



# EDGAR® ABS XML Technical Specification

Version 1.5

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# 1. INTRODUCTION

## 1.1. Purpose

This document describes the valid structure and content of the ABS Extensible Markup Language (XML) Asset Data File Types. The following table (Table 1-1) lists the ABS Asset Data File Types. Note that ABS Asset Data Files are only applicable to EX-102 XML files and do not apply to EX-103 XML files. For information on submitting EX-103 files, please see Section 5.

**Table 1-1: ABS Asset Data File Types**

ASSET DATA FILE TYPE	DESCRIPTION
ABS-AUTOLOAN	Data about an asset pool comprising auto loans.
ABS-AUTOLEASE	Data about an asset pool comprising auto leases.
ABS-DS	Data about an asset pool comprising debt securities.
ABS-RMBS	Data about an asset pool comprising residential mortgages.
ABS-CMBS	Data about an asset pool comprising commercial mortgages.

This specification provides the basis for creating the aforementioned ABS Asset Data File Types that can be successfully parsed by the EDGAR system.

ABS Asset Data Files must conform to the ABS Asset Data File Taxonomy for the EDGAR system. This taxonomy comprises a collection of XML Schema Definition (.xsd) files that defines the structure of ABS Asset Data File Types.

ABS Asset Data Files can be transmitted to the SEC via the ‘Transmit’ link on the EDGAR FilerWeb (<https://www.edgarfiling.sec.gov/>) or the ‘Transmit XML Submission’ link on the EDGAR OnlineForms/XML Website (<https://www.onlineforms.edgarfiling.sec.gov/>).

In order to use the EDGAR FilerWeb or OnlineForms/XML Website, you must have a Central Index Key (CIK) and EDGAR access codes (password, CIK confirmation code (CCC)). If you currently have a CIK and access codes, you can proceed to the EDGAR FilerWeb or OnlineForms/XML Website to submit your ABS Asset Data File. If you do not have access codes, you will need to obtain these codes through the EDGAR Filer Management Website, (<https://www.filermanagement.edgarfiling.sec.gov/>). For information on how to obtain access codes, refer to the “Becoming an EDGAR Filer” section of the EDGAR Filer Manual, Volume I (General Information).

For further information regarding the EDGAR FilerWeb or OnlineForms/XML Website, specifically in regards to the transmission of filer-constructed ABS Asset Data Files, refer to the “Filer-Constructed XML Submission” section of the EDGAR Filer Manual, Volume II (EDGAR Filing).

For guidance on how to prepare an ABS Asset Data File, please refer to section 5, “ABS Asset Data File Construction” of this document. An ABS Asset Data File must conform to one of the following schema files included in this Technical Specification package:

- eis\_ABS\_AutoLeaseAssetData.xsd
- eis\_ABS\_AutoLoanAssetData.xsd
- eis\_ABS\_DebtSecuritiesAssetData.xsd
- eis\_ABS\_RMBSAssetData.xsd
- eis\_ABS\_CMBSAssetData.xsd

The following sample ABS Asset Data XML documents are embedded in section 6 of this document:

- Sample\_ABS\_AutoLeaseAssetData.xml
- Sample\_ABS\_AutoLoanAssetData.xml
- Sample\_ABS\_DebtSecuritiesAssetData.xml
- Sample\_ABS\_RMBSAssetData.xml
- Sample\_ABS\_CMBSAssetData.xml

## 1.2. Summary of Changes

On December 12, 2016, EDGAR Release 16.4 introduced the following change:

- The schema file “eis\_ABS\_RMBSAssetData.xsd” was updated to correct certain response code values to integer in the following element types –
  - Item 1(c)(13)(iii) ORIG\_LOAN\_TYP\_MST\_SNR\_LIEN\_CODE\_TYPE from 1.0 to 1 and 99.0 to 99
  - Item 1(d)(8) PROPRTY\_MST\_RCNT\_AVM\_MDL\_CODE\_TYPE from 98.0 to 98
  - Item 1(i)(1) ASSET\_SUBJ\_DEMAND\_STAT\_CODE\_TYPE from 98.0 to 98
  - Item 1(m)(1) MOD\_MST\_RCNT\_LOAN\_EVNT\_CODE\_TYPE from 8.0 to 8
  - Item 1(m)(21)(vii) POST\_MOD\_ARM\_ROUND\_CODE\_TYPE from 0.0 to 0, 1.0 to 1, 2.0 to 2, 3.0 to 3, and 99.0 to 99
  - Item 1(q)(2) MST\_RCNT\_LOSS\_MTGTION\_EXIT\_CODE\_TYPE from 98.0 to 98
  - Item 1(r)(4) FORECL\_EXIT\_REASN\_CODE\_TYPE from 98.0 to 98
  - Item 1(s)(10) REO\_EXIT\_REASN\_CODE\_TYPE from 98.0 to 98
  - Item 1(v)(1) NON\_PAY\_STAT\_CODE\_TYPE from 9.0 to 9
- The schema file “eis\_ABS\_DebtSecuritiesAssetData.xsd” was updated to correct the response code value to integer in the following element type –
  - Item 5(f)(1) STAT\_ASSET\_SUBJ\_TO\_DEMND\_CODE\_TYPE from 98.0 to 98

- The schema file “eis\_ABS\_CMBSAssetData.xsd” was updated to correct certain response code values to integer in the following element types –
  - Item 2(c)(28)(i) ARM\_INDX\_CODE\_TYPE from 98.0 to 98
  - Item 2(d)(7) PROPRTY\_TYP\_CODE\_TYPE from 98.0 to 98
  - Item 2(d)(15) VAL\_SRC\_SCRTZTN\_CODE\_TYPE from 98.0 to 98
- The schema file “eis\_ABS\_RMBSAssetData.xsd” was updated to add the following element with MM/YYYY format –
  - Item 1(c)(13)(vi) mostSeniorLienOriginationDate
- The schema file “eis\_ABS\_CMBSAssetData.xsd” was updated to correct the value type from integer to decimal in the following element –
  - Item 2(c)(28)(iv) armMarginNumber



## 2. EDGAR SCHEMA FILES

Table 2-1 describes the schema files that the EDGAR system uses to validate ABS Asset Data File Types. These schemas are considered part of this specification and are distributed with this document. Note that EDGAR Schema Files are only applicable to EX-102 XML files and do not apply to EX-103 XML files. For instructions on submitting EX-103 files, please see Section 5.

**Table 2-1: ABS Schema Files**

XML Schema File	Scope of File
eis_Common.xsd	Defines the common elements for all EDGAR File Types.
eis_stateCodes.xsd	All State Codes.
eis_ABS_Common.xsd	Defines the common elements for all ABS Asset Data File Types.
eis_ABS_AutoLeaseAssetData.xsd	Defines the elements for an Auto Lease Asset Data File.
eis_ABS_AutoLoanAssetData.xsd	Defines the elements for an Auto Loan Asset Data File.
eis_ABS_DebtSecuritiesAssetData.xsd	Defines the elements for a Debt Securities Asset Data File.
eis_ABS_RMBSAssetData.xsd	Defines the elements for a Residential Mortgage Asset Data File.
eis_ABS_CMBSAssetData.xsd	Defines the elements for a Commercial Mortgage Asset Data File.

The schema files define the valid data elements for an ABS Asset Data File, the hierarchy and sequencing of these elements, data types, valid values, maximum lengths, and the number of occurrences, etc.

It is recommended that you download these files and use them for your own validation prior to filing an Asset Data File. This will greatly reduce the likelihood of receiving an EDGAR Suspend error. These schema files contain several annotations that describe the nature of the content of some of the elements.

## 2.1. Schema Table Column Definitions

We assume the filer is familiar with the basics of the XML language, namespaces, and the XML Schema Definition language. If not, you can find numerous references on the World Wide Web.

The following table (Table 2-2) includes the schema language features used most frequently in the ABS Asset Data Schema files:

**Table 2-2: Schema Language**

Indicator	Purpose
<sequence>	Specifies that child elements must appear in a specific order. This indicator is used with each element hierarchy. Elements must always appear in the order shown in Section 3.4.
<choice>	Specifies that only one of the child elements can be present within the containing element.
<minOccurs>	Specifies the minimum number of times that an element can occur.
<maxOccurs>	Specifies the maximum number of times that an element can occur.

The default value for the <minOccurs> and <maxOccurs> indicator is 1. An optional field will have a <minOccurs> value of zero.

The following excerpt from the eis\_ABS\_AutoLeaseAssetData.xsd schema file shows the basic structure used by all of the ABS asset class schemas:

```
<xs:complexType name="ASSET_TYPE">
  <xs:sequence>
    <xs:element name="assetTypeNumber" type="ns2:STRING_100_TYPE" minOccurs="1"/>
    <xs:element name="assetNumber" type="ns1:STRING_25_TYPE" minOccurs="1"/>
    <xs:element name="reportingPeriodBeginDate" type="ns1:DATE_TYPE" minOccurs="0"/>
    <xs:element name="reportingPeriodEndDate" type="ns1:DATE_TYPE" minOccurs="0"/>
    <xs:element name="originatorName" type="ns1:STRING_30_TYPE" minOccurs="0"/>
    <xs:element name="acquisitionCost" type="ns1:DECIMAL_TYPE20_8" minOccurs="0"/>
    <xs:element name="subvented" type="SUBVNT_CODE_TYPE" minOccurs="0"
      maxOccurs="unbounded"/>
    <xs:element name="vehicleManufacturerName" type="ns1:STRING_30_TYPE" minOccurs="0"/>
    <xs:element name="vehicleModelName" type="ns1:STRING_30_TYPE" minOccurs="0"/>
    <xs:element name="zeroBalanceCode" type="ZERO_BAL_CODE_TYPE" minOccurs="0"
      maxOccurs="unbounded"/>
    <xs:element name="terminationIndicator" type="TERMNTN_CODE_TYPE" minOccurs="0"
      maxOccurs="unbounded"/>
    <xs:element name="excessFeeAmount" type="ns1:DECIMAL_TYPE20_8" minOccurs="0"/>
    <xs:element name="liquidationProceedsAmount" type="ns1:DECIMAL_TYPE20_8" minOccurs="0"/>
  </xs:sequence>
</xs:complexType>

<xs:element name="assetData">
  <xs:complexType>
    <xs:sequence>
      <xs:element name="assets" type="ASSET_TYPE" minOccurs="0" maxOccurs="unbounded"/>
    </xs:sequence>
  </xs:complexType>
</xs:element name="assetData">
```

The following is a sample XML that is generated from the eis\_ABS\_AutoLeaseAssetData.xsd schema above:

```
<?xml version="1.0" encoding="UTF-8"?>
```

```

<assetData xmlns="http://www.sec.gov/edgar/document/absee/autolease/assetdata"
xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance">
  <assets>
    <assetTypeNumber>ABS10000022</assetTypeNumber>
    <assetNumber>A1000000033</assetNumber>
    <reportingPeriodBeginDate>03-20-2011</reportingPeriodBeginDate>
    <reportingPeriodEndDate>02-20-2013</reportingPeriodEndDate>
    <originatorName>PCSR</originatorName>
    <acquisitionCost>18000.00000000</acquisitionCost>
    <subvented>98</subvented>
    <subvented>2</subvented>
    <subvented>0</subvented>
    <vehicleManufacturerName>Ford</vehicleManufacturerName>
    <vehicleModelName>Taurus </vehicleModelName>
    <terminationIndicator>2</terminationIndicator>
    <terminationIndicator>4</terminationIndicator>
    <terminationIndicator>1</terminationIndicator>
    <excessFeeAmount>.00</excessFeeAmount>
    <liquidationProceedsAmount>12000.00000000</liquidationProceedsAmount>
  </assets>
  <assets>
    <assetTypeNumber> ABS10000022</assetTypeNumber>
    <assetNumber> A1000000034</assetNumber>
    <reportingPeriodBeginDate>10-05-2011</reportingPeriodBeginDate>
    <reportingPeriodEndDate>05-01-2012</reportingPeriodEndDate>
    <originatorName> PCSR </originatorName>
    <subvented>98</subvented>
    <zeroBalanceCode>1</zeroBalanceCode>
    <zeroBalanceCode>3</zeroBalanceCode>
    <zeroBalanceCode>99</zeroBalanceCode>
  </assets>
  <assets>
    <assetTypeNumber> ABS10000025</assetTypeNumber>
    <assetNumber> A1000000035</assetNumber>
    <reportingPeriodBeginDate>01-05-2011</reportingPeriodBeginDate>
    <reportingPeriodEndDate>09-22-2013</reportingPeriodEndDate>
    <originatorName> PCSR </originatorName>
    <acquisitionCost>10000.00000000</acquisitionCost>
    <vehicleManufacturerName>Mitsubishi </vehicleManufacturerName>
    <vehicleModelName> Galant </vehicleModelName>
    <terminationIndicator>2</terminationIndicator>
    <terminationIndicator>4</terminationIndicator>
    <terminationIndicator>1</terminationIndicator>
    <excessFeeAmount>2000.0000000</excessFeeAmount>
    <liquidationProceedsAmount>8000.0000000</liquidationProceedsAmount>
  </assets>
</assetData>

```

### 3. XML SCHEMAS

This section summarizes the restrictions and constraints imposed on the content of the all ABS Asset Data File Types. These rules are enforced by the schema files and by EDGAR processing sub-systems. Note that these restrictions and constraints are only applicable to EX-102 XML files and do not apply to EX-103 XML files. For instructions on submitting EX-103 files, please see Section 5.

#### 3.1. Schema Table Column Definitions

Table 3-1 defines the columns in the five tables (provided in Section 3.4) which map ABS Schemas to Asset Data Types:

**Table 3-1: Column Definitions for Data Fields**

Column Name	Description
Level	Depth of element in the XML node hierarchy.
Order	Order in which elements may appear.
Data Type	See the Table in Section 3.2 for a detailed description.
Element Name	Name of the XML element. This is case-sensitive.
Max Length	Maximum length for elements. EDGAR database stores up to this number of characters. "Unlimited" means no maximum length constraint for the element value.
Choice List	The paragraph that describes the data value constraint for the element. The values specified are case sensitive.
Max Occur	Specifies the maximum number of times that an element can occur.
Item	The item number as it relates to the ABS-EE rule.
Applicability of Element	Indicates applicability of the element. m = Mandatory o = Optional NA = Does not apply. EDGAR uses this element for server-side processing. Do not provide a value for this element.

#### 3.2. Data Type Constraints

Each entry in the "Data Type" column of these tables will be one of these values:

Data Type	Constraints
Boolean	Indicate a "true" value with the word "true". Indicate a "false" value with the word "false".
Date1	Input must be of the format MM-DD-YYYY. A date element may not have a null, blank, zero, or invalid date value. This is a schema violation and will cause the XML to be stripped from the submission.
Date2	Input must be of the format MM/YYYY. A date element may not have a null, blank, zero, or invalid date value. This is a schema violation and will cause the XML to be stripped from the submission.
Integer	Valid characters are 0-9, and the minus sign. Cannot contain commas, dollar sign, or parentheses.
Decimal	Valid characters are 0-9, and the minus sign. Cannot contain commas, dollar sign, or parentheses. May contain period and decimal places.

Data Type	Constraints
String	<p>Sequence of valid alphanumeric characters and usually is accompanied by a max length value, denoting the number of characters allowed in the string. Should be no longer than the length shown in the tables in Sections 3.4.</p> <p>You must use special escape sequences to represent these four characters:</p> <p>For the &lt; character use the escape sequence "&amp;lt;" or "&amp;#60;".</p> <p>For the &gt; character use the escape sequence "&amp;gt;" or "&amp;#62;".</p> <p>For the &amp; character use the escape sequence "&amp;amp;" or "&amp;#38;".</p> <p>For the " character use the escape sequence "&amp;quot;" or "&amp;#34;".</p>
NV	These fields cannot have a value. They are parent element nodes that contain other XML elements. These elements need to be present for proper validation.
attr	Attribute property for an XML element.

### 3.3. Applicability of Schema Elements

Each entry in the "Applicability of Element" column in the tables in Section 3.4 will have one of these values:

Value	Description
m	Mandatory
o	Optional
m#	If value is supplied, it will be checked against the EDGAR database to validate that it exists and is a valid value.
NA	Does not apply to the ABS Asset Data File type. EDGAR uses this field for server-side processing. Do not provide a value for this element.
blank	Does not apply to the ABS Asset Data File type.

### 3.4. Mapping of ABS Schemas to Asset Data Types

**Note:** Each element listed in the Element/Attribute Name column corresponds to an Item number of Schedule AL – Asset-Level Information (17 CFR 229.1125). Schedule AL contains the complete title and description of each of the disclosure requirements and filers should refer to Schedule AL for a full description of the information that must be provided in any ABS Asset Data File.

#### 3.4.1. Mapping of ABS AutoLoan Schema to Asset Data Types

Level	Order	Data Type	Element/Attribute Name	Max Length	Choice List	Max Occur	Item	Asset Data
1	1	NV	assetData			1		m
2	1	NV	assets			Unlimited		m
3	1	String	assetTypeNumber	100		1	Item 3(a)(1)	m
3	2	String	assetNumber	25		1	Item 3(a)(2)	m
3	3	Date1	reportingPeriodBeginningDate			1	Item 3(b)(1)	o
3	4	Date1	reportingPeriodEndingDate			1	Item 3(b)(2)	o
3	5	String	originatorName	50		1	Item 3(c)(1)	o
3	6	Date2	originationDate			1	Item 3(c)(2)	o
3	7	Decimal	originalLoanAmount	20,8		1	Item 3(c)(3)	o
3	8	Integer	originalLoanTerm	8		1	Item 3(c)(4)	o
3	9	Date2	loanMaturityDate			1	Item 3(c)(5)	o
3	10	Decimal	originalInterestRatePercentage	20,8		1	Item 3(c)(6)	o
3	11	String	interestCalculationTypeCode		<a href="#">INTR_CALC_TYP_CODE_TYPE</a>	1	Item 3(c)(7)	o
3	12	String	originalInterestRateTypeCode		<a href="#">ORIG_INTR_RT_TYP_CODE_TYPE</a>	1	Item 3(c)(8)	o
3	13	Integer	originalInterestOnlyTermNumber	2		1	Item 3(c)(9)	o
3	14	Date2	originalFirstPaymentDate			1	Item 3(c)(10)	o
3	15	Boolean	underwritingIndicator			1	Item 3(c)(11)	o
3	16	Integer	gracePeriodNumber	2		1	Item 3(c)(12)	o
3	17	String	paymentTypeCode		<a href="#">PYMNT_TYP_CODE_TYPE</a>	1	Item 3(c)(13)	o
3	18	String	subvented		<a href="#">SUBVNT_CODE_TYPE</a>	Unlimited	Item 3(c)(14)	o

Level	Order	Data Type	Element/Attribute Name	Max Length	Choice List	Max Occur	Item	Asset Data
3	19	String	vehicleManufacturerName	30		1	Item 3(d)(1)	o
3	20	String	vehicleModelName	30		1	Item 3(d)(2)	o
3	21	String	vehicleNewUsedCode		<a href="#">VHCL NEW USED CODE TYPE</a>	1	Item 3(d)(3)	o
3	22	String	vehicleModelYear	4		1	Item 3(d)(4)	o
3	23	String	vehicleTypeCode		<a href="#">VHCL_TYP CODE TYPE</a>	1	Item 3(d)(5)	o
3	24	Decimal	vehicleValueAmount	20,8		1	Item 3(d)(6)	o
3	25	String	vehicleValueSourceCode		<a href="#">VHCL_VAL_SRC CODE TYPE</a>	1	Item 3(d)(7)	o
3	26	String	obligorCreditScoreType	35		1	Item 3(e)(1)	o
3	27	String	obligorCreditScore	20		1	Item 3(e)(2)	o
3	28	String	obligorIncomeVerificationLevelCode		<a href="#">OBLGR_INCM_VRFCTN_LVL_CODE TYPE</a>	1	Item 3(e)(3)	o
3	29	String	obligorEmploymentVerificationCode		<a href="#">OBLGR_EMPLOY_VRFCTN_CODE TYPE</a>	1	Item 3(e)(4)	o
3	30	Boolean	coObligorIndicator			1	Item 3(e)(5)	o
3	31	Decimal	paymentToIncomePercentage	20,8		1	Item 3(e)(6)	o
3	32	String	obligorGeographicLocation	100		1	Item 3(e)(7)	o
3	33	Boolean	assetAddedIndicator			1	Item 3(f)(1)	o
3	34	Integer	remainingTermToMaturityNumber	8		1	Item 3(f)(2)	o
3	35	Boolean	reportingPeriodModificationIndicator			1	Item 3(f)(3)	o
3	36	String	servicingAdvanceMethodCode		<a href="#">SRVC_ADV METH CODE TYPE</a>	1	Item 3(f)(4)	o
3	37	Decimal	reportingPeriodBeginningLoanBalanceAmount	20,8		1	Item 3(f)(5)	o
3	38	Decimal	nextReportingPeriodPaymentAmountDue	20,8		1	Item 3(f)(6)	o
3	39	Decimal	reportingPeriodInterestRatePercentage	20,8		1	Item 3(f)(7)	o
3	40	Decimal	nextInterestRatePercentage	20,8		1	Item 3(f)(8)	o
3	41	Decimal	servicingFeePercentage	20,8		1	Item 3(f)(9)	o
3	42	Decimal	servicingFlatFeeAmount	20,8		1	Item 3(f)(10)	o
3	43	Decimal	otherServicerFeeRetainedByServicer	20,8		1	Item 3(f)(11)	o
3	44	Decimal	otherAssessedUncollectedServicerFeeAmount	20,8		1	Item 3(f)(12)	o
3	45	Decimal	scheduledInterestAmount	20,8		1	Item 3(f)(13)	o

