Ratings Files Publication Guide

Goals

This document is for technical audiences. It provides guidance on the creation, publication and use of files containing NRSRO ratings, and how those files containing ratings are related to the USROCR Taxonomy. It assumes exposure to the XBRL US Record of Credit Rating Taxonomy (USROCR) Architecture document published by XBRL US Inc.

The guidance in this document applies to two related disclosure rules (see Appendix B below), which can be briefly summarized as:

- The "10% Disclosure Rule": An NRSRO is required to publicly disclose in XBRL a random sample of 10% of the ratings issued for which the issuer, obligor, underwriter, or other sponsor paid ("issuer paid"), within 6 months of the rating event, and with several additional conditions related to the contents of the sample.
- The "100% Disclosure Rule": An NRSRO must also make publicly available all credit rating action history related to credit ratings that are outstanding that were issued as of June 2007, with issuer-paid ratings disclosed within 12 months of the rating event and subscriber-paid ratings within 24 months of the rating event.

The overriding goal of this guidance is to help an NRSRO to comply with these regulations while ensuring data quality. Data quality is defined here as:

1. Accuracy of the data, mainly from the provider's point of view;
2. Accessibility of the data, mainly from users' point of view;
3. Completeness of the data, mainly with respect to ratings histories;
4. Timeliness of the data, that is, elapsed time between a rating event and its disclosure;
5. Consistency and irredundancy of the data, not only with respect to issuer and issue identifiers but also other elements that allow the NRSRO to choose its vocabulary.

A final goal is to describe some best practices in automation, so as to minimize manual intervention in the publication process for an NRSRO and the consumption process of a data user.

Contents

1 Instances

An NRSRO creates USROCR *instances* and posts them on its web site as part of its compliance with both rules.

A USROCR instance is an XML file that is *Schema-valid* with respect to the USROCR base schema, and is furthermore *XBRL-valid* with respect to that same USROCR base schema.

1.1 Rating Histories

A *rating history* is of a set of Rating Details (element RD) elements in an instance.

If an RD element for an issue or issuer/obligor appears in an instance, then the entire relevant history for that particular issue or issuer/obligor must also appear in the instance. This is a consequence of rule 17g-2 section (a) 8 that requires "for each outstanding credit rating… a record showing all rating actions".

For the 10% Disclosure Rule, the relevant ratings of an issue or issuer are all the ratings for which the issuer paid.

For the 100% Disclosure Rule, the relevant history contains all ratings published on or after June 26th, 2007.

In XML terms:

- If an Issue (element IND) element appears, then its RD children must include all relevant ratings for that issue.

If an RD element for an issuer/obligor appears in an instance then the entire relevant history for that particular issuer/obligor must also appear in the instance. In XML terms:

- If an Issuer (element ISD) element appears *and* it has one or more RD children, then its RD children must include all relevant ratings for that issuer.

1.2 The Scope of an Instance

Because each instance contains entire ratings histories, instance size will impact usability.

As a rule of thumb, a single instance should not have more than 2,500 RD elements. Testing of the taxonomy with actual rating sets showed that if an NRSRO were to publish all ratings required by the rule in a single file, it could exceed over 100MB in size; yet only a small fraction of the file's contents would change on a daily or even monthly basis. Empirically, setting a limit of 2,500 on the number of RD elements appearing in any one instance provides a workable balance between (a) the frequency with which rating histories are appended to (b) the size of the files and (c) the overall number of files.

So as to have consistency in the way that different NRSRO's partition their published data, there are constraints on the issues and issuers that are allowed to appear in an instance.

Each instance contains a *scope* of ratings. Scope is not defined by time period and it is not defined by type of action; it is defined only by the issuers and issues an instance contains. The following scopes are defined:

1. All historical ratings for all issuers and issues in all industries and classes.
2. All historical ratings for all issuers and issues in all industries, all of a single class (all ISD elements in the instance have the same content for their SC elements).
3. All historical ratings for multiple issuers and issues, all of the same industry and class (same as scope 2, but all IG elements have the same content).
4. All historical ratings for multiple issues, and ratings of, a single issuer (same as scope 3, but all ISID elements in the instance have the same content and there are one or more IND elements).
5. All historical ratings for a single issuer, but not its issues (same as scope 4, but there are zero IND elements).
6. All historical ratings for a single issue (same as scope 4, but all IND elements have the same IN and INID contents).

