FR 2052a Complex Institution Liquidity Monitoring Report
Submission to the Federal Reserve

6G Documentation Package Overview

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Federal Reserve Bank of New York
Welcome

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- Participant code: 955 098 72#
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Poll 1

Do you represent?

a. The technical operations or support of for the submission of the FR 2052a
b. The management of liquidity position or policies at a firm
c. Other
Overview of Today’s Session

- Contents of the 6G Firm distribution package
- 6G Business Requirements_for distribution.xlsx:
  - ‘Table of Contents’ Tab
  - ‘General’ Tab
  - ‘Report Types Columns’ Tab
  - Various Report Tabs
  - Correlation between ‘6G Business Requirements_for distribution.xlsx’ document and XML Schema
  - Validation types
  - Validations based on ‘Prod-SubProd-SubProd2’ Tab
  - Validations based on ‘Counterparty Required’ Tab
  - Validations based on ‘Collateral Class Required’ Tab
  - Validations based on ‘Maturity bucket values’ Tab
  - Validations based on ‘Enumerations’ Tab
- XML Schemas
- Sample XML files
- Firm’s user acceptance testing (UAT) timeline and rules of engagement
- Technical questions requiring assistance
- Updates to the 6G Business Requirements_for distribution.xlsx document
### Contents of the 6G Firm Distribution Package

The 6G Firm distribution package includes the following documents:

<table>
<thead>
<tr>
<th>File Name</th>
<th>File content and purpose</th>
</tr>
</thead>
<tbody>
<tr>
<td>FR 2052a Instructions.pdf</td>
<td>Reporting requirements for FR 2052a (6G) Complex Institution Liquidity Monitoring Report</td>
</tr>
<tr>
<td>6GSchema.xsd</td>
<td>XML Schema for Data files</td>
</tr>
<tr>
<td>6GCommentSchema.xsd</td>
<td>XML Schema for Comments files</td>
</tr>
<tr>
<td>XYZBANKIncludesSchema.xsd</td>
<td>Firm-specific schema-include XSD sample file</td>
</tr>
<tr>
<td>XYZBANKIncludesSchema_NoBusinessLinesProvided.xsd</td>
<td>Firm-specific schema-include XSD sample file</td>
</tr>
<tr>
<td>6G_XYZBANK_08312021.xml</td>
<td>Primary Submission schedule sample file¹</td>
</tr>
<tr>
<td>6G_XYZBANK_08312021.REDUCED.xml</td>
<td>Reduced Submission schedule sample file</td>
</tr>
<tr>
<td>6G_XYZBANK_08312021.COMMENT.xml</td>
<td>Comments submission sample file</td>
</tr>
</tbody>
</table>

Note that the three “XYZBANK” sample files included in the 6G documentation package are intended to illustrate the XML schema format and do not constitute guidance on how to report specific transactions.
## What is included in the Table of Contents

<table>
<thead>
<tr>
<th>#</th>
<th>Tab Name</th>
<th>Topic</th>
<th>Comment</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>General</td>
<td>General guidance and validation rules</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Report Types Columns</td>
<td>Report type schema and validation specifications</td>
<td>Report Types Columns definitions</td>
</tr>
<tr>
<td>3</td>
<td>assetInflowReport</td>
<td>Report type schema and validation specifications</td>
<td>L.A: Inflows - Assets</td>
</tr>
<tr>
<td>4</td>
<td>unsecuredInflowReport</td>
<td>Report type schema and validation specifications</td>
<td>L.U: Inflows - Unsecured</td>
</tr>
<tr>
<td>5</td>
<td>securedInflowReport</td>
<td>Report type schema and validation specifications</td>
<td>L.S: Inflows - Secured</td>
</tr>
<tr>
<td>6</td>
<td>otherInflowReport</td>
<td>Report type schema and validation specifications</td>
<td>L.G: Inflows - Other</td>
</tr>
<tr>
<td>7</td>
<td>depositOutflowReport</td>
<td>Report type schema and validation specifications</td>
<td>O.D: Outflows - Deposits</td>
</tr>
<tr>
<td>8</td>
<td>wholesaleOutflowReport</td>
<td>Report type schema and validation specifications</td>
<td>O.W: Outflows - Wholesale</td>
</tr>
<tr>
<td>9</td>
<td>securedOutflowReport</td>
<td>Report type schema and validation specifications</td>
<td>O.S: Outflows - Secured</td>
</tr>
<tr>
<td>10</td>
<td>otherOutflowReport</td>
<td>Report type schema and validation specifications</td>
<td>O.O: Outflows - Other</td>
</tr>
<tr>
<td>11</td>
<td>InformationalSupplementalReport</td>
<td>Report type schema and validation specifications</td>
<td>5.I: Supplemental - Informational</td>
</tr>
<tr>
<td>12</td>
<td>DerivativesAndCollateralReport</td>
<td>Report type schema and validation specifications</td>
<td>5.DC: Supplemental - Derivatives &amp; Collateral</td>
</tr>
<tr>
<td>15</td>
<td>foreignExchangeSupplementalRepo</td>
<td>Report type schema and validation specifications</td>
<td>5.FX: Supplemental - Foreign Exchange</td>
</tr>
<tr>
<td>16</td>
<td>s6GComments</td>
<td>Report type schema and validation specifications</td>
<td>Comment schema</td>
</tr>
<tr>
<td>17</td>
<td>header</td>
<td>File Header schema and validation specifications</td>
<td></td>
</tr>
<tr>
<td>18</td>
<td>Prod_SubProd_SubSubProd2</td>
<td>Validation rule and enumeration reference table</td>
<td></td>
</tr>
<tr>
<td>19</td>
<td>Counterparty Required</td>
<td>Validation rule and enumeration reference table</td>
<td></td>
</tr>
<tr>
<td>20</td>
<td>Collateral Class Required</td>
<td>Validation rule and enumeration reference table</td>
<td></td>
</tr>
<tr>
<td>21</td>
<td>Maturity bucket values</td>
<td>Validation rule and enumeration reference table</td>
<td>All expected 6G Maturity Buckets listed in tab ‘Maturity bucket values’</td>
</tr>
<tr>
<td>22</td>
<td>Enumerations</td>
<td>Validation rule and enumeration reference table</td>
<td></td>
</tr>
<tr>
<td>23</td>
<td>Change Log</td>
<td>Document changes since initial publishing</td>
<td></td>
</tr>
</tbody>
</table>
Hyperlink to the Table of Contents from other tabs

It is easy to navigate back to the ‘Table of Contents’ tab from any other tab in the document. You can use the hyperlink located in the A1 cell on any tab.
What is included

- The ‘General’ tab includes business rules, which are enforced by Federal Reserve Bank (FRB) application for 6G 2052a processing and not directly related to the specific report types XML Schema and validation rules described in the report-specific tabs.

- Business rules are categorized by the following topics and sub-topics:
  - Topics:

What is included

- Sub-topics
**Key points**

1. Reporting schedule
   - Notifications
   - 6G Implementation will have 2 calendars for each Firm:
     - 1 calendar for Primary Submission schedule
     - 1 calendar for Reduced Submission schedule
   - Application will generate warnings to the Firms if Primary Submission schedule file or Reduced Submission schedule file are not received on time.