Level	Order	Data Type	Element/Attribute Name	Max Length	Choice List	Max Occur	Item	Asset Data
3	46	Decimal	scheduledPrincipalAmount	20,8		1	Item 3(f)(14)	o
3	47	Decimal	otherPrincipalAdjustmentAmount	20,8		1	Item 3(f)(15)	o
3	48	Decimal	reportingPeriodActualEndBalanceAmount	20,8		1	Item 3(f)(16)	o
3	49	Decimal	reportingPeriodScheduledPaymentAmount	20,8		1	Item 3(f)(17)	o
3	50	Decimal	totalActualAmountPaid	20,8		1	Item 3(f)(18)	o
3	51	Decimal	actualInterestCollectedAmount	20,8		1	Item 3(f)(19)	o
3	52	Decimal	actualPrincipalCollectedAmount	20,8		1	Item 3(f)(20)	o
3	53	Decimal	actualOtherCollectedAmount	20,8		1	Item 3(f)(21)	o
3	54	Decimal	servicerAdvancedAmount	20,8		1	Item 3(f)(22)	o
3	55	Date1	interestPaidThroughDate			1	Item 3(f)(23)	o
3	56	Date2	zeroBalanceEffectiveDate			1	Item 3(f)(24)(i)	o
3	57	String	zeroBalanceCode		<a href="#">ZERO BAL CODE TYPE</a>	Unlimited	Item 3(f)(24)(ii)	o
3	58	Integer	currentDelinquencyStatus	8		1	Item 3(f)(25)	o
3	59	String	primaryLoanServicerName	100		1	Item 3(g)(1)	o
3	60	Date2	mostRecentServicingTransferReceivedDate			1	Item 3(g)(2)	o
3	61	Boolean	assetSubjectDemandIndicator			1	Item 3(h)	o
3	62	String	assetSubjectDemandStatusCode		<a href="#">REPRCH ASSET SUBJ DMAND CODE TYPE</a>	1	Item 3(h)(1)	o
3	63	Decimal	repurchaseAmount	20,8		1	Item 3(h)(2)	o
3	64	Date1	demandResolutionDate			1	Item 3(h)(3)	o
3	65	String	repurchaserName	30		1	Item 3(h)(4)	o
3	66	String	repurchaseReplacementReasonCode		<a href="#">REPRCH RPLCMNT REASN CODE TYPE</a>	Unlimited	Item 3(h)(5)	o
3	67	Decimal	chargedoffPrincipalAmount	20,8		1	Item 3(i)(1)	o
3	68	Decimal	recoveredAmount	20,8		1	Item 3(i)(2)	o
3	69	String	modificationTypeCode		<a href="#">MOD TYPE CODE TYPE</a>	Unlimited	Item 3(j)(1)	o
3	70	Integer	paymentExtendedNumber	2		1	Item 3(j)(2)	o
3	71	Boolean	repossessedIndicator			1	Item 3(k)	o
3	72	Decimal	repossessedProceedsAmount	20,8		1	Item 3(k)(1)	o



### 3.4.2. Mapping of ABS AutoLease Schema to Asset Data Types

Level	Order	Data Type	Element/Attribute Name	Max Length	Choice List	Max Occur	Item	Asset Data
1	1	NV	assetData			1		m
2	1	NV	assets			Unlimited		m
3	1	String	assetTypeNumber	100		1	Item 4(a)(1)	m
3	2	String	assetNumber	25		1	Item 4(a)(2)	m
3	3	Date1	reportingPeriodBeginDate			1	Item 4(b)(1)	o
3	4	Date1	reportingPeriodEndDate			1	Item 4(b)(2)	o
3	5	String	originatorName	30		1	Item 4(c)(1)	o
3	6	Date2	originationDate			1	Item 4(c)(2)	o
3	7	Decimal	acquisitionCost	20,8		1	Item 4(c)(3)	o
3	8	Integer	originalLeaseTermNumber	8		1	Item 4(c)(4)	o
3	9	Date2	scheduledTerminationDate			1	Item 4(c)(5)	o
3	10	Date2	originalFirstPaymentDate			1	Item 4(c)(6)	o
3	11	Boolean	underwritingIndicator			1	Item 4(c)(7)	o
3	12	Integer	gracePeriod	2		1	Item 4(c)(8)	o
3	13	String	paymentTypeCode		<a href="#">PYMNT_TYP_CODE_TYPE</a>	1	Item 4(c)(9)	o
3	14	String	subvented		<a href="#">SUBVNT_CODE_TYPE</a>	Unlimited	Item 4(c)(10)	o
3	15	String	vehicleManufacturerName	30		1	Item 4(d)(1)	o
3	16	String	vehicleModelName	30		1	Item 4(d)(2)	o
3	17	String	vehicleNewUsedCode		<a href="#">VHCL_NEW_USED_CODE_TYPE</a>	1	Item 4(d)(3)	o
3	18	String	vehicleModelYear	4		1	Item 4(d)(4)	o
3	19	String	vehicleTypeCode		<a href="#">VHCL_TYP_CODE_TYPE</a>	1	Item 4(d)(5)	o
3	20	Decimal	vehicleValueAmount	20,8		1	Item 4(d)(6)	o
3	21	String	vehicleValueSourceCode		<a href="#">VHCL_VAL_SRC_CODE_TYPE</a>	1	Item 4(d)(7)	o
3	22	Decimal	baseResidualValue	20,8		1	Item 4(d)(8)	o
3	23	String	baseResidualSourceCode		<a href="#">BS_RESDL_SRC_CODE_TYPE</a>	1	Item 4(d)(9)	o
3	24	Decimal	contractResidualValue	20,8		1	Item 4(d)(10)	o

Level	Order	Data Type	Element/Attribute Name	Max Length	Choice List	Max Occur	Item	Asset Data
3	25	String	lesseeCreditScoreType	35		1	Item 4(e)(1)	o
3	26	String	lesseeCreditScore	20		1	Item 4(e)(2)	o
3	27	String	lesseeIncomeVerificationLevelCode		<a href="#">LSSE INCM VRFCN LVL CODE TYPE</a>	1	Item 4(e)(3)	o
3	28	String	lesseeEmploymentVerificationCode		<a href="#">LSSE EMPLOY VRFCN CODE TYPE</a>	1	Item 4(e)(4)	o
3	29	Boolean	coLesseePresentIndicator			1	Item 4(e)(5)	o
3	30	Decimal	paymentToIncomePercentage	20,8		1	Item 4(e)(6)	o
3	31	String	lesseeGeographicLocation	100		1	Item 4(e)(7)	o
3	32	Boolean	assetAddedIndicator			1	Item 4(f)(1)	o
3	33	Integer	remainingTermNumber	8		1	Item 4(f)(2)	o
3	34	Boolean	reportingPeriodModificationIndicator			1	Item 4(f)(3)	o
3	35	String	servicingAdvanceMethodCode		<a href="#">SRVC ADV METH CODE TYPE</a>	1	Item 4(f)(4)	o
3	36	Decimal	reportingPeriodSecuritizationValueAmount	20,8		1	Item 4(f)(5)	o
3	37	Decimal	securitizationDiscountRate	20,8		1	Item 4(f)(6)	o
3	38	Decimal	nextReportingPeriodPaymentAmountDue	20,8		1	Item 4(f)(7)	o
3	39	Decimal	servicingFeePercentage	20,8		1	Item 4(f)(8)	o
3	40	Decimal	servicingFlatFeeAmount	20,8		1	Item 4(f)(9)	o
3	41	Decimal	otherLeaseLevelServicingFeesRetainedAmount	20,8		1	Item 4(f)(10)	o
3	42	Decimal	otherAssessedUncollectedServicerFeeAmount	20,8		1	Item 4(f)(11)	o
3	43	Decimal	reportingPeriodEndingActualBalanceAmount	20,8		1	Item 4(f)(12)	o
3	44	Decimal	reportingPeriodScheduledPaymentAmount	20,8		1	Item 4(f)(13)	o
3	45	Decimal	totalActualAmountPaid	20,8		1	Item 4(f)(14)	o
3	46	Decimal	actualOtherCollectedAmount	20,8		1	Item 4(f)(15)	o
3	47	Decimal	reportingPeriodEndActualSecuritizationAmount	20,8		1	Item 4(f)(16)	o
3	48	Decimal	servicerAdvancedAmount	20,8		1	Item 4(f)(17)	o
3	49	Date1	paidThroughDate			1	Item 4(f)(18)	o
3	50	Date2	zeroBalanceEffectiveDate			1	Item 4(f)(19)(i)	o
3	51	String	zeroBalanceCode		<a href="#">ZERO BAL CODE TYPE</a>	Unlimited	Item 4(f)(19)(ii)	o

Level	Order	Data Type	Element/Attribute Name	Max Length	Choice List	Max Occur	Item	Asset Data
3	52	Integer	currentDelinquencyStatus	8		1	Item 4(f)(20)	o
3	53	String	primaryLeaseServicerName	30		1	Item 4(g)(1)	o
3	54	Date2	mostRecentServicingTransferReceivedDate			1	Item 4(g)(2)	o
3	55	Boolean	assetSubjectDemandIndicator			1	Item 4(h)	o
3	56	String	assetSubjectDemandStatusCode		<a href="#">REPRCH_STAT_ASSET_SUBJ_DMAND_CODE_TYPE</a>	1	Item 4(h)(1)	o
3	57	Decimal	repurchaseAmount	20,8		1	Item 4(h)(2)	o
3	58	Date1	DemandResolutionDate			1	Item 4(h)(3)	o
3	59	String	repurchaserName	30		1	Item 4(h)(4)	o
3	60	String	repurchaseOrReplacementReasonCode		<a href="#">REPRCH_RPLC_REASN_CODE_TYPE</a>	Unlimited	Item 4(h)(5)	o
3	61	Decimal	chargedOffAmount	20,8		1	Item 4(i)(1)	o
3	62	String	modificationTypeCode		<a href="#">MOD_TYPE_CODE_TYPE</a>	Unlimited	Item 4(j)(1)	o
3	63	Integer	leaseExtended	2		1	Item 4(j)(2)	o
3	64	String	terminationIndicator		<a href="#">TERMNTN_CODE_TYPE</a>	Unlimited	Item 4(k)(1)	o
3	65	Decimal	excessFeeAmount	20,8		1	Item 4(k)(2)	o
3	66	Decimal	liquidationProceedsAmount	20,8		1	Item 4(k)(3)	o

### 3.4.3. Mapping of ABS CMBS Schema to Asset Data Types

Level	Order	Data Type	Element/Attribute Name	Max Length	Choice List	Max Occur	Item	Asset Data
1	1	NV	assetData			1		m
2	1	NV	assets			Unlimited		m
3	1	String	assetTypeNumber	100		1	Item 2(a)(1)	m
3	2	String	assetNumber	25		1	Item 2(a)(2)	m

Level	Order	Data Type	Element/Attribute Name	Max Length	Choice List	Max Occur	Item	Asset Data
3	3	Integer	GroupID	8		1	Item 2(a)(3)	o
3	4	Date1	reportingPeriodBeginningDate			1	Item 2(b)(1)	o
3	5	Date1	reportingPeriodEndDate			1	Item 2(b)(2)	o
3	6	String	originatorName	150		1	Item 2(c)(1)	o
3	7	Date1	originationDate			1	Item 2(c)(2)	o
3	8	Decimal	originalLoanAmount	20,8		1	Item 2(c)(3)	o
3	9	Integer	originalTermLoanNumber	8		1	Item 2(c)(4)	o
3	10	Date1	maturityDate			1	Item 2(c)(5)	o
3	11	Integer	originalAmortizationTermNumber	8		1	Item 2(c)(6)	o
3	12	Decimal	originalInterestRatePercentage	20,8		1	Item 2(c)(7)	o
3	13	Decimal	interestRateSecuritizationPercentage	20,8		1	Item 2(c)(8)	o
3	14	String	interestAccrualMethodCode		<a href="#">INTR ACCRL METH CODE TYPE</a>	1	Item 2(c)(9)	o
3	15	String	originalInterestRateTypeCode		<a href="#">ORIG INTR RT TYP CODE TYPE</a>	1	Item 2(c)(10)	o
3	16	Integer	originalInterestOnlyTermNumber	8		1	Item 2(c)(11)	o
3	17	Date1	firstLoanPaymentDueDate			1	Item 2(c)(12)	o
3	18	Boolean	underwritingIndicator			1	Item 2(c)(13)	o
3	19	String	lienPositionSecuritizationCode		<a href="#">LIEN PSTN CODE TYPE</a>	1	Item 2(c)(14)	o
3	20	String	loanStructureCode		<a href="#">LOAN STCTR CODE TYPE</a>	1	Item 2(c)(15)	o
3	21	String	paymentTypeCode		<a href="#">PYMNT TYP CODE TYPE</a>	1	Item 2(c)(16)	o
3	22	Decimal	periodicPrincipalAndInterestPaymentSecuritizationAmount	20,8		1	Item 2(c)(17)	o
3	23	Decimal	scheduledPrincipalBalanceSecuritizationAmount	20,8		1	Item 2(c)(18)	o
3	24	String	paymentFrequencyCode		<a href="#">PYMNT_FREQ CODE TYPE</a>	1	Item 2(c)(19)	o
3	25	Integer	NumberPropertiesSecuritization	8		1	Item 2(c)(20)	o
3	26	Integer	NumberProperties	8		1	Item 2(c)(21)	o
3	27	Integer	graceDaysAllowedNumber	8		1	Item 2(c)(22)	o
3	28	Boolean	interestOnlyIndicator			1	Item 2(c)(23)	o
3	29	Boolean	balloonIndicator			1	Item 2(c)(24)	o

Level	Order	Data Type	Element/Attribute Name	Max Length	Choice List	Max Occur	Item	Asset Data
3	30	Boolean	prepaymentPremiumIndicator			1	Item 2(c)(25)	o
3	31	Boolean	negativeAmortizationIndicator			1	Item 2(c)(26)	o
3	32	Boolean	modifiedIndicator			1	Item 2(c)(27)	o
3	33	String	armIndexCode		<a href="#">ARM_IDX CODE TYPE</a>	1	Item 2(c)(28)(i)	o
3	34	Date1	firstRateAdjustmentDate			1	Item 2(c)(28)(ii)	o
3	35	Date1	firstPaymentAdjustmentDate			1	Item 2(c)(28)(iii)	o
3	36	Decimal	armMarginNumber	20,8		1	Item 2(c)(28)(iv)	o
3	37	Decimal	lifetimeRateCapPercentage	20,8		1	Item 2(c)(28)(v)	o
3	38	Decimal	lifetimeRateFloorPercentage	20,8		1	Item 2(c)(28)(vi)	o
3	39	Decimal	periodicRateIncreaseLimitPercentage	20,8		1	Item 2(c)(28)(vii)	o
3	40	Decimal	periodicRateDecreaseLimitPercentage	20,8		1	Item 2(c)(28)(viii)	o
3	41	Decimal	periodicPaymentAdjustmentMaximumAmount	20,8		1	Item 2(c)(28)(ix)	o
3	42	Decimal	periodicPaymentAdjustmentMaximumPercent	20,8		1	Item 2(c)(28)(x)	o
3	43	String	rateResetFrequencyCode		<a href="#">RT_RST_FREQ_CODE TYPE</a>	1	Item 2(c)(28)(xi)	o
3	44	String	paymentResetFrequencyCode		<a href="#">PY_RST_FREQ_CODE TYPE</a>	1	Item 2(c)(28)(xii)	o
3	45	Integer	indexLookbackDaysNumber	8		1	Item 2(c)(28)(xiii)	o
3	46	Date1	prepaymentLockOutEndDate			1	Item 2(c)(29)(i)	o
3	47	Date1	yieldMaintenanceEndDate			1	Item 2(c)(29)(ii)	o
3	48	Date1	prepaymentPremiumsEndDate			1	Item 2(c)(29)(iii)	o
3	49	Decimal	maximumNegativeAmortizationAllowedPercentage	20,8		1	Item 2(c)(30)(i)	o
3	50	Decimal	maximumNegativeAmortizationAllowedAmount	20,8		1	Item 2(c)(30)(ii)	o
3	51	Decimal	negativeAmortizationDeferredInterestCapAmount	20,8		1	Item 2(c)(30)(iii)	o
3	52	Decimal	deferredInterestCumulativeAmount	20,8		1	Item 2(c)(30)(iv)	o
3	53	Decimal	deferredInterestCollectedAmount	20,8		1	Item 2(c)(30)(v)	o

Level	Order	Data Type	Element/Attribute Name	Max Length	Choice List	Max Occur	Item	Asset Data
2	54	NV	property			Unlimited		o
4	55	String	propertyName	150		1	Item 2(d)(1)	o
4	56	String	propertyAddress	200		1	Item 2(d)(2)	o
4	57	String	propertyCity	50		1	Item 2(d)(3)	o
4	58	String	propertyState	2		1	Item 2(d)(4)	o
4	59	String	propertyZip	10		1	Item 2(d)(5)	o
4	60	String	propertyCounty	50		1	Item 2(d)(6)	o
4	61	String	propertyTypeCode		<a href="#">PROPERTY_TYP_CODE_TYPE</a>	1	Item 2(d)(7)	o
4	62	Integer	netRentableSquareFeetNumber	8		1	Item 2(d)(8)	o
4	63	Integer	netRentableSquareFeetSecuritizationNumber	8		1	Item 2(d)(9)	o
4	64	Integer	unitsBedsRoomsNumber	8		1	Item 2(d)(10)	o
4	65	Integer	unitsBedsRoomsSecuritizationNumber	8		1	Item 2(d)(11)	o
4	66	Integer	yearBuiltNumber	8		1	Item 2(d)(12)	o
4	67	Integer	yearLastRenovated	8		1	Item 2(d)(13)	o
4	68	Decimal	valuationSecuritizationAmount	20,8		1	Item 2(d)(14)	o
4	69	String	valuationSourceSecuritizationCode		<a href="#">VAL_SRC_SCRTZTN_CODE_TYPE</a>	1	Item 2(d)(15)	o
4	70	Date1	valuationSecuritizationDate			1	Item 2(d)(16)	o
4	71	Decimal	mostRecentValuationAmount	20,8		1	Item 2(d)(17)	o
4	72	Date1	mostRecentValuationDate			1	Item 2(d)(18)	o
4	73	String	mostRecentValuationSourceCode		<a href="#">MST_RCNT_VAL_SRC_CODE_TYPE</a>	1	Item 2(d)(19)	o
4	74	Decimal	physicalOccupancySecuritizationPercentage	20,8		1	Item 2(d)(20)	o
4	75	Decimal	mostRecentPhysicalOccupancyPercentage	20,8		1	Item 2(d)(21)	o
4	76	String	propertyStatusCode		<a href="#">PROPERTY_STAT_CODE_TYPE</a>	1	Item 2(d)(22)	o
4	77	Date1	defeasanceOptionStartDate			1	Item 2(d)(23)	o
4	78	String	DefeasedStatusCode		<a href="#">DFSNC_STAT_CODE_TYPE</a>	1	Item 2(d)(24)	o
4	79	String	largestTenant	150		1	Item 2(d)(25)(i)	o
4	80	Integer	squareFeetLargestTenantNumber	8		1	Item 2(d)(25)(ii)	o