As a non-normative example, suppose an NRSRO has ratings for nine issues, of four issuers, in two categories, as shown in the table below:

Class (element SC)	Issuer	Issue	Rated
Financial	F1	F1A	√
Financial	F1	F1B	√
Financial	F1	F1C	√
Financial	F2	F2A	√
Financial	F2		√
Government	G1	G1D	√
Government	G1	G1E	√
Government	G2	G2D	√
Government	G2	G2E	√

If ratings for F1A and F1B appear in the same instance, then it is a scope "4" instance, and that instance should contain the ratings history for F1C as well. It does not matter whether there was a contemporaneous rating action for F1C.

If ratings for F1A and F2A appear in the same instance, then it is a scope "3" instance, and that same instance should contain the ratings history for F1B, F1C, and issuer F2. It does not matter whether there was a contemporaneous rating action for F1B, F1C, or issuer F2.

If ratings for issuer F1 and issuer F2 appear in the same instance, then it is also a scope "3" instance.

If ratings for G1D and F2A appear in the same instance, it is a scope "1" instance and should contain all rating actions for all issuers and issues.

An NRSRO with ratings for only a few hundred issues might be able to publish instances with the 2nd scope or even the 1st scope, but an NRSRO that rates *thousands* of issues may wish to assume from the outset that only files in the 4th or 5th scope will keep the instance sizes manageable.

1.3 The Name of an Instance

Each instance should have a unique file name that conveys the following information:

1. The name of the NRSRO.
2. A name for the scope of ratings it includes. The purpose of this is to ensure that users can identify the content of the instance.
3. The date that the instance was published, in ISO 8601 format (CCYY-MM-DD). In combination with parts 1 and 2, the date part ensures that an instance name is unique. Because the rules require ratings to be published within a various time periods after the rating, the publication date can be used both by the NRSRO to demonstrate that ratings appeared within that required time period.
4. An instance must have the suffix ".xml".

The following table shows a non-normative example of a naming scheme:

Instance Name	Contents
MyRatings-2010-03-31.xml	All rating actions the "MyRatings" NRSRO.
MyRatings-FIN-2010-06-30.xml	Rating actions for F1, F2, and their issues.
MyRatings-F1-2010-09-30.xml	Rating actions for F1, F1A, F1B, and F1C.
MyRatings-F1B-2010-12-31.xml	Rating actions only for issue F1B.

1.4 Zip Archives

One or more instances may be published in a file with the suffix ".zip", but all files should have the same publication date, and the date in the name of the archive file should match that date. Below is a non-normative example:

Archive Name	Instance Contents
MyRatings-F1-2010-12-31.zip	MyRatings-F1A-2010-12-31.xml
	MyRatings-F1B-2010-12-31.xml
	MyRatings-F1C-2010-12-31.xml

1.5 Instance Listing

The NRSRO must publish on their Web site the required ratings action information as prescribed in Rule 17g-2(d) under the Securities Exchange Act of 1934. It is recommended that a list of all available zip archives and instances and their location on the NRSRO's Web site be disclosed. RSS might be an appropriate format for such a listing..

2 Issuer Identifiers (Elements IS and ISID)

Users should be able to correctly and uniquely identify an issuer no matter what instance, or kind of instance, it appears in, and when the instance is published. The name (element IS) is always required, but it not as reliable as other alphanumeric identification schemes.

Both the 10% and 100% Disclosure Rules require that the instance use the name of the rated instrument or obligor, additionally identified either by CUSIP or CIK when available. In practical terms, this means that:

- If an issuer has a CIK, then the CIK should appear in the ISID element of that issuer. Note that SEC registrants have a CIK; its usage is not limited to public companies. The CIK of an issuer can be obtained from the SEC's EDGAR web site.
- If the issuer has no CIK, then the ISID element should contain some other issuer identifier;
- Additional ISID elements may contain other issuer identification schemes and identifiers for the issuer;
- Any given combination of identifier scheme and identifier must always refer to the same issuer in any instance. If an NRSRO chooses to provide an identifier with their own identifier scheme, the NRSRO should maintain a list of all identifiers used, so as to avoid duplication. This is called a uniqueness constraint.

These same principles apply to the Obligor (elements OD and OID).

For individual XML element names and fields, see the schema documentation.

3 Issue/Instrument Identifiers (Elements IN and INID)

Users should be able to correctly and uniquely identify an issue/instrument no matter what instance, or kind of instance, it appears in, and when or where the instance is published. The name (element IN) is always required, but the name alone is not as reliable as other alphanumeric identification schemes.