2. Reporting schedule
   - Timing of submission
   - 6G Primary submission schedule for Each Firm is the equivalent of the 5G Submission schedule unless Firm is instructed differently.

3. File identification
   - File name
   - File Naming Conventions for 6G submissions:
     - 6G_XYZBANK_08312021.xml - Primary Schedule submission file name
     - 6G_XYZBANK_08312021.REDUCED.xml - Reduced Schedule submission file name
     - 6G_XYZBANK_08312021.COMMENT.xml - Comments file name

4. File identification
   - SFTP transmission directory
   - 1. Submitting Firms expected to use existing 5G Secure Transport SFTP Accounts for 6G files transmission.
   - 2. Firms will use different folder in the FRS SFTP target directory for 6G files transmission:
     - 5G files => placed into 5G folder
     - 6G files => to be placed into new 6G folder

5. XML Schema
   - FRS will implement processing of separate XML Schemas for 5G and 6G Data and will be able to distinguish between 5G and 6G files submissions.
Key points

- 18. Amounts
  
  6G Data submissions will be able to accommodate up to 8 digits to the right of the decimal place.

- 22. "BusinessLine" Enumeration
  
  For firms that are required to report Business Lines, Enumeration values will be provided via Firm Specific Schema XSD file.

- Please note that all Business rules provided are equally important and must be considered by the Firms when constructing files for 6G submissions.
The table below provides definitions for the columns used in the tabs describing the structure of report types.

<table>
<thead>
<tr>
<th>Column name</th>
<th>Column Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 #</td>
<td>Line number on the TAB</td>
</tr>
<tr>
<td>2 Report type</td>
<td>Refers to the reportType (see reportTypes enumeration) applicable to the 6G data structure requirements on each tab</td>
</tr>
<tr>
<td>3 Business field name</td>
<td>- Refers to the Field names included in the FR 2052a Instructions, Appendix I</td>
</tr>
<tr>
<td></td>
<td>- Color shading of these fields corresponds to the FR 2052a Instructions, Appendix I</td>
</tr>
<tr>
<td>4 XML Element or Attribute Name</td>
<td>Y - XML Element or Attribute are mandated by the Schema</td>
</tr>
<tr>
<td></td>
<td>N - XML Element or Attribute are not mandated by the Schema, however can be mandated by FR 2052a Instructions</td>
</tr>
<tr>
<td>5 Required by Schema</td>
<td>N/A - Identifies Validation requirement which involves multiple Schema Elements or Attributes</td>
</tr>
<tr>
<td>6 XML Element or Attribute Type</td>
<td>Column Entry identifies if 5G Data Collection has similar implementation comparing to 6G:</td>
</tr>
<tr>
<td></td>
<td>5G = 6G [similar implementation between 5G and 6G]</td>
</tr>
<tr>
<td></td>
<td>5G &lt;&gt; 6G [different implementation between 5G and 6G]</td>
</tr>
<tr>
<td>7 XMLChild Element or Attribute Name</td>
<td>Description of the Validation rule</td>
</tr>
<tr>
<td>8 XMLChild Element or Attribute Type</td>
<td>Link to or description of the enumeration used by the validation rule</td>
</tr>
<tr>
<td>9 5G vs. 6G</td>
<td></td>
</tr>
<tr>
<td>10 Validation rule</td>
<td></td>
</tr>
<tr>
<td>11 Enumeration list</td>
<td></td>
</tr>
<tr>
<td>12 Comments</td>
<td></td>
</tr>
</tbody>
</table>
6G Business Requirements_for distribution.xlsx
Various Report Tabs

Which reports are included

- There are total of 13 Report types for data reporting, plus Comments schema definitions.

<table>
<thead>
<tr>
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<td>Report type schema and validation specifications</td>
<td>L: S: Inflows - Secured</td>
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<td>6</td>
<td>otherInflowReport</td>
<td>Report type schema and validation specifications</td>
<td>L: O: Inflows - Other</td>
</tr>
<tr>
<td>7</td>
<td>depositsOutflowReport</td>
<td>Report type schema and validation specifications</td>
<td>O: D: Outflows - Deposits</td>
</tr>
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<td>Report type schema and validation specifications</td>
<td>S: DC: Supplemental - Derivatives &amp; Collateral</td>
</tr>
<tr>
<td>13</td>
<td>LiquidityRiskMeasurementsSup</td>
<td>Report type schema and validation specifications</td>
<td>S: L: Supplemental - Liquidity Risk Measurement</td>
</tr>
<tr>
<td>14</td>
<td>balanceSheetSupReport</td>
<td>Report type schema and validation specifications</td>
<td>S: B: Supplemental - Balance Sheet</td>
</tr>
<tr>
<td>15</td>
<td>foreignExchangeSupplementalRepo</td>
<td>Report type schema and validation specifications</td>
<td>S: FX: Supplemental - Foreign Exchange</td>
</tr>
<tr>
<td>16</td>
<td>skewComments</td>
<td>Report type schema and validation specifications</td>
<td>Comment schema</td>
</tr>
<tr>
<td>17</td>
<td>header</td>
<td>File Header schema and validation specifications</td>
<td></td>
</tr>
<tr>
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<td>Validation rule and enumeration reference table</td>
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<td>Validation rule and enumeration reference table</td>
<td></td>
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<tr>
<td>20</td>
<td>Collateral Class Required</td>
<td>Validation rule and enumeration reference table</td>
<td></td>
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</tr>
<tr>
<td>22</td>
<td>Enumerations</td>
<td>Validation rule and enumeration reference table</td>
<td></td>
</tr>
</tbody>
</table>
Please note that Report type tabs may contain multiple rows per each Schema Element or Attribute indicating:

- Different validation rules applied to the same Element or Attribute [Example below]

- Multiple sub-elements or sub-attributes related to the Element described [Example below]
6G Business Requirements_for distribution.xlsx
Correlation between ‘6G Business Requirements_for distribution.xlsx’ Document and XML Schema

- Examples below are provided based on the assetInflowReport tab.

XML element or attribute names in scope
XML Schema for ‘assetInflowReport’

```xml
<xs:element name="assetInflowReport">
  <xs:complexType>
    <xs:complexContent>
      <xs:extension base="reportBase">
        <xs:sequence>
          <xs:element name="assetProduct" type="assetProduct" minOccurs="1" maxOccurs="1" />
          <xs:element name="assetSource" type="assetSource" minOccurs="0" maxOccurs="1" />
          <xs:element name="marketValue" type="valueType" minOccurs="1" maxOccurs="1" />
          <xs:element name="collateralClass" type="collateralClass" minOccurs="1" maxOccurs="1" />
          <xs:element name="accountingDesignation" type="accountingDesignation" minOccurs="1" maxOccurs="1" />
          <xs:element name="collateralMaturityBucket" type="maturityBucket" minOccurs="0" maxOccurs="1" />
          <xs:element name="reportingScope" type="reportScope" minOccurs="1" maxOccurs="1" />
          <xs:element name="reportID" type="tenDigitPositiveIntegerType" minOccurs="0" maxOccurs="1" />
        </xs:sequence>
        <xs:attribute name="treasuryControl" type="xs:boolean" use="required" />
      </xs:extension>
    </xs:complexContent>
  </xs:complexType>
</xs:element>
```

