Document title

OSLO BØRS FUNDAMENTAL DATA - BOND FILE

Document type or subject

CLIENT SPECIFICATION

Revision number

Revision Number: 1.2

Date

02 October 2020

PREFACE

DOCUMENT HISTORY

The Current Version change history is provided in the following section.

VERSION NO.	DATE	CHANGE DESCRIPTION
1.0	07/08/2020	Initial draft **Launch date: 30 November 2020**
1.1	09/28/2020	Update enumeration value from '635' to '625' for "OB Mortgage Bank Bonds"(field 'BondSector')
1.2	10/02/2020	Tag : <interestRegulationPeriod> modification => From one occurrence to multiple occurrences possible.

CONTACT INFORMATION

For technical support, please contact the **Euronext Service Operations**:

- Email: serviceoperations@euronext.com
- Telephone: +44 (0) 2890 822485

FURTHER INFORMATION

For additional product information, please contact us at databyeuronext@euronext.com.

CONTENTS

1. INTRODUCTION

The Oslo Børs Fundamental Data - Bond file includes information concerning bond fundamentals and events that effects the valuation of bonds listed at Oslo Børs and Nordic ABM.

Fundamental Data - Bonds contains the following detailed information :

- Key dates (Issue date, maturity date, interest as from date, first coupon payment, first down payment date and tap issue period)
- Fundamentals (Coupon rate, coupon frequency, amortisation type, down payment Method, denomination amount, cash flow and risk category)
- Companies (borrower, trustee, paying agent)

The Fundamental Data - Bonds file is provided on the business day (according to the Euronext markets trading calendar) prior to the trading session where the data is effective.

2. FILE SPECIFICATIONS

2.1 FILE AVAILABILITY

The Oslo Børs Fundamental Data - Bond file will be available on trading days(according to the Euronext markets trading calendar*) approximately at 19h00 CET.

* This means that the Oslo Børs Fundamental Data - Bond file will be created on the following days, which are holidays according to the Oslo Børs markets calendar:

- Maundy Thursday
- Constitution Day – 17/05
- Ascension Day – 40 days after Easter
- Christmas Eve
- New Year's Eve

2.2 FILE FORMAT

The Oslo Børs Fundamental Data - Bond file is provided in XML format, .zip compressed.

2.3 FILE NAME

The Oslo Børs Fundamental Data - Bond file name is

- ob_bonds_yyyymmdd.xml.zip

where yyyymmdd refers to the date of the trading session when the data is effective.

2.4 STRUCTURE

<u>Header</u>

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

<u>Body</u>

<BondDetails generated="" runNo="" validDate="">.

<Bond>

<ISIN></ISIN>

<TradingCode></TradingCode>

<SymbolIndex></SymbolIndex>

<BondFundamental>

<bondIssueType></bondIssueType>

<bondType></bondType>

<amortizationType></amortizationType>

<downPaymentMethod> </downPaymentMethod>

```
        <issueDate></issueDate>
        <maturityDate></maturityDate>
        <actualMaturity></actualMaturity>
        <interestAsOf></interestAsOf>
        <firstCouponPayment></firstCouponPayment>
        <firstDownPayment></firstDownPayment>
        <currentCouponRate></currentCouponRate>
        <couponinformation></couponinformation>
        <couponSpread></couponSpread>
        <riskCategory></riskCategory>
        <bondSector></bondSector>
        <bondIssuerSector></bondIssuerSector>
        <bondDescription></bondDescription>
        <csd></csd>
        <denominationAmount></denominationAmount>
        <exDownPaymentTimeType></exDownPaymentTimeType>
        <exDownPaymentCount></exDownPaymentCount>
        <nominalAmount></nominalAmount>
        <nominalAmountCurrencyCode></nominalAmountCurrencyCode>
        <variableInterest></variableInterest>
    </bondFundamental>
    <couponDates>
        <fixedCouponDates>
            <firstCouponMonth></firstCouponMonth>
            <firstCouponDay></firstCouponDay>
            <secondCouponMonth></secondCouponMonth>
            <secondCouponDay></secondCouponDay>
        </fixedCouponDates>
        <variableCouponDates></variableCouponDates>
    </couponDates>
    <tapIssue>
        <TapIssueAmount></TapIssueAmount>
    </tapIssue>
    <borrower>
```

```xml
                <borrowerCompanyName></borrowerCompanyName>
                <borrowerCompanySixt></borrowerCompanySixt>
            </borrower>
            <trustee>
                <trusteeCompany></trusteeCompany>
            </trustee>
            <payingAgent>
                <payingCompany></payingCompany>
            </payingAgent>
            <amortization>
                <cashFlowDate></cashFlowDate>
                <cashFlowType></cashFlowType>
                <price></price>
                <nominalAmountTotal></nominalAmountTotal>
                <ownAmount></ownAmount>
                <updateTimestamp></updateTimestamp>
            </amortization>
            <bondOptionPeriod>
                <fromDate></fromDate>
                <expirationDate></expirationDate>
                <price></price>
                <optionType></optionType>
            </bondOptionPeriod>
            <interestRegulationPeriod>
                <announcementDate></announcementDate>
                <interestRegulationDate></interestRegulationDate>
                <couponRate></couponRate>
                <toDate></toDate>
            </interestRegulationPeriod>
        </Bond>
</BondDetails>
```

