

Stamdata Feed Specification V3.1

Updated: April 2012

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Change Log

- April 2012 – Updates to feed table columns;
Issuer_IndustrialCode_SN2007 / NAERINGSKODE - Added new code, "64308 - Captive investment companies"
IndustrialCode_SN2007 / NAERINGSKODE - Added new code, "64308 - Captive investment companies"
CapitalWeight - introducing new weightings of 50 and 150 based on issuer ratings.
RiskSpecification - introducing new code for covered bonds and weighting based risk specifications.
Issuer_SectorCode_ER2012 / SECTORCODE - Added field to issue table, used to only be available in issuer table.
- Nov 2011 – First version for Stamdata Feed Specification V3.0

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Overview

This document contains the specification for the fundamental data feed provided by Norsk Tillitsmann Stamdata AS, hereafter referred to as the feed. The feed contains detailed, structured information on Norwegian debt/ fixed income securities gathered and organized in the Stamdata database and made available to subscribers.

The Stamdata Feed contains reference data for all debt securities registered in the Norwegian Central Securities Depository (VPS) that have been published, along with a number of bonds and certificates that have not yet been published.

The feed contents are a structured interpretation of the loan agreement and/or term sheet linked to a large company database. The data is entered, updated and verified continuously.

The fundamental data is made available through the following interfaces;

- Security search (<http://www.stamdata.no/Search.mvc>)
- Statistics and graphing (<http://www.stamdata.no/Statistics.mvc>)
- Stamdata Feed

The following sections will describe the Stamdata Feed;

- **XML Structure** – The Stamdata Feed is delivered as an XML file. This section describes how the XML is structured. Which elements to expect and how they are used to build a feed.
- **Feed Content Configuration** – The Stamdata Feed is highly configurable with regards to which tables and records to include. This section describes how the contents of the feed are configured, and which configuration possibilities exist.
- **Feed Creation** – The feed can be created and delivered in a number of methods. This section describes the meta configuration used to decide when and how a feed is created.

XML Structure

The Stamdata Feed is delivered to subscribers using a communication format that is easily consumed by a number of different systems and tools – Extensible Markup Language 1.0 (XML). The XML is made available in the Stamdata XML-file. This section describes the Stamdata XML-file created, and how it is structured. Based on the Stamdata XML-file it is possible to efficiently import data into a variety of financial systems, or transform the data into common and widely used data formats such as text files (.txt) or spread sheet files (.csv).

A major change between version 2 and 3 of the Stamdata XML-file is the distinction between metadata and actual feed content. The distinction of metadata and actual feed content allows the Stamdata XML-file to be updated to market and data requirement changes, without requiring subscribers to update their import routines. The configurability also allows feed subscribers to adapt to changes in feed content at their own pace.

Configuration of the actual feed content is done using the Feed Content Configuration Tool which is described in a separate section and is accessed through <http://www.stamdata.no/Feed/Configuration>.

Database-element

The main element of the Stamdata XML-file is the <database>-element. A < database>-element contains zero or more *table*-elements.

The <database>-element contains meta-information on when the file was created and which record versions are included in the file:

Structure	Example of actual names
<pre> <database> <Today>2011-11-10</Today> <first_version>0</first_version> <last_version>509895</last_version> <last_version_in_db>509895 </last_version_in_db> <table_table1> </table_table1> <table_table2> <table2> ... table2 fields here ... <table_subTable> </table_subTable> </table2> </table_table2> </database> </pre>	<pre> <database> <Today>2011-11-10</Today> <first_version>0</first_version> <last_version>509895</last_version> <last_version_in_db>509895 </last_version_in_db> <table_Issuer> </table_Issuer> <table_Issue> <Issue> ... Issue fields here ... <table_IssueTermDate> </table_IssueTermDate> </Issue> </table_Issue> </database> </pre>

Figure 1: The first cell shows the structure of the document with <Database>-element, <table>-elements and version information. The second cell shows the same structure with example tables that can be configured to be used in the feed. Whitespace has been added to increase readability.

- **Today** – identifies the date for when the file was created.
- **first_version** – identifies the first version (change number) included in the file.
- **last_vesion** –(obsolete) identifies the last version included in the file (this field is obsolete and will always be equal to last_version_in_db, and is only included for compatibility)
- **last_version_in_db** – identifies the last version in the database. This may not be equal to an actual version included in the file, as the version may be used on a table not

included in the feed received. However all records contained in the feed will be less than or equal this number.

Table-element

Below is an example of a database containing three tables – Issuer, Issue and IssueTermDate (a sub-table of Issue).

```
<database>
  <Table_Issuer>
    <Issuer organizationnumber="987987987">
      <OrganizationNumber>987987987</OrganizationNumber>
      ... other fields ...
    </Issuer>
  </Table_Issuer>

  <Table_Issue>
    <Issue isin="NO0123456981">
      <ISIN> NO0123456981</ISIN>
      ... other fields ...

      <Table_IssueTermDate>
        <IssueTermDate isin="NO0123456981" termdate="2010-05-02">
          <ISIN> NO0123456981</ISIN>
          <TermDate>2010-05-02</TermDate>

          ... other fields ...
        </IssueTermDate>
      </Table_IssueTermDate>

    </Issue>
  </Table_Issue>
</database>
```

Figure 2: Example database containing three tables.