Correlation between ‘6G Business Requirements_for distribution.xlsx’ Document and XML Schema (continued)
6G Business Requirements_for distribution.xlsx
Correlation between ‘6G Business Requirements_for distribution.xlsx’ Document and XML Schema (continued)

XML Schema for ‘assetInflowReport’

```xml
<xs:complexType name="valueType">
  <xs:extension base="valueBase">
    <xs:attribute name="converted" type="xs:boolean" use="required"/>
    <xs:attribute name="currencyInit" type="xs:string" use="required"/>
    <xs:attribute name="unitMultiplier" type="xs:integer" use="required" fixed="1"/>
  </xs:extension>
</xs:simpleContent>
</xs:complexType>

<xs:simpleType name="valueBase">
  <xs:restriction base="xs:decimal">
    <xs:minInclusive value="0"/>
  </xs:restriction>
</xs:simpleType>

<xs:complexType name="maturityBucket">
  <xs:sequence>
    <xs:element name="maturityStart" type="maturityBucketStart" minOccurs="1" maxOccurs="1"/>
    <xs:element name="maturityEnd" type="maturityBucketEnd" minOccurs="0" maxOccurs="1"/>
  </xs:sequence>
</xs:complexType>
```
Sample file – 6G_XYZBANK_08312021.xml
There are two types of validation employed for processing of a firm’s 6G submissions:
1. Schema-based validations
2. Application-based validations

**Validation Types**

If the business rule can be handled by the XML Schema, validation, in most cases, is applied using XML Schema rules.

Please note that error messages generated by the XML Schema-based validations might not be as explicit as application validation error messages.

**Examples of the Schema-based validations:**

<table>
<thead>
<tr>
<th>Report Type</th>
<th>Required Field Name</th>
<th>XML Element or Attribute Name</th>
<th>Required by Schema</th>
<th>XML Element or Attribute Type</th>
<th>XML Element or Attribute Name</th>
<th>Required by Schema</th>
<th>XML Element or Attribute Type</th>
<th>Validation Rule</th>
<th>Validation Error Message</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>assetScope</td>
<td>assetScope</td>
<td>Y</td>
<td>assetScope</td>
<td>Y</td>
<td>assetScope</td>
<td>Y</td>
<td>Validation needs to be performed to make sure that expected Product is used with every Report Type. If unexpected value is used, file must be rejected with corresponding error handling.</td>
<td>See Validation Rule</td>
</tr>
<tr>
<td>2</td>
<td>assetProduct</td>
<td>assetProduct</td>
<td>Y</td>
<td>assetProduct</td>
<td>Y</td>
<td>assetProduct</td>
<td>Y</td>
<td>Validation needs to be performed to make sure that expected Sub-Product is used with corresponding Report Type. If unexpected value is used, file must be rejected with corresponding error handling.</td>
<td>See Validation Rule</td>
</tr>
<tr>
<td>3</td>
<td>subProduct</td>
<td>subProduct</td>
<td>N</td>
<td>subProduct</td>
<td>Y</td>
<td>subProduct</td>
<td>Y</td>
<td>Validation needs to be performed to make sure that expected Sub-Product is used with corresponding Report Type. If unexpected value is used, file must be rejected with corresponding error handling.</td>
<td>See Validation Rule</td>
</tr>
</tbody>
</table>

Examples of the Schema-based validations:

- **Validation Rule:**
  - Check if attribute is not Empty (optional).
  - Check if attribute is not Exempt (optional).

- **Validation Error Message:**
  - Check if attribute is not Negative (values can be +1000 or ≥ 0).
  - Check if attribute is not Zero (values can be ≥ 0).
  - Check if attribute is not Empty (optional).
  - Check if attribute is not Exempt (optional).
  - Check if attribute is not Equal to (values can be ≥ 0).
  - Check if attribute is not Equal to (values can be ≥ 0).
  - Check if attribute is not Equal to (values can be ≥ 0).
  - Check if attribute is not Equal to (values can be ≥ 0).
  - Check if attribute is not Equal to (values can be ≥ 0).
Application-based validation

- If the business rule cannot be handled by the XML Schema, validation is applied using application-based rules.
- In general, error messages generated by the application-based validations provide more details compared to the XML Schema-based validation error messages.
- Examples of the application-based validations:
**Enumeration lists**

The ‘Enumeration list’ column includes references to the list of **expected values** or **expected values combinations** in the 6G files.
6G Business Requirements_for distribution.xlsx

Validation Types (continued)

**Enumeration lists**

- There are multiple Enumeration lists referenced in the requirements document:

<table>
<thead>
<tr>
<th>Tab Name</th>
<th>Topic</th>
<th>Comment</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. General</td>
<td>General guidance and validation rules</td>
<td></td>
</tr>
<tr>
<td>3. Asset/Profile</td>
<td>Report type schema and validation specifications</td>
<td>I.A. Inflows - Assets</td>
</tr>
<tr>
<td>7. CollateralClassOutflowReport</td>
<td>Report type schema and validation specifications</td>
<td>O.O: Outflows - Deposits</td>
</tr>
<tr>
<td>10. OtherOutflowReport</td>
<td>Report type schema and validation specifications</td>
<td>O.O: Outflows - Other</td>
</tr>
<tr>
<td>15. ForeignExchangeSupplementalFlex</td>
<td>Report type schema and validation specifications</td>
<td>S.FX: Supplemental - Foreign Exchange</td>
</tr>
<tr>
<td>16. PostComments</td>
<td>Validation rule and enumeration reference table</td>
<td>Comment schema</td>
</tr>
<tr>
<td>17. Provider</td>
<td>Rules table schema and validation specifications</td>
<td></td>
</tr>
<tr>
<td>18. Prod-SubProd-SubProd2</td>
<td>Validation rule and enumeration reference table</td>
<td></td>
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</tr>
<tr>
<td>21. Maturity bucket values</td>
<td>Validation rule and enumeration reference table</td>
<td>Maturity bucket values Listed in tab “Maturity bucket values”</td>
</tr>
<tr>
<td>22. Enumerations</td>
<td>Validation rule and enumeration reference table</td>
<td></td>
</tr>
</tbody>
</table>

- The ‘Enumerations’ tab, in most cases, represents a set of values populated in the XML Schema and are used for XML Schema-based validations.
- Enumeration tabs listed below are used mostly for application-based validations.
  - Prod-SubProd-SubProd2
  - Counterparty Required
  - Collateral Class Required
  - Maturity bucket values
‘assetInflowReport’ – Validation examples

- ‘Product’ – Check if the attribute is not empty [populated] ➔ Schema-based validation.

- ‘Product’ – Validation needs to be performed to make sure that the expected product is used with every report type. If an unexpected value is used, file must be rejected with corresponding error handling ➔ Schema-based validation.
  - To perform this validation, we need to access the ‘Enumerations’ tab and filter based on ‘XML Element or Attribute Name’ = ‘assetProduct.’
  - ‘Enumeration value’ list will show list of allowed values.
‘balanceSheetSupReport’ – Validation examples

Product-specific requirement [exceptions] ➔ Application-based validations:

1. S.B.5 – Counterparty Netting – requires a negative value or can be ZERO
   If reported values for this product are positive, the file should be rejected.