Level	Order	Data Type	Element/Attribute Name	Max Length	Choice List	Max Occur	Item	Asset Data
4	81	Date1	leaseExpirationLargestTenantDate			1	Item 2(d)(25)(iii)	o
4	82	String	secondLargestTenant	150		1	Item 2(d)(26)(i)	o
4	83	Integer	squareFeetSecondLargestTenantNumber	8		1	Item 2(d)(26)(ii)	o
4	84	Date1	leaseExpirationSecondLargestTenantDate			1	Item 2(d)(26)(iii)	o
4	85	String	thirdLargestTenant	150		1	Item 2(d)(27)(i)	o
4	86	Integer	squareFeetThirdLargestTenantNumber	8		1	Item 2(d)(27)(ii)	o
4	87	Date1	leaseExpirationThirdLargestTenantDate			1	Item 2(d)(27)(iii)	o
4	88	Date1	financialsSecuritizationDate			1	Item 2(d)(28)(i)	o
4	89	Date1	mostRecentFinancialsStartDate			1	Item 2(d)(28)(ii)	o
4	90	Date1	mostRecentFinancialsEndDate			1	Item 2(d)(28)(iii)	o
4	91	Decimal	revenueSecuritizationAmount	20,8		1	Item 2(d)(28)(iv)	o
4	92	Decimal	mostRecentRevenueAmount	20,8		1	Item 2(d)(28)(v)	o
4	93	Decimal	operatingExpensesSecuritizationAmount	20,8		1	Item 2(d)(28)(vi)	o
4	94	Decimal	operatingExpensesAmount	20,8		1	Item 2(d)(28)(vii)	o
4	95	Decimal	netOperatingIncomeSecuritizationAmount	20,8		1	Item 2(d)(28)(viii)	o
4	96	Decimal	mostRecentNetOperatingIncomeAmount	20,8		1	Item 2(d)(28)(ix)	o
4	97	Decimal	netCashFlowFlowSecuritizationAmount	20,8		1	Item 2(d)(28)(x)	o
4	98	Decimal	mostRecentNetCashFlowAmount	20,8		1	Item 2(d)(28)(xi)	o
4	99	String	netOperatingIncomeNetCashFlowSecuritizationCode		<a href="#">NET OPRTNG INCM NET CASH FLW S CRTZTN CODE TYPE</a>	1	Item 2(d)(28)(xii)	o
4	100	String	netOperatingIncomeNetCashFlowCode		<a href="#">NET OPRTNG INCM NET CASH FLW C ODE TYPE</a>	1	Item 2(d)(28)(xiii)	o
4	101	Decimal	mostRecentDebtServiceAmount			1	Item 2(d)(28)(xiv)	o
4	102	Decimal	debtServiceCoverageNetOperatingIncomeSecuritizationPercentage	20,8		1	Item 2(d)(28)(xv)	o

Level	Order	Data Type	Element/Attribute Name	Max Length	Choice List	Max Occur	Item	Asset Data
4	103	Decimal	mostRecentDebtServiceCoverageNetOperatingIncomePercentage	20,8		1	Item 2(d)(28)(xvi)	o
4	104	Decimal	debtServiceCoverageNetCashFlowSecuritizationPercentage	20,8		1	Item 2(d)(28)(xvii)	o
4	105	Decimal	mostRecentDebtServiceCoverageNetCashFlowpercentage	20,8		1	Item 2(d)(28)(xviii)	o
4	106	String	debtServiceCoverageSecuritizationCode		<a href="#">DEBT SRVC CVRG CODE TYPE</a>	1	Item 2(d)(28)(xix)	o
4	107	String	mostRecentDebtServiceCoverageCode		<a href="#">MST RCNT DEBT SRVC AMNT CODE TYPE</a>	1	Item 2(d)(28)(xx)	o
4	108	Date1	mostRecentAnnualLeaseRolloverReviewDate			1	Item 2(d)(28)(xxi)	o
3	109	Boolean	assetAddedIndicator			1	Item 2(e)(1)	o
3	110	Boolean	reportPeriodModificationIndicator			1	Item 2(e)(2)	o
3	111	Decimal	reportPeriodBeginningScheduleLoanBalanceAmount	20,8		1	Item 2(e)(3)	o
3	112	Decimal	totalScheduledPrincipalInterestDueAmount	20,8		1	Item 2(e)(4)	o
3	113	Decimal	reportPeriodInterestRatePercentage	20,8		1	Item 2(e)(5)	o
3	114	Decimal	servicerTrusteeFeeRatePercentage	20,8		1	Item 2(e)(6)	o
3	115	Decimal	scheduledInterestAmount	20,8		1	Item 2(e)(7)	o
3	116	Decimal	otherInterestAdjustmentAmount	20,8		1	Item 2(e)(8)	o
3	117	Decimal	scheduledPrincipalAmount	20,8		1	Item 2(e)(9)	o
3	118	Decimal	unscheduledPrincipalCollectedAmount	20,8		1	Item 2(e)(10)	o
3	119	Decimal	otherPrincipalAdjustmentAmount	20,8		1	Item 2(e)(11)	o
3	120	Decimal	reportPeriodEndActualBalanceAmount	20,8		1	Item 2(e)(12)	o
3	121	Decimal	reportPeriodEndScheduledLoanBalanceAmount	20,8		1	Item 2(e)(13)	o
3	122	Date1	paidThroughDate			1	Item 2(e)(14)	o
3	123	Date1	hyperAmortizingDate			1	Item 2(e)(15)	o
3	124	String	servicingAdvanceMethodCode		<a href="#">SRVC ADV METH CODE TYPE</a>	1	Item 2(e)(16)(i)	o
3	125	Boolean	nonRecoverabilityIndicator			1	Item 2(e)(16)(ii)	o
3	126	Decimal	totalPrincipalInterestAdvancedOutstandingAmount	20,8		1	Item 2(e)(16)(iii)	o
3	127	Decimal	totalTaxesInsuranceAdvancesOutstandingAmount	20,8		1	Item	o



Level	Order	Data Type	Element/Attribute Name	Max Length	Choice List	Max Occur	Item	Asset Data
							2(e)(16)(iv)	
3	128	Decimal	otherExpensesAdvancedOutstandingAmount	20,8		1	Item 2(e)(16)(v)	o
3	129	String	paymentStatusLoanCode		<a href="#">PYMNT_STAT_LOAN_CODE_TYPE</a>	1	Item 2(e)(17)	o
3	130	Decimal	armIndexRatePercentage	20,8		1	Item 2(e)(18)(i)	o
3	131	Decimal	nextInterestRatePercentage	20,8		1	Item 2(e)(18)(ii)	o
3	132	Date1	nextInterestRateChangeAdjustmentDate			1	Item 2(e)(18)(iii)	o
3	133	Date1	nextPaymentAdjustmentDate			1	Item 2(e)(18)(iv)	o
3	134	String	primaryServicerName	30		1	Item 2(f)(1)	o
3	135	Date1	mostRecentSpecialServicerTransferDate			1	Item 2(f)(2)	o
3	136	Date1	mostRecentMasterServicerReturnDate			1	Item 2(f)(3)	o
3	137	Boolean	assetSubjectDemandIndicator			1	Item 2(g)	o
3	138	String	assetSubjectDemandStatusCode		<a href="#">ASSET_SUBJ_DEMAND_STAT_CODE_TYPE</a>	1	Item 2(g)(1)	o
3	139	Decimal	repurchaseAmount	20,8		1	Item 2(g)(2)	o
3	140	Date1	demandResolutionDate			1	Item 2(g)(3)	o
3	141	String	repurchaserName	150		1	Item 2(g)(4)	o
3	142	String	repurchaseReplacementReasonCode		<a href="#">REPRCH_RPLCMNT_REASN_CODE_TYPE</a>	Unlimited	Item 2(g)(5)	o
3	143	Decimal	realizedLossToTrustAmount	20,8		1	Item 2(h)	o
3	144	String	liquidationPrepaymentCode		<a href="#">LIQDTN_PRPYMNT_CODE_TYPE</a>	1	Item 2(i)(1)	o
3	145	Date1	liquidationPrepaymentDate			1	Item 2(i)(2)	o
3	146	Decimal	prepaymentPremiumYieldMaintenanceReceivedAmount	20,8		1	Item 2(i)(3)	o
3	147	String	workoutStrategyCode		<a href="#">WRKOUT_STRAT_CODE_TYPE</a>	Unlimited	Item 2(j)	o
3	148	Date1	lastModificationDate			1	Item 2(k)(1)	o
3	149	String	modificationCode		<a href="#">MOD_CODE_TYPE</a>	Unlimited	Item 2(k)(2)	o
3	150	Decimal	postModificationInterestPercentage	20,8		1	Item 2(k)(3)	o
3	151	Decimal	postModificationPaymentAmount	20,8		1	Item 2(k)(4)	o
3	152	Date1	postModificationMaturityDate			1	Item 2(k)(5)	o

Level	Order	Data Type	Element/Attribute Name	Max Length	Choice List	Max Occur	Item	Asset Data
3	153	Decimal	postModificationAmortizationPeriodAmount	20,8		1	Item 2(k)(6)	o

### 3.4.4. Mapping of ABS RMBS Schema to the Asset Data Types

Level	Order	Data Type	Element/Attribute Name	Max Length	Choice List	Max Occur	Item	Asset Data
1	1	NV	assetData			1		m
2	1	NV	assets			Unlimited		m
3	1	String	assetTypeNumber	100		1	Item 1(a)(1)	m
3	2	String	assetNumber	25		1	Item 1(a)(2)	m
3	3	Integer	assetGroupNumber	8		1	Item 1(a)(3)	o
3	4	Date1	reportPeriodBeginDate			1	Item 1(b)(1)	o
3	5	Date1	reportPeriodEndDate			1	Item 1(b)(2)	o
3	6	String	originalLoanPurposeCode		<a href="#">ORIG LOAN PURPS CODE TYPE</a>	Unlimited	Item 1(c)(1)	o
3	7	String	originatorName	150		1	Item 1(c)(2)	o
3	8	Decimal	originalLoanAmount	20,8		1	Item 1(c)(3)	o
3	9	Date2	originalLoanMaturityDate			1	Item 1(c)(4)	o
3	10	Integer	originalAmortizationTermNumber	8		1	Item 1(c)(5)	o
3	11	Decimal	originalInterestRatePercentage	20,8		1	Item 1(c)(6)	o
3	12	String	accrualTypeCode		<a href="#">ACCRL TYP CODE TYPE</a>	1	Item 1(c)(7)	o
3	13	String	originalInterestRateTypeCode		<a href="#">ORIG INTR RT TYP CODE TYPE</a>	1	Item 1(c)(8)	o
3	14	Integer	originalInterestOnlyTermNumber	8		1	Item 1(c)(9)	o
3	15	Boolean	underwritingIndicator			1	Item 1(c)(10)	o
3	16	String	originalLienPositionCode		<a href="#">ORIG LIEN PSTN CODE TYPE</a>	1	Item 1(c)(11)	o
3	17	Decimal	mostRecentJuniorLoanBalanceAmount	20,8		1	Item 1(c)(12)(i)	o

Level	Order	Data Type	Element/Attribute Name	Max Length	Choice List	Max Occur	Item	Asset Data
3	18	Date2	mostRecentJuniorLoanBalanceDate			1	Item 1(c)(12)(ii)	o
3	19	Decimal	mostRecentSeniorLoanAmount	20,8		1	Item 1(c)(13)(i)	o
3	20	Date2	mostRecentSeniorLoanAmountDate			1	Item 1(c)(13)(ii)	o
3	21	String	loanTypeMostSeniorLienCode		<a href="#">ORIG LOAN TYP MST SNR LIEN CODE TYPE</a>	1	Item 1(c)(13)(iii)	o
3	22	Integer	mostSeniorLienHybridPeriodNumber	8		1	Item 1(c)(13)(iv)	o
3	23	Decimal	mostSeniorLienNegativeAmortizationLimitPercentage	20,8		1	Item 1(c)(13)(v)	o
3	24	Date2	mostSeniorLienOriginationDate			1	Item 1(c)(13)(vi)	o
3	25	Boolean	prepaymentPenaltyIndicator			1	Item 1(c)(14)	o
3	26	Boolean	negativeAmortizationIndicator			1	Item 1(c)(15)	o
3	27	Boolean	modificationIndicator			1	Item 1(c)(16)	o
3	28	Integer	modificationNumber	8		1	Item 1(c)(17)	o
3	29	Boolean	mortgageInsuranceRequirementIndicator			1	Item 1(c)(18)	o
3	30	Boolean	balloonIndicator			1	Item 1(c)(19)	o
3	31	String	coveredHighCostCode		<a href="#">COV HIGH COST CODE TYPE</a>	1	Item 1(c)(20)	o
3	32	String	servicerHazardInsuranceCode		<a href="#">SRVR HAZRD INS CODE TYPE</a>	1	Item 1(c)(21)	o
3	33	Decimal	refinanceCashOutAmount	20,8		1	Item 1(c)(22)	o
3	34	Decimal	totalOriginationDiscountAmount	20,8		1	Item 1(c)(23)	o
3	35	Boolean	brokerIndicator			1	Item 1(c)(24)	o

Level	Order	Data Type	Element/Attribute Name	Max Length	Choice List	Max Occur	Item	Asset Data
3	36	String	channelCode		<a href="#">CHNL_CODE_TYPE</a>	1	Item 1(c)(25)	o
3	37	Integer	nationalMortgageLicenseSystemCompanyNumber	8		1	Item 1(c)(26)	o
3	38	Integer	buyDownNumber	8		1	Item 1(c)(27)	o
3	39	Integer	loanDelinquencyAdvanceNumber	8		1	Item 1(c)(28)	o
3	40	String	originationARMIndexCode		<a href="#">ORIG_INDX_CODE_TYPE</a>	1	Item 1(c)(29)(i)	o
3	41	Decimal	armMarginPercentage	20,8		1	Item 1(c)(29)(ii)	o
3	42	Decimal	fullyIndexedRatePercentage	20,8		1	Item 1(c)(29)(iii)	o
3	43	Integer	initialFixedRatePeriodHybridARMNumber	2		1	Item 1(c)(29)(iv)	o
3	44	Decimal	initialInterestRateDecreasePercentage	20,8		1	Item 1(c)(29)(v)	o
3	45	Decimal	initialInterestRateIncreasePercentage	20,8		1	Item 1(c)(29)(vi)	o
3	46	Integer	indexLookbackNumber	8		1	Item 1(c)(29)(vii)	o
3	47	Integer	subsequentInterestRateResetNumber	8		1	Item 1(c)(29)(viii)	o
3	48	Decimal	lifetimeRateCeilingPercentage	20,8		1	Item 1(c)(29)(ix)	o
3	49	Decimal	lifetimeRateFloorPercentage	20,8		1	Item 1(c)(29)(x)	o
3	50	Decimal	subsequentInterestRateDecreasePercentage	20,8		1	Item 1(c)(29)(xi)	o
3	51	Decimal	subsequentInterestRateIncreasePercentage	20,8		1	Item 1(c)(29)(xii)	o

Level	Order	Data Type	Element/Attribute Name	Max Length	Choice List	Max Occur	Item	Asset Data
3	52	Integer	subsequentPaymentResetNumber	8		1	Item 1(c)(29)(xii)	o
3	53	String	armRoundCode		<a href="#">ARM_ROUND_CODE_TYPE</a>	1	Item 1(c)(29)(xi)	o
3	54	Decimal	armRoundPercentage	20,8		1	Item 1(c)(29)(xv)	o
3	55	Boolean	optionArmIndicator			1	Item 1(c)(29)(xvi)	o
3	56	String	paymentMethodAfterRecastCode		<a href="#">PYMNT METH CODE TYPE</a>	1	Item 1(c)(29)(xvii)	o
3	57	Decimal	initialMinimumPaymentAmount	20,8		1	Item 1(c)(29)(xviii)	o
3	58	Boolean	convertibleIndicator			1	Item 1(c)(29)(xix)	o
3	59	Boolean	HELOCIndicator			1	Item 1(c)(29)(xx)	o
3	60	Integer	HELOCDrawNumber	2		1	Item 1(c)(29)(xxi)	o
3	61	String	prepaymentPenaltyCalculationCode		<a href="#">PRPYMNT PNLTy CALC CODE TYPE</a>	1	Item 1(c)(30)(i)	o
3	62	String	prepaymentPenaltyTypeCode		<a href="#">PRPYMNT PNLTy TYP CODE TYPE</a>	1	Item 1(c)(30)(ii)	o
3	63	Integer	prepaymentPenaltyTotalTermNumber	8		1	Item 1(c)(30)(iii)	o
3	64	Integer	prepaymentPenaltyHardTermNumber	8		1	Item 1(c)(30)(iv)	o
3	65	Decimal	negativeAmortizationLimitAmount	20,8		1	Item 1(c)(31)(i)	o
3	66	Integer	negativeAmortizationInitialRecastNumber	8		1	Item 1(c)(31)(ii)	o

Level	Order	Data Type	Element/Attribute Name	Max Length	Choice List	Max Occur	Item	Asset Data
3	67	Integer	negativeAmortizationSubsequentRecastNumber	8		1	Item 1(c)(31)(iii)	o
3	68	Decimal	negativeAmortizationBalanceAmount	20,8		1	Item 1(c)(31)(iv)	o
3	69	Integer	initialFixedPaymentNumber	8		1	Item 1(c)(31)(v)	o
3	70	Decimal	initialPaymentCapPercentage	20,8		1	Item 1(c)(31)(vi)	o
3	71	Decimal	subsequentPaymentCapPercentage	20,8		1	Item 1(c)(31)(vii)	o
3	72	Integer	initialMinimumPaymentResetNumber	8		1	Item 1(c)(31)(viii)	o
3	73	Integer	subsequentMinimumPaymentResetNumber	8		1	Item 1(c)(31)(ix)	o
3	74	Decimal	minimumPaymentAmount	20,8		1	Item 1(c)(31)(x)	o
3	75	Integer	geographicalLocation	8		1	Item 1(d)(1)	o
3	76	String	occupancyStatusCode		<a href="#">OCCPNKY_STAT_CODE_TYPE</a>	1	Item 1(d)(2)	o
3	77	String	mostRecentOccupancyStatusCode		<a href="#">MST_RCNT_OCCPNKY_STAT_CODE_TYPE</a>	1	Item 1(d)(3)	o
3	78	String	propertyTypeCode		<a href="#">PROPRTY_TYP_CODE_TYPE</a>	1	Item 1(d)(4)	o
3	79	Decimal	mostRecentPropertyValueAmount	20,8		1	Item 1(d)(5)	o
3	80	String	mostRecentPropertyValueTypeCode		<a href="#">PROPRTY_MST_RCNT_VAL_TYP_CODE_TYPE</a>	1	Item 1(d)(6)	o
3	81	Date2	mostRecentPropertyValueDate			1	Item 1(d)(7)	o
3	82	String	mostRecentAVMModelCode		<a href="#">PROPRTY_MST_RCNT_AVM_MDL_CODE_TYPE</a>	1	Item 1(d)(8)	o
3	83	Integer	mostRecentAVMConfidenceNumber	8		1	Item 1(d)(9)	o