A database contains zero or more *table*-elements. A *table*-element contains a set of records that all share the same fields, specific to the record type of the table. All *table*-element names are prefixed with “Table_”. The table type is the postfix of the *table*-element. Examples of *table*-elements names are :

```
<Table_Issue>...</Table_Issue>
<Table_IssueTermDate>...</Table_IssueTermDate>.
```

See “Appendix 1: Feed table columns” for the tables that are available as of writing.

The *record*-elements within the *table*-element share the same name as the *table*-element without the “Table_” prefix. For example <Table_Issue> contains *record*-elements called <Issue>. The fields within a specific record will be of different data types, and may also contain sub-tables.

Each *record*-element contains attributes that identify the primary key of the record. The attributes are written in all lowercase. The primary key fields are typically repeated within the fields of the table as elements.

Data-formats

Dates

All dates are quoted in the following format: “yyyy-mm-dd”. Example: 2006-03-29.

Numbers/Decimals

The decimal operator is “.” (dot). Example: A coupon of 6.15% is quoted as “6.15”.
Numbers are quoted without spaces. 100 000 000 for example is given as “100000000”.

VER

VER-fields (version-fields) are used to specify the record version included. On each update to a record (or sub-record) the version number is increased. This can be used to synchronize updates based on the data-feed.

Feed Content Configuration

NOTE: In order to be able to configure the feed you receive, the feed account must be set to use the 'Dynamic Feed Engine'. If this setting is not enabled, any configurations made will not change the feed received. Contact us (mail@stamdata.no) with your user name to enable.

The Stamdata Feed content can be configured by selecting the tables and fields to be included. This is done through a web-interface; <http://www.stamdata.no/Feed/Configuration> (requires a valid feed user-account and password)

STAMDATA

Logged in: FEED
Logout

Stamdata Home
Subscription
Search
Issues
Issues
News
Statistics
League Tables
Your Account
Notifications
Change Email
Change Password
Feed Administration

Feed Configuration

Version 6 created on 16.11.2011 11:16:42 (show previous versions)
expand all collapse all

+ Issue

- IssueTermDate

ISIN	ISIN of the security the term belongs to.
TermDate	Date for interest payment and any instalments/redemption. The date quoted is the date until which interest is calculated, and not necessarily the date where the actual payment occurs.
XRedemptionDate	The date from which the bond is traded excluding the installment (redemption). This is the draw date for the installment for the corresponding term date.
XCouponDate	X coupon date. The owner of a bond/certificate the banking day prior to the X coupon date receives the coupon for the present term. If a bond/certificate is traded in the period between the x coupon date and the interest payment date (TermDate), the coupon is paid to the seller of the security.
VER	The version number for a record. The VER of a record is updated if at least one field in the record has its value updated.
Put_Price	The put price indicates the price at which the lender may put its bonds on the interest payment date (TermDate).
Put_LastNotificationDate	Deadline for putting is the last day the

The following options are available in the feed configuration page;

- **View the currently configured feed** – The main portion of the screen is dedicated to showing the tables and fields configured to be added to the feed. Each table is shown under a heading that can be expanded. Expanding the heading will show all fields configured to be included. A description of the field is also shown.
- **Access to previous feed version** - Each update to the feed configuration will cause a new version to be created. The newest version is the default version shown, and is also the version used to create feeds. Older version are useful if a configuration change has caused unforeseen problems. It is then possible to edit a previous version of the feed, and when saved, it will be updated to be the newest version. In effect, this causes the version causing unforeseen problems to be replaced.

Feed Configuration

Version 2 created on 16.11.2011 11:12:29 ▼

expand 2 created on 16.11.2011 11:12:29

+ Issue 1 created on 16.11.2011 11:12:23

- Edit – allows the user to edit the feed by adding, removing and renaming tables and fields to be included in the feed.

NOTE: Historic feed versions older than 90 days may be removed in cases where a customer has many historic versions.

Editing feed contents

Pressing the Edit-button allows the user to configure the data feed.

Fields can be added by two methods; searching for fields using the Search-feature or by navigating the table and fields available.

The Search-feature allows location of fields based on field name, table name and field description. The search results can easily be added to the feed by selecting “+add field”. If a field is selected that is not already included in the current feed, the table and its primary keys will also automatically be added. The list of items added are at the bottom of the page, so scroll down to see the added fields if you are in doubt.

Feed Configuration

Version 6 created on 16.11.2011 11:16:42 [\(show previous versions\)](#)
[expand all](#) [collapse all](#)

Table	Field	Description	
Issue	Issuer_GeographicCode	The issuer's geographical code according to ORBOF, published by Finanstilsynet (The Financial Supervisory Authority of Norway), Norges Bank (The Norwegian Central Bank) and Statistisk Sentralbyrå (Statistics Norway).	+ add field
Issuer	GeographicCode	The issuer's geographical code according to ORBOF, published by Finanstilsynet (The Financial Supervisory Authority of Norway), Norges Bank (The Norwegian Central Bank) and Statistisk Sentralbyrå (Statistics Norway).	+ add field

Figure 3: Search – Searches for fields in the feed. Pressing the “add field” button, adds the fields to the current feed.

The second method for adding fields is by selecting tables via the ‘Add table’-combo box located at the bottom of the screen. By selecting a table, the table and its primary keys will be added to the current feed.

Feed Configuration

Version 7 created on 16.11.2011 12:43:50 [\(show previous versions\)](#)
[expand all](#) [collapse all](#)

You haven't configured any tables and columns yet. Click edit and add column choosing the tables and columns from the dropdown lists.

- Add table
- Issue
- Issuer
- IssueRating
- IssuerRating
- IssueTermDate

Figure 4: Add table combobox used to add tables to the feed.