Notes:

- There is a <Bond> section for each bond listed on Oslo Børs Oslo Børs or Nordic ABM
- Either a <fixedCouponDates> or a <variableCouponDates> section is provided for any given <Bond>
- Multiple instances of the <amortization>, <bondOptionPeriod>, <interestRegulationPeriod> sections may be provided for any given <Bond>

Please find below a description of the different fields included in the file :

Field	Short Description	Format	Length	Example	Values	Presence*
<BondDetails>						
generated		dateTime		2020-08-14T14:40:56.611Z		M
runNo	The intraday run number for the file. Starts at 1 every day	Integer		1		M
validDate	The trading day that the file is valid for	Date		2020-08-17Z		M
<Bond>						M
ISIN	ISIN of the bond	Alpha	12	FR0007054358		M
TradingCode	Trading Code of the bond	Alpha	12	FR0010915660		M
SymbolIndex	Symbol Index of the bond	Integer		1129095142		M
<bondFundamental>						M
BondIssueType	Issue Type of the bond	Alpha	50	Public Placement	* Public placement * Dutch aution * Private placement * Privately * American auction * Undefined	M
BondType	Bond Type	Alpha	40	Perpetual Hybrid Tier 1	* Certificate * Debenture * Partial bond * Premium bond * Perpetual Hybrid Tier 1 * Undefined	M
AmortizationType	Amortization Type of the bond	Alpha	50	Bullet loan	* Bullet loan * Serial bond * Other/Non standard * Undefined * Equal installments * Matching pmts of principal and interest * Non matching pmts of principal and interest * Premium bond * Annuity * Perpetuity * Zero coupon	M

DownPaymentMethod	Down Payment Method of the bond	Alpha	30	Mathematical calculation	* Draw * Mathematical calculation * Lump sum * Perpetual * Undefineds * Purchase	M
IssueDate	Issue Date of the bond	Date		2020-01-01Z		M
MaturityDate	Maturity Date of the bond	Date		2020-01-01Z		M
InterestAsOf	"InterestAsOf" refers to "interest accrual date", i.e. when interest starts to accrue	Date		2020-01-01Z		M
FirstCouponPayment	Date of First Coupon Payment	Date		2020-01-01Z		O
FirstDownPayment	Date of First Down Payment	Date		2020-01-01Z		O
CurrentCouponRate	Rate	Decimal		10		M
CouponInformation	Information on the Coupon	Alpha	40	EURIBOR 6 MOIS		O
CouponSpread	Coupon Spread	Decimal		1.05		O
RiskCategory	Risk Category	Alpha	50	Negative pledge with condition	* Government backed * Unknown * Council surety guarantee * Council simple guarantee * Intermunicipal surety pro rate * Pledge * Negative pledge * Negative pledge with condition * Subordinate load capital * Municipal * Solidary surety * Council * Several Municipals * Guarantee by way of possession * Collateral * Unsecured loans * Municipal * Secondary priority collateral * Asset backed bonds * Perpetual hybrid tier 1 * Covered Bonds * Unconditional on-demand guar	O
BondSector	Bond Sector	Alpha	3	ALG	Please refer below the table for the list of possible values	M