Both the 10% and 100% Disclosure Rules require that the instance use the name of the rated instrument or obligor, additionally identified either by CUSIP or CIK when available. In practical terms, this means that:

- If an issue/instrument has a CUSIP, then its CUSIP must appear in the INID element of that issue.
- If the issue/instrument has no CUSIP, then the INID element should contain some other issue/instrument identifier.
- Additional INID elements may contain other issue/instrument identification schemes and identifiers for the issue/instrument.
- Any given combination of identifier scheme and identifier must always refer to the same issue/instrument in any instance. If an NRSRO chooses to provide an identifier with their own scheme, the NRSRO should maintain a list of all issue/instrument identifiers the NRSRO has used, so as to avoid duplication. This is called a uniqueness constraint.

For individual XML element names and fields, see the Schema documentation.

4 Best Practices for Data Quality

An NRSRO should consider the following best practices to achieve accuracy, accessibility, completeness, timeliness, and irredundancy of their published instances.

4.1 Accuracy

Figure 2 in the USROCR architecture document (duplicated in Appendix A below) shows the underlying data model for ratings data (and implicitly, describes the taxonomy as well). That model consists of seven entities (ISD, ISID, IND, INID, RD, OD, and OID) that could be implemented directly into a database containing the entire history of all of an NRSRO's ratings. The uniqueness constraint on issuers and obligors (section 2 above) manifests as the primary keys of entities ISD and OD; the uniqueness constraint on issue/instruments (section 3 above) likewise manifests as the primary key of the IND entity.

If an NRSRO maintains a database with accurate data, and the data model of the ratings data can be derived from that database, then the accuracy of the USROCR instances should be largely achieved by automating the export of the database content into an instance catalog and its instances.

However the instance may be created, upon creation of the instance, it should be tested for XBRL-validity (which also implies XML Schema-validity) before any further processing.

Each instance that is exported should be tested against the scope hierarchy criteria in section 1.2 above to ensure that the instances have been partitioned appropriately. Instances with more than 2,500 RD elements would be candidates for partitioning in subsequent periods.

4.2 Accessibility

An NRSRO should define a permanent URL for a web page where the ratings data catalog and other explanatory material will be found.

In order for users to be able to easily access the required disclosures, it is recommended that once an NRSR establishes an URL where the ratings data has been published, an instance (or zip archive) should not be removed or relocated in a way that makes it inaccessible from that same URL. It is further recommended that the ratings data be accessible from a single location on the NRSRO's Web site.

NRSROs may consider using an URL hierarchy that resembles the scope hierarchy described in section 1.2 above be considered. A typical folder could contain files published at many different dates. This will still help to prevent any individual folder on the web server from containing thousands of files. Organizing the hierarchy by type and scope facilitates verification of historical rating data for a given issue or issuer.

4.3 Completeness

All published rating actions - upgrades, downgrades, withdrawals, maturation, new ratings – must be taken into consideration when determining whether a rating must appear in a published instance.

The 10% Disclosure Rule requires a random sample of 10% of information for each class of credit rating that are issuer-paid for which the NRSRO is registered and that has issued 500 or more outstanding credit ratings. For example, assume an NRSRO is registered in all five classes of credit ratings (financial institutions, corporate issuers, insurance

companies, issuers of asset-backed securities and issuers of government securities) and within each class of credit ratings the NRSRO has more than 500 outstanding credit ratings. Then the NRSRO is required to disclose five random 10% samples, one for each of five classes. If a credit rating made public under this rule is withdrawn, or if the instrument matures, then the NRSRO must randomly select a new outstanding credit rating from that same class to maintain the 10% disclosure threshold.

Completeness with respect to the 100% Disclosure Rule requires no such selection criteria; all must be published.

4.4 Timeliness

When a rating action occurs, it must appear on the web site in an instance before some specified time has elapsed, depending on its type:

Type	No later than
Subscriber-Paid Rating	24 months
Issuer-Paid Rating	12 months
Issuer-Paid Rating that appears in a random sample	6 months

An action on an issuer-paid rating must only be published in an instance that contains the complete rating history for that issuer or issue/instrument, as specified in section 1.1 above.

Therefore, under the 10% Disclosure Rule, if an issuer or issue/instrument is randomly selected that has not appeared previously in any published instance previously, the new instance must contain the full history of that issuer or issue.