Once the table is added, you can use the 'Add field'-combo box to select additional fields to be included for the respective table. When adding a table, the table's primary key(s) will automatically be included, and they cannot be removed.

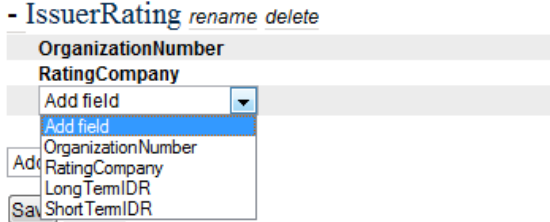


Figure 5: The add field combobox used to add fields under tables.

Tables will be included in the feed in the same order as they appear in the feed configuration tool. However sub-tables will always be placed after fields located directly in the parent table. To reorder you will need to delete columns and re-add in correct order.

Any changes done to the current feed configuration will be shown with a yellow background. Once the user has completed adding fields 'Save' must be selected to save the changes. The next feed file generated will use the new feed configuration.

Note: to create a new feed file, use the 'Generate'-button from the Feed Administration menu (Your Account -> Feed Administration). In order to be able to configure the feed you receive, the feed account must be set to use the 'Dynamic Feed Engine'.

Legacy feed configuration - rename

In order to create a feed that is in a higher degree backwards compatible with pre-V3.0 feeds, it is possible to rename tables and fields added to the feed. For example, the Issue-table and its fields can be renamed to follow the pre-V3.0 feed naming. Examples of renaming are given below:

Issue (table)	Laneopplysninger
ISIN	ISIN
OfficialName	OFFISIELT_LAANENAVN
ShortName	VPS_NAVN
SecurityGroup	VERDIPAPIR_GRUPPE
Ticker	TICKER
IssueDate	UTSTEDELSESDATO
LastPossibleMaturityDate	FORFALLSDATO

Contact us (mail@stamdata.no) specifying your feed user name, and we can create a default feed configuration, that uses the pre-V3 feed naming for all fields and tables. This is often the easiest way to migrate to the new feed generator, as when a standard XML parser is used, the V3 feed will typically be consumable without further modification.

Feed Creation

The Stamdata Feed can be created and delivered in a number of methods. This section describes options available.

Stamdata FTP Area

All Stamdata feed-accounts are connected to an FTP storage area where the current feed file, along with historic feed files are made available. The FTP server may be connected to using either the FTP or SFTP protocols. SFTP will allow encrypted transfer of information.

The Stamdata FTP service is available at: <ftp://ftp.stamdata.no>

NOTE: To use FTP, it is required that Stamdata knows of the specific public IP-address/range that will be used to download file. SFTP on the other hand, is open to all IP-addresses.

The root folder of the FTP-area contains a file, stamdata.xml, that contains the latest feed created. Off the root folder, there is a history folder, where the current, and historic feed files are stored. These feed files are named “yyyyMMdd-HHMM-stamdata.xxx” e.g. “20111030-1430-stamdata.zip” for the compressed file that was created on the 30. Oct 2011 at 14:30.

Older historic files located in the history folder will be deleted automatically from time to time (files older than 30 days). The feed file stored in the FTP root folder will be replaced for each new feed file created.

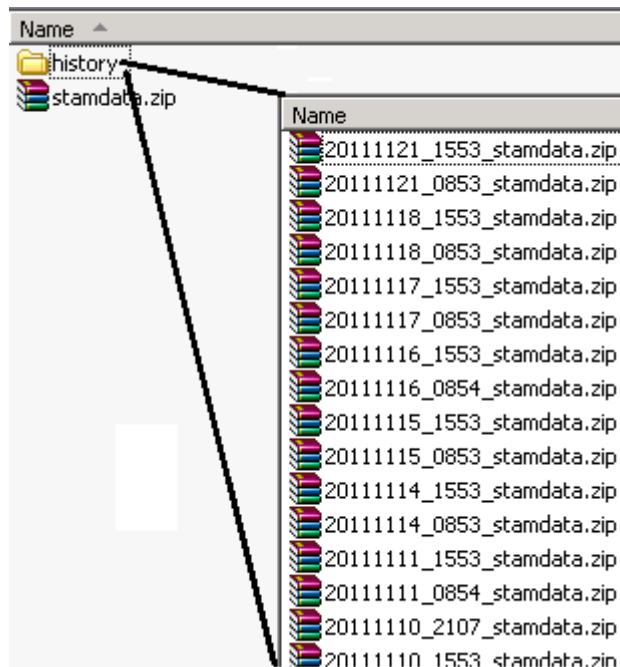


Figure 6: FTP folder structure. The root folder contains the latest feed. Historic files are located in the history folder. The newest historic file is the same as the latest file in the root folder.

Feed creation settings

NOTE: At the time of writing, not all settings described in this section are available for editing by end-users. Please contact us mail@stamdata.no to request any changes to your current feed creation configuration.

The following feed creation options are available for configuration;

- Use Dynamic feed engine – true/false setting indicating if the feed shall be created based on the V3.0 or higher feed engine.
- Feed generation schedule – this schedule is used to define the times a feed file creation process is initiated.
- Include preliminary information – true/false setting indicating if the feed shall contain preliminary, best-effort, non-final information for securities.
- Differential feed – true/false setting indicating if the feed shall contain all securities available, or only those that have been updated.
- Differential feed reset time – used in connection with differential feed, and described in more detail below.
- Compress feed files – true/false indicating if feed files shall be compressed before placed on FTP or send by email.
- Email feed file – specifies a list of email-address a feed file is delivered to.

