Contra Party Type "C") and included "M" in the Remuneration column.

There's another example of a dealer-to-dealer trade in the TRACE data, but the dealer that subsequently sells the bonds to a customer does not charge a mark-up or commission. The two transactions reported at 11:19:52 for 200 bonds at 100.021 show that dealer A sold the bonds to dealer B (designated as Reporting Party Type "D", Side "S", Contra Party "D") and dealer B subsequently sold the bonds to its customer (designated as Reporting Party Type "D", Side "S", Contra Party Type "C"). We can determine that no mark-up was charged because the second trade report at 11:19:52 indicates "N" in the Remuneration column. Given that the 200 bonds did not originate from dealer B inventory and there's no change in price from dealer to customer, we can conclude that the dealer either chose not to charge his customer for the transaction or the customer has a periodic fee-based type account and is not charged on a per transaction basis.

In our final example, we will look at the last trade reported to TRACE on 10/3/2017 at 12:53:01. Here the dealer (Reporting Party "D") is buying (Side "B") 40 bonds from his customer (Contra Party "C") at a price of 99.876. The dealer also charged the customer a mark-down for this transaction, which is denoted as "M" in the Remuneration column. Unlike in our previous example, where the dealer sells bonds to another dealer, the dealer here purchased and placed the 40 bonds in its inventory. We can determine that because there's no other reported trades to TRACE after 12:53:01 on 10/3/2017.

To summarize the data box shown below, there were a total of eight secondary market transactions in corporate bond CUSIP 5T505XZQ3 reported to TRACE on 10/3/2017. Four customers purchased this bond ranging from a low of 99.959 to a high of 100.021, two customers sold this bond with a low of 99.876 and a high of 99.942 and two dealers sold this bond to other dealers. We are not able to determine if one broker-dealer or multiple firms reported these trades to TRACE because FINRA does not identify the broker-dealer that reported the trades.

You can use TRACE data when you purchase or sell certain TRACE-Eligible securities to compare the price received from the firm to other prices reported by other registered broker-dealers in the marketplace. You can obtain the quantity and the price listed on your customer confirmation provided by the firm to help identify your trade that the firm reported to TRACE.

Hypothetical Reported TRACE DATA:

Date	Time of Execution	Settlement	Status	Quantity	Price	Yield	Remun.	ATS	Side	Reporting Party Type	Contra Party Type
10/3/2017	12:53:01	10/5/2017	T	40000	99.876	1.629	M		B	D	C
10/3/2017	12:19:44	10/5/2017	T	2300000	99.942	1.494	M		B	D	C
10/3/2017	11:51:27	10/5/2017	T	50000	99.959	1.458	M		S	D	C
10/3/2017	11:19:52	10/5/2017	T	200000	100.021	1.358	N		S	D	C
10/3/2017	11:19:52	10/5/2017	T	200000	100.021	1.358			S	D	D
10/3/2017	10:31:22	10/5/2017	T	20000	99.00	1.443			S	D	D
10/3/2017	10:31:22	10/5/2017	T	20000	100.00	1.443	M		S	D	C
10/3/2017	9:07:55	10/5/2017	T	2900000	99.964	1.449	M		S	D	C

*Data is used for illustration purposes

Note: There is a Glossary of Terms available on the Bond Trade Activity Search Results page that explains each of the data elements. Not all data elements are included in our data box example above. Please note that each line item above represents a distinct trade report.

We hope that this education document was informative and helpful.

Please contact your Financial Advisor with any questions relating to this education document.

1 Eligible fixed income securities or TRACE-Eligible security means a debt security that is United States ("U.S.") dollar-denominated and is: (1) issued by a U.S. or foreign private issuer, and, if a "restricted security" as defined in Securities Act Rule 144(a)(3), sold pursuant to Securities Act Rule 144A; (2) issued or guaranteed by an Agency as defined in paragraph (k) or a Government-Sponsored Enterprise as defined in paragraph (n); or (3) a U.S. Treasury security as defined in paragraph (p). "TRACE-Eligible Security" does not include a debt security that is issued by a foreign sovereign or a Money Market Instrument as defined in paragraph (o).

(k) "Agency" means a U.S. "executive agency" as defined in 5 U.S.C. 105 that is authorized to issue debt directly or through a related entity, such as a government corporation, or to guarantee the repayment of principal and/or interest of a debt security issued by another entity. The term excludes the U.S. Department of the Treasury ("Treasury") in the exercise of its authority to issue U.S. Treasury securities as defined in paragraph (p).

(n) "Government-Sponsored Enterprise" ("GSE") has the same meaning as defined in 2 U.S.C. 622(8).

(o) "Money Market Instrument" means, other than a U.S. Treasury security, a debt security that at issuance has a maturity of one calendar year or less, or, if a discount note issued by an Agency, as defined in paragraph (k), or a Government-Sponsored Enterprise, as defined in paragraph (n), a maturity of one calendar year and one day or less.

(p) "U.S. Treasury security" means a security, other than a savings bond, issued by the U.S. Department of the Treasury to fund the operations of the federal government or to retire such outstanding securities. The term "U.S. Treasury security" also includes separate principal and interest components of a U.S. Treasury security that has been separated pursuant to the Separate Trading of Registered Interest and Principal of Securities (STRIPS) program operated by the U.S. Department of Treasury.

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