Level	Order	Data Type	Element/Attribute Name	Max Length	Choice List	Max Occur	Item	Asset Data
3	84	Decimal	originalCLTVPercentage	20,8		1	Item 1(d)(10)	o
3	85	Decimal	originalLTVPercentage	20,8		1	Item 1(d)(11)	o
3	86	Integer	originalObligorNumber	8		1	Item 1(e)(1)	o
3	87	String	originalObligorCreditScoreNumber	30		1	Item 1(e)(2)	o
3	88	String	originalObligorCreditScoreType	150		1	Item 1(e)(3)	o
3	89	String	mostRecentObligorCreditScoreNumber	30		1	Item 1(e)(4)	o
3	90	String	mostRecentObligorCreditScoreType	150		1	Item 1(e)(5)	o
3	91	Date2	mostRecentObligorCreditScoreDate			1	Item 1(e)(6)	o
3	92	String	obligorIncomeVerificationLevelCode		<a href="#">OBLGR_INCM_VRFCTN_LVL_CODE_TYPE</a>	1	Item 1(e)(7)	o
3	93	Boolean	IRSForm4506TIndicator			1	Item 1(e)(8)	o
3	94	Decimal	originatorFrontEndDTIPercentage	20,8		1	Item 1(e)(9)	o
3	95	Decimal	originatorBackEndDTIPercentage	20,8		1	Item 1(e)(10)	o
3	96	String	obligorEmploymentVerificationCode		<a href="#">OBLGR_EMPLOY_VRFCTN_CODE_TYPE</a>	1	Item 1(e)(11)	o
3	97	String	obligorEmploymentLengthCode		<a href="#">OBLGR_EMPLOY_LEN_CODE_TYPE</a>	1	Item 1(e)(12)	o
3	98	String	obligorAssetVerificationCode		<a href="#">OBLGR_ASSET_VRFCTN_CODE_TYPE</a>	1	Item 1(e)(13)	o
3	99	Decimal	originalPledgedAssetsAmount	20,8		1	Item 1(e)(14)	o
3	100	String	qualificationMethodCode		<a href="#">OBLGR_QUALIF_METH_CODE_TYPE</a>	1	Item 1(e)(15)	o
3	101	String	mortgageInsuranceCompanyName	150		1	Item 1(f)(1)	o
3	102	Decimal	mortgageInsuranceCoveragePercentage	20,8		1	Item 1(f)(2)	o



Level	Order	Data Type	Element/Attribute Name	Max Length	Choice List	Max Occur	Item	Asset Data
3	103	String	poolInsuranceCompanyName	150		1	Item 1(f)(3)	o
3	104	Decimal	poolInsuranceStopLossPercentage	20,8		1	Item 1(f)(4)	o
3	105	String	mortgageInsuranceCoverageTypeCode		<a href="#">MORTG INS CVRG_TYP_CODE_TYPE</a>	1	Item 1(f)(5)	o
3	106	Boolean	assetAddedIndicator			1	Item 1(g)(1)	o
3	107	Integer	remainingTermToMaturityNumber	8		1	Item 1(g)(2)	o
3	108	Boolean	modificationIndicatorReportingPeriod			1	Item 1(g)(3)	o
3	109	Date1	nextPaymentDueDate			1	Item 1(g)(4)	o
3	110	String	advancingMethodCode		<a href="#">ADV METH CODE_TYPE</a>	1	Item 1(g)(5)	o
3	111	String	servicingAdvanceMethodologyCode		<a href="#">SRVC ADV METH CODE_TYPE</a>	1	Item 1(g)(6)	o
3	112	Date1	stopPrincipalInterestAdvancingDate			1	Item 1(g)(7)	o
3	113	Decimal	reportingPeriodBeginningLoanBalanceAmount	20,8		1	Item 1(g)(8)	o
3	114	Decimal	reportingPeriodBeginningScheduledLoanBalanceAmount	20,8		1	Item 1(g)(9)	o
3	115	Decimal	nextReportingPeriodPaymentDueAmount	20,8		1	Item 1(g)(10)	o
3	116	Decimal	reportingPeriodInterestRatePercentage	20,8		1	Item 1(g)(11)	o
3	117	Decimal	nextInterestRatePercentage	20,8		1	Item 1(g)(12)	o
3	118	Decimal	servicingFeePercentage	20,8		1	Item 1(g)(13)	o
3	119	Decimal	servicingFlatFeeAmount	20,8		1	Item 1(g)(14)	o
3	120	Decimal	otherAssessedUncollectedServicerFeeamount	20,8		1	Item 1(g)(15)	o
3	121	Decimal	otherServicingFeeRetainedByServicerAmount	20,8		1	Item 1(g)(16)	o

Level	Order	Data Type	Element/Attribute Name	Max Length	Choice List	Max Occur	Item	Asset Data
3	122	Decimal	scheduledInterestAmount	20,8		1	Item 1(g)(17)	o
3	123	Decimal	otherInterestAdjustmentAmount	20,8		1	Item 1(g)(18)	o
3	124	Decimal	scheduledPrincipalAmount	20,8		1	Item 1(g)(19)	o
3	125	Decimal	otherPrincipalAdjustmentAmount	20,8		1	Item 1(g)(20)	o
3	126	Decimal	reportingPeriodEndActualBalanceAmount	20,8		1	Item 1(g)(21)	o
3	127	Decimal	reportingPeriodEndScheduledBalanceAmount	20,8		1	Item 1(g)(22)	o
3	128	Decimal	reportingPeriodScheduledPaymentAmount	20,8		1	Item 1(g)(23)	o
3	129	Decimal	totalActualPaidAmount	20,8		1	Item 1(g)(24)	o
3	130	Decimal	actualInterestCollectedAmount	20,8		1	Item 1(g)(25)	o
3	131	Decimal	actualPrincipalCollectedAmount	20,8		1	Item 1(g)(26)	o
3	132	Decimal	actualOtherCollectedAmount	20,8		1	Item 1(g)(27)	o
3	133	Date1	paidThroughDate			1	Item 1(g)(28)	o
3	134	Date1	interestPaidThroughDate			1	Item 1(g)(29)	o
3	135	Decimal	paidFullAmount	20,8		1	Item 1(g)(30)	o
3	136	Decimal	servicerAdvancedPrincipalAmount	20,8		1	Item 1(g)(31)(i)	o
3	137	Decimal	servicerAdvancedRepaidPrincipalAmount	20,8		1	Item 1(g)(31)(ii)	o
3	138	Decimal	servicerAdvancedCumulativePrincipalAmount	20,8		1	Item 1(g)(31)(iii)	o
3	139	Decimal	servicerAdvanceInterestAmount	20,8		1	Item 1(g)(31)(iv)	o

Level	Order	Data Type	Element/Attribute Name	Max Length	Choice List	Max Occur	Item	Asset Data
3	140	Decimal	servicerAdvanceRepaidInterestAmount	20,8		1	Item 1(g)(31)(v)	o
3	141	Decimal	servicerAdvanceCumulativeInterestAmount	20,8		1	Item 1(g)(31)(vi)	o
3	142	Decimal	servicerAdvanceTaxesInsuranceAmount	20,8		1	Item 1(g)(31)(vii)	o
3	143	Decimal	servicerAdvanceRepaidTaxesInsuranceAmount	20,8		1	Item 1(g)(31)(viii)	o
3	144	Decimal	servicerAdvanceCumulativeTaxesInsuranceAmount	20,8		1	Item 1(g)(31)(ix)	o
3	145	Decimal	servicerAdvanceCorporateAmount	20,8		1	Item 1(g)(31)(x)	o
3	146	Decimal	servicerAdvanceRepaidCorporateAmount	20,8		1	Item 1(g)(31)(xi)	o
3	147	Decimal	servicerAdvanceCumulativeCorporateAmount	20,8		1	Item 1(g)(31)(xii)	o
3	148	Date2	zeroBalanceEffectiveDate			1	Item 1(g)(32)(i)	o
3	149	String	zeroBalanceCode		<a href="#">ZERO_BAL_CODE_TYPE</a>	Unlimited	Item 1(g)(32)(ii)	o
3	150	String	mostRecentTwelveMonthHistoryCode		<a href="#">MST_RCNT_TWLV_MNTH_HSTRY_CODE_TYPE</a>	1	Item 1(g)(33)	o
3	151	Integer	paymentPastDueNumber	8		1	Item 1(g)(34)	o
3	152	Decimal	nextResetRatePercentage	20,8		1	Item 1(g)(35)(i)	o
3	153	Date2	nextPaymentChangeDate			1	Item 1(g)(35)(ii)	o
3	154	Date2	nextInterestRateChangeDate			1	Item 1(g)(35)(iii)	o
3	155	Decimal	nextResetPaymentAmount	20,8		1	Item 1(g)(35)(iv)	o

Level	Order	Data Type	Element/Attribute Name	Max Length	Choice List	Max Occur	Item	Asset Data
3	156	Boolean	exercisedArmConversionOptionIndicator			1	Item 1(g)(35)(v)	o
3	157	String	primaryServicerName	150		1	Item 1(h)(1)	o
3	158	Date2	mostRecentServicingTransferReceivedDate			1	Item 1(h)(2)	o
3	159	String	masterServicerName	150		1	Item 1(h)(3)	o
3	160	String	specialServicerName	150		1	Item 1(h)(4)	o
3	161	String	subServicerName	150		1	Item 1(h)(5)	o
3	162	Boolean	assetSubjectDemandIndicator			1	Item 1(i)	o
3	163	String	assetSubjectDemandStatusCode		<a href="#">ASSET_SUBJ_DEMAND_STAT_CODE_TYPE</a>	1	Item 1(i)(1)	o
3	164	Decimal	repurchaseAmount	20,8		1	Item 1(i)(2)	o
3	165	Date1	demandResolutionDate			1	Item 1(i)(3)	o
3	166	String	repurchaserName	150		1	Item 1(i)(4)	o
3	167	String	repurchaseReplacementCode		<a href="#">REPRCH_REPLCMNT_CODE_TYPE</a>	Unlimited	Item 1(i)(5)	o
3	168	Decimal	chargeOffPrincipalAmount	20,8		1	Item 1(j)(1)	o
3	169	Decimal	chargeOffInterestAmount	20,8		1	Item 1(j)(2)	o
3	170	String	lossMitigationTypeCode		<a href="#">LOSS_MTGTION_TYP_CODE_TYPE</a>	Unlimited	Item 1(l)	o
3	171	String	mostRecentLoanModificationEventCode		<a href="#">MOD_MST_RCNT_LOAN_EVNT_CODE_TYPE</a>	Unlimited	Item 1(m)(1)	o
3	172	Date2	mostRecentLoanModificationEffectiveDate			1	Item 1(m)(2)	o
3	173	Date2	postModificationMaturityDate			1	Item 1(m)(3)	o
3	174	String	postModificationInterestRateTypeCode		<a href="#">POST_MOD_INTR_RT_TYP_CODE_TYPE</a>	1	Item 1(m)(4)	o
3	175	String	postModificationAmortizationTypeCode		<a href="#">POST_MOD_AMORT_TYP_CODE_TYPE</a>	1	Item	o

Level	Order	Data Type	Element/Attribute Name	Max Length	Choice List	Max Occur	Item	Asset Data
							1(m)(5)	
3	176	Decimal	postModificationInterestPercentage	20,8		1	Item 1(m)(6)	o
3	177	Date2	postModificationFirstPaymentDate			1	Item 1(m)(7)	o
3	178	Decimal	postModificationLoanBalanceAmount	20,8		1	Item 1(m)(8)	o
3	179	Decimal	postModificationPrincipalInterestPaymentAmount	20,8		1	Item 1(m)(9)	o
3	180	Decimal	totalCapAmount	20,8		1	Item 1(m)(10)	o
3	181	Boolean	incomeVerificationIndicatorAtModification			1	Item 1(m)(11)	o
3	182	Decimal	modificationFrontEndDebtToIncomePercentage	20,8		1	Item 1(m)(12)	o
3	183	Decimal	modificationBackEndDebtToIncomePercentage	20,8		1	Item 1(m)(13)	o
3	184	Decimal	totalDeferredAmount	20,8		1	Item 1(m)(14)	o
3	185	Decimal	forgivenPrincipalCumulativeAmount	20,8		1	Item 1(m)(15)	o
3	186	Decimal	forgivenPrincipalReportingPeriodAmount	20,8		1	Item 1(m)(16)	o
3	187	Decimal	forgivenInterestCumulativeAmount	20,8		1	Item 1(m)(17)	o
3	188	Decimal	forgivenInterestReportingPeriodAmount	20,8		1	Item 1(m)(18)	o
3	189	Decimal	actualEndingBalanceTotalDebtAmount	20,8		1	Item 1(m)(19)	o
3	190	Decimal	scheduledEndingBalanceTotalDebtAmount	20,8		1	Item 1(m)(20)	o
3	191	String	postModificationARMCode		<a href="#">POST_MOD_ARM_CODE_TYPE</a>	1	Item 1(m)(21)(i)	o
3	192	String	postModificationARMIndexCode		<a href="#">POST_MOD_ARM_INDX_CODE_TYPE</a>	1	Item 1(m)(21)(ii)	o
3	193	Decimal	postModificationMarginPercentage	20,8		1	Item 1(m)(21)(iii)	o

Level	Order	Data Type	Element/Attribute Name	Max Length	Choice List	Max Occur	Item	Asset Data
							)	
3	194	Integer	postModificationInterestResetNumber	2		1	Item 1(m)(21)(iv)	o
3	195	Date2	postModificationNextResetDate			1	Item 1(m)(21)(v)	o
3	196	Integer	postModificationIndexLookbackNumber	8		1	Item 1(m)(21)(vi)	o
3	197	String	postModificationARMRoundingCode		<a href="#">POST MOD ARM ROUND CODE TYPE</a>	1	Item 1(m)(21)(vii)	o
3	198	Decimal	postModificationARMRoundingPercentage	20,8		1	Item 1(m)(21)(viii)	o
3	199	Decimal	postModificationInitialMinimumPayment	20,8		1	Item 1(m)(21)(ix)	o
3	200	Date2	postModificationNextPaymentAdjustmentDate			1	Item 1(m)(21)(x)	o
3	201	Decimal	postModificationARMPaymentRecastFrequency	20,8		1	Item 1(m)(21)(xi)	o
3	202	Decimal	postModificationLifetimeFloorPercentage	20,8		1	Item 1(m)(21)(xii)	o
3	203	Decimal	postModificationLifetimeCeilingPercentage	20,8		1	Item 1(m)(21)(xiii)	o
3	204	Decimal	postModificationInitialInterestRateIncreasePercentage	20,8		1	Item 1(m)(21)(xiv)	o
3	205	Decimal	postModificationInitialInterestRateDecreasePercentage	20,8		1	Item 1(m)(21)(xv)	o
3	206	Decimal	postModificationSubsequentInterestIncreasePercentage	20,8		1	Item 1(m)(21)(xvi)	o

Level	Order	Data Type	Element/Attribute Name	Max Length	Choice List	Max Occur	Item	Asset Data
3	207	Decimal	postModificationSubsequentInterestRateDecreasePercentage	20,8		1	Item 1(m)(21)(xvii)	o
3	208	Decimal	postModificationPaymentCapPercentage	20,8		1	Item 1(m)(21)(xviii)	o
3	209	String	postModificationPaymentMethodAfterRecastCode		<a href="#">POST_MOD_PYMNT METH AFTR RECAST CODE TYPE</a>	1	Item 1(m)(21)(xix)	o
3	210	Integer	postModificationARMInterestRateTeaserNumber	2		1	Item 1(m)(21)(xx)	o
3	211	Integer	postModificationARMPaymentTeaserNumber	2		1	Item 1(m)(21)(xxi)	o
3	212	Boolean	postModificationARMNegativeAmortizationIndicator			1	Item 1(m)(21)(xxii)	o
3	213	Decimal	postModificationARMNegativeAmortizationCapPercentage	20,8		1	Item 1(m)(21)(xxiii)	o
3	214	Integer	postModificationInterestOnlyTermNumber	2		1	Item 1(m)(22)(i)	o
3	215	Date2	postModificationInterestOnlyLastPaymentDate			1	Item 1(m)(22)(ii)	o
3	216	Decimal	postModificationBalloonAmount	20,8		1	Item 1(m)(23)	o
3	217	Boolean	postModificationInterestRateStepIndicator			1	Item 1(m)(24)(i)	o
3	218	Decimal	postModificationStepInterestPercentage	20,8		1	Item 1(m)(24)(ii)	o
3	219	Date2	postModificationStepDate			1	Item 1(m)(24)(iii)	o
3	220	Decimal	postModificationStepPrincipalInterestPaymentAmount	20,8		1	Item 1(m)(24)(iv)	o
3	221	Integer	postModificationStepNumber	8		1	Item	o

Level	Order	Data Type	Element/Attribute Name	Max Length	Choice List	Max Occur	Item	Asset Data
							1(m)(24)(v)	
3	222	Decimal	postModificationMaximumFutureStepAgreementPercentage	20,8		1	Item 1(m)(24)(vi)	o
3	223	Date2	postModificationMaximumStepAgreementRateDate			1	Item 1(m)(24)(vii)	o
3	224	Decimal	nonInterestBearingDeferredPrincipalCumulativeAmount	20,8		1	Item 1(m)(25)	o
3	225	Decimal	nonInterestBearingDeferredPrincipalReportingPeriodAmount	20,8		1	Item 1(m)(26)	o
3	226	Decimal	recoveryDeferredPrincipalReportingPeriodAmount	20,8		1	Item 1(m)(27)	o
3	227	Decimal	nonInterestBearingDeferredPaidFullAmount	20,8		1	Item 1(m)(28)	o
3	228	Decimal	nonInterestBearingDeferredInterestFeeReportingPeriodAmount	20,8		1	Item 1(m)(29)	o
3	229	Decimal	nonInterestBearingDeferredInterestFeeCumulativeAmount	20,8		1	Item 1(m)(30)	o
3	230	Decimal	recoveryDeferredInterestFeeReportingPeriodAmount	20,8		1	Item 1(m)(31)	o
3	231	Date2	mostRecentForbearancePlanOrTrialModificationStartDate			1	Item 1(n)(1)	o
3	232	Date2	mostRecentForbearancePlanOrTrialModificationScheduledEndDate			1	Item 1(n)(2)	o
3	233	Date2	mostRecentTrialModificationViolatedDate			1	Item 1(n)(3)	o
3	234	Date2	mostRecentRepaymentPlanStartDate			1	Item 1(o)(1)	o
3	235	Date2	mostRecentRepaymentPlanScheduledEndDate			1	Item 1(o)(2)	o
3	236	Date2	mostRecentRepaymentPlanViolatedDate			1	Item 1(o)(3)	o



Level	Order	Data Type	Element/Attribute Name	Max Length	Choice List	Max Occur	Item	Asset Data
3	237	Decimal	shortSaleAcceptedOfferAmount	20,8		1	Item 1(p)(1)	o
3	238	Date2	mostRecentLossMitigationExitDate			1	Item 1(q)(1)	o
3	239	String	mostRecentLossMitigationExitCode		<a href="#">MST_RCNT_LOSS_MTGTION_EXIT_CODE_TYPE</a>	1	Item 1(q)(2)	o
3	240	Date2	attorneyReferralDate			1	Item 1(r)(1)	o
3	241	String	foreclosureDelayReasonCode		<a href="#">FORECL_DELAY_REASN_CODE_TYPE</a>	Unlimited	Item 1(r)(2)	o
3	242	Date2	foreclosureExitDate			1	Item 1(r)(3)	o
3	243	String	foreclosureExitReasonCode		<a href="#">FORECL_EXIT_REASN_CODE_TYPE</a>	Unlimited	Item 1(r)(4)	o
3	244	Date2	noticeOfIntentDate			1	Item 1(r)(5)	o
3	245	Decimal	mostRecentAcceptedREOOfferAmount	20,8		1	Item 1(s)(1)	o
3	246	Date2	mostRecentAcceptedREOOfferDate			1	Item 1(s)(2)	o
3	247	Decimal	grossLiquidationProceedsAmount	20,8		1	Item 1(s)(3)	o
3	248	Decimal	netSalesProceedsAmount	20,8		1	Item 1(s)(4)	o
3	249	Decimal	reportingPeriodLossPassedToIssuingEntityAmount	20,8		1	Item 1(s)(5)	o
3	250	Decimal	cumulativeTotalLossPassedToIssuingEntityAmount	20,8		1	Item 1(s)(6)	o
3	251	Decimal	subsequentRecoveryAmount	20,8		1	Item 1(s)(7)	o
3	252	Boolean	evictionIndicator			1	Item 1(s)(8)	o
3	253	Date2	reoExitDate			1	Item 1(s)(9)	o
3	254	String	reoExitReasonCode		<a href="#">REO_EXIT_REASN_CODE_TYPE</a>	Unlimited	Item 1(s)(10)	o
3	255	Decimal	UPBLiquidationAmount	20,8		1	Item 1(t)(1)(i)	o