4.5 Consistency and Irredundancy

The NRSRO has some flexibility in choosing identifier schemes and identifiers to supplement the CIK and CUSIP, but this should be done consistently, as noted in sections 2 and 3 above. This consistency principle applies to these other elements in which the NRSRO is able to define and use its own vocabulary:

Element	Full Name	Example NRSRO proprietary terms
AT	Action Type	Rating, WatchList, Outlook, Trend
R	Rating / Opinion	AAA, AA
RT	Rating Type	Long-Term, Short-Term
RA	Rating Action	Upgrade, Downgrade, Withdrawal
IG	Industry Group	Property Insurance, Electronics
RODC	Debt Class	Senior, Subordinated
IRTD	Interest Rate Type	Fixed, Variable, Stepped

The exact string values for each term should be consistent across all the instances published by an NRSRO. For example, an NRSRO is free to use its own vocabulary for actions in the content of the RA (Rating Action) element, but that NRSRO should not use the string "withdrawal" in one rating in one instance and "W" elsewhere to mean the same thing.

Also, section 1.3 above provides an NRSRO with flexibility to choose a partitioning and naming scheme for instances. In doing so, an NRSO should avoid naming and creating those instances in such a way that the same issuer or issue rating will appear in several contemporaneous instances. An NRSRO should anticipate that its partitioning will, over time, evolve so that fewer issuers and issues appear in each instance.

Appendix A   Data Model

Figure 2 – Data Model of the XBRL US Record of Credit Ratings Taxonomy
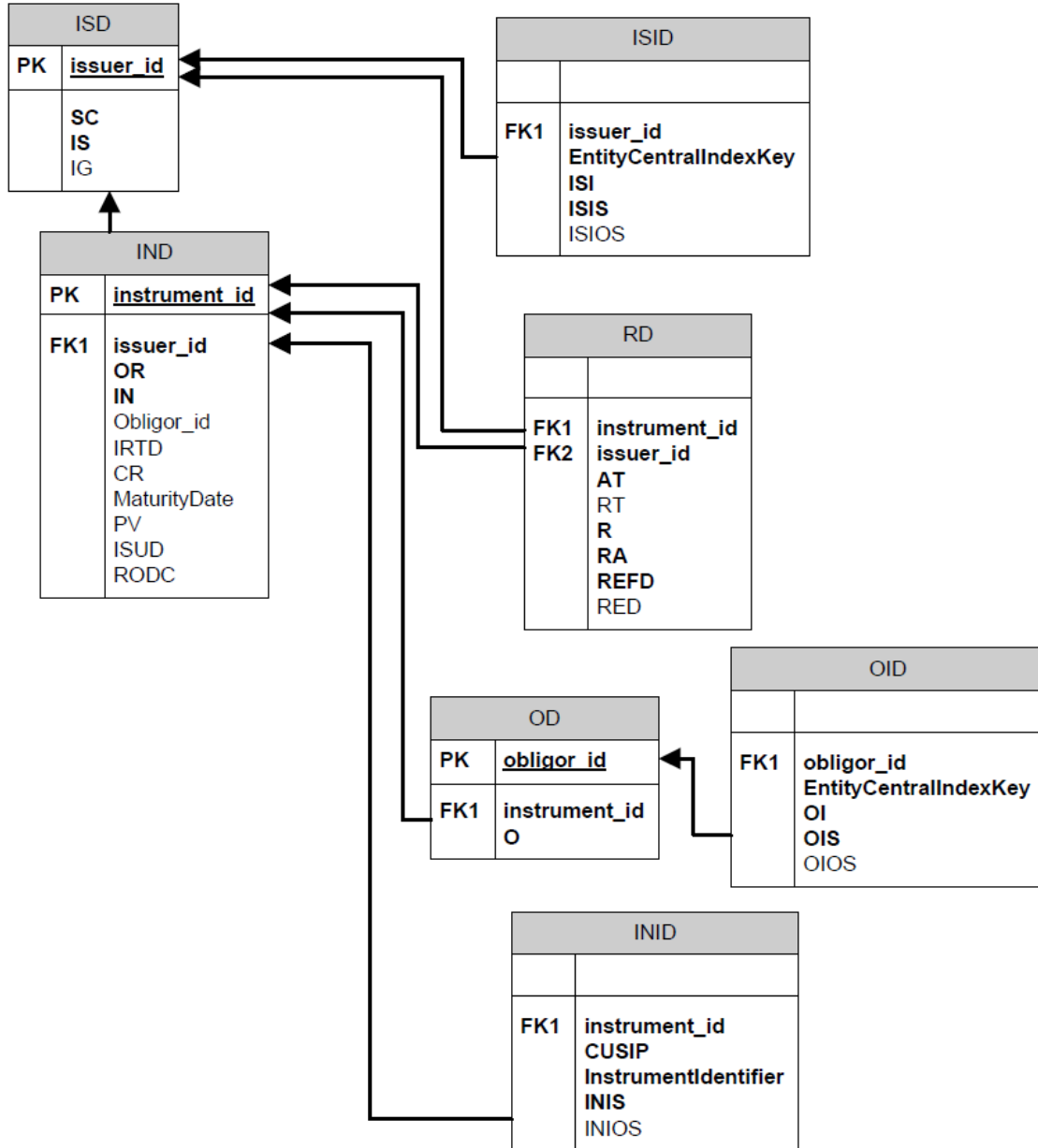
All items with a "_id" suffix represent the content constraints defined by using a tuple structure. The data model shows the eight tuples included in the taxonomy and their content.