The options above will be described in more detail in the following sections

Use Dynamic feed engine

Use Dynamic feed engine is used to enable/disable the usage of the V3.0 or higher feed generation engine. This document describes many features of the dynamic feed engine, and are also only available to the dynamic feed engine.

Feed generation schedule

This field defines the schedule used for initiation of feed generation. The actual time the feed is completed will be slightly after the time specified. It is typical to have a schedule that creates a feed daily Monday to Friday shortly before 9:00 AM.

This field follows the RFC2445 iCalendar specification's RRULE property. See <http://tools.ietf.org/html/rfc2445#section-4.8.5.4> for details.

Include preliminary information

This setting is used to specify if preliminary, best-effort, non-final information for securities should be included in the feed. If this setting is set, it is highly recommended to see the Issue – Preliminary field which indicates if the current record is to be viewed as preliminary information.

Preliminary information is often based on preliminary term sheets, messages from managers etc. Systems that imports preliminary securities should make it clear to the user of the system that the information is likely to have errors, and is not final.

Preliminary information is useful in systems where security data must be entered before the issue date of the security. For example it is often required to record the intent to purchase a security before the final terms of the security are completed.

Differential feed

This setting must be set to receive only updates since the last feed generated. It is often used in combination with systems that have slow import modules, which would require extensive processing to handle a complete feed. It is also used with systems that only detect changes, rather than actually processing the feed itself.

Differential feed reset time

When a differential feed is enabled, only updates since the last feed are included in the feed – minimizing the size and processing required to consume the feed. Such systems are often configured to download a feed file once a day, whereas it may still be of interest to update a database manually at other times of the day in order to add information made available throughout the day.

Setting this value, will only reset the changes included in the feed once a day. When used in connection with a feed generation schedule of every 30 minutes, one can create a fixed schedule to import the feed shortly after the differential feed reset time. All other feed files created until the next feed reset time, will include all updates since the reset time.

An example:

A feed is generated at 6:00 AM and again every 30min between 9:00 AM and 3:00 PM. The feed created at 6:00 AM is configured to be consumed daily at 6:05 AM. However due to requirements the application must also be able to load updates on request from a user. By setting the Differential feed reset time to 6:00 AM, the feed created at 9:30 AM will contain all the updates between 6:00 AM and 9:30AM. At 11:30 AM the feed available will include all update between 6:00 AM and 11:30 AMD. Therefore it is only required to import the first file after the reset time, whereas it is optional to import any differential file created throughout the day, as it will contain all updates since the reset time.

Compress feed files

This field is enabled to compress the feed file using .ZIP compression. This is very useful to speed up transfer times as XML based feed files have very high compression rations often up to 25:1 (25MB is compressed to 1MB)

Email feed file

This field is used to specify the address the field file is sent to by email. It is often used before an automatic process of downloading feed files is in place, and is not a recommended transfer method due to delays that occur with internet email. Enabling this setting will still make feed files available on the Stamdata FTP server.

Manual feed file requesting

It may be necessary to create a manual feed update file. This can be done by logging into the Stamdata web-pages with the feed user-account. Under the “Your Account” -> “Feed

Administration” menu it is possible to create a feed from a specified date, or to create a full feed containing all active securities.

Once “Generate” is selected, a feed generation process will start, and the updated feed will be sent in the same manner as automatic updates (typically placed on the Stamdata FTP-server). We recommend allowing 5 minutes for this process to complete.

Your Account

[NOTIFICATIONS](#) | [CHANGE E-MAIL](#) | [CHANGE PASSWORD](#) | [FEED ADMINISTRATION](#)

Feed Administration

Below, you can trigger generation of a new feed data file. The generated file will include all the updates since the choosen date and is placed on your ftp area just like the regular file. It is also possible to generate a complete feed.

Feed from date

 (dd.MM.yyyy)

Complete feed

Lookup Tables

The following links contain Excel spreadsheets with lookup values / universes used in the Stamdata data feeds.

- [Businesses \(BUSINESSES\)](#)
- [Currencies \(VALUTAKODE\)](#)
- [Geographic Codes \(GEOGRAPHICCODE\)](#)

Figure 7: From the Feed Administration meny you can request generation of updated feeds

Appendix 1: Feed table columns

This appendix contains a list of tables and fields available in the data feed as of 18. Nov 2011. For an up to date list, please use the Feed Content Configuration tool which will always be up to date.

Issue

Issue, Bond/certificate issue data. Primary key: ISIN.

Column	Description
ISIN	<p>The securities number according to International Securities Identification Numbering system (ISIN). An ISIN consists of the following three parts:</p> <ol style="list-style-type: none"> 1. A two letter prefix which is a nation code (NO for Norway, DK for Denmark etc.) 2. The basic number which consists of nine characters, either digits or letters. In Norway only digits are used. In cases where a country's security numbers has less than nine characters zeros should be added in front of the security number until nine characters is achieved. Until 1999.01.01 the numbers consisted of six digits and number series were designated systematically depending on the issuers. After this date the numbers consists of seven digits and is consecutively designated independently of the issuers. The basic numbers start with three zeros before 1999.01.01 and two zeros after 1999.01.01 accordingly. 3. A control digit, calculated by means of a formula denoted as "modulus 10 Double-Add-Double". In this calculation both the prefix and the basic number are used. <p>It is quoted in the following format: NOXXXXXXXXXX (There are no spaces between the letter prefix, the basic number or the control digit).</p> <p>For complementary information regarding ISIN, see ISO 6166:1994(E), Fifth edition 1994.</p>
Aux1	Obsolete - This field is not in use.
BusinessDayConvention	The business day convention for a loan where the term date is to be adjusted to business days and regulates how a term date should be moved due to Saturdays, Sundays and public holidays. Usually a term date is moved to the first following Banking day, but in certain cases (for example if it falls in the following calendar month) there may be deviations from the principal rule.

