

# Transaction Fee Pilot: Exchange Transaction Fee Summary Technical Specification

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**Draft 12/21/2018**

This draft Exchange Transaction Fee Summary Technical Specification is being posted for public review in connection with the Commission’s adoption of Transaction Fee Pilot for NMS Stocks. Commission staff encourages the public to participate in the public review of this draft Technical Specification, which provides the technical specifications that exchanges would use to provide data on their transaction fees pursuant to Rule 610T(e). Please provide feedback on the draft Technical Specification via email to [StructuredData@sec.gov](mailto:StructuredData@sec.gov) and include “Draft 2018 Transaction Fee Pilot Exchange Transaction Fee Summary Technical Specification” in the subject line no later than January 23, 2019.

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## **1 OVERVIEW**

### **1.1 Goal**

This document provides the technical specifications for how exchanges would provide information required under 17 CFR 242.610T(e).

The Technical Specification defines syntax of data elements, their contents, arrangements of elements, and methods for validation.

This Technical Specification has been created for a technical audience with the specifications for conforming data to the Commission's data schema for the Exchange Transaction Fee Summary. This specification does not provide interpretative guidance for any rule.

## 1.2 Definitions

*Exchange Transaction Fee Summary*: As defined in 17 CFR 242.610T(e).

*XML Schema*: A World Wide Web Consortium ([W3C](http://www.w3.org/)) recommendation that specifies how to formally describe the elements in an Extensible Markup Language ([XML](http://www.w3.org/XML/)) document. This description can be used to verify that each item of content in a document adheres to the description of the element in which the content is to be placed.

## 1.3 Concept Definition Table

The Concept Definition table is found in Exhibit 1 to Release No. 34-84875.

## 1.4 Abbreviations Used Within Element Names

Element names contain abbreviations using the ISO 20022 XML Element name conventions.

[https://www.iso20022.org/sites/default/files/documents/general/XML\\_Tags.pdf](https://www.iso20022.org/sites/default/files/documents/general/XML_Tags.pdf)

- Group: grp
- Participant: ptcpt

## 1.5 Validation

XML Schema validation will signal errors such as missing or misplaced elements, negative values where a positive value is required, values outside the expected range, and insufficient decimal digits of precision.

## 2 SCHEMA (NORMATIVE)

```
<?xml version="1.0" encoding="UTF-8"?>
<xs:schema xmlns:xs="http://www.w3.org/2001/XMLSchema" elementFormDefault="qualified">
  <xs:element name="feeData">
    <xs:complexType>
      <xs:sequence>
        <xs:element name="fee" minOccurs="0" maxOccurs="unbounded">
          <xs:complexType>
            <xs:sequence>
              <xs:element name="exch">
                <xs:annotation>
                  <xs:documentation>
                    A required unique code to identify each exchange in the Transaction Fee Pilot.
                  </xs:documentation>
                </xs:annotation>
              </xs:element>
            </xs:sequence>
          </xs:complexType>
        </xs:element>
      </xs:sequence>
    </xs:complexType>
  </xs:element>
</xs:schema>
```

```

    <xs:restriction base="xs:string">
      <xs:pattern value="[A-Z][A-Z0-9 ]*[A-Z0-9]"/>
    </xs:restriction>
  </xs:simpleType>
</xs:element>
<xs:element name="rt">
  <xs:annotation>
    <xs:documentation>

```

A required record type indicator. M, if the fee or rebate type reported is a monthly realized fee or rebate (average or median fee or rebate); S, if the fee or rebate type reported is a spot fee or rebate schedule (base or top tier fee or rebate).

```

    </xs:documentation>
  </xs:annotation>
</xs:simpleType>
  <xs:restriction base="xs:string">
    <xs:enumeration value="M"/>
    <xs:enumeration value="S"/>
  </xs:restriction>
</xs:simpleType>
</xs:element>
<xs:element name="ptcpt" minOccurs="0" default="">
  <xs:annotation>
    <xs:documentation>