Appendix B   Relevant Text of Rule 17g-2

The following is not an exhaustive reprinting of the rule.

§ 240.17g–2 Records to be made and retained by nationally recognized statistical rating organization

(a) * * *

(8) For each outstanding credit rating, a record showing all rating actions and the date of such actions from the initial credit rating to the current credit rating identified by the name of the rated security or obligor and, if applicable, the CUSIP of the rated security or the Central Index Key (CIK) number of the rated obligor.

* * *

(d)(1) <u>Manner of retention</u>. An original, or a true and complete copy of the original, of each record required to be retained pursuant to paragraphs (a) and (b) of this section must be maintained in a manner that, for the applicable retention period specified in paragraph (c) of this section, makes the original record or copy easily accessible to the principal office of the nationally recognized statistical rating organization and to any other office that conducted activities causing the record to be made or received.

[“10% DISCLOSURE REQUIREMENT”]

(2) A nationally recognized statistical rating organization must make and keep publicly available on its corporate Internet Web site in an XBRL (eXtensible Business Reporting Language) format the ratings action information for ten percent of the outstanding credit ratings required to be retained pursuant to paragraph (a)(8) of this

section, selected on a random basis, for each class of credit rating for which it is registered and for which it has issued 500 or more outstanding credit ratings paid for by the obligor being rated or by the issuer, underwriter, or sponsor of the security being rated. Any ratings action required to be disclosed pursuant to this paragraph (d)(2) need not be made public less than six months from the date such ratings action is taken. If a credit rating made public pursuant to this paragraph is withdrawn or the instrument rated matures, the nationally recognized statistical rating organization must randomly select a new outstanding credit rating from that class of credit ratings in order to maintain the 10 percent disclosure threshold. In making the information available on its corporate Internet Web site, the nationally recognized statistical rating organization shall use the List of XBRL Tags for NRSROs as specified on the Commission's Internet Web site.

[100% DISCLOSURE REQUIREMENT]

(3)(i)(A) A nationally recognized statistical rating organization must make publicly available on its corporate Internet Web site in an interactive data file that uses a machine-readable format the ratings action information required to be retained pursuant to paragraph (a)(8) of this section for any credit rating initially determined by the nationally recognized statistical rating organization on or after June 26, 2007.

(B) Any ratings action information required to be made and kept publicly available on a nationally recognized statistical rating organization's corporate Internet Web pursuant to paragraph (d)(3)(i)(A) with respect to credit ratings paid for by the obligor being rated or by the issuer, underwriter, or sponsor of the security being rated need not be made public less than twelve months from the date such ratings action is taken.

(C) Any ratings action information required to be made and kept publicly available on a nationally recognized statistical rating organization's corporate Internet Web pursuant to paragraph (d)(3)(i)(A) with respect to credit ratings other than those ratings described in paragraph (d)(3)(i)(B) need not be made public less than twenty-four months from the date such ratings action is taken.

(ii) In making the information required under paragraph (d)(3)(i) available in an interactive data file on its corporate Internet Web site, the nationally recognized statistical rating organization shall use any machine-readable format, including but not limited to XBRL format, until 60 days after the date on which the Commission publishes a List of XBRL Tags for NRSROs on its Internet Web site, at which point the nationally recognized statistical rating organization shall make this information available in an interactive data file on its corporate Internet Web site in XBRL format using the List of XBRL Tags for NRSROs as published by the Commission on its Internet Web site.

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