	<p>Codes:</p> <ul style="list-style-type: none"> • <Empty> - Term dates are not moved • Next - Term dates are always moved to the following Banking day • Next in month - Term dates are always moved to the following Banking day except if this day falls in the following calendar month. In that case, the term date is moved to the first Banking day preceding the original term day. • Previous - Term dates are always moved to the previous Banking day. • Previous in month - Term dates are always moved to the previous Banking day except if this day falls in the previous calendar month. In that case, the term date is moved to the first Banking day of the current month.
CalendarOslo	Indicates if the loan follows the Oslo, Norway calendar. This is used for calculation of term dates, settlement dates, etc. 1 = True, 0 = False.
CapitalWeight	<p>The capital weight assigned to the loan according to; Regulations on capital adequacy requirements (§5 i Forskrift om minstekrav til kapitaldekning i finansinstitusjoner og verdipapirforetak 22. okt. nr. 875 1990). The capital weight is also used within the Basel Accords</p> <p>There is a transitional CapitalWeight field CapitalWeight_20120319, which is recommended to be used which includes weightings of 50 and 150 used in connection with companies that have official ratings, where ratings cause the company to have 50 or 150 as weight (instead of 100 that is the standard value for companies)</p>
CFICode	Obsolete - This field is not in use.
Currency	<p>The currency code indicates the denomination currency of the loan. The code has three letters, among others;</p> <ul style="list-style-type: none"> • NOK: Norwegian kroner • USD: US dollar <p>A list of up to date codes used in Stamdata are available here: http://www.stamdata.no/Feed/FeedAdministration (requires Stamdata user account)</p>
CurrentCouponRate	The current coupon rate or interest the loan bears.
CurrentInterestType	The current method for setting the interest rate of the loan. The possible field values are given below;

- **Fixed** - A loan with fixed interest rate to maturity.
- **FRN** - Floating Rate Note
- **Rev. FRN** - Reverse FRN where the interest rate varies reverse to the reference rate (CurrentReferenceRate).
- **Zero** - Zero coupon bond. Also included are Stock index bonds (akjseindeksobligasjoner) without coupons, which will have an interest rate equal to zero.
- **Step** - A loan with increasing interest rate, where both the interest rates and the date(s) are agreed on in advance.
- **Adjust** - Loans with adjustable interest rate. Most common in the Norwegian market is a loan where the issuer fixes the interest rate and decide on the term period. At every interest rate adjustment date the issuer and the lender usually has the right to call/put the bonds.

CurrentMargin	The current coupon margin which is added to the reference rate for loans where the interest rate is linked to a certain reference rate. The margin specified is the current margin, for calculation of interest of the current term. For the margin used for future or historic terms, see Margin under IssueTermDate. The current margin is given as a percent. See also ReferenceRate.
CurrentOutstandingAmount	The current outstanding nominal amount, including certificates/bonds held/controlled by the issuer.
DayCountConvention	<p>The day count convention indicates the method used to determine the fraction to be used when calculating the interest to be paid on a term date. The principal rule (with some exceptions) in the Norwegian market is:</p> <ol style="list-style-type: none"> 1. For fixed rate loans and floating rate loans (see InterestType - "Adjust") the interest is calculated based on a 360 days year with 12 months all with 30 days, except if (a) the last day in the term is the 31st calendar day of the month and the first day in the term is not the 30th or the 31st calendar day in the month. In this case the month with the last day in the term should not be reduced to 30 days, or (b) the last day of the term is the last day of February. In this case February should not be extended to 30 days. 2. For floating rate loans the interest is calculated based on the actual number of calendar days as from issue date (IssueDate) to interest payment date (TermDate) and later as from interest payment date (TermDate) to the next payment date/maturity date (MaturityDate). The number

of interest days is divided by 360.

3. For certificates the interest rate is calculated based on the actual number of days divided by 365.

The following list shows the valid values for this field:

- 30/360
- Act/360
- Act/365
- Act/Act-ICMA
- Act/Act-ISDA
- Act/Act-AFB

EarlyRedeemedDate	The date a bond is fully redeemed due to a call option has been exercised, all outstanding put options have been exercised, the issuer has bought back all outstanding bonds, or a decision of premature redemption has been passed at a bondholders meeting. The field will be empty if the issuer has not exercised a call option or if the complete bond is not called. In cases where a bond is announced to start on a given issue date, but no bonds are ever issued, this date will be set to the same day as the issue date.
Exchange	Three letter code indicating the exchange where the security is registered for trading. See also Ticker and ListingStatus. A list of up to date codes used in Stamdata are available here: http://www.stamdata.no/Feed/FeedAdministration (requires Stamdata user account)
ExtendedMaturityDate	The extended maturity date of the security. Commonly used in combination with Covered Bonds to allow more time to realize assets if the issuer fails to repay the bond on normal maturity. Securities with extended maturity dates are often said to have soft bullets
FaceValue	The face value of the security. Also called denomination.
FirstInterestPaymentDate	Date for the first interest payment. If BusinessDayConvention is "Next" or "Next in month" this date will be adjusted accordingly. See also UnadjustedFirstInterestPaymentDate
FollowsIMM	This value is set when the terms of the loan follow International Money Market days (IMM). When set, the value will be 'IMM'
InterestAccrualDate	The date the interest will accrual. This is typically the same date as the issue date.
InterestRegulationClause	An extract from the Interest registration clause found in the loan agreement.