2. S.B.6 – Carrying Value Adjustment – should accept both positive and negative values
   Attributes only needs to be validated to ensure that numeric value is provided.
   If the reported values for this Product are Not Numeric, File should be rejected.

For all other products for balanceSheetSupReport type: Check if attribute is not negative [Values can be = ZERO or > ZERO].
‘balanceSheetSupReport’ – Validation examples

Corresponding XML Schema [6GSchema.xsd]

To accommodate these requirements, the XML Schema uses type="anyValueType" for ‘balanceSheetSupReport.’ For all other report types, the XML Schema uses type="valueType."

```xml
<xsd:element name="balanceSheetSupReport">
  <xsd:complexType>
    <xsd:complexContent>
      <xsd:extension base="%reportBase">
        <xsd:sequence>
          <xsd:element name="collectionReference" type="xsd:collectionReference" minOccurs="0" maxOccurs="1"/>
          <xsd:element name="balanceSheetSupProduct" type="xsd:balanceSheetSupProduct" minOccurs="1" maxOccurs="1"/>
          <xsd:element name="subProductReference" type="xsd:subProductReference" minOccurs="0" maxOccurs="1"/>
          <xsd:element name="collateralClass" type="xsd:collateralClass" minOccurs="0" maxOccurs="1"/>
          <xsd:element name="effectiveMaturityBucket" type="xsd:maturityBucket" minOccurs="0" maxOccurs="1"/>
          <xsd:element name="encumbranceType" type="xsd:encumbranceType" minOccurs="0" maxOccurs="1"/>
          <xsd:element name="marketValue" type="xsd:anyValueType" minOccurs="0" maxOccurs="1"/>
          <xsd:element name="collateralValue" type="xsd:anyValueType" minOccurs="0" maxOccurs="1"/>
          <xsd:element name="counterpartySector" type="xsd:counterpartySectorWithRetail" minOccurs="0" maxOccurs="1"/>
          <xsd:element name="gsiID" type="xsd:string" minOccurs="0" maxOccurs="1"/>
          <xsd:element name="riskWeight" type="xsd:decimalValue" minOccurs="0" maxOccurs="1"/>
          <xsd:element name="internalCounterparty" type="xsd:InternalCounterparty" minOccurs="0" maxOccurs="1"/>
        </xsd:sequence>
        <xsd:attribute name="internal" type="xsd:boolean" use="required"/>
        <xsd:attribute name="converted" type="xsd:boolean" use="required"/>
        <xsd:attribute name="unit" type="xsd:currencyUnit" use="required"/>
        <xsd:attribute name="unitMultiplier" type="xsd:integer" use="required" fixed="0"/>
      </xsd:extension>
    </xsd:complexContent>
  </xsd:complexType>
</xsd:element>
```
‘balanceSheetSupReport’ – Validation examples

Corresponding XML File [6G_XYZBANK_08312021.xml]

```xml
.. Note: Only Category 2 Firms are required to submit $589 for counterparty netting products on the Form X

  <balanceSheetSupReport internal="false" reportID="1">
    <reportScope>XYZBANK - Americas</reportScope>
    <comment>Sample report for Primary schedule submission, LISCC Firm</comment>
    <collectionReference>0.5</collectionReference>
    <balanceSheetSupProduct>Counterparty Netting</balanceSheetSupProduct>
    <productReference>Repo</productReference>
    <collateralClass>G-1-Q</collateralClass>
    <maturityBucket>
      <maturityStart>P1D</maturityStart>
      <maturityEnd>P1D</maturityEnd>
    </maturityBucket>
    <maturityValue unit="USD" unitMultiplier="G" converted="false">-5000.25</maturityValue>
    <counterpartySector>Broker Dealer</counterpartySector>
  </balanceSheetSupReport>
```
For listed table [report type] and product combination:

If Sub-Product is provided, then Sub-Product should be from the list of expected values, otherwise the file must be rejected with corresponding error handling [Enumeration list validation] → Application-based validation.

- To perform this validation, we need to access ‘Prod-SubProd-SubProd2’ Enumeration tab.
- The ‘Sub-Product’ column represents a list of expected values to be provided for ‘Report type’ and ‘Product’ combination.

Please note that only four report types expected to have Sub-Products or/and Sub-Product 2 values populated:
1. assetInflowReport
2. securedInflowReport
3. securedOutflowReport
4. derivativesAndCollateralSupReport

Please note that only particular products for the report types mentioned above are expected to have Sub-Products or/and Sub-Product 2 values populated.
For report type and product combinations listed in the ‘Counterparty Required’ tab:
- A counterparty value must be provided, otherwise the file will be rejected – Application-based validation.

To perform this validation, select the ‘Counterparty Required’ Enumeration tab.

For each listed ‘Report type’ and ‘Product’ combination, a counterparty value must be provided, otherwise the file will be rejected.
For report type and product combinations listed in FR 2052a Instructions, Appendix II-c:

1. For the required indicator – a collateral class must be provided.
2. If a collateral class is not provided, the file will be rejected with corresponding error handling.

- To perform this validation, select the ‘Collateral Class Required’ Enumeration tab.
- For each listed ‘Report type’ and ‘Product’ combination, a collateral class value must be provided, otherwise file will be rejected.
Validations based on ‘Maturity Bucket Values’ Tab

Maturity Bucket – maturityBucket / maturityBucketStart [Enumeration list validation] ➔ Schema-based validation

- To perform this validation, select the Enumeration list ‘Maturity bucket values.’
- Review the set of allowed values in the ‘maturityStart’ column.

<table>
<thead>
<tr>
<th>Day</th>
<th>maturityBucket</th>
<th>maturityStart</th>
<th>maturityEnd</th>
<th>6G Status</th>
<th>Requirement</th>
<th>Comments / Example</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Open</td>
<td>P0D</td>
<td>P0D</td>
<td>S0 + S6</td>
<td>=maturityBucket=maturityStart=P0D&lt;/maturityStart=&lt;/maturityEnd&gt;</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Day 1</td>
<td>P1D</td>
<td>P1D</td>
<td>S0 + S6</td>
<td>Daily Maturity bucket</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Day 2</td>
<td>P2D</td>
<td>P2D</td>
<td>S0 + S6</td>
<td>Daily Maturity bucket</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>Day 3</td>
<td>P3D</td>
<td>P3D</td>
<td>S0 + S6</td>
<td>Daily Maturity bucket</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>Day 4</td>
<td>P4D</td>
<td>P4D</td>
<td>S0 + S6</td>
<td>Daily Maturity bucket</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>Day 5</td>
<td>P5D</td>
<td>P5D</td>
<td>S0 + S6</td>
<td>Daily Maturity bucket</td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>Day 6</td>
<td>P6D</td>
<td>P6D</td>
<td>S0 + S6</td>
<td>Daily Maturity bucket</td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>Day 7</td>
<td>P7D</td>
<td>P7D</td>
<td>S0 + S6</td>
<td>Daily Maturity bucket</td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>Day 8</td>
<td>P8D</td>
<td>P8D</td>
<td>S0 + S6</td>
<td>Daily Maturity bucket</td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>Day 9</td>
<td>P9D</td>
<td>P9D</td>
<td>S0 + S6</td>
<td>Daily Maturity bucket</td>
<td></td>
</tr>
<tr>
<td>11</td>
<td>Day 10</td>
<td>P10D</td>
<td>P10D</td>
<td>S0 + S6</td>
<td>Daily Maturity bucket</td>
<td></td>
</tr>
<tr>
<td>12</td>
<td>Day 11</td>
<td>P11D</td>
<td>P11D</td>
<td>S0 + S6</td>
<td>Daily Maturity bucket</td>
<td></td>
</tr>
<tr>
<td>13</td>
<td>Day 12</td>
<td>P12D</td>
<td>P12D</td>
<td>S0 + S6</td>
<td>Daily Maturity bucket</td>
<td></td>
</tr>
</tbody>
</table>
Maturity Bucket – maturityBucket / maturityBucketEnd [Enumeration list validation] ➔ Schema-based validation

- To perform this validation, select the Enumeration list ‘Maturity bucket values.’
- Review the set of allowed values in the ‘maturityEnd’ column.
Maturity Bucket – maturityBucket – Check if the Maturity Bucket Range combination is valid [Enumeration list validation] ➔ Application-based validation.