```

MM, if the fees or rebates are for market makers, else Other. Required for spot records if the exchange charged market makers and others different base and top tier fees. Required for monthly fee records if exchanges charged different average or median fees or pays different average or median fees. Otherwise blank or absent.

```

    </xs:documentation>
  </xs:annotation>
</xs:simpleType>
  <xs:restriction base="xs:string">
    <xs:enumeration value="MM"/>
    <xs:enumeration value="Other"/>
    <xs:enumeration value=""/>
  </xs:restriction>
</xs:simpleType>
</xs:element>
<xs:element name="grp">
  <xs:annotation>
    <xs:documentation>

```

A required indicator that identifies the pilot or control group during the Pilot and post-Pilot periods. 1, 2 - Pilot Groups 1, 2; C - Control group.

```

    </xs:documentation>
  </xs:annotation>
</xs:simpleType>
  <xs:restriction base="xs:string">
    <xs:enumeration value="C"/>
    <xs:enumeration value="1"/>
    <xs:enumeration value="2"/>
  </xs:restriction>
</xs:simpleType>
</xs:element>
<xs:element name="disp">
  <xs:annotation>
    <xs:documentation>

```

D - Displayed, N - Not displayed, B - Both. For spot fee type records, if the fees or rebates are the same between displayed and non-displayed liquidity, then the exchange may report both in a single "B" record. For monthly records, this should be segmented into the average and median fee per share for displayed liquidity, and the average and median fee for non-displayed liquidity unless there are no differences between the average and median fees for displayed and non-displayed liquidity, in which case the exchange can report the average and median fee in a single "B" record.

```

    </xs:documentation>
  </xs:annotation>
</xs:simpleType>
  <xs:restriction base="xs:string">
    <xs:enumeration value="D"/>
    <xs:enumeration value="N"/>
    <xs:enumeration value="B"/>
  </xs:restriction>

```

```

</xs:simpleType>
</xs:element>
<xs:element name="topOrDepth">
  <xs:annotation>
    <xs:documentation>

```

T - Fees for top-of-book liquidity, D - Fees for depth-of-book liquidity, B - Both. For spot records, if the fees or rebates are the same between top-of-book and depth-of-book liquidity, then the exchange may report both fees in a single "B" record. For monthly records, if there are no differences between the fees for top-of-book and depth-of-book liquidity, then the exchange may include only the average and median fees in a single "B" record.

```

</xs:documentation>
</xs:annotation>
<xs:simpleType>
  <xs:restriction base="xs:string">
    <xs:enumeration value="T"/>
    <xs:enumeration value="D"/>
    <xs:enumeration value="B"/>
  </xs:restriction>
</xs:simpleType>
</xs:element>
<xs:sequence minOccurs="0">
  <xs:element name="startDate" type="DATE_OR_BLANK_TYPE">
    <xs:annotation>
      <xs:documentation>

```

The effective date for any fee or rebate changes. This should correspond to the effective date referenced in the 19b-4 fee filing submitted to the Commission. This is needed in a monthly record only if fees or rebates changed on a day other than the first of the month; otherwise blank or absent.

```

</xs:documentation>
</xs:annotation>
</xs:element>
<xs:element name="endDate" minOccurs="0" default="" type="DATE_OR_BLANK_TYPE">
  <xs:annotation>
    <xs:documentation>

```

The last date that a given fee is assessed or rebate offered prior to any fee or rebate changes. This column will be blank unless a mid-month change to fees or rebates is made. This should correspond to the last date that a given fee or rebate is applicable prior to the effective date of the new fee or rebate reflected in Form 19b-4 filings submitted to the Commission to capture any revisions to transaction-based fees and rebates. This is needed in a monthly record only if fees or rebates changed on a day other than the first of the month.

```

</xs:documentation>
</xs:annotation>
</xs:element>
</xs:sequence>
<xs:element minOccurs="0" name="yearMonth" type="YEAR_MONTH_OR_BLANK_TYPE">
  <xs:annotation>
    <xs:documentation>

```

The year and month of the monthly realized reported average and median per-share fees or rebates.

```

</xs:documentation>
</xs:annotation>
</xs:element>
<xs:element name="preOrPost" minOccurs="0" default="">
  <xs:annotation>
    <xs:documentation>

```

An indicator variable needed in a monthly record only if the exchange changed fees on a day other than the first day of the month. Blank - there were no fee changes other than on the first day of the month. 1 - the average and median are the pre-change average and median for the part of the month prior to the change. 2 - the average and median are the post-change average and median for the part of the month after the change.

```

</xs:documentation>
</xs:annotation>
<xs:simpleType>
  <xs:restriction base="xs:string">
    <xs:enumeration value="1"/>
    <xs:enumeration value="2"/>
    <xs:enumeration value=""/>
  </xs:restriction>
</xs:simpleType>
</xs:element>