Level	Order	Data Type	Element/Attribute Name	Max Length	Choice List	Max Occur	Item	Asset Data
3	256	Decimal	servicingFeesClaimedAmount	20,8		1	Item 1(t)(1)(ii)	o
3	257	Decimal	servicerAdvanceReimbursedPrincipalAmount	20,8		1	Item 1(t)(1)(iii)	o
3	258	Decimal	servicerAdvanceReimbursedInterestAmount	20,8		1	Item 1(t)(1)(iv)	o
3	259	Decimal	servicerAdvanceReimbursedTaxesInsuranceAmount	20,8		1	Item 1(t)(1)(v)	o
3	260	Decimal	servicerAdvanceReimbursedCorporateAmount	20,8		1	Item 1(t)(1)(vi)	o
3	261	Decimal	REOManagementFeesAmount	20,8		1	Item 1(t)(1)(vii)	o
3	262	Decimal	cashKeyDeedAmount	20,8		1	Item 1(t)(1)(viii)	o
3	263	Decimal	performanceIncentiveFeesAmount	20,8		1	Item 1(t)(1)(ix)	o
3	264	Date2	mortgageInsuranceClaimFiledDate			1	Item 1(u)(1)	o
3	265	Decimal	mortgageInsuranceClaimAmount	20,8		1	Item 1(u)(2)	o
3	266	Date2	mortgageInsuranceClaimPaidDate			1	Item 1(u)(3)	o
3	267	Decimal	mortgageInsuranceClaimPaidAmount	20,8		1	Item 1(u)(4)	o
3	268	Date2	mortgageInsuranceClaimDeniedRescindedDate			1	Item 1(u)(5)	o
3	269	Date2	marketableTitleTransferDate			1	Item 1(u)(6)	o
3	270	String	nonPayStatusCode		<a href="#">NON PAY STAT CODE TYPE</a>	1	Item 1(v)(1)	o
3	271	String	reportingActionCode		<a href="#">RPT ACTN CODE TYPE</a>	Unlimited	Item 1(v)(2)	o

### 3.4.5. Mapping of ABS DebtSecurities Schema to Asset Data Types

Level	Order	Data Type	Element/Attribute Name	Max Length	Choice List	Max Occur	Item	Asset Data
1	1	NV	assetData			1		m
2	1	NV	assets			Unlimited		m
3	1	String	assetTypeNumber	100		1	Item 5(a)(1)	m
3	2	String	assetNumber	25		1	Item 5(a)(2)	m
3	3	Integer	assetGroupNumber	8		1	Item 5(a)(3)	o
3	4	Date1	reportPeriodBeginningDate			1	Item 5(b)(1)	o
3	5	Date1	reportPeriodEndDate			1	Item 5(b)(2)	o
3	6	String	issuerName	150		1	Item 5(c)(1)	o
3	7	Date2	originalIssuanceDate			1	Item 5(c)(2)	o
3	8	Decimal	originalSecurityAmount	20,8		1	Item 5(c)(3)	o
3	9	Integer	originalSecurityTermNumber	8		1	Item 5(c)(4)	o
3	10	Date2	securityMaturityDate			1	Item 5(c)(5)	o
3	11	Integer	originalAmortizationTermNumber	8		1	Item 5(c)(6)	o
3	12	Decimal	originalInterestRatePercentage	20,8		1	Item 5(c)(7)	o
3	13	String	accrualTypeCode		<a href="#">ACCRL_TYP_CODE_TYPE</a>	1	Item 5(c)(8)	o
3	14	String	interestRateTypeCode		<a href="#">INTR_RT_TYP_CODE_TYPE</a>	1	Item 5(c)(9)	o
3	15	Integer	originalInterestOnlyTermNumber	8		1	Item 5(c)(10)	o
3	16	Date2	firstPaymentDate			1	Item 5(c)(11)	o
3	17	Boolean	underwritingIndicator			1	Item 5(c)(12)	o
3	18	String	securityTitleName	150		1	Item 5(c)(13)	o
3	19	Decimal	denominationNumber	20,8		1	Item 5(c)(14)	o
3	20	String	currencyName	100		1	Item 5(c)(15)	o
3	21	String	trusteeName	100		1	Item 5(c)(16)	o
3	22	String	secFileNumber	15		1	Item 5(c)(17)	m#
3	23	String	cik	10		1	Item 5(c)(18)	m#
3	24	Boolean	callableIndicator			1	Item 5(c)(19)	o

Level	Order	Data Type	Element/Attribute Name	Max Length	Choice List	Max Occur	Item	Asset Data
3	25	String	paymentFrequencyCode		<a href="#">PYMNT_FREQ_CODE_TYPE</a>	1	Item 5(c)(20)	o
3	26	Boolean	zeroCouponIndicator			1	Item 5(c)(21)	o
3	27	Boolean	assetAddedIndicator			1	Item 5(d)(1)	o
3	28	Boolean	assetModifiedIndicator			1	Item 5(d)(2)	o
3	29	Decimal	reportPeriodBeginningAssetBalanceAmount	20,8		1	Item 5(d)(3)	o
3	30	Decimal	reportPeriodBeginningScheduledAssetBalanceAmount	20,8		1	Item 5(d)(4)	o
3	31	Decimal	reportPeriodScheduledPaymentAmount	20,8		1	Item 5(d)(5)	o
3	32	Decimal	reportPeriodInterestRatePercentage	20,8		1	Item 5(d)(6)	o
3	33	Decimal	totalActualPaidAmount	20,8		1	Item 5(d)(7)	o
3	34	Decimal	actualInterestCollectionPercentage	20,8		1	Item 5(d)(8)	o
3	35	Decimal	actualPrincipalCollectedAmount	20,8		1	Item 5(d)(9)	o
3	36	Decimal	actualOtherCollectionAmount	20,8		1	Item 5(d)(10)	o
3	37	Decimal	otherPrincipalAdjustmentAmount	20,8		1	Item 5(d)(11)	o
3	38	Decimal	otherInterestAdjustmentAmount	20,8		1	Item 5(d)(12)	o
3	39	Decimal	scheduledInterestAmount	20,8		1	Item 5(d)(13)	o
3	40	Decimal	scheduledPrincipalAmount	20,8		1	Item 5(d)(14)	o
3	41	Decimal	endReportingPeriodActualBalanceAmount	20,8		1	Item 5(d)(15)	o
3	42	Decimal	endReportingPeriodScheduledBalanceAmount	20,8		1	Item 5(d)(16)	o
3	43	Decimal	servicingFeePercentage	20,8		1	Item 5(d)(17)	o
3	44	Decimal	servicingFlatFeeAmount	20,8		1	Item 5(d)(18)	o
3	45	String	zeroBalanceCode		<a href="#">ZERO_BAL_CODE_TYPE</a>	1	Item 5(d)(19)(i)	o
3	46	Date2	zeroBalanceEffectiveDate			1	Item 5(d)(19)(ii)	o
3	47	Integer	remainingTermToMaturityNumber	8		1	Item 5(d)(20)	o
3	48	Integer	currentDelinquentStatusNumber	8		1	Item 5(d)(21)	o
3	49	Integer	paymentPastDueDaysNumber	8		1	Item 5(d)(22)	o
3	50	Integer	paymentPastDueNumber	8		1	Item 5(d)(23)	o
3	51	Decimal	nextReportPeriodPaymentDueAmount	20,8		1	Item 5(d)(24)	o

Level	Order	Data Type	Element/Attribute Name	Max Length	Choice List	Max Occur	Item	Asset Data
3	52	Date2	nextDueDate			1	Item 5(d)(25)	o
3	53	String	primaryLoanServicerName	30		1	Item 5(e)(1)	o
3	54	Date2	mostRecentServicingTransferReceivedDate			1	Item 5(e)(2)	o
3	55	Boolean	assetSubjectToDemandIndicator			1	Item 5(f)	o
3	56	String	statusAssetSubjectToDemandCode		<a href="#">STAT ASSET SUBJ TO DEMND CODE TYPE</a>	1	Item 5(f)(1)	o
3	57	Decimal	repurchaseAmount	20,8		1	Item 5(f)(2)	o
3	58	Date1	demandResolutionDate			1	Item 5(f)(3)	o
3	59	String	repurchaserName	150		1	Item 5(f)(4)	o
3	60	String	repurchaseReplacementReasonCode		<a href="#">REPRCH REPLCMNT REASN CODE TYPE</a>	Unlimited	Item 5(f)(5)	o

## 4. DATA VALUE CONSTRAINTS

### 4.1. Data Value constraints for AutoLoan

#### 4.1.1. INTR\_CALC\_TYP\_CODE\_TYPE

These are the valid values for the <INTR\_CALC\_TYP\_CODE\_TYPE> element in the submission file:

VALUE	CODE DESCRIPTION
1	Simple
98	Other

#### 4.1.2. ORIG\_INTR\_RT\_TYP\_CODE\_TYPE

These are the valid values for the <ORIG\_INTR\_RT\_TYP\_CODE\_TYPE> element in the submission file:

VALUE	CODE DESCRIPTION
1	Fixed
2	Adjustable
98	Other

#### 4.1.3. PYMNT\_TYP\_CODE\_TYPE

These are the valid values for the <PYMNT\_TYP\_CODE\_TYPE> element in the submission file:

VALUE	CODE DESCRIPTION
1	Bi-Weekly
2	Monthly
3	Quarterly
4	Balloon
98	Other

#### 4.1.4. SUBVNT\_CODE\_TYPE

These are the valid values for the <SUBVNT\_CODE\_TYPE> element in the submission file:

VALUE	CODE DESCRIPTION
0	No
1	Yes - Rate Subvention
2	Yes - Cash Rebate
98	Yes - Other

#### 4.1.5. VHCL\_NEW\_USED\_CODE\_TYPE

These are the valid values for the <VHCL\_NEW\_USED\_CODE\_TYPE> element in the submission file:

VALUE	CODE DESCRIPTION
1	New
2	Used

#### 4.1.6. VHCL\_TYP\_CODE\_TYPE

These are the valid values for the <VHCL\_TYP\_CODE\_TYPE> element in the submission file:

VALUE	CODE DESCRIPTION
1	Car
2	Truck
3	SUV
4	Motorcycle
98	Other
99	Unknown

#### 4.1.7. VHCL\_VAL\_SRC\_CODE\_TYPE

These are the valid values for the <VHCL\_VAL\_SRC\_CODE\_TYPE> element in the submission file:

VALUE	CODE DESCRIPTION
1	Invoice Price
2	MSRP
3	Kelley Blue Book
98	Other

#### 4.1.8. OBLGR\_INCM\_VRFCTN\_LVL\_CODE\_TYPE

These are the valid values for the <OBLGR\_INCM\_VRFCTN\_LVL\_CODE\_TYPE> element in the submission file:

VALUE	CODE DESCRIPTION
1	Not stated, not verified
2	Stated, not verified
3	Stated, verified but not to "level 4" or "level 5"
4	Stated, "level 4" verified Level 4 income verification = Previous year W-2 or tax returns, and year-to-date pay stubs, if salaried. If self-employed, then obligor provided 2 years of tax returns.

VALUE	CODE DESCRIPTION
5	Stated, "level 5" verified Level 5 income verification = 24 months income verification (W-2s, pay stubs, bank statements and/or tax returns). If self-employed, then obligor provided 2 years tax returns plus a CPA certification of the tax returns.

#### 4.1.9. OBLGR\_EMPLOY\_VRFCTN\_CODE\_TYPE

These are the valid values for the <OBLGR\_EMPLOY\_VRFCTN\_CODE\_TYPE> element in the submission file:

VALUE	CODE DESCRIPTION
1	Not stated, not verified
2	Stated, not verified
3	Stated, "level 3" verified Level 3 verified = Direct independent verification with a third party of the obligor's current employment.

#### 4.1.10. SRVC\_ADV\_METH\_CODE\_TYPE

These are the valid values for the <SRVC\_ADV\_METH\_CODE\_TYPE> element in the submission file:

VALUE	CODE DESCRIPTION
1	No advancing
2	Interest only
3	Principal only
4	Principal and Interest
99	Unavailable

#### 4.1.11. ZERO\_BAL\_CODE\_TYPE

These are the valid values for the <ZERO\_BAL\_CODE\_TYPE> element in the submission file:

VALUE	CODE DESCRIPTION
1	Prepaid or Matured
2	Third-Party Sale
3	Repurchased or Replaced
4	Charged-off
5	Servicing Transfer
99	Unavailable



#### 4.1.12. REPRCH\_ASSET\_SUBJ\_DMANT\_CODE\_TYPE

These are the valid values for the <REPRCH\_ASSET\_SUBJ\_DMANT\_CODE\_TYPE> element in the submission file:

VALUE	CODE DESCRIPTION
0	Asset Pending Repurchase or Replacement
1	Asset Was Repurchased or Replaced
2	Demand in Dispute
3	Demand Withdrawn
4	Demand Rejected
98	Other

#### 4.1.13. REPRCH\_RPLCMNT\_REASN\_CODE\_TYPE

These are the valid values for the <REPRCH\_RPLCMNT\_REASN\_CODE\_TYPE> element in the submission file:

VALUE	CODE DESCRIPTION
1	Fraud
2	Early Payment Default
3	Other Recourse Obligation
4	Reps/Warrants Breach
5	Servicer Breach
98	Other
99	Unknown

#### 4.1.14. MOD\_TYPE\_CODE\_TYPE

These are the valid values for the <MOD\_TYPE\_CODE\_TYPE> element in the submission file:

VALUE	CODE DESCRIPTION
1	APR
2	Principal
3	Term
4	Extension
98	Other

## 4.2. Data Value constraints for AutoLease

### 4.2.1. PYMNT\_TYP\_CODE\_TYPE

These are the valid values for the <PYMNT\_TYP\_CODE\_TYPE> element in the submission file:

VALUE	CODE DESCRIPTION
1	Bi-Weekly
2	Monthly
3	Quarterly
4	Prepaid
98	Other

### 4.2.2. SUBVNT\_CODE\_TYPE

These are the valid values for the <SUBVNT\_CODE\_TYPE> element in the submission file:

VALUE	CODE DESCRIPTION
0	No
1	Yes - Rate or Finance Charge Subvention
2	Yes - Residual Subvention
98	Yes - Other

### 4.2.3. VHCL\_NEW\_USED\_CODE\_TYPE

These are the valid values for the <VHCL\_NEW\_USED\_CODE\_TYPE> element in the submission file:

VALUE	CODE DESCRIPTION
1	New
2	Used

### 4.2.4. VHCL\_TYP\_CODE\_TYPE

These are the valid values for the <VHCL\_TYP\_CODE\_TYPE> element in the submission file:

VALUE	CODE DESCRIPTION
1	Car
2	Truck
3	SUV

VALUE	CODE DESCRIPTION
4	Motorcycle
98	Other
99	Unknown

#### 4.2.5. VHCL\_VAL\_SRC\_CODE\_TYPE

These are the valid values for the <VHCL\_VAL\_SRC\_CODE\_TYPE> element in the submission file:

VALUE	CODE DESCRIPTION
1	Invoice Price
2	MSRP
3	Kelley Blue Book
98	Other

#### 4.2.6. BS\_RES DL\_SRC\_CODE\_TYPE

These are the valid values for the <BS\_RES DL\_SRC\_CODE\_TYPE> element in the submission file:

VALUE	CODE DESCRIPTION
1	Black Book
2	Automotive Lease Guide
98	Other

#### 4.2.7. LSSE\_INCM\_VRFCTN\_LVL\_CODE\_TYPE

These are the valid values for the <LSSE\_INCM\_VRFCTN\_LVL\_CODE\_TYPE> element in the submission file:

VALUE	CODE DESCRIPTION
1	Not stated, not verified
2	Stated, not verified
3	Stated, verified but not to "level 4" or "level 5"
4	Stated, "level 4" verified Level 4 income verification = Previous year W-2 or tax returns, and year-to-date pay stubs, if salaried. If self-employed, then lessee provided 2 years of tax returns.
5	Stated, "level 5" verified Level 5 income verification = 24 months income verification (W-2s, pay stubs, bank statements and/or tax returns). If self-employed, then lessee provided 2 years tax returns plus a CPA certification of the tax returns.

#### 4.2.8. LSSE\_EMPLOY\_VRFCTN\_CODE\_TYPE

These are the valid values for the <LSSE\_EMPLOY\_VRFCTN\_CODE\_TYPE> element in the submission file:

VALUE	CODE DESCRIPTION
1	Not stated, not verified
2	Stated, not verified
3	Stated, "level 3" verified Level 3 verified = Direct independent verification with a third party of the lessee's current employment.

#### 4.2.9. SRVC\_ADV\_METH\_CODE\_TYPE

These are the valid values for the <SRVC\_ADV\_METH\_CODE\_TYPE> element in the submission file:

VALUE	CODE DESCRIPTION
1	No advancing
2	Interest only
3	Principal only
4	Principal and Interest
99	Unknown

#### 4.2.10. ZERO\_BAL\_CODE\_TYPE

These are the valid values for the <ZERO\_BAL\_CODE\_TYPE> element in the submission file:

VALUE	CODE DESCRIPTION
1	Terminated
2	Repurchased or Replaced
3	Charged-off
4	Servicing Transfer
99	Unavailable

#### 4.2.11. REPRCH\_STAT\_ASSET\_SUBJ\_DMAND\_CODE\_TYPE

These are the valid values for the <REPRCH\_STAT\_ASSET\_SUBJ\_DMAND\_CODE\_TYPE> element in the submission file:

VALUE	CODE DESCRIPTION
0	Asset Pending Repurchase or Replacement
1	Asset Was Repurchased or Replaced

VALUE	CODE DESCRIPTION
2	Demand in Dispute
3	Demand Withdrawn
4	Demand Rejected
98	Other

#### 4.2.12. REPRCH\_RPLC\_REASN\_CODE\_TYPE

These are the valid values for the <REPRCH\_RPLC\_REASN\_CODE\_TYPE> element in the submission file:

VALUE	CODE DESCRIPTION
1	Fraud
2	Early Payment Default
3	Other Recourse Obligation
4	Reps/Warrants Breach
5	Servicer Breach
98	Other
99	Unknown

#### 4.2.13. MOD\_TYPE\_CODE\_TYPE

These are the valid values for the <MOD\_TYPE\_CODE\_TYPE> element in the submission file:

VALUE	CODE DESCRIPTION
1	Payment Amount
2	Term
3	Extension
98	Other

#### 4.2.14. TERMNTN\_CODE\_TYPE

These are the valid values for the <TERMNTN\_CODE\_TYPE> element in the submission file:

VALUE	CODE DESCRIPTION
1	Payoff
2	Return
3	Repossession
4	Repurchase
98	Other

### 4.3. Data Value constraints for CMBS

#### 4.3.1. INTR\_ACCRL\_METH\_CODE\_TYPE

These are the valid values for the <INTR\_ACCRL\_METH\_CODE\_TYPE> element in the submission file:

VALUE	CODE DESCRIPTION
1	30/360
2	Actual/365
3	Actual/360
4	Actual/Actual
5	Actual/366
6	Simple
7	78s
98	Other

#### 4.3.2. ORIG\_INTR\_RT\_TYP\_CODE\_TYPE

These are the valid values for the <ORIG\_INTR\_RT\_TYP\_CODE\_TYPE> element in the submission file:

VALUE	CODE DESCRIPTION
1	Fixed
2	ARM
3	Step
4	Other

#### 4.3.3. LIEN\_PSTN\_CODE\_TYPE

These are the valid values for the <LIEN\_PSTN\_CODE\_TYPE> element in the submission file:

VALUE	CODE DESCRIPTION
1	Primary
2	Secondary
3	Tertiary;etc
98	Other
99	Unknown

#### 4.3.4. LOAN\_STCTR\_CODE\_TYPE

These are the valid values for the <LOAN\_STCTR\_CODE\_TYPE> element in the submission file:

VALUE	CODE DESCRIPTION
A1	A Note; A/B Participation Structure
A2	A Note; A/B/C Participation Structure
B1	B Note; A/B Participation Structure
B2	B Note; A/B/C Participation Structure
C2	C Note; A/B/C Participation Structure
MZ	Mezzanine Financing
PP	Participated mortgage loan with pari passu debt outside trust
WL	Whole loan structure

#### 4.3.5. PYMNT\_TYP\_CODE\_TYPE

These are the valid values for the <PYMNT\_TYP\_CODE\_TYPE> element in the submission file:

VALUE	CODE DESCRIPTION
1	Fully Amortizing
2	Amortizing Balloon
3	Interest Only/Balloon
4	Interest Only/Amortizing
5	Interest Only/Amortizing/Balloon
6	Principal Only
7	Hyper - Amortization
98	Other

#### 4.3.6. PYMNT\_FREQ\_CODE\_TYPE

These are the valid values for the <PYMNT\_FREQ\_CODE\_TYPE> element in the submission file:

VALUE	CODE DESCRIPTION
1	Monthly
3	Quarterly
6	Semi-Annually
12	Annually
365	Daily

#### 4.3.7. ARM\_INDX\_CODE\_TYPE

These are the valid values for the <ARM\_INDX\_CODE\_TYPE> element in the submission file:

VALUE	CODE DESCRIPTION
A	11 FHLB COFI (1 Month)
B	11 FHLB COFI (6 Month)
C	1 Year CMT Weekly Average Treasury
D	3 Year CMT Weekly Average Treasury
E	5 Year CMT Weekly Average Treasury
F	Wall Street Journal Prime Rate
G	1 Month LIBOR
H	3 Month LIBOR
I	6 Month LIBOR
J	National Mortgage Index Rate
98	Other

#### 4.3.8. RT\_RST\_FREQ\_CODE\_TYPE

These are the valid values for the <RT\_RST\_FREQ\_CODE\_TYPE> element in the submission file:

VALUE	CODE DESCRIPTION
1	Monthly
3	Quarterly
6	Semi-Annually
12	Annually
365	Daily

#### 4.3.9. PY\_RST\_FREQ\_CODE\_TYPE

These are the valid values for the <PY\_RST\_FREQ\_CODE\_TYPE> element in the submission file:

VALUE	CODE DESCRIPTION
1	Monthly
3	Quarterly
6	Semi-Annually
12	Annually
365	Daily



#### 4.3.10. PROPRTY\_TYP\_CODE\_TYPE

These are the valid values for the <PROPRTY\_TYP\_CODE\_TYPE> element in the submission file:

VALUE	CODE DESCRIPTION
CH	Cooperative housing
HC	HealthCare
IN	Industrial
LO	Lodging
MF	Multifamily
MH	Mobile Home Park
MU	Mixed Use
OF	Office
RT	Retail
SE	Securities
SS	Self Storage
WH	Warehouse
ZZ	Missing Information
98	Other

#### 4.3.11. VAL\_SRC\_SCRTZTN\_CODE\_TYPE

These are the valid values for the <VAL\_SRC\_SCRTZTN\_CODE\_TYPE> element in the submission file:

VALUE	CODE DESCRIPTION
BPO	Broker price opinion
MAI	Certified MAI appraisal
MS	Master servicer estimate
Non-MAI	Non-certified MAI appraisal
98	Other
SS	SS estimate

#### 4.3.12. MST\_RCNT\_VAL\_SRC\_CODE\_TYPE

These are the valid values for the <MST\_RCNT\_VAL\_SRC\_CODE\_TYPE> element in the submission file:

VALUE	CODE DESCRIPTION
98	Other
BPO	Broker price option
MAI	Certified MAI appraisal

VALUE	CODE DESCRIPTION
MS	Master Servicer Estimate
Non-MAI	Non-certified MAI Appraisal
SS	SS Estimate

#### 4.3.13. PROPRTY\_STAT\_CODE\_TYPE

These are the valid values for the <PROPRTY\_STAT\_CODE\_TYPE> element in the submission file:

VALUE	CODE DESCRIPTION
1	In Foreclosure
2	REO
3	Defeased
4	Partial Release
5	Substituted
6	Same as at Securitization

#### 4.3.14. DFSNC\_STAT\_CODE\_TYPE

These are the valid values for the <DFSNC\_STAT\_CODE\_TYPE> element in the submission file:

VALUE	CODE DESCRIPTION
F	Full Defeasance
IP	Portion of Loan Previously Defeased
N	No Defeasance Occurred
X	Defeasance Not Allowable

#### 4.3.15. NET\_OPRNG\_INCM\_NET\_CASH\_FLW\_SCRTZTN\_CODE\_TYPE

These are the valid values for the <NET\_OPRNG\_INCM\_NET\_CASH\_FLW\_SCRTZTN\_CODE\_TYPE> element in the submission file:

VALUE	CODE DESCRIPTION
CREFC	Calculated using CREFC standard
PSA	Calculated using a definition given in the pooling and servicing agreement
UW	Calculated using the underwriting method

#### 4.3.16. NET\_OPRNG\_INCM\_NET\_CASH\_FLW\_CODE\_TYPE

These are the valid values for the <NET\_OPRNG\_INCM\_NET\_CASH\_FLW\_CODE\_TYPE> element in the submission file:

VALUE	CODE DESCRIPTION
CREFC	Calculated using CREFC Standard
PSA	Calculated using a definition given in the pooling and servicing agreement
UW	Calculated using the underwriting method

#### 4.3.17. DEBT\_SRVC\_CVRG\_CODE\_TYPE

These are the valid values for the <DEBT\_SRVC\_CVRG\_CODE\_TYPE> element in the submission file:

VALUE	CODE DESCRIPTION
A	Average - Not all properties received financials, servicer allocates debt service only to properties where financials are received.
C	Consolidated - All properties reported on one "rolled up" financial from the borrower
F	Full - All Statements Collected for all properties
N	None Collected - no financial statements were received
P	Partial - Not all properties received financials, servicer to leave empty
W	Worst Case - Not all properties received financial statements, servicer allocates 100% of Debt Service to all properties where financials are received

#### 4.3.18. MST\_RCNT\_DEBT\_SRVC\_AMT\_CODE\_TYPE

These are the valid values for the <MST\_RCNT\_DEBT\_SRVC\_AMT\_CODE\_TYPE> element in the submission file:

VALUE	CODE DESCRIPTION
A	Average - Not all properties received financials, servicer allocates debt service only to properties where financial statements are received.
C	Consolidated - All properties reported on one "rolled up" financial statement from the borrower
F	Full - All financial statements collected for all properties
N	None collected - No financials were received
P	Partial - Not all properties received financial statements, servicer to leave empty
W	"Worst Case" - Not all properties received financial statements, servicer allocates 100% of debt service to all properties where financial statements are received.

#### 4.3.19. SRVC\_ADV\_METH\_CODE\_TYPE

These are the valid values for the <SRVC\_ADV\_METH\_CODE\_TYPE> element in the submission file:

VALUE	CODE DESCRIPTION
1	Scheduled Interest, Scheduled Principal

VALUE	CODE DESCRIPTION
2	Actual Interest, Actual Principal
3	Scheduled Interest, Actual Principal
98	Other
99	unknown

#### 4.3.20. PYMNT\_STAT\_LOAN\_CODE\_TYPE

These are the valid values for the <PYMNT\_STAT\_LOAN\_CODE\_TYPE> element in the submission file:

VALUE	CODE DESCRIPTION
0	Current
1	30-59 days delinquent
2	60-89 days delinquent
3	90+ days delinquent
4	Performing matured balloon
5	Non performing matured balloon.
A	Payment not received but still in grace period or not yet due.
B	Late payment but less than 30 days delinquent

#### 4.3.21. ASSET\_SUBJ\_DEMAND\_STAT\_CODE\_TYPE

These are the valid values for the <ASSET\_SUBJ\_DEMAND\_STAT\_CODE\_TYPE> element in the submission file:

VALUE	CODE DESCRIPTION
0	Asset Pending Repurchase or Replacement (within cure period)
1	Asset was Repurchased or Replaced
2	Demand in Dispute
3	Demand Withdrawn
4	Demand Rejected

#### 4.3.22. REPRCH\_RPLCMNT\_REASN\_CODE\_TYPE

These are the valid values for the <REPRCH\_RPLCMNT\_REASN\_CODE\_TYPE> element in the submission file:

VALUE	CODE DESCRIPTION
1	Fraud
2	Early Payment Default
3	Other recourse obligation
4	Reps/Warrants breach
5	Servicer breach
98	Other

VALUE	CODE DESCRIPTION
99	Unknown

#### 4.3.23. LIQDTN\_PRPYMNT\_CODE\_TYPE

These are the valid values for the <LIQDTN\_PRPYMNT\_CODE\_TYPE> element in the submission file:

VALUE	CODE DESCRIPTION
1	Partial Liquidation(Curtailment)
2	Payoff Prior to Maturity
3	Disposition/Liquidation
4	Repurchase/Substitution
5	Full Payoff at Maturity
6	DPO
7	Liquidated-only for use for loans liquidated prior to 7/1/2006
8	Payoff w/ Penalty
9	Payoff w/ Yield Maintenance
10	Curtailment w/ Penalty
11	Curtailment w/ yield Maintenance

#### 4.3.24. WRKOUT\_STRAT\_CODE\_TYPE

These are the valid values for the <WRKOUT\_STRAT\_CODE\_TYPE> element in the submission file:

VALUE	CODE DESCRIPTION
1	Modification
2	Foreclosure
3	Bankruptcy
4	Extension
5	Note sale
6	DPO
7	REO
8	Resolved
9	Pending return to master servicer
10	Deed-in-lieu of Foreclosure
11	Full Payoff
12	Reps and Warranties
13	TBD
98	Other

#### 4.3.25. MOD\_CODE\_TYPE

These are the valid values for the <MOD\_CODE\_TYPE> element in the submission file:

VALUE	CODE DESCRIPTION
1	Maturity Date Extension
2	Amortization Change
3	Principal Write-off
5	Temporary Rate Reduction
6	Capitalization on Interest
7	Capitalization on Taxes
8	Combination
98	Other

#### 4.4. Data Value constraints for RMBS

##### 4.4.1. ORIG\_LOAN\_PURPS\_CODE\_TYPE

These are the valid values for the <ORIG\_LOAN\_PURPS\_CODE\_TYPE> element in the submission file:

VALUE	CODE DESCRIPTION
1	Cash out
2	Limited cash-out (GSE definition)
3	Facilitate REO (repo financing for manufactured housing)
4	First time home purchase (Purchaser has not owned a principal residence in the past three years.)
5	Other-than-first-time home purchase
6	Rate/term refinance - lender initiated
7	Rate/term refinance - obligor initiated
8	Construction to permanent: A mortgage loan on completed construction under one mortgage or trust deed in which the completion certificate and the certificate of occupancy have been obtained.
9	Assumption
98	Other
99	Unknown

##### 4.4.2. ACCRL\_TYP\_CODE\_TYPE

These are the valid values for the <ACCRL\_TYP\_CODE\_TYPE> element in the submission file:

VALUE	CODE DESCRIPTION
1	30/360
2	Actual/365

VALUE	CODE DESCRIPTION
3	Actual/360
4	Actual/Actual
5	Actual/366
6	Simple
7	78s
98	Other

#### 4.4.3. ORIG\_INTR\_RT\_TYP\_CODE\_TYPE

These are the valid values for the <ORIG\_INTR\_RT\_TYP\_CODE\_TYPE> element in the submission file:

VALUE	CODE DESCRIPTION
1	Fixed
2	Adjustable
3	Step
98	Other

#### 4.4.4. ORIG\_LIEN\_PSTN\_CODE\_TYPE

These are the valid values for the <ORIG\_LIEN\_PSTN\_CODE\_TYPE> element in the submission file:

VALUE	CODE DESCRIPTION
1	First
2	Second
3	Third
98	Other
99	Unknown

#### 4.4.5. ORIG\_LOAN\_TYP\_MST\_SNR\_LIEN\_CODE\_TYPE

These are the valid values for the <ORIG\_LOAN\_TYP\_MST\_SNR\_LIEN\_CODE\_TYPE> element in the submission file:

VALUE	CODE DESCRIPTION
1	Fixed rate
2	ARM
3	Hybrid
4	Negative amortization
99	Unknown

#### 4.4.6. COV\_HIGH\_COST\_CODE\_TYPE

These are the valid values for the <COV\_HIGH\_COST\_CODE\_TYPE> element in the submission file:

VALUE	CODE DESCRIPTION
0	No
1	Yes
99	Unknown

#### 4.4.7. SRVR\_HAZRD\_INS\_CODE\_TYPE

These are the valid values for the <SRVR\_HAZRD\_INS\_CODE\_TYPE> element in the submission file:

VALUE	CODE DESCRIPTION
0	No
1	Yes
99	Unknown

#### 4.4.8. CHNL\_CODE\_TYPE

These are the valid values for the <CHNL\_CODE\_TYPE> element in the submission file:

VALUE	CODE DESCRIPTION
1	Retail
2	Broker
3	Correspondent bulk
4	Correspondent flow with delegated underwriting
5	Correspondent flow without delegated underwriting
98	Other
99	Unknown

#### 4.4.9. ORIG\_INDX\_CODE\_TYPE

These are the valid values for the <ORIG\_INDX\_CODE\_TYPE> element in the submission file:

VALUE	CODE DESCRIPTION
1	1 MONTH TREASURY (WEEKLY)
2	1 Year CMT Moving 12 Month Avg (MTA)
3	1 YEAR TREASURY (WEEKLY)
4	1 YR TREASURY (MONTHLY)
5	10 YEAR TREASURY (MONTHLY)
6	10 YEAR TREASURY (WEEKLY)



VALUE	CODE DESCRIPTION
7	11TH DISTRICT COFI (MONTHLY)
8	11TH DISTRICT COFI (SEMI-ANNUAL)
9	2 YR TREASURY (MONTHLY)
10	2 YR TREASURY (WEEKLY)
11	3 MONTH TREASURY (MONTHLY)
12	3 MONTH TREASURY (WEEKLY)
13	3 MTH T-BILL AUCTION AVGDISCOUNT RATE (WEEKLY)
14	3 MTH TREASURY AUCTION AVG –INVESTMENT (WEEKLY)
15	3 YEAR TREASURY (WEEKLY)
16	3 YR TREASURY (MONTHLY)
17	5 YR TREASURY (MONTHLY)
18	5 YR TREASURY (WEEKLY)
19	6 MONTH US TREASURY (MONTHLY)
20	6 MONTH US TREASURY (WEEKLY)
21	6 MTH T-BILL AUCTION AVGDISCOUNT RATE (WEEKLY)
22	6 MTH TREASURY AUCTION AVG –INVESTMENT (WEEKLY)
23	7 YEAR TREASURY (WEEKLY)
24	CDs (secondary market) 6-month (WEEKLY)
25	FEDERAL RESERVE “PRIME RATE” (MONTHLY)
26	FHLB Contract Mortgage Rate Prev.Occupied
27	FHLBB CONTRACT (MONTHLY)
28	FHLBB EFFECTIVE RATE
29	FHLBB MONTHLY NATIONAL AVG MEDIAN COFI (MONTHLY)
30	FHLBB NATIONAL COFI QUARTERLY AVG
31	FNMA 6 MONTH TREASURY (WEEKLY)
32	FSLIC MONTHLY NATIONAL AVG MEDIAN COFI (MONTHLY)
33	WSJ “PRIME RATE” (DAILY)
34	WSJ “PRIME RATE” (First Business Day)
35	WSJ 1 MONTH LIBOR (DAILY)
36	WSJ 1 MONTH LIBOR (First Business Day)
37	WSJ 1 MONTH LIBOR FIRST DAY OF THE MONTH
38	WSJ 1 MONTH LIBOR(on or after 25th)
39	WSJ 1 YEAR LIBOR (DAILY)
40	WSJ 1 YEAR LIBOR (First Business Day)
41	WSJ 3 MONTH LIBOR (DAILY)
42	WSJ 3 MONTH LIBOR(First Business Day)
43	WSJ 6 MONTH LIBOR (DAILY)
44	WSJ 6 MONTH LIBOR/30 L-B-DAYS (MONTHLY)

VALUE	CODE DESCRIPTION
45	WSJ 6 month Libor WSJ-15th day
46	WSJ 6 MONTH LIBOR/Pub on 25th (MONTHLY)
47	WSJ 6-MONTH LIBOR (First Business Day)
48	3-Year CMT
49	5-Year CMT
50	7-Year CMT
98	Other
99	Unavailable

#### 4.4.10. ARM\_ROUND\_CODE\_TYPE

These are the valid values for the <ARM\_ROUND\_CODE\_TYPE> element in the submission file:

VALUE	CODE DESCRIPTION
0	No rounding
1	Up
2	Down
3	Nearest
99	Unknown

#### 4.4.11. PYMNT\_METH\_CODE\_TYPE

These are the valid values for the <PYMNT\_METH\_CODE\_TYPE> element in the submission file:

VALUE	CODE DESCRIPTION
1	Fully Amortizing 30 year
2	Fully Amortizing 15 year
3	Fully Amortizing 40 year
4	Interest-Only
5	Minimum Payment
6	Unknown

#### 4.4.12. PRPYMNT\_PNLTY\_CALC\_CODE\_TYPE

These are the valid values for the <PRPYMNT\_PNLTY\_CALC\_CODE\_TYPE> element in the submission file:

VALUE	CODE DESCRIPTION
1	Lesser of 2% or 60 days interest
2	Lesser of 1% or 2 months interest
3	Lesser of 1% or 3 months interest or remaining bal of 1st year interest

VALUE	CODE DESCRIPTION
4	Lesser of 1% or remaining bal of 1st year Interest
5	Lesser of 3 months interest or remaining bal of 1 <sup>st</sup> year interest
6	Lesser of 1% or 6 months interest
7	Lesser of 2% or 6 months interest
8	Lesser of 3% or 6 months interest
9	Greater of 1% or \$100
10	60 days interest
11	1 months interest
12	2 months interest
13	3 months interest
14	5 months interest
15	6 months interest
16	12 months interest
17	24 months interest
18	36 months interest
19	60 months interest
20	1%
21	2%
22	3%
23	4%
24	5%
25	6%
26	1%, 1%
27	2%, 1%
28	2%, 2%
29	3%, 1%
30	3%, 2%
31	3%, 3%
32	4%, 3%
33	5%, 1%
34	5%, 2%
35	5%, 4%
36	5%, 5%
37	6%, 1%
38	1%, 1%, 1%
39	1%, 2%, 3%
40	2%, 2%, 2%
41	3%, 2%, 1%

VALUE	CODE DESCRIPTION
42	3%, 3%, 1%
43	3%, 3%, 3%
44	5%, 3%, 1%
45	5%, 4%, 1%
46	5%, 4%, 3%
47	5%, 5%, 5%
48	4%, 3%, 2%, 1%
49	5%, 4%, 3%, 2%
50	5%, 4%, 3%, 2%, 1%
51	5%, 5%, 5%, 5%, 5%
52	10%, 7%, 3.5%
53	1%, 1%, 1%, 1%, 1%
54	2%, 2%, 2%, 2%, 2%
55	3%, 3%, 3%, 3%, 3%
56	3%, 2%, 1% or 6 months interest
98	Other
99	Unavailable

#### 4.4.13. PRPYMNT\_PNLTY\_TYP\_CODE\_TYPE

These are the valid values for the <PRPYMNT\_PNLTY\_TYP\_CODE\_TYPE> element in the submission file:

VALUE	CODE DESCRIPTION
1	Hard: The prepayment penalty is incurred regardless of the reason the loan is prepaid in full.
2	Soft: The prepayment penalty is incurred only if the loan is prepaid in full due to a refinancing.
3	Hybrid: The prepayment penalty can be characterized as hard for a certain amount of time and as soft during another period.
99	Unknown

#### 4.4.14. OCCPNKY\_STAT\_CODE\_TYPE

These are the valid values for the <OCCPNKY\_STAT\_CODE\_TYPE> element in the submission file:

VALUE	CODE DESCRIPTION
1	Owner-Occupied
2	Second Home
3	Investment Property
4	Transfer Owner-Occupied (loan has been assumed)
5	Non-Owner Occupied (tenant)
6	Vacant (not secure)

VALUE	CODE DESCRIPTION
7	Vacant (secure)
8	Adverse Occupant
9	Occupied by Unknown Party
10	Partially Vacant
98	Other
99	Unavailable

#### 4.4.15. MST\_RCNT\_OCCPNY\_STAT\_CODE\_TYPE

These are the valid values for the <MST\_RCNT\_OCCPNY\_STAT\_CODE\_TYPE> element in the submission file:

VALUE	CODE DESCRIPTION
1	Owner-occupied
2	Second-home
3	Investment property
4	Transfer owner – occupied (loan has been assumed)
5	Non-owner occupied (tenant)
6	Vacant (not secure)
7	Vacant (secure)
8	Adverse occupant
9	Occupied by unknown party
10	Partially vacant
98	Other
99	Unknown

#### 4.4.16. PROPRTY\_TYPE\_CODE\_TYPE

These are the valid values for the <PROPRTY\_TYP\_CODE\_TYPE> element in the submission file:

VALUE	CODE DESCRIPTION
1	Single family detached (non-PUD)
2	Co-op
3	Condo, low rise (4 or fewer stories)
4	Condo, high rise (5+ stories)
5	Condotel (as defined in Issuer's Underwriting Guidelines)
6	dPUD (PUD with "de minimus" monthly HOA dues)
7	PUD (Only for use with Single-Family detached homes with PUD riders)
8	Townhouse (Do not report as "PUD")
9	Single-wide manufactured housing
10	Double-wide manufactured housing

VALUE	CODE DESCRIPTION
11	Multi-wide manufactured housing
12	1 family attached
13	2 family
14	3 family
15	4 family
98	Other
99	Unavailable

#### 4.4.17. MST\_RCNT\_PROPERTY\_VAL\_CODE\_TYPE

These are the valid values for the < MST\_RCNT\_PROPERTY\_VAL\_CODE\_TYPE> element in the submission file:

VALUE	CODE DESCRIPTION
1	Tax Assessment
2	Drive-By Form 704
3	URAR Form 1004, Form 70, Form 72, Form 1025, Form 1073, Form 465, Form 2090, Form 1004C, and Form 70B (Form 1075 retired 11/1/2005)
4	Form 2070 and Form 2075 (Form 2065 retired 11/1/2005)
5	Form 2055, Form 1075, Form 466, and Form 2095 (Exterior Only)
6	Form 2055 (with Interior Inspection)
7	Automated Valuation Model (also indicate system code in field 127)
8	Reserved
9	Desk Review
10	BPO as-Is
11	BPO quick sale
12	NADA/Yellow Book Value (for MH)
13	Land Only (for Lot and MH)
14	Reserved
15	Case-Shiller/other index application
16	Form 1004MC
98	Other
99	Unavailable

#### 4.4.18. PROPRTY\_MST\_RCNT\_AVM\_MDL\_CODE\_TYPE

These are the valid values for the <PROPRTY\_MST\_RCNT\_AVM\_MDL\_CODE\_TYPE> element in the submission file:

VALUE	CODE DESCRIPTION
0	No AVM Used
1	HPA (FACL)
2	VP4 (FACL)
3	PASS (FACL)
4	PowerBase 6.0 (FACL)
5	HVE (Freddie Mac)
6	CASA (Fiserv)
7	APS (Fannie Mae)
8	iAVM (IntelliReal)
9	ValueFinder (LandSafe)
10	ValueSure (LPS)
11	SiteX Value (LPS)
12	CMV (MDAS)
13	ValueSmart (MDAS)
14	Real Assessment (Real Info)
15	i-Val (Real Info)
16	GeoCompVal (Real Info)
17	AVMax (RJ Peters)
18	VeroValue Preferred (Veros)
19	VeroValue (Veros)
20	VeroValue Advantage (Veros)
98	Other

#### 4.4.19. OBLGR\_INCM\_VRFCTN\_LVL\_CODE\_TYPE

These are the valid values for the <OBLGR\_INCM\_VRFCTN\_LVL\_CODE\_TYPE> element in the submission file:

VALUE	CODE DESCRIPTION
1	Not Stated, not verified
2	Stated, not verified
3	Stated, verified but not verified to "level 4" or "level 5"
4	Stated, "level 4" verified. Previous year W-2 or tax returns, and year-to-date pay stubs, if salaried. If self-employed, then obligor provided 2 years of tax returns.

VALUE	CODE DESCRIPTION
5	Stated, "level 5" verified. 24 months income verification (W-2s, pay stubs, bank statements and/or tax returns). If self-employed, then obligor provided 2 years tax returns plus a CPA certification of the tax returns.

#### 4.4.20. OBLGR\_EMPLOY\_VRFCTN\_CODE\_TYPE

These are the valid values for the <OBLGR\_EMPLOY\_VRFCTN\_CODE\_TYPE> element in the submission file:

VALUE	CODE DESCRIPTION
1	Not stated, not verified
2	Stated, not verified
3	Stated, level 3 verified. Level 3 verified = Direct independent verification with a third party of the obligor's current employment.

#### 4.4.21. OBLGR\_EMPLOY\_LEN\_CODE\_TYPE

These are the valid values for the <OBLGR\_EMPLOY\_LEN\_CODE\_TYPE> element in the submission file:

VALUE	CODE DESCRIPTION
0	No
1	Yes
99	Unknown

#### 4.4.22. OBLGR\_ASSET\_VRFCTN\_CODE\_TYPE

These are the valid values for the <OBLGR\_ASSET\_VRFCTN\_CODE\_TYPE> element in the submission file:

VALUE	CODE DESCRIPTION
1	Not stated, not verified
2	Stated, not verified
3	Stated, verified but not to "level 4".
4	Stated, "level 4" verified. Level 4 verified = 2 months of bank statements/balance documentation (written or electronic) for liquid assets (or gift letter).

#### 4.4.23. OBLGR\_QUALIF\_METH\_CODE\_TYPE

These are the valid values for the <OBLGR\_QUALIF\_METH\_CODE\_TYPE> element in the submission file:

VALUE	CODE DESCRIPTION
1	Start Rate



VALUE	CODE DESCRIPTION
2	First Year Cap Rate
3	Interest Only Amount
4	Fully Indexed
5	Minimum Payment
98	Other
99	Unknown

#### 4.4.24. MORTG\_INS\_CVRG\_TYP\_CODE\_TYPE

These are the valid values for the <MORTG\_INS\_CVRG\_TYP\_CODE\_TYPE> element in the submission file:

VALUE	CODE DESCRIPTION
1	Loss limit cap
2	Pool
3	Risk sharing
4	Second layer
5	Standard primary

#### 4.4.25. ADV\_METH\_CODE\_TYPE

These are the valid values for the <ADV\_METH\_CODE\_TYPE> element in the submission file:

VALUE	CODE DESCRIPTION
1	No Advancing
2	Interest Only
3	Principal Only
4	Principal and Interest
99	Unavailable

#### 4.4.26. SRVC\_ADV\_METH\_CODE\_TYPE

These are the valid values for the <SRVC\_ADV\_METH\_CODE\_TYPE> element in the submission file:

VALUE	CODE DESCRIPTION
1	Scheduled interest, scheduled principal
2	Actual interest, actual principal
3	Scheduled interest, actual principal
98	Other
99	Unknown

#### 4.4.27. ZERO\_BAL\_CODE\_TYPE

These are the valid values for the <ZERO\_BAL\_CODE\_TYPE> element in the submission file:

VALUE	CODE DESCRIPTION
1	Prepaid or Matured
2	Third-party Sale
3	Short sale (if no FC date) or Short payoff
4	Deed-in-Lieu
5	Note sale
6	Repurchased or Replaced
7	Charged-off
8	REO Sale completed
9	Servicing transfer
10	Liquidated
99	Unavailable

#### 4.4.28. MST\_RCNT\_TWLV\_MNTH\_HSTRY\_CODE\_TYPE

Item 1(g)(33) - These are the valid values for the <MST\_RCNT\_TWLV\_MNTH\_HSTRY\_CODE\_TYPE> element in the submission file:

VALUE	CODE DESCRIPTION
0	Current
1	30-59 Days delinquent
2	60-89 Days delinquent
3	90-119 Days delinquent
4	120+ Days delinquent
5	Foreclosure
6	REO
7	Loan did not exist in period
99	Unknown

#### 4.4.29. ASSET\_SUBJ\_DEMAND\_STAT\_CODE\_TYPE

These are the valid values for the <ASSET\_SUBJ\_DEMAND\_STAT\_CODE\_TYPE> element in the submission file:

VALUE	CODE DESCRIPTION
0	Asset Pending Repurchase or Replacement
1	Asset was Repurchased or Replaced
2	Demand in Dispute
3	Demand Withdrawn
4	Demand Rejected
98	Other

#### 4.4.30. REPRCH\_REPLCMNT\_CODE\_TYPE

These are the valid values for the <REPRCH\_REPLCMNT\_CODE\_TYPE> element in the submission file:

VALUE	CODE DESCRIPTION
1	Fraud
2	Early payment default
3	Other recourse obligation
4	Reps/warrants breach
5	Servicer breach
98	Other
99	Unknown

#### 4.4.31. LOSS\_MTGTION\_TYP\_CODE\_TYPE

These are the valid values for the <LOSS\_MTGTION\_TYP\_CODE\_TYPE> element in the submission file:

VALUE	CODE DESCRIPTION
1	Not in loss mitigation
2	Short payoff
3	Short sale
4	Deed-in-lieu
5	Modification
6	Repayment plan
7	Write-off consideration
8	Forbearance
9	Trial modification
98	Other

VALUE	CODE DESCRIPTION
99	Unknown

#### 4.4.32. MOD\_MST\_RCNT\_LOAN\_EVNT\_CODE\_TYPE

These are the valid values for the <MOD\_MST\_RCNT\_LOAN\_EVNT\_CODE\_TYPE> element in the submission file:

VALUE	CODE DESCRIPTION
1	Capitalization-fees or interest have been capitalized into the unpaid principal balance.
2	Change of payment frequency
3	Construction to permanent
4	Forgiveness of principal
5	Rate reductions
6	Maturity extensions
7	Forgiveness of interest
8	Unscheduled payment recast
98	Other

#### 4.4.33. POST\_MOD\_INTR\_RT\_TYP\_CODE\_TYPE

These are the valid values for the <POST\_MOD\_INTR\_RT\_TYP\_CODE\_TYPE> element in the submission file:

VALUE	CODE DESCRIPTION
1	Fixed
2	Adjustable
3	Step
98	Other

#### 4.4.34. POST\_MOD\_AMORT\_TYP\_CODE\_TYPE

These are the valid values for the <POST\_MOD\_AMORT\_TYP\_CODE\_TYPE> element in the submission file:

VALUE	CODE DESCRIPTION
1	Fully amortizing
2	Interest Only
3	Balloon
98	Other

#### 4.4.35. POST\_MOD\_ARM\_CODE\_TYPE

These are the valid values for the <POST\_MOD\_ARM\_CODE\_TYPE> element in the submission file:

VALUE	CODE DESCRIPTION
0	No
1	Yes
99	Unknown

#### 4.4.36. POST\_MOD\_ARM\_INDX\_CODE\_TYPE

These are the valid values for the <POST\_MOD\_ARM\_INDX\_CODE\_TYPE> element in the submission file:

VALUE	CODE DESCRIPTION
1	1 MONTH TREASURY (WEEKLY)
2	1 Year CMT Moving 12 Month Average (MTA)
3	1 YEAR TREASURY (WEEKLY)
4	1 YR TREASURY (MONTHLY)
5	10 YEAR TREASURY (MONTHLY)
6	10 YEAR TREASURY (WEEKLY)
7	11 <sup>TH</sup> DISTRICT COFI (MONTHLY)
8	11 <sup>TH</sup> DISTRICT COFI (SEMI-ANNUAL)
9	2 YR TREASURY (MONTHLY)
10	2 YR TREASURY (WEEKLY)
11	3 MONTH TREASURY (MONTHLY)
12	3 MONTH TREASURY (WEEKLY)
13	3 MTH T-BILL AUCTION AVGDISCOUNT RATE (WEEKLY)
14	3 MTH TREASURY AUCTION AVG –INVESTMENT (WEEKLY)
15	3 YEAR TREASURY (WEEKLY)
16	3 YR TREASURY (MONTHLY)
17	5 YR TREASURY (MONTHLY)
18	5 YR TREASURY (WEEKLY)
19	6 MONTH US TREASURY (MONTHLY)
20	6 MONTH US TREASURY (WEEKLY)
21	6 MTH T-BILL AUCTION AVGDISCOUNT RATE (WEEKLY)
22	6 MTH TREASURY AUCTION AVG –INVESTMENT (WEEKLY)
23	7 YEAR TREASURY (WEEKLY)
24	CDs (secondary market) 6-month (WEEKLY)
25	FEDERAL RESERVE “PRIME RATE” (MONTHLY)
26	FHLB Contract Mortgage Rate Prev. Occupied
27	FHLBB CONTRACT (MONTHLY)

VALUE	CODE DESCRIPTION
28	FHLBB EFFECTIVE RATE
29	FHLBB MONTHLY NATIONAL AVG MEDIAN COFI (MONTHLY)
30	FHLBB NATIONAL COFI QUARTERLY AVG
31	FNMA 6 MONTH TREASURY (WEEKLY)
32	FSLIC MONTHLY NATIONAL AVG MEDIAN COFI (MONTHLY)
33	WSJ "PRIME RATE" (DAILY)
34	WSJ "PRIME RATE" (First Business Day)
35	WSJ 1 MONTH LIBOR (DAILY)
36	WSJ 1 MONTH LIBOR (First Business Day) OF THE MONTH
37	WSJ 1 MONTH LIBOR FIRST DAY OF THE MONTH
38	WSJ 1 MONTH LIBOR(on or after 25 <sup>th</sup> )
39	WSJ 1 YEAR LIBOR (DAILY)
40	WSJ 1 YEAR LIBOR (First Business Day)
41	WSJ 3 MONTH LIBOR (DAILY)
42	WSJ 3 MONTH LIBOR(First Business Day)
43	WSJ 6 MONTH LIBOR (DAILY)
44	WSJ 6 MONTH LIBOR/30 L-B-DAYS (MONTHLY)
45	WSJ 6 month Libor WSJ-15 <sup>th</sup> day
46	WSJ 6 MONTH LIBOR/Pub on 25 <sup>th</sup> (MONTHLY)
47	WSJ 6-MONTH LIBOR (First Business Day)
48	3-Year CMT
49	5-Year CMT
50	7-Year CMT
98	Other
99	Unavailable

#### 4.4.37. POST\_MOD\_ARM\_ROUND\_CODE\_TYPE

These are the valid values for the <POST\_MOD\_ARM\_ROUND\_CODE\_TYPE> element in the submission file:

VALUE	CODE DESCRIPTION
0	No Rounding
1	Up
2	Down
3	Nearest
99	Unknown

#### 4.4.38. POST\_MOD\_PYMNT\_METH\_AFTR\_RECAST\_CODE\_TYPE

These are the valid values for the <POST\_MOD\_PYMNT\_METH\_AFTR\_RECAST\_CODE\_TYPE> element in the submission file:

VALUE	CODE DESCRIPTION
1	Fully amortizing 30 year
2	Fully amortizing 15 year
3	Fully amortizing 40 year
4	Interest-Only
5	Minimum Payment
6	Unknown

#### 4.4.39. MST\_RCNT\_LOSS\_MTGTION\_EXIT\_CODE\_TYPE

These are the valid values for the <MST\_RCNT\_LOSS\_MTGTION\_EXIT\_CODE\_TYPE> element in the submission file:

VALUE	CODE DESCRIPTION
1	Completed/satisfied
2	Cancelled/failed
3	Denied
98	Other
99	Unknown

#### 4.4.40. FORECL\_DELAY\_REASN\_CODE\_TYPE

These are the valid values for the <FORECL\_DELAY\_REASN\_CODE\_TYPE> element in the submission file:

VALUE	CODE DESCRIPTION
1	No delay
2	Loss mitigation delay
3	Bankruptcy delay
4	Title/document delay
5	Contestation delay
6	Court/procedural delay
7	Loss mitigation/servicer delay
8	Statutory moratorium
9	Disaster relief/other
10	Relief Act
98	Other
99	Unavailable

#### 4.4.41. FORECL\_EXIT\_REASN\_CODE\_TYPE

These are the valid values for the <FORECL\_EXIT\_REASN\_CODE\_TYPE> element in the submission file:

VALUE	CODE DESCRIPTION
1	Third-party Sale
2	REO
3	Loss mitigation
4	Bankruptcy
5	Reinstatement
6	Charge-off
7	Paid in Full
8	Foreclosure started in error
9	Redeemed
98	Other
99	Unknown

#### 4.4.42. REO\_EXIT\_REASN\_CODE\_TYPE

These are the valid values for the <REO\_EXIT\_REASN\_CODE\_TYPE> element in the submission file:

VALUE	CODE DESCRIPTION
1	REO Sale Completed
2	Bankruptcy
3	Loss Mitigation
4	Litigation
5	Rescinded
98	Other
99	Unknown

#### 4.4.43. NON\_PAY\_STAT\_CODE\_TYPE

These are the valid values for the <NON\_PAY\_STAT\_CODE\_TYPE> element in the submission file:

VALUE	CODE DESCRIPTION
9	Forbearance – the servicer has authorized a temporary suspension of payments or has agreed to accept periodic payments of less than the borrower’s scheduled monthly payment, periodic payments at different intervals, etc., to give the borrower additional time and a means for bringing the mortgage current by repaying all delinquent installments.
12	Repayment plan – the servicer has an agreement with the borrower for the acceptance of regularly scheduled monthly mortgage payments plus an additional amount over a prescribed number of months to bring the mortgage loan current.



VALUE	CODE DESCRIPTION
17	Pre-foreclosure sale – the servicer plans to pursue a preforeclosure sale (a payoff of less than the full amount of our indebtedness) to avoid the expenses of foreclosure proceedings.
24	Drug seizure – the Department of Justice (or any other state or federal agency) has decided to seize (or has seized) a property under the forfeiture provision of the Controlled Forfeiture provision of the Controlled Substances Act.
26	Refinance – the servicer is aware that the borrower is pursuing an arrangement whereby the existing first mortgage will be refinanced (paid off).
27	Assumption – the servicer is working with the borrower to sell the property by permitting the purchaser to pay the delinquent installments and assume the outstanding debt in order to avoid a foreclosure.
28	Modification – the servicer is working with the borrower to renegotiate the terms of the mortgage in order to avoid foreclosure.
29	Charge-off – use this code to indicate that it is not in best interest to pursue collection efforts or legal actions against the borrower (because of a reduced value for the property, a low outstanding mortgage balance, or the presence of certain environmental hazards on the property).
31	Probate – Use this code to indicate that the servicer cannot pursue (or complete).
32	Military indulgence – the servicer has granted a delinquent service member forbearance or foreclosure proceedings have been stayed under the provisions of the Servicemembers Civil Relief Act or any similar state law.
42	Delinquent, no action – the loan is 90 + days delinquent, but the servicer has not taken legal action or initiated loss mitigation.
43	Foreclosure – the servicer has referred the case to an attorney to take legal action to acquire the property through a foreclosure sale.
44	Deed-in-lieu –the servicer was authorized to accept a voluntary conveyance of the property instead of initiating foreclosure proceedings.
49	Assignment – mortgage is in the process of being assigned to the insurer or guarantor.
59	Chapter 12 bankruptcy – the borrower has filed for bankruptcy under Chapter 12 of the Federal Bankruptcy Act.
61	Second lien considerations – use this code for a second mortgage to indicate that the servicer is evaluating the advantages and disadvantages of pursuing a foreclosure action or recommending that the debt be charged off.
62	Veterans affairs-“no-bid” – use this code to indicate that the Department of Veterans Affairs refused to establish an “upset price” to be bid at the foreclosure sale for a VA-guaranteed mortgage that the servicer had referred for foreclosure.
63	Veterans affairs – refund – use this code to indicate that the Department of Veterans Affairs has requested information about a VA-guaranteed mortgage the servicer referred for foreclosure, in order to reach a decision about whether to accept an assignment for purposes of refunding the mortgage to avoid foreclosure.
64	Veterans affairs—buydown – Use this code to indicate that a cash contribution was agreed to be made to reduce the outstanding indebtedness of a VA-guaranteed mortgage for which the Department of Veterans Affairs failed to establish an “upset price” bid for the foreclosure sale, in order to get the VA to reconsider its decision about establishing an “upset price.”
65	Chapter 7 bankruptcy – the borrower has filed for bankruptcy under Chapter 7 of the Federal Bankruptcy Act.