- To perform this validation, select the Enumeration list ‘Maturity bucket values.’
- Review the set of allowed values combinations.

<table>
<thead>
<tr>
<th>MaturityBucket</th>
<th>maturityStart</th>
<th>maturityEnd</th>
<th>6G Status</th>
<th>Requirement</th>
</tr>
</thead>
<tbody>
<tr>
<td>Open</td>
<td>0D</td>
<td>0D</td>
<td>5G = 66</td>
<td>&lt;maturityBucket=maturityStart=0D/&gt; &lt;maturityEnd=0D/&gt;</td>
</tr>
<tr>
<td>2 Day</td>
<td>1D</td>
<td>1D</td>
<td>5G = 66</td>
<td>Daily Maturity bucket</td>
</tr>
<tr>
<td>3 Day</td>
<td>2D</td>
<td>2D</td>
<td>5G = 66</td>
<td>Daily Maturity bucket</td>
</tr>
<tr>
<td>4 Day</td>
<td>3D</td>
<td>3D</td>
<td>5G = 66</td>
<td>Daily Maturity bucket</td>
</tr>
<tr>
<td>5 Day</td>
<td>4D</td>
<td>4D</td>
<td>5G = 66</td>
<td>Daily Maturity bucket</td>
</tr>
<tr>
<td>6 Day</td>
<td>5D</td>
<td>5D</td>
<td>5G = 66</td>
<td>Daily Maturity bucket</td>
</tr>
<tr>
<td>7 Day</td>
<td>6D</td>
<td>6D</td>
<td>5G = 66</td>
<td>Daily Maturity bucket</td>
</tr>
<tr>
<td>8 Day</td>
<td>7D</td>
<td>7D</td>
<td>5G = 66</td>
<td>Daily Maturity bucket</td>
</tr>
<tr>
<td>9 Day</td>
<td>8D</td>
<td>8D</td>
<td>5G = 66</td>
<td>Daily Maturity bucket</td>
</tr>
<tr>
<td>10 Day</td>
<td>9D</td>
<td>9D</td>
<td>5G = 66</td>
<td>Daily Maturity bucket</td>
</tr>
<tr>
<td>11 Day</td>
<td>P10D</td>
<td>P10D</td>
<td>5G = 66</td>
<td>Daily Maturity bucket</td>
</tr>
<tr>
<td>12 Day</td>
<td>P11D</td>
<td>P11D</td>
<td>5G = 66</td>
<td>Daily Maturity bucket</td>
</tr>
<tr>
<td>13 Day</td>
<td>P12D</td>
<td>P12D</td>
<td>5G = 66</td>
<td>Daily Maturity bucket</td>
</tr>
</tbody>
</table>

Use case #1 - Daily maturity buckets
- Expectation is that maturityStart = maturityEnd

Use case #2 - Other maturity buckets and maturityEnd is provided
- Expectation is that maturityStart will have next closest value > maturityStart

Example:
<maturityBucket=maturityStart=0D>/maturityStart=maturityStart=maturityEnd=0D>/maturityEnd=maturityEnd=0D>/maturityEnd=maturityEnd>
Maturity Bucket – maturityBucket – Check if the Maturity Bucket Range combination is valid [Enumeration list validation] ➔ Application-based validation

<table>
<thead>
<tr>
<th>Maturity Bucket</th>
<th>Maturity Start</th>
<th>Maturity End</th>
<th>6G Status</th>
<th>Requirement</th>
<th>Comments / Example</th>
</tr>
</thead>
<tbody>
<tr>
<td>58 Day 57</td>
<td>P57D</td>
<td>P57D</td>
<td>5G ≤ 6G</td>
<td>6G Daily Maturity bucket</td>
<td></td>
</tr>
<tr>
<td>59 Day 58</td>
<td>P58D</td>
<td>P58D</td>
<td>5G ≤ 6G</td>
<td>6G Daily Maturity bucket</td>
<td></td>
</tr>
<tr>
<td>60 Day 59</td>
<td>P59D</td>
<td>P59D</td>
<td>5G ≤ 6G</td>
<td>6G Daily Maturity bucket</td>
<td></td>
</tr>
<tr>
<td>61 Day 60</td>
<td>P60D</td>
<td>P60D</td>
<td>5G ≤ 6G</td>
<td>6G Daily Maturity bucket</td>
<td></td>
</tr>
<tr>
<td>63 61 - 74 Days</td>
<td>P68D</td>
<td>P74D</td>
<td>5G ≤ 6G</td>
<td>6G Weekly Maturity bucket</td>
<td></td>
</tr>
<tr>
<td>64 75 - 90 Days</td>
<td>P75D</td>
<td>P90D</td>
<td>5G ≤ 6G</td>
<td>6G Weekly Maturity bucket</td>
<td></td>
</tr>
<tr>
<td>65 91 - 120 Days</td>
<td>P91D</td>
<td>P120D</td>
<td>5G ≤ 6G</td>
<td>6G Monthly Maturity bucket</td>
<td></td>
</tr>
<tr>
<td>66 121 - 170 Days</td>
<td>P121D</td>
<td>P170D</td>
<td>5G ≤ 6G</td>
<td>6G Monthly Maturity bucket</td>
<td></td>
</tr>
<tr>
<td>69 &gt; 1 Yr &lt;= 2 Yr</td>
<td>P365D</td>
<td>P730D</td>
<td>5G ≤ 6G</td>
<td>6G Yearly Maturity bucket</td>
<td></td>
</tr>
<tr>
<td>70 &gt; 2 Yr &lt;= 3 Yr</td>
<td>P730D</td>
<td>P1095D</td>
<td>5G ≤ 6G</td>
<td>6G Yearly Maturity bucket</td>
<td></td>
</tr>
<tr>
<td>71 &gt; 3 Yr &lt;= 5 Yr</td>
<td>P1095D</td>
<td>P1461D</td>
<td>5G ≤ 6G</td>
<td>6G Yearly Maturity bucket</td>
<td></td>
</tr>
<tr>
<td>72 &gt; 5 Yr &lt;= 5 Yr</td>
<td>P1461D</td>
<td>P1827D</td>
<td>5G ≤ 6G</td>
<td>6G Yearly Maturity bucket</td>
<td></td>
</tr>
<tr>
<td>73 Perpetual</td>
<td>P9999D</td>
<td>A/A</td>
<td>5G ≤ 6G</td>
<td>Perpetual Maturity bucket</td>
<td></td>
</tr>
</tbody>
</table>

MaturityEnd is not applicable for this Maturity bucket

maturityBucket=maturityStart=P9999D

maturityBucket=maturityStart=P1827D
Example 1

1. Enumeration list validation
2. Enumeration list will be periodically updated.
   - Enumeration list is based on Financial Stability Board (FSB) documentation.
   - 2020 Enumeration list is used for 6G Implementation and located ==>
   - Update is expected once a year.