```

```

<xs:sequence>
  <xs:annotation>
    <xs:documentation>

```

The base and top tier fees or rebates are required in both spot and monthly records.

```

</xs:documentation>
</xs:annotation>
<xs:element name="baseTakeFee" type="DECIMAL_OR_BLANK_TYPE">
  <xs:annotation>
    <xs:documentation>

```

The Base Taker Fee is the standard per share fee assessed or rebate offered before any applicable discounts, tiers, caps, or other incentives are applied. Fees have a positive sign; rebates have a negative sign.

```

</xs:documentation>
</xs:annotation>
</xs:element>
<xs:element name="topTierTakeFee" type="DECIMAL_OR_BLANK_TYPE">
  <xs:annotation>
    <xs:documentation>

```

The Top Tier Taker Fee is the per share fee assessed or rebate offered after all applicable discounts, tiers, caps, or other incentives are applied. Fees have a positive sign; rebates have a negative sign.

```

</xs:documentation>
</xs:annotation>
</xs:element>
<xs:element name="baseMakeFee" type="DECIMAL_OR_BLANK_TYPE">
  <xs:annotation>
    <xs:documentation>

```

The Base Maker Fee is the standard per share fee assessed or rebate offered before any applicable discounts, tiers, caps, or other incentives are applied. Fees have a positive sign; rebates have a negative sign.

```

</xs:documentation>
</xs:annotation>
</xs:element>
<xs:element name="topTierMakeFee" type="DECIMAL_OR_BLANK_TYPE">
  <xs:annotation>
    <xs:documentation>

```

The Top Tier Maker Fee is the per share fee assessed or rebate offered after all applicable discounts, tiers, caps, or other incentives are applied. Fees have a positive sign; rebates have a negative sign.

```

</xs:documentation>
</xs:annotation>
</xs:element>
</xs:sequence>
<xs:sequence minOccurs="0">
  <xs:annotation>
    <xs:documentation>

```

The average and median fees are not required in a spot record.

```

</xs:documentation>
</xs:annotation>
<xs:element name="avgTakeFee" type="DECIMAL_OR_BLANK_TYPE">
  <xs:annotation>
    <xs:documentation>

```

The monthly average realized Taker fee assessed or rebate offered per share by category (i.e., pilot group, participant type, displayed vs. non-displayed, and top-of-book vs. depth-of-book). Fees have a positive sign; rebates have a negative sign.

```

</xs:documentation>
</xs:annotation>
</xs:element>
<xs:element name="medianTakeFee" type="DECIMAL_OR_BLANK_TYPE">
  <xs:annotation>
    <xs:documentation>

```

The monthly median realized Taker fee assessed or rebate offered per share by category (i.e., pilot group, participant type, displayed vs. non-displayed, and top-of-book vs. depth-of-book), across broker-dealers. Fees have a positive sign; rebates have a negative sign.

```

</xs:documentation>
</xs:annotation>
</xs:element>
<xs:element name="avgMakeFee" type="DECIMAL_OR_BLANK_TYPE">

```

```
<xs:annotation>
  <xs:documentation>
```

The monthly average realized Maker fee assessed or rebate offered per share by category (i.e., pilot group, participant type, displayed vs. non-displayed, and top-of-book vs. depth-of-book). Fees have a positive sign; rebates have a negative sign.

```
</xs:documentation>
</xs:annotation>
</xs:element>
<xs:element name="medianMakeFee" type="DECIMAL_OR_BLANK_TYPE">
  <xs:annotation>
    <xs:documentation>
```

The monthly median realized Maker fee assessed or rebate offered per share, by category (i.e., pilot group, participant type, displayed vs. non-displayed, and top-of-book vs. depth-of-book), across broker-dealers. Fees have a positive sign; rebates have a negative sign.

```
</xs:documentation>
</xs:annotation>
</xs:element>
</xs:sequence>
</xs:sequence>
</xs:complexType>
</xs:element>
</xs:sequence>
</xs:complexType>
</xs:element>
<xs:simpleType name="DATE_OR_BLANK_TYPE">
  <xs:annotation>
    <xs:documentation>
```