e	
IsPreliminary	Given the feed is configured to receive preliminary security information, meaning information that is not final or has not been verified for correctness, this field will be set to 1. For securities where verification has been done, this field will be set to 0. We recommend that records based on preliminary information are tagged as such, as it is highly likely to contain incorrect, incomplete or non-final information.
IssueDate	The date the security is issued, also called disbursement date.
Issuer_Business	Code indicating the nature of the issuers business. Examples are given in the table below; <ul style="list-style-type: none"> • STA - Sovereign • STF - Government enterprise • STB - Government funded bank • FYL - County municipality • KOM - Municipality • OSF - Company controlled by one or several municipalities • FOB - Commercial bank • SPB - Savings bank • KRF - Credit association • KRA - Mortgage company • FOR - Assurance company • FIN - Finance institution – not a bank, mortgage- or assurance company • KFT - Power plant • IND - Private enterprise <p>Up to date codes used in Stamdata are available here: http://www.stamdata.no/Feed/FeedAdministration (requires Stamdata user account)</p>
Issuer_CountryCode	Obsolete - This field is not in use. (See also Issuer -> CountryCode_ISO3166)
Issuer_GeographicCode	The issuer's geographical code according to ORBOF, published by Finanstilsynet (The Financial Supervisory Authority of Norway), Norges Bank (The Norwegian Central Bank) and Statistisk Sentralbyrå (Statistics Norway).
Issuer_IndustrialCode_SN2002	(Prefer to use IndustrialCode_SN2007) The issuer's industry class SN2002 code as it is registered in The Norwegian Register of Business Enterprises SN2002 code set. In cases where the issuer is

	registered with more than one code, the most intuitive industry class code, by our judgment, is chosen. Up to date codes used in Stamdata are available here: http://www.stamdata.no/Feed/FeedAdministration (requires Stamdata user account)
Issuer_IndustrialCode_SN2007	The issuer's industry class SN2007 code as it is registered in The Norwegian Register of Business Enterprises SN2007 code set. In cases where the issuer is registered with more than one code, the most intuitive industry class code, by our judgment, is chosen. Up to date codes used in Stamdata are available here: http://www.stamdata.no/Feed/FeedAdministration (requires Stamdata user account)
Issuer_Name	The name of the issuer. Typical abbreviations of company form may be used. E.g. AS, ASA, Corp, Ltd, Plc.
Issuer_OrganizationNumber	The issuer's official registration number assigned to it from the Norwegian Register of Business Enterprises. Note; Foreign non-Norwegian issuers has a fictitious registration number assigned to it. These fictitious organization numbers start with 1- or 2. A Norwegian organization number contains 9 digits.
Issuer_TotalOutstandingAmountInNOK	The total outstanding amount the issuer has in bonds and certificates registered in Stamdata, converted to NOK.
Issuer_EUROutstandingAmount	The total outstanding amount of bonds and certificates that are denominated in Euro (EUR). This field does not include volumes in NOK, USD or other currencies.
Issuer_USDOutstandingAmount	The total outstanding amount of bonds and certificates that are denominated in US Dollar (USD). This field does not include volumes in NOK, EUR or other currencies.
Issuer_SectorCode	(Prefer to use Issuer_SectorCode_ER2012) The issuers' institutional sector code according to ORBOF, published by Kredittilsynet (The Financial Supervisory Authority of Norway), Norges Bank (The Norwegian Central Bank) and Statistisk Sentralbyrå (Statistics Norway). Up to date codes used in Stamdata are available here: http://www.stamdata.no/Feed/FeedAdministration (requires Stamdata user account)
Issuer_SectorCode_ER2012	The issuers' sector codes that follow the 4-digit sector code given by The Central Coordinating Register for Legal Entities (Enhetsregisteret). These codes are to be used for reporting in ORBOF for reports for periods after 1. Jan 2012.
LastPossibleMaturityDate	The last possible date the security will mature. This date may be different than the maturity date of the bond due to extended maturity dates, that can cause the bond to continue after normal maturity.
LeadManagerID	Identification code for the lead manager (arranger) assigned to it by VPS. If there are multiple managers this field will be set to the manager deemed to be the main lead manager