- To perform this validation, select the ‘Enumerations’ tab.
- Filter on ‘XML Element or Attribute Name’ = ‘gsib.’
- The filtered results provide a list of allowed values for ‘gsib’ entries in the input files.
**Example 2**

- Validation needs to be performed to make sure that the expected product is used with every report type.
- If an unexpected value is used, the file must be rejected with corresponding error handling.

To perform this validation, select the ‘Enumerations’ tab and filter based on ‘XML Element or Attribute Name’ = ‘balanceSheetSupProduct.’

The ‘Enumeration value’ list will show a list of allowed values.
There are four XML Schemas shared with the institutions in the distributed package.

<table>
<thead>
<tr>
<th>XML Schema</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>6GSchema.xsd</td>
<td>XML Schema for Data files</td>
</tr>
<tr>
<td>6GCommentSchema.xsd</td>
<td>XML Schema for Comments files</td>
</tr>
<tr>
<td>XYZBANKIncludesSchema.xsd</td>
<td>Firm-specific schema-include XSD sample file</td>
</tr>
<tr>
<td>XYZBANKIncludesSchema_NoBusinessLinesProvided.xsd</td>
<td>Firm-specific schema-include XSD sample file</td>
</tr>
</tbody>
</table>

**General information**

- 6GSchema.xsd – XML Schema, which was designed for 6G FR 2052a Complex Institution Liquidity Monitoring Report submissions
- 6GSchema.xsd has many similarities with XML Schema used for 5G Data collection; however, it has specific details to accommodate 6G requirements.
- This XML Schema is applicable for two file types expected to be provided by each submitting firm:
  - Primary Submission schedule file
  - Reduced Submission schedule file

**Including firm-specific XML Schema**

- 6GSchema.xsd includes statement pointing to firm-specific XML Schema.

```xml
<?xml version="1.0" encoding="UTF-8" ?>
<xs:schema xmlns:xsi="http://www.w3.org/2001/XMLSchema" elementFormDefault="qualified" attributeFormDefault="unqualified">
  <xs:include schemaLocation="XYZBANKIncludesSchema.xsd" />
</xs:schema>
```

- It is expected that each submitting firm will substitute sample ‘XYZBANKIncludesSchema.xsd’ XML Schema with firm-specific XML Schema include file.
XML Schemas
6GSchema.xsd (continued)

Schema navigation

- XML Schema can be easily navigated after searching for the word, “six.”


```xml
  <xs:element name="6gSubmission">
    <xs:complexType>
      <xs:sequence>
        <xs:element ref="header" />
        <xs:choice minOccurs="1" maxOccurs="unbounded">
          <xs:element ref="assetInflowReport" />
          <xs:element ref="unsecuredInflowReport" />
          <xs:element ref="securedInflowReport" />
          <xs:element ref="otherInflowReport" />
          <xs:element ref="depositsOutflowReport" />
          <xs:element ref="wholesaleOutflowReport" />
          <xs:element ref="securedOutflowReport" />
          <xs:element ref="otherOutflowReport" />
          <xs:element ref="foreignExchangeSupplementalReport" />
          <xs:element ref="informationalSupplementalReport" />
          <xs:element ref="derivativesAndCollateralSupReport" />
          <xs:element ref="liquidityRiskMeasurementSupReport" />
          <xs:element ref="balanceSheetSupReport" />
        </xs:choice>
      </xs:sequence>
    </xs:complexType>
  </xs:element>
```
Schema navigation – file header

- Details about XML elements of the header can be found in the ‘header’ tab of the ‘6G Business Requirements_for distribution.xlsx’ document.
- Header example [6G_XYZBANK_08312021.xml]:

```
<sixGSubmission xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xsi:noNamespaceSchemaLocation="6GSchema.xsd">
  <header version="1" reportingFrequency="Primary">
    <reporter listingExchange="NYSE">XYZBANK</reporter>
    <reportingDate>2021-08-31</reportingDate>
  </header>
</sixGSubmission>
```

- File header contains information about file submission:
Schema navigation – file header

- New XML element ‘reportingFrequency’ was introduced to differentiate between type of file processed:
  - Primary vs. reduced
    - `<xs:simpleType name="reportingFrequency">`
      - `<xs:restriction base="xs:string">`
        - `<xs:enumeration value="Primary"/>`
        - `<xs:enumeration value="Reduced"/>`
      </xs:restriction>
    </xs:simpleType>

- ‘Reporter’ information [‘reporterList’ and ‘listingExchange’] provided via firm-specific XSD Schema file [examples from ‘XYZBANKIncludesSchema.xsd’]
Schema navigation – report records

- XML Schema describes report records of different report types.
Schema navigation – report records

- For each of the report types XML Schema contains corresponding XML element describing record of specific report type. Example below:

```xml
<xs:element name="assetInflowReport">
  <xs:complexType>
    <xs:complexContent>
      <xs:extension base="reportBase">
        <xs:sequence>
          <xs:element name="assetProduct" type="assetProduct" minOccurs="1" maxOccurs="1"/>
          <xs:element name="assetSource" type="assetSource" minOccurs="0" maxOccurs="1"/>
          <xs:element name="marketValue" type="valueType"/>
          <xs:element name="lendableValue" type="valueType" minOccurs="1" maxOccurs="1"/>
          <xs:element name="maturityBucket" type="maturityBucket" minOccurs="1" maxOccurs="1"/>
          <xs:element name="forwardStartValue" type="valueType" minOccurs="0" maxOccurs="1"/>
          <xs:element name="collateralClass" type="collateralClass" minOccurs="1" maxOccurs="1"/>
          <xs:element name="accountingDesignation" type="accountingDesignation" minOccurs="1" maxOccurs="1"/>
          <xs:element name="effectiveMaturityBucket" type="maturityBucket" minOccurs="0" maxOccurs="1"/>
          <xs:element name="encumbranceType" type="encumbranceType" minOccurs="0" maxOccurs="1"/>
          <xs:element name="internalCounterparty" type="internalCounterparty" minOccurs="0" maxOccurs="1"/>
          <xs:element name="businessLine" type="businessLine" minOccurs="0" maxOccurs="1"/>
        </xs:sequence>
        <xs:attribute name="treasuryControl" type="xs:boolean" use="required"/>
      </xs:extension>
    </xs:complexContent>
  </xs:complexType>
</xs:element>
```
Schema navigation – Report records

- Each XML Schema element with minOccurs=“1” is a mandatory element and must be provided from the XML Schema perspective.