A date as YYYY-MM-DD, or empty.

```
</xs:documentation>
</xs:annotation>
<xs:union memberTypes="xs:date EMPTY_TYPE"/>
</xs:simpleType>
<xs:simpleType name="YEAR_MONTH_OR_BLANK_TYPE">
  <xs:annotation>
    <xs:documentation>
```

A month in YYYY-MM format, or empty.

```
</xs:documentation>
</xs:annotation>
<xs:union memberTypes="xs:gYearMonth EMPTY_TYPE"/>
</xs:simpleType>
<xs:simpleType name="DECIMAL_OR_BLANK_TYPE">
  <xs:annotation>
    <xs:documentation>
```

A number or blank.

```
</xs:documentation>
</xs:annotation>
<xs:union memberTypes="xs:decimal EMPTY_TYPE"/>
</xs:simpleType>
<xs:simpleType name="EMPTY_TYPE">
  <xs:annotation>
    <xs:documentation>
```

A string of zero length.

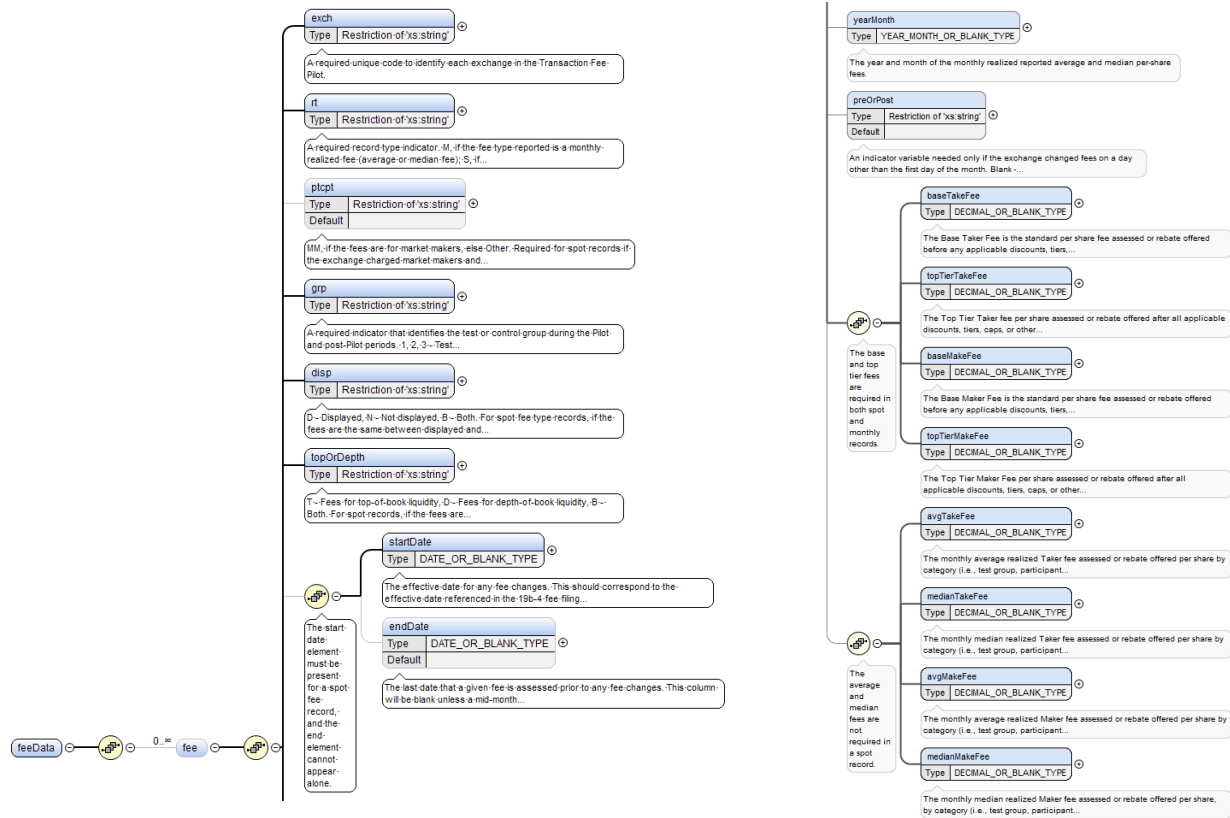
```
</xs:documentation>
</xs:annotation>
<xs:restriction base="xs:string">
  <xs:maxLength value="0"/>
</xs:restriction>
</xs:simpleType>
<xs:simpleType name="NONEMPTY_TYPE">
  <xs:annotation>
    <xs:documentation>
```