VALUE	CODE DESCRIPTION
66	Chapter 11 bankruptcy – the borrower has filed for bankruptcy under Chapter 11 of the Federal Bankruptcy Act.
67	Chapter 13 bankruptcy – the borrower has filed for bankruptcy under Chapter 13 of the Federal Bankruptcy Act.
98	Other
99	Unknown

#### 4.4.44. RPT\_ACTN\_CODE\_TYPE

These are the valid values for the <RPT\_ACTN\_CODE\_TYPE> element in the submission file:

VALUE	CODE DESCRIPTION
3	Modifiable ARM
7	No action
8	Relief provision
10	Loan approved for loss mitigation
11	Money judgment
13	Inactivation
14	Substitution
15	Bankruptcy/litigation
30	Referred for foreclosure
60	Payoff
65	Repurchase
70	A property that was secured by an uninsured conventional mortgage has been acquired by foreclosure, when a property that was secured by a VA mortgage cannot be conveyed to VA because the VA refused to specify a bid amount, or when an RHS mortgage serviced under the special servicing option has been acquired by foreclosure. (The servicer also should use Action Code 70 to report its repurchase of an acquired property after submission of the REOgram, if the mortgage has not already been removed from our LASER records.)
71	A property has been condemned or acquired by a third party.
72	A property has been acquired by foreclosure and is pending conveyance to FHA, VA, or the MI.
98	Other
99	Unknown

## 4.5. Data Value constraints for DebtSecurities

### 4.5.1. ACCRL\_TYP\_CODE\_TYPE

These are the valid values for the <ACCRL\_TYP\_CODE\_TYPE> element in the submission file:

VALUE	CODE DESCRIPTION
1	30/360
2	Actual/365
3	Actual/360
4	Actual/Actual
5	Actual/366
6	Simple
7	78's
98	Other

### 4.5.2. INTR\_RT\_TYP\_CODE\_TYPE

These are the valid values for the <INTR\_RT\_TYP\_CODE\_TYPE> element in the submission file:

VALUE	CODE DESCRIPTION
1	Fixed
2	Adjustable
3	Step
98	Other

### 4.5.3. PYMNT\_FREQ\_CODE\_TYPE

These are the valid values for the <PYMNT\_FREQ\_CODE\_TYPE> element in the submission file:

VALUE	CODE DESCRIPTION
1	Monthly
2	Quarterly
3	Semi-annually
4	Annually
5	Daily
6	Irregular

#### 4.5.4. ZERO\_BAL\_CODE\_TYPE

These are the valid values for the <ZERO\_BAL\_CODE\_TYPE> element in the submission file:

VALUE	CODE DESCRIPTION
1	Prepaid or Matured
2	Repurchased or Replaced
98	Other
99	Unavailable

#### 4.5.5. STAT\_ASSET\_SUBJ\_TO\_DEMND\_CODE\_TYPE

These are the valid values for the <STAT\_ASSET\_SUBJ\_TO\_DEMND\_CODE\_TYPE> element in the submission file:

VALUE	CODE DESCRIPTION
0	Asset Pending Repurchase or Replacement (within cure period)
1	Asset was Repurchased or Replaced
2	Demand in Dispute
3	Demand Withdrawn
4	Demand Rejected
98	Other

#### 4.5.6. REPRCH\_REPLCMNT\_REASN\_CODE\_TYPE

These are the valid values for the <REPRCH\_REPLCMNT\_REASN\_CODE\_TYPE> element in the submission file:

VALUE	CODE DESCRIPTION
1	Fraud
2	Early payment default
3	Other recourse obligation
4	Reps/warrants breach
5	Servicer breach
98	Other
99	Unknown

## 5. ABS ASSET DATA FILE CONSTRUCTION

### 5.1. General Formatting of XML Files

The following rules apply to Asset Data Files in an XML-format:

- The filename must end with an “.xml” extension.
- The file cannot be compressed in any fashion.
- We strongly recommend you format the ABS Asset Data File as shown in the provided sample files. This makes the raw XML files easier to view in a text editor. The submission of ASCII XML files with no line breaks, while legal XML, is strongly discouraged. While usually formatted via style sheets, the raw XML is frequently available for inspection and should be readable by a person. A single line XML file is not viewer-friendly and should be avoided.
- The `<?xml version=“1.0”?>` declaration line is optional; however, if it is included it must be the first line in the file. Any text entered before this line, even white space, will cause an error. The version value must be “1.0.” Any other value for version will cause an error.
- For an XML element with a data value, keep the begin tag, data value, and end tag on the same line of text. Otherwise, you could get a schema violation error. As an example, for a filer ID value which cannot be longer than 10 characters, this specification is correct:

```
<cik>1212121212</cik>
```

- The specification below will result in a parsing error because the extraneous white space and line feeds will be counted as part of the length of the data value. In other words, the CIK value will be regarded as longer than 10 characters.

```
<cik>  
1212121212  
</cik>
```

### 5.2. Formatting of ABS Asset Data XML Files

The following rules apply to the supporting document XML-format:

- The `<?xml version=“1.0”?>` declaration line is optional; however, if it is included it must be the first line in the file. Any text entered before this line, even white space, will cause an error. The version value must be “1.0.” Any other value for version will cause an error.
- The following applies to EX-102 XML files only. EX-103 XML files should not include the beginning tag for asset data. The beginning tag for the `<assetData>` must match the following:

AutoLease Instance Documents

```
<assetData xmlns="http://www.sec.gov/edgar/document/absee/autolease/assetdata"
xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance">
```

AutoLoan Instance Documents

```
<assetData xmlns="http://www.sec.gov/edgar/document/absee/autoloan/assetdata"
xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance">
```

DebtSecurities Instance Documents

```
<assetData xmlns="http://www.sec.gov/edgar/document/absee/debtsecurities/assetdata"
xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance">
```

RMBS Instance Documents

```
<assetData xmlns="http://www.sec.gov/edgar/document/absee/rmbs/assetdata"
xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance">
```

CMBS Instance Documents

```
<assetData xmlns="http://www.sec.gov/edgar/document/absee/cmbs/assetdata"
xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance">
```

- The XML elements cannot have any namespaces.

For eg: It has to be <currencyName> and not <ns2: currencyName>

### 5.3. Asset Data XML File Rules

The following rules apply to all of the ABS Asset Data Files:

1. The allowable file extension is .xml.
2. The names of attached document files must follow the EDGAR file naming conventions:
  - File names cannot exceed 32 characters, including the file extension.
  - Valid characters are lowercase letters, digits 0-9, up to one underscore, up to one hyphen, and up to one period.
  - First character must be a letter.
  - Spaces are not allowed.
  - File name must have a file type extension of .xml.
3. The <description> is optional, but all other elements must be present and must have a value.
4. The <contents> element must contain a MIME encoded document. You can use any standard 64-character set based MIME encoding algorithm to create a MIME document.

### 5.4. Unique Constraints for Repeatable Code Elements

The following applies to EX-102 XML files only. Some code elements within the ABS Asset Data Files are repeatable. These repeatable elements must have unique values for each asset group.

The following excerpt is from the eis\_ABS\_CMBSAssetData.xsd schema file for a repeatable element:

```
<xs:simpleType name="MOD_CODE_TYPE">
  <xs:annotation>
    <xs:documentation> Item 2(k)(2) - Enumerated values and descriptions: 1: Maturity date extension,
      2: Amortization change, 3: Principal write-off, 5: Temporary rate reduction, 6: Capitalization on
      interest, 7: Capitalization on taxes, 8: Combination, 98: Other
    </xs:documentation>
  </xs:annotation>
  <xs:restriction base="xs:token">
    <xs:enumeration value="1"/>
    <xs:enumeration value="2"/>
    <xs:enumeration value="3"/>
    <xs:enumeration value="5"/>
    <xs:enumeration value="6"/>
    <xs:enumeration value="7"/>
    <xs:enumeration value="8"/>
    <xs:enumeration value="98"/>
  </xs:restriction>
</xs:simpleType>

<!-- Item 2(k)(2) - The code that describes the type of loan modification. -->
<xs:element name="modificationCode" type="MOD_CODE_TYPE" minOccurs="0" maxOccurs="unbounded"/>
```

The following is a sample XML that is valid based on the eis\_ABS\_CMBSAssetData.xsd schema above. There are some duplicate code values but they are across two different assets:

```
<asset>
  <assetTypeNumber>ABS123</assetTypeNumber>
  <assetNumber>12000333</assetNumber>
  <modificationCode>1</modificationCode>
  <modificationCode>2</modificationCode>
  <modificationCode>3</modificationCode>
</asset>
<asset>
  <assetTypeNumber>ABS456</assetTypeNumber>
  <assetNumber>12000399</assetNumber>
  <modificationCode>2</modificationCode>
  <modificationCode>3</modificationCode>
</asset>
```

The following is a sample XML that is invalid based on the eis\_ABS\_CMBSAssetData.xsd schema above. The first asset contains duplicate code values which will fail schema validation:

```
<asset>
  <assetTypeNumber>ABS123</assetTypeNumber>
  <assetNumber>12000333</assetNumber>
  <modificationCode>1</modificationCode>
  <modificationCode>3</modificationCode>
  <modificationCode>3</modificationCode>
</asset>
<asset>
  <assetTypeNumber>ABS456</assetTypeNumber>
  <assetNumber>12000399</assetNumber>
  <modificationCode>6</modificationCode>
  <modificationCode>7</modificationCode>
  <modificationCode>98</modificationCode>
</asset>
```

## 5.5. EDGAR Reserved Tags

EX-103 XML files can be constructed using any EX-102 tags or any user defined tags; except for the following EDGAR reserved tags:

- <acronym/>
- <applet/>
- <area/>
- <base/>
- <basefont/>
- <bdo/>
- <button/>
- <col/>
- <colgroup/>
- <del/>
- <fieldset/>
- <font/>
- <form/>
- <frame/>
- <frameset/>
- <iframe/>
- <input/>
- <ins/>
- <label/>
- <legend/>
- <map/>
- <meta http-equiv="name" content="content"/>
- <noframes/>
- <noscript/>
- <object/>
- <option/>
- <param/>
- <q/>
- <s/>
- <S/>
- <script/>
- <select/>
- <span/>
- <style/>
- <tbody/>
- <textarea/>
- <tfoot/>
- <thead/>

## 5.6. Comments and Narratives

For EX-103 files, you may use the following (or similar) tags for providing comments or narratives:

- <!-- xxcommentsxx -->
- <![CDATA[ xxnarrativesxx ]]>



## 6. SAMPLE ABS ASSET DATA XML FILES

Table 6-1 provides a list of sample ABS Asset Data XML Files.

**Table 6-1: Sample ABS Asset Data & EX-103 XML Files**

Asset Data File Type	Sample File
ABS-AUTOLOAN	Sample_ABS_AutoLoan.xml
ABS-AUTOLEASE	Sample_ABS_AutoLease.xml
ABS-DS	Sample_ABS_DebtSecurities.xml
ABS-RMBS	Sample_ABS_RMBSAssetData.xml
ABS-CMBS	Sample_ABS_CMBS.xml
ABS-EX103	Sample_ABS_EX103.xml

## APPENDIX A. STATE/COUNTRY CODES

These are the valid designators for the <stateOrCountry> element in the primary document.

Code	State/Country Name
AL	ALABAMA
AK	ALASKA
AZ	ARIZONA
AR	ARKANSAS
CA	CALIFORNIA
CO	COLORADO
CT	CONNECTICUT
DE	DELAWARE
DC	DISTRICT OF COLUMBIA
FL	FLORIDA
GA	GEORGIA
GU	GUAM
HI	HAWAII
ID	IDAHO
IL	ILLINOIS
IN	INDIANA
IA	IOWA
KS	KANSAS
KY	KENTUCKY
LA	LOUISIANA
ME	MAINE
MD	MARYLAND
MA	MASSACHUSETTS
MI	MICHIGAN
MN	MINNESOTA
MS	MISSISSIPPI
MO	MISSOURI
MT	MONTANA
NE	NEBRASKA
NV	NEVADA
NH	NEW HAMPSHIRE
NJ	NEW JERSEY
NM	NEW MEXICO
NY	NEW YORK
NC	NORTH CAROLINA
ND	NORTH DAKOTA
OH	OHIO
OK	OKLAHOMA
OR	OREGON
PA	PENNSYLVANIA

Code	State/Country Name
RI	RHODE ISLAND
SC	SOUTH CAROLINA
SD	SOUTH DAKOTA
TN	TENNESSEE
TX	TEXAS
UT	UTAH
VT	VERMONT
VA	VIRGINIA
WA	WASHINGTON
WV	WEST VIRGINIA
WI	WISCONSIN
WY	WYOMING
PR	PUERTO RICO
VI	VIRGIN ISLANDS, U.S.
A0	ALBERTA, CANADA
A1	BRITISH COLUMBIA, CANADA
Z4	CANADA (FEDERAL LEVEL)
A2	MANITOBA, CANADA
A3	NEW BRUNSWICK, CANADA
A4	NEWFOUNDLAND, CANADA
A5	NOVA SCOTIA, CANADA
A6	ONTARIO, CANADA
A7	PRINCE EDWARD ISLAND, CANADA
A8	QUEBEC, CANADA
A9	SASKATCHEWAN, CANADA
B0	YUKON, CANADA
B2	AFGHANISTAN
Y6	ALAND ISLANDS
B3	ALBANIA
B4	ALGERIA
B5	AMERICAN SAMOA
B6	ANDORRA
B7	ANGOLA
1A	ANGUILLA
B8	ANTARCTICA
B9	ANTIGUA AND BARBUDA
C1	ARGENTINA
1B	ARMENIA
1C	ARUBA
C3	AUSTRALIA
C4	AUSTRIA
1D	AZERBAIJAN
C5	BAHAMAS
C6	BAHRAIN

Code	State/Country Name
C7	BANGLADESH
C8	BARBADOS
1F	BELARUS
C9	BELGIUM
D1	BELIZE
G6	BENIN
D0	BERMUDA
D2	BHUTAN
D3	BOLIVIA
1E	BOSNIA AND HERZEGOVINA
B1	BOTSWANA
D4	BOUVET ISLAND
D5	BRAZIL
D6	BRITISH INDIAN OCEAN TERRITORY
D9	BRUNEI DARUSSALAM
E0	BULGARIA
X2	BURKINA FASO
E2	BURUNDI
E3	CAMBODIA
E4	CAMEROON
E8	CAPE VERDE
E9	CAYMAN ISLANDS
F0	CENTRAL AFRICAN REPUBLIC
F2	CHAD
F3	CHILE
F4	CHINA
F6	CHRISTMAS ISLAND
F7	COCOS (KEELING) ISLANDS
F8	COLOMBIA
F9	COMOROS
G0	CONGO
Y3	CONGO, THE DEMOCRATIC REPUBLIC OF THE
G1	COOK ISLANDS
G2	COSTA RICA
L7	COTE D'IVOIRE
1M	CROATIA
G3	CUBA
G4	CYPRUS
2N	CZECH REPUBLIC
G7	DENMARK
1G	DJIBOUTI
G9	DOMINICA
G8	DOMINICAN REPUBLIC
H1	ECUADOR

Code	State/Country Name
H2	EGYPT
H3	EL SALVADOR
H4	EQUATORIAL GUINEA
1J	ERITREA
1H	ESTONIA
H5	ETHIOPIA
H7	FALKLAND ISLANDS (MALVINAS)
H6	FAROE ISLANDS
H8	FIJI
H9	FINLAND
I0	FRANCE
I3	FRENCH GUIANA
I4	FRENCH POLYNESIA
2C	FRENCH SOUTHERN TERRITORIES
I5	GABON
I6	GAMBIA
2Q	GEORGIA
2M	GERMANY
J0	GHANA
J1	GIBRALTAR
J3	GREECE
J4	GREENLAND
J5	GRENADA
J6	GUADELOUPE
J8	GUATEMALA
Y7	GUERNSEY
J9	GUINEA
S0	GUINEA-BISSAU
K0	GUYANA
K1	HAITI
K4	HEARD ISLAND AND MCDONALD ISLANDS
X4	HOLY SEE (VATICAN CITY STATE)
K2	HONDURAS
K3	HONG KONG
K5	HUNGARY
K6	ICELAND
K7	INDIA
K8	INDONESIA
K9	IRAN, ISLAMIC REPUBLIC OF
L0	IRAQ
L2	IRELAND
Y8	ISLE OF MAN
L3	ISRAEL
L6	ITALY

Code	State/Country Name
L8	JAMAICA
M0	JAPAN
Y9	JERSEY
M2	JORDAN
1P	KAZAKSTAN
M3	KENYA
J2	KIRIBATI
M4	KOREA, DEMOCRATIC PEOPLE'S REPUBLIC OF
M5	KOREA, REPUBLIC OF
M6	KUWAIT
1N	KYRGYZSTAN
M7	LAO PEOPLE'S DEMOCRATIC REPUBLIC
1R	LATVIA
M8	LEBANON
M9	LESOTHO
N0	LIBERIA
N1	LIBYAN ARAB JAMAHIRIYA
N2	LIECHTENSTEIN
1Q	LITHUANIA
N4	LUXEMBOURG
N5	MACAU
1U	MACEDONIA, THE FORMER YUGOSLAV REPUBLIC OF
N6	MADAGASCAR
N7	MALAWI
N8	MALAYSIA
N9	MALDIVES
O0	MALI
O1	MALTA
1T	MARSHALL ISLANDS
O2	MARTINIQUE
O3	MAURITANIA
O4	MAURITIUS
2P	MAYOTTE
O5	MEXICO
1K	MICRONESIA, FEDERATED STATES OF
1S	MOLDOVA, REPUBLIC OF
O9	MONACO
P0	MONGOLIA
Z5	MONTENEGRO
P1	MONTSERRAT
P2	MOROCCO
P3	MOZAMBIQUE
E1	MYANMAR
T6	NAMIBIA

Code	State/Country Name
P5	NAURU
P6	NEPAL
P7	NETHERLANDS
P8	NETHERLANDS ANTILLES
1W	NEW CALEDONIA
Q2	NEW ZEALAND
Q3	NICARAGUA
Q4	NIGER
Q5	NIGERIA
Q6	NIUE
Q7	NORFOLK ISLAND
1V	NORTHERN MARIANA ISLANDS
Q8	NORWAY
P4	OMAN
R0	PAKISTAN
1Y	PALAU
1X	PALESTINIAN TERRITORY, OCCUPIED
R1	PANAMA
R2	PAPUA NEW GUINEA
R4	PARAGUAY
R5	PERU
R6	PHILIPPINES
R8	PITCAIRN
R9	POLAND
S1	PORTUGAL
S3	QATAR
S4	REUNION
S5	ROMANIA
1Z	RUSSIAN FEDERATION
S6	RWANDA
Z0	SAINT BARTHELEMY
U8	SAINT HELENA
U7	SAINT KITTS AND NEVIS
U9	SAINT LUCIA
Z1	SAINT MARTIN
V0	SAINT PIERRE AND MIQUELON
V1	SAINT VINCENT AND THE GRENADINES
Y0	SAMOA
S8	SAN MARINO
S9	SAO TOME AND PRINCIPE
T0	SAUDI ARABIA
T1	SENEGAL
Z2	SERBIA
T2	SEYCHELLES

Code	State/Country Name
T8	SIERRA LEONE
U0	SINGAPORE
2B	SLOVAKIA
2A	SLOVENIA
D7	SOLOMON ISLANDS
U1	SOMALIA
T3	SOUTH AFRICA
1L	SOUTH GEORGIA AND THE SOUTH SANDWICH ISLANDS
U3	SPAIN
F1	SRI LANKA
V2	SUDAN
V3	SURINAME
L9	SVALBARD AND JAN MAYEN
V6	SWAZILAND
V7	SWEDEN
V8	SWITZERLAND
V9	SYRIAN ARAB REPUBLIC
F5	TAIWAN, PROVINCE OF CHINA
2D	TAJIKISTAN
W0	TANZANIA, UNITED REPUBLIC OF
W1	THAILAND
Z3	TIMOR-LESTE
W2	TOGO
W3	TOKELAU
W4	TONGA
W5	TRINIDAD AND TOBAGO
W6	TUNISIA
W8	TURKEY
2E	TURKMENISTAN
W7	TURKS AND CAICOS ISLANDS
2G	TUVALU
W9	UGANDA
2H	UKRAINE
C0	UNITED ARAB EMIRATES
X0	UNITED KINGDOM
2J	UNITED STATES MINOR OUTLYING ISLANDS
X3	URUGUAY
2K	UZBEKISTAN
2L	VANUATU
X5	VENEZUELA
Q1	VIET NAM
D8	VIRGIN ISLANDS, BRITISH
X8	WALLIS AND FUTUNA
U5	WESTERN SAHARA



Code	State/Country Name
T7	YEMEN
Y4	ZAMBIA
Y5	ZIMBABWE

## APPENDIX B. ACRONYMS

Acronym	Description
ASCII	American Standard Code for Schedule Interchange
CCC	CIK Confirmation Code
CIK	Central Index Key
EDGAR	Electronic Data Gathering, Analysis, and Retrieval
ICT	Investment Company Type
PDF	Portable Document Format
SEC	Securities and Exchange Commission
XML	Extensible Markup Language