ListingStatus	<p>The listing status indicates the loans status considering any listing on a stock exchange. The field has three possible values:</p> <ul style="list-style-type: none"> • Y: Is listed • Q: Will apply for listing • N: Will not be listed <p>. See also fields Ticker and Exchange.</p>
MaturityDate	The date the security will mature. This date may not be the last possible maturity date of the security, see fields LastPossibleMaturityDate and ExtendedMaturityDate.
MaturityPrice	The maturity price indicating the price at which the loan is redeemed on the maturity date. The redemption price is quoted in percentage format.
MaximumOutstandingAmount	The maximum principal amount for issues that can be tapped (issuer can issue new tranches of the bond).
OfficialName	The official name of the loan according to the loan agreement.
PayingAgent_ID	Identification code for the issuer's Paying Agent assigned to it by VPS.
RedemptionType	<p>A code indicating the redemption type. There are four types:</p> <ul style="list-style-type: none"> • Bullet ("B") • Perpetual ("P") • Annuitet ("A") • Serial ("S") • Irregular ("I") <p>A Bullet loan runs without installments and matures in whole on the maturity date. A perpetual loan has no final maturity date. "Serial" is a loan with installments as either a serial loan with regular (or approximately regular) yearly installments, or as an annuity (or approximately an annuity). "Irregular" is a loan where the installments do not follow a predetermined pattern.</p>
ReferenceRate	The current reference rate used to fix the current coupon rate - where this is relevant. The most common reference rate used in Norway is NIBOR (Norwegian InterBank Offered Rate). Other reference rates are LIBOR (London InterBank Offered Rate) and consumer price index (yearly percentage change). The time to maturities of the reference rates is quoted in months, where "3M"

indicates three months, "6M" indicates six months etc. There is a space between the name of the reference rate and the maturity, for example NIBOR 3M. Up to date reference rate codes used are available here: <http://www.stamdata.no/Feed/FeedAdministration> (requires Stamdata user account)

RiskSpecification

A code classifying the loans into the following groups based on their status/credit risk.

- **0** - Loans issued by OECD sovereigns
- **1** - Loans guaranteed by OECD sovereigns
- **2** - Loans guaranteed by municipalities and county municipalities
- **3** - Loans issued by financial institutions
- **4** - Covered Bonds
- **5** - Loans with a pledge
- **6** - Loans with a negative pledge
- **7** - Not secured loans
- **8** - Subordinated loans
- **9** - Loans with a Guarantee
- **10** - Loans issued by a Norwegian government enterprise
- **11** - Company Rating Class 1 (20%)
- **12** - Company Rating Class 2 (50%)
- **13** - Company Rating Class 3, 4 (100%)
- **14** - Company Rating Class 5, 6 (150%)

Note; the values 4, 11, 12, 13 and 14 are new values available in a transactional field which is the recommended field to use - **RiskSpecification_20120319**. If not using the transactional field, the code 4 will be mapped into 9, and the codes 11, 12, 13 and 14 will be mapped into 7.

RoundingRule

Interest rate round off convention. The round off convention is quoted with a number which indicates the denominator in a fraction, where the numerator is ALWAYS equal to one. It indicates the nearest decimal interval to which the coupon rate should be rounded off

- 8 Rounded off to the nearest 1/8
- 10 Rounded off to the nearest 1/10
- 20 Rounded off to the nearest 5/100
- 50 Rounded off to the nearest 2/100

	<ul style="list-style-type: none"> • 100 Rounded off to the nearest 5/1000 • 1000 Rounded off to the nearest 1/1000 • 100000 Rounded off to the nearest 1/100000
SecurityGroup	<p>The securities are categorized into two main groups depending on maturity. The certificates have less than one year maturity and the bonds have maturity of more than one year. Possible values are shown in the table below.</p> <ul style="list-style-type: none"> • SE - Certificates not issued by a sovereign. • FS - Certificates with more than one term. • SS - Certificates issued by a sovereign. • FR - FRN (Floating Rate Note) • OB - A bond which is neither convertible nor a FRN. • KO - A convertible bond with a right and/or an obligation to convert one's bonds into shares issued by the bond issuer.
ShortName	<p>A 60 character short name for the security, that is created based on features the security has. The name contains issuer name, duration, put and call possibilities. The name may change during the lifetime of the security.</p> <p>Examples:</p> <ul style="list-style-type: none"> • Farsund komm 2,67% CERT 090 060411 • Sevan Marine ASA 11/12 15,00% USD C • Nordea Bank Finland Abp 11/13 LNK
TermsPerYear	<p>The current number of terms per year. 0 - No terms (e.g. certificates), 1 - yearly terms, 2 - term every six months, 4 - quarterly terms, 12 - monthly terms.</p>
Ticker	<p>Ticker code (id code) designated to a security by an exchange where the security is listed. This field should be used in combination with 'Exchange' that indicates the exchange where the security is listed.</p>
UnadjustedFirstInterestPaymentDate	<p>The unadjusted first interest payment date of the loan. This value is used to calculate the date a term is to be on. This value is not reliably for the following conditions;</p>

- Identification of interest payment dates on the 29th, 30th and 31st of a month, when the first date is in February
- Identification of interest payment dates on the 31st of a month, when the first date is in a month with less than 31 days.

VER

The version number for a record. The VER of a record is updated if at least one field in the record has its value updated.