A string of at least one character.

```
</xs:documentation>
</xs:annotation>
<xs:restriction base="xs:string">
  <xs:minLength value="1"/>
</xs:restriction>
</xs:simpleType>
</xs:schema>
```



### 3 SCHEMA GRAPHICAL REPRESENTATION (NON-NORMATIVE)





#### 4 SAMPLE DATA (NON-NORMATIVE)

exch	rt	ptcpt	Grp	disp	topOrDepth	startDate	endDate	monthYear	preOrPost	baseTakeFee	tpTierTakeFee	averageTakeFee	medianTakeFee	baseMakeFee	topTierMakeFee	averageMakeFee	medianMakeFee
XYZ	S	Other	1	D	T	11/11/2020				0.0001	0.0001			-0.0001	-0.0001		
XYZ	S	MM	1	D	T	11/11/2020	12/11/2020										
XYZ	M	Other	1	D	T			1/2010				0.0001	0.00001			0.0001	0.00001
XYZ	M	MM	1	D	T			2/2020	1			0.0005	0.0005			0.0005	0.0005
XYZ	M	MM	1	D	T			2/2020	2			0.0004	0.0004			0.0004	0.0004

#### 5 SAMPLE INSTANCE (NON-NORMATIVE)

```

<feeData>
  <fee>
    <exch>XYZ</exch>
    <rt>S</rt>
    <ptcpt>Other</ptcpt>
    <grp>1</grp>
    <disp>D</disp>
    <topOrDepth>T</topOrDepth>
    <startDate>2020-11-11</startDate>
    <baseTakeFee>0.0001</baseTakeFee>
    <topTierTakeFee>0.0001</topTierTakeFee>
    <baseMakeFee>-0.0001</baseMakeFee>
    <topTierMakeFee>-0.0001</topTierMakeFee>
  </fee>
  <fee>
    <exch>XYZ</exch>
    <rt>S</rt>
    <ptcpt>MM</ptcpt>
    <grp>1</grp>
    <disp>D</disp>
    <topOrDepth>T</topOrDepth>
    <startDate>2020-11-11</startDate>
    <endDate>2021-12-11</endDate>
  </fee>
  <fee>
    <exch>XYZ</exch>
    <rt>M</rt>
    <ptcpt>Other</ptcpt>
    <grp>1</grp>
    <disp>D</disp>
    <topOrDepth>T</topOrDepth>
    <yearMonth>2020-01</yearMonth>
    <avgTakeFee>0.0001</avgTakeFee>
    <medianTakeFee>0.00001</medianTakeFee>
    <avgMakeFee>0.0001</avgMakeFee>
    <medianMakeFee>0.00001</medianMakeFee>
  </fee>
  <fee>
    <exch>XYZ</exch>
    <rt>M</rt>
    <ptcpt>MM</ptcpt>
    <grp>1</grp>
    <disp>D</disp>
    <topOrDepth>T</topOrDepth>
    <yearMonth>2020-02</yearMonth>
    <preOrPost>1</preOrPost>
    <avgTakeFee>0.0005</avgTakeFee>
    <medianTakeFee>0.0005</medianTakeFee>
    <avgMakeFee>0.0005</avgMakeFee>
    <medianMakeFee>0.0005</medianMakeFee>
  </fee>
</feeData>

```

```
<exch>XYZ</exch>
<rt>M</rt>
<ptcpt>MM</ptcpt>
<grp>1</grp>
<disp>D</disp>
<topOrDepth>T</topOrDepth>
<yearMonth>2020-02</yearMonth>
<preOrPost>2</preOrPost>
<avgTakeFee>0.0004</avgTakeFee>
<medianTakeFee>0.0004</medianTakeFee>
<avgMakeFee>0.0004</avgMakeFee>
<medianMakeFee>0.0004</medianMakeFee>
</fee>
</feeData>
```