  `<xs:element name="assetProduct" type="assetProduct" minOccurs="1" maxOccurs="1"/>

- Each XML Schema element with minOccurs=“0” is not mandatory element from XML Schema perspective; however, these types of fields may be required to be populated based on the business rules articulated in the ‘FR 2052a Instructions.pdf.’ Such fields, which are not required by XML Schema but expected to be provided from the business perspective, are called ‘Dependent fields.’

  `<xs:element name="assetSource" type="assetSource" minOccurs="0" maxOccurs="1"/>

- Example of ‘Dependent field’ is the element name=“businessLine”

  `<xs:element name="businessLine" type="businessLine" minOccurs="0" maxOccurs="1"/>

  - “businessLine” is not mandatory from XML Schema perspective.
  - “businessLine,” however, must be provided by Category I firms, as designated by the Board’s tailoring rules.
Schema navigation – enumeration values

- XML Schema contains multiple enumeration values lists which correspond to the content of the ‘Enumerations’ tab in the ‘6G Business Requirements_for_distribution.xlsx.’ Examples below:

```xml
- <xs:simpleType name="encumbranceType">
  - <xs:restriction base="xs:string">
    <xs:enumeration value="Securities Financing Transaction"/>
    <xs:enumeration value="Derivative VM"/>
    <xs:enumeration value="Derivative IM and DFC"/>
    <xs:enumeration value="Segregated for Customer Protection"/>
    <xs:enumeration value="Covered Federal Reserve Facility Funding"/>
    <xs:enumeration value="Other"/>
  </xs:restriction>
</xs:simpleType>

- <xs:simpleType name="maturityOptionality">
  - <xs:restriction base="xs:string">
    <xs:enumeration value="Evergreen"/>
    <xs:enumeration value="Extendible"/>
    <xs:enumeration value="Accelerated Counterparty"/>
    <xs:enumeration value="Accelerated Firm"/>
    <xs:enumeration value="Not Accelerated"/>
  </xs:restriction>
</xs:simpleType>
```
XML Schemas

XYZBANKIncludesSchema.xsd

- XYZBANKIncludesSchema.xsd XML Schema represents a sample of the firm-specific Include Schema file, which was created for demonstration purposes for hypothetical ‘XYZBANK.’
- 6GSchema.xsd has an “include” statement pointing to Firm specific XML Schema.

```xml
<?xml version="1.0" encoding="UTF-8" ?>
<xs:schema xmlns:xs="http://www.w3.org/2001/XMLSchema" elementFormDefault="qualified" attributeFormDefault="unqualified">
  <xs:include schemaLocation="XYZBANKIncludesSchema.xsd"/>
</xs:schema>
```

- 6G firm-specific Include Schema file contains enumerations for the following XML types:
  - reporterList – existed in 5G
  - exchangeList – existed in 5G
  - reportScope – existed in 5G
  - internalCounterparty – existed in 5G
  - businessLine – new XML type introduced for 6G

- Notes:
  - Please be aware that only Category I Firms must provide businessLine information.
  - The FRB will distribute 6G firm-specific schema-include XSD files to Category I Firms.
<xml version="1.0" encoding="UTF-8" ?>
<!-- schema generated on 07/29/2021 -->
<xs:schema xmlns:xs="http://www.w3.org/2001/XMLSchema" elementFormDefault="qualified" attributeFormDefault="unqualified">
  
  <xs:simpleType name="reporterList">
    <xs:restriction base="xs:string">
      <xs:enumeration value="XYZBANK" />
    </xs:restriction>
  </xs:simpleType>

  <xs:simpleType name="exchangeList">
    <xs:restriction base="xs:string">
      <xs:enumeration value="XNYX" />
    </xs:restriction>
  </xs:simpleType>

  <xs:simpleType name="reportScope">
    <xs:restriction base="xs:string">
      <xs:enumeration value="XYZBANK - Consolidated" />
      <xs:enumeration value="XYZBANK - Parent" />
      <xs:enumeration value="XYZBANK Bank USA NA" />
      <xs:enumeration value="XYZBANK - APAC" />
      <xs:enumeration value="XYZBANK - Americas" />
      <xs:enumeration value="XYZBANK - EMEA" />
    </xs:restriction>
  </xs:simpleType>

  <xs:simpleType name="internalCounterparty">
    <xs:restriction base="xs:string">
      <xs:enumeration value="XYZBANK - Parent" />
      <xs:enumeration value="XYZBANK Bank USA NA" />
      <xs:enumeration value="XYZBANK - APAC" />
      <xs:enumeration value="XYZBANK - Americas" />
      <xs:enumeration value="XYZBANK - EMEA" />
    </xs:restriction>
  </xs:simpleType>

  <xs:simpleType name="businessLine">
    <xs:restriction base="xs:string">
      <xs:enumeration value="Asset Management" />
      <xs:enumeration value="Wealth Management" />
      <xs:enumeration value="Commercial Bank" />
      <xs:enumeration value="Corporate Treasury" />
    </xs:restriction>
  </xs:simpleType>

</xs:schema>
XML Schemas

XYZBANKIncludesSchema_NoBusinessLinesProvided.xsd

- Categories II, III, and IV firms, as designated by the Board’s tailoring rules, are not required to provide “businessLine” information.
- For the 6GSchema.xsd XML Schema to be properly validated, there is an expectation that simpleType name="businessLine" is properly defined and present in the firm-specific include file.
- XYZBANKIncludesSchema_NoBusinessLinesProvided.xsd was created as an example for firms which are not required to provide Business Lines information.
- As you can see from the example below, while simpleType name="businessLine" is properly defined, it has no enumeration values.
For Firms which are not required to provide ‘businessLine’ values in the 6G submissions
  – To successfully validate 6G XSD Schema, Firms must use 6G Firm-specific schema-include XSD files with ‘businessLine’ included
  – The FRB does not intend to distribute 6G Firm-specific schema-include XSD files to the Firms that are not expected to provide ‘businessLine’ in the 6G submissions
  – Firms are advised to modify existing 5G Firm-specific schema-include XSD files into the 6G format by following the steps below:
    – Use the provided ‘XYZBANKIncludesSchema_NoBusinessLinesProvided.xsd’ file as an example
    – Edit content of the existing 5G Firm-specific schema-include XSD file by adding an entry for ‘businessLine’ from the ‘XYZBANKIncludesSchema_NoBusinessLinesProvided.xsd’ sample file
    – If the 5G Firm-specific schema-include XSD file cannot be located by the Firm, FRB can provide a copy of such document to the Firm
General information

- 6GCommentSchema.xsd has many similarities with XML Schema used for 5G Data collection; however, it includes specific details to accommodate 6G requirements.
- It is expected that firms will be able to use the same XML file to provide comments for:
  - Primary submission schedule file
  - Reduced submission schedule file
- If firm already submitted comments for specific as-of-date for primary submission file and needs to add comments for reduced schedule submission for the same as-of-date, the firm needs to submit new version of the comments file for the same as-of-date with additional comments.
- There is an expectation that every new version of the comments file for specific as-of-date will contain all cumulative comments for this as-of-date for primary and reduced submission schedule files.
- Detailed information about 6GCommentSchema.xsd XML Schema can be found in the ‘sixGComments’ tab of the ‘6G Business Requirements_for distribution.xlsx’ document.
**Including 6GSchema.xsd XML Schema**

- 6GCommentSchema.xsd has include statement pointing to 6GSchema.xsd XML Schema.

```xml
<?xml version="1.0" encoding="UTF-8" ?>
- <xs:schema xmlns:xs="http://www.w3.org/2001/XMLSchema"
  xmlns:include="http://www.w3.org/2001/XMLSchemaInclude"
  xmlns:6GSchema="http://www.example.com/6GSchema"/>
```

**Possible level of comments**

- 6GCommentSchema.xsd allows for submission of comments on the different precision level to accommodate firm’s needs.