IssueTermDate

IssueTermDate, Bond/certificate term date data. Primary key: ISIN, TermDate

Column	Description
ISIN	ISIN of the security the term belongs to.
TermDate	Date for interest payment and any installments/redemption. The date quoted is the date until which interest is calculated, and not necessarily the date where the actual payment occurs.
Call_LastNotificationDate	Deadline for call notification. This is the last day the issuer may notify the paying agent of it's intentions on calling. The deadline is usually set to 30 banking days prior to the interest payment date (term date).
Call_Price	The call price indicates the price at which the issuer may call the remaining loan or any portion of the loan at the interest payment date (TermDate).
Cap	Interest Coupon Cap indicates the maximum interest rate for the term i.e. the coupon may not exceed the cap.
CouponFixDate	The coupon fixing date, that gives the date that the next terms coupon is to be calculated. It is typically set for Adjust and FRN loans. The coupon that is fixed will be in effect as from the interest payment date (TermDate) in the same record until interest payment date (TermDate) of the next term.
DaysInPeriod	The number of interest days in the period of the term
Floor	Interest Coupon Floor indicates the minimum interest rate for the term i.e. the coupon may not be less than the floor.
Installment	Installment amount is the nominal value due for redemption on the interest payment date (interest is not included in the redemption amount).
InterestCoupon	The interest rate or coupon for the term. The payment made can be calculated using the day count convention and days in period. The value is given as a percent.
Put_LastNotificationDate	Deadline for putting is the last day the lender may notify the paying agent of it's intentions on putting. The deadline is usually set to 15 banking days prior to the interest payment date (TermDate)
Put_Price	The put price indicates the price at which the lender may put its bonds on the interest payment date (TermDate).
VER	The version number for a record. The VER of a record is updated if at least one field in the record has its value updated.
XCouponDate	X coupon date. The owner of a bond/certificate the banking day prior to the X coupon date receives the coupon for the present term. If a bond/certificate is traded in the period between the x coupon date and the interest payment date (TermDate), the coupon is paid to the seller of the security.
XRedemptionDate	The date from which the bond is traded excluding the installment (redemption). This is the draw date for the

installment for the corresponding term date.

Issuer

Issuer, Bond/certificate issuer data. Primary key: OrganizationNumber

Column	Description
OrganizationNumber	The issuer's official registration number assigned to it from the Norwegian Register of Business Enterprises. Note; Foreign non-Norwegian issuers has a fictitious registration number assigned to it. These fictitious organization numbers start with 1- or 2. A Norwegian organization number contains 9 digits.
Business	Code indicating the nature of the issuers business. Examples are given in the table below; <ul style="list-style-type: none"> • STA - Sovereign • STF - Government enterprise • STB - Government funded bank • FYL - County municipality • KOM - Municipality • OSF - Company controlled by one or several municipalities • FOB - Commercial bank • SPB - Savings bank • KRF - Credit association • KRA - Mortgage company • FOR - Assurance company • FIN - Finance institution – not a bank, mortgage- or assurance company • KFT - Power plant • IND - Private enterprise <p>Up to date codes used in Stamdata are available here: http://www.stamdata.no/Feed/FeedAdministration (requires Stamdata user account)</p>
CountryCode_ISO3166	Country code given in ISO 3166 format with 2 characters.
GeographicCode	The issuer's geographical code according to ORBOF, published by Finanstilsynet (The Financial Supervisory Authority of Norway), Norges Bank (The Norwegian Central Bank) and Statistisk Sentralbyrå (Statistics Norway).
IndustrialCode_SN2002	(Prefer to use IndustrialCode_SN2007) The issuer's industry class SN2002 code as it is registered in The Norwegian

	Register of Business Enterprises SN2002 code set. In cases where the issuer is registered with more than one code, the most intuitive industry class code, by our judgment, is chosen. Up to date codes used in Stamdata are available here: http://www.stamdata.no/Feed/FeedAdministration (requires Stamdata user account)
IndustrialCode_SN2007	The issuer's industry class SN2007 code as it is registered in The Norwegian Register of Business Enterprises SN2007 code set. In cases where the issuer is registered with more than one code, the most intuitive industry class code, by our judgment, is chosen. Up to date codes used in Stamdata are available here: http://www.stamdata.no/Feed/FeedAdministration (requires Stamdata user account)
Name	The name of the issuer. Typical abbreviations of company form may be used. E.g. AS, ASA, Corp, Ltd, Plc.
SectorCode	<p>The issuers' institutional sector code according to ORBOF, published by Kredittilsynet (The Financial Supervisory Authority of Norway), Norges Bank (The Norwegian Central Bank) and Statistisk Sentralbyrå (Statistics Norway). Up to date codes used in Stamdata are available here: http://www.stamdata.no/Feed/FeedAdministration (requires Stamdata user account) An excerpt of the codes in given below:</p> <ul style="list-style-type: none"> • 110 Central government administration • 190 State lending institution • 210 Commercial bank • 217 Commercial bank, non-Norwegian • 250 Savings bank • 310 Credit enterprise/ Mortgage company • 370 Finance company • 390 Other financial corporations, excl. financial auxiliaries • 391 Financial holding company • 410 Life insurance company etc. • 510 County municipalities • etc.
SectorCode_ER2012	This field contains sector codes that follow the 4-digit sector code given by The Central Coordinating Register for Legal Entities (Enhetsregisteret). These codes are to be used for reporting in ORBOF for reports for periods after 1. Jan 2012.
ShortName	A three letter unique code that identifies the issuer. This code is assigned by Stamdata. This is an alternative identification of the issuer.
VER	The version number for a record. The VER of a record is updated if at least one field in the record has its value

updated.

IssuerRating

IssuerRating – official, publicly available ratings for issuer.

Usage of this table will inquire an extra fee for the feed subscription, however for a pilot period we are providing this table at no extra costs.

Column	Description
OrganizationNumber	The organization number of the issuer
RatingCompany	The rating company
LongTermIDR	Long term issuer default rating
ShortTermIDR	Short term issuer default rating

IssueRating

IssueRating - official, publicly available ratings for issues / bonds.

Usage of this table will inquire an extra fee for the feed subscription, however for a pilot period we are providing this table at no extra costs.

Column	Description
ISIN	ISIN of the security
RatingCompany	The rating company
Rating	Issue rating, or covered bond pool. See table IssuerRating for rating of the issuer as a company. This field only set if the specific issue has a rating.