- Firms can specify:
  - reportingFrequency
  - reportScope
  - report type
  - product
  - subProduct
  - comment text

- Alternatively, comment record can be submitted without reportingFrequency, reportScope, or specific report details.
Examples of the comments provided below:

```xml
<?xml version="1.0" encoding="UTF-8"?>
<6GComments xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xsi:noNamespaceSchemaLocation="6GCommentSchema.xsd">
  <commentOuter version="1">
    <reporter listingExchange="NYX">XYZBANK</reporter>
    <reportingDate>2021-08-31</reportingDate>
    <commentInner>
      <!-- Sample file -->
      <!-- ... -->
      <comment>
        <commentInner>
          <!-- Reporting Frequency: Primary -->
        </commentInner>
        <reportInner scope="XYZBANK">
          <reportScope>Primary</reportScope>
          <reportType>AssetInflowReport</reportType>
          <reportID>1</reportID>
          <product>Capacity</product>
          <subProduct>Bank of England</subProduct>
        </reportInner>
        <text>Sample comment for Primary submission, AssetInflowReport, reportID specific</text>
      </commentInner>
      <commentInner>
        <!-- Reporting Frequency: Reduced -->
      </commentInner>
      <reportInner scope="XYZBANK">
        <reportScope>Consolidated</reportScope>
        <reportType>LiquidityRiskMeasurementSupReport</reportType>
        <reportID>1</reportID>
        <product>Net Stable Funding Ratio</product>
      </reportInner>
      <text>Sample comment for Reduced submission, LiquidityRiskMeasurementSupReport, reportID specific</text>
      </commentInner>
      <!-- ... -->
    </commentInner>
  </commentOuter>
</6GComments>
```
Sample XML files

Note that the three “XYZBANK” sample files included in the 6G documentation package are intended to illustrate the XML schema format and do not constitute guidance on how to report specific transactions.

6G_XYZBANK_08312021.xml

- File represents sample of the Primary Submission schedule file.
- File corresponds to the 6GSchema.xsd.
- File was created for demonstration purposes for hypothetical ‘XYZBANK’.
- File contains variation of records of all 6G report types:
  - assetInflowReport
  - unsecuredInflowReport
  - securedInflowReport
  - otherInflowReport
  - depositsOutflowReport
  - wholesaleOutflowReport
  - securedOutflowReport
  - otherOutflowReport
  - foreignExchangeSupplementalReport
  - informationalSupplementalReport
  - derivativesAndCollateralSupReport
  - liquidityRiskMeasurementSupReport
  - balanceSheetSupReport
Sample XML files (continued)

**6G_XYZBANK_08312021.REDUCTED.xml**
- File represents sample of the reduced submission schedule file.
- File corresponds to the 6GSchema.xsd.
- File was created for demonstration purposes for hypothetical ‘XYZBANK.’
- File contains variation of records of only two 6G report types expected to be submitted via reduced submission schedule file:
  - liquidityRiskMeasurementSupReport
  - balanceSheetSupReport

**6G_XYZBANK_08312021.COMMENT.xml**
- File represents sample of the comments file.
- File corresponds to the 6GCommentSchema.xsd.
- File was created for demonstration purposes for hypothetical ‘XYZBANK.’
- File contains variation of comments records on the different precision levels to accommodate firm’s needs.
Firm’s UAT Testing Timeline and Rules of Engagement

- The FRB quality assurance (QA) environment for a firm’s UAT of 6G submissions is expected to be open early March 2022. Additional communication will be issued indicating when the FRB QA environment is ready for firm’s UAT.
- Testing will be initially opened only for Category I Firms.
- Categories II, III, and IV firms are expected to proceed with testing starting from June–July 2022 based on the expected start of 6G submissions.
  - Please note that only Category I Firms are expected to start submitting FR 2052a Complex Institution Liquidity Monitoring Report in 6G format from May 1, 2022.
  - Categories II, III, and IV Firms are expected to start submissions in the 6G format from October 2022.
- Firms will be able to submit test 6G files [Primary, Reduced, and Comments] into the QA environment using SFTP (Secure File Transfer Protocol) data transmission, while utilizing 5G QA SFTP credentials [Accounts] and placing files into newly created 6G folders.
- Firms will not need to get pre-approvals for submission of the test files after QA environment will be opened for testing.
- Firms will be able to submit as many files as necessary during UAT time period.
- For every submitted UAT test file, firms will receive:
  - Success or failure processing email notifications
  - Detailed error messages [if applicable]
- The FRB will enable email submission deadline notifications in the QA environment for firms participating in UAT for primary and reduced submission schedule files.
- Firms are welcome to seek guidance interpreting error messages as required during and after UAT.
Updates to the ‘6G Business Requirements for distribution.xlsx’ document

- Minor updates in the previously distributed ‘6G Business Requirements for distribution.xlsx’ document include:
  - Introducing ‘change log’ tab
  - Modifying the ‘counterparty required’ tab described via ‘change log’ tab

<table>
<thead>
<tr>
<th>#</th>
<th>Change date</th>
<th>Tab</th>
<th>Change description</th>
<th>Performed by</th>
<th>Comment / Reference</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>12/28/2021</td>
<td>Counterparty Required</td>
<td>Names for 6 Products have been updated to align with values used in XML Schema and values used in 'Enumerations' Tab</td>
<td>D. Raginskiy</td>
<td>Updated Product names; Non-Reciprocal Brokered Deposits; Forwards and Futures; FHLB Advances; Synthetic Firm Financing; Other Secured Financing Transactions; Outstanding Draws on Unsecured Revolving Facilities</td>
</tr>
</tbody>
</table>

- Updated version of the ‘6G Business Requirements_for distribution.xlsx’ is distributed to the firms via ‘Ask the Fed’ session materials:
  - 6G Business Requirements_for distribution_2021.12.28.xlsx
Technical Questions Requiring Assistance

- Please direct any questions as follows:
  - NYSTLiquidityMonitoring@ny.frb.org for questions regarding 2052a content
  - FR2052A.Support@ny.frb.org for technical questions related to 6G onboarding and file submission

- Answers to commonly asked questions expected to be communicated using Frequently Asked Questions process.
Poll 2

Is the material in this presentation helpful to the technical development of data files?

a) Yes  
b) No  
c) Unsure
Poll 3

Did this presentation provide information to further your knowledge of the requirements for a successful submission to the Federal Reserve?

a) Yes
b) No
c) Unsure
To Ask a Question

• Use the chat feature in the webinar (Ask Question button on bottom of screen)

• Email your question to: questions@askthefed.org.

• Use the “Ask a Question” feature on the Ask the Fed® website: www.askthefed.org.
Thanks for joining us.

www.askthefed.org