BondIssuerSector	Bond Issuer Sector	Alpha	50	State enterprise,state-owned enterprise	* Corporate * Government * Other * State enterprise,state-owned enterprise * Municipal/county * Bank * Government backed * Mortgage Institutions * Industrial Companies * Foreign * Government certificate * Loan certificate, commercial paper * Public	O
BondDescription	Bond Description	Alpha	500	The bonds will be listed on AIW basis.		M
CSD	CSD	Alpha	50	Euroclear France		M
DenominationAmount	Nominal	Decimal		500000		M
ExDownPaymentTimeType	Ex Down Payment Time Type	Alpha	15	Banking Days	* Banking Days * Calendar Days	O
ExDownPaymentCount	Ex Down Payment Count	Integer		25		O
NominalAmount	Nominal Total (remaining amount)	Decimal		1000000		O
NominalAmountCurrencyCode	Currency of the Nominal	Alpha	3	NOK		O
VariableInterest	Variable Interest	Boolean		true	* true * false	M
</bondFundamental>						M
<couponDates>						O
<fixedCouponDates>						O
FirstCouponMonth	First Coupon Month in case of Fixed Coupon Date	Integer		6		M
FirstCouponDay	First Coupon Day in case of Fixed Coupon Date	Integer		25		M
SecondCouponMonth	Second Coupon Month in case of Fixed Coupon Date	Integer		8		O
SecondCouponDay	Second Coupon Day in case of Fixed Coupon Date	Integer		1		O
</fixedCouponDates>						O
</couponDates>						O
<couponDates>						O
VariableCouponDates	Coupon Date for Variable Coupon Dates	Date		2020-01-01Z		M
</couponDates>						O

<tapIssue>						O
TapIssueAmount	Amount of the Tap issue	Decimal		1000000		O
</tapIssue>						O
<borrower>						O
BorrowerCompanyName	Company label	Alpha	60	GOLDMANSACHS&CO		M
BorrowerCompanySixt	Company Sixt Code	Alpha	12	261964		M
</borrower>						O
<trustee>						O
TrusteeCompany	Trustee Company	Alpha	60	CREDIT SUISSE SECURITIES LTD		M
<trustee>						O
<payingAgent>						O
PayingCompany	Paying Agent	Alpha	50	CREDIT SUISSE SECURITIES LTD		M
</payingAgent>						O
<amortization>						O
CashFlowDate	Cash Flow Date	Date		2020-01-01Z		M
CashFlowType	Cash Flow Type	Alpha	4	EMIT	* ‘EMIT’ (In case of nominal increase) * 'NEDB' (In case of nominal decrease) * 'CALL' (In case of Call) * 'PUT' (In case of Put) * 'OWN' (In case of Own account)	M
Price	Price	Decimal		100		M
NominalAmountTotal	Nominal Amount Total	Decimal		10000000		O
OwnAmount	Own Amount	Decimal		5000		O
UpdateTimestamp	Update Timestamp	dateTime		2012-07-05T10:22:14.540Z		O
</amortization>						O
<bondOptionPeriod>						O
FromDate	From Date	Date		2020-01-01Z		M
ExpirationDate	Expiration Date	Date		2021-01-01Z		M
Price	Price	Decimal		100		M
OptionType	Option Type	Alpha	5	Mixed	* Call * Put * Mixed	M
</bondOptionPeriod>						O
<interestRegulationPeriod>						O
AnnouncementDate	Announcement Date	Date		2020-01-01Z		M
InterestRegulationDate	Interest Regulation Date	Date		2020-01-01Z		M
CouponRate	Coupon Rate	Decimal		3,19		O
ToDate	To Date	Date		2021-01-01Z		O

</interestRegulationPeriod>						O
</Bond>						M

* M - Mandatory; O – Optional

List of possible values for 'BondSector':

```
<xsd:enumeration value="606"/>
<!-–ABM ESG bonds-->
<xsd:enumeration value="601"/>
<!—ABM Bank and Insurance Bonds>
<xsd:enumeration value="609"/>
<!—ABM Loan Certificates>
<xsd:enumeration value="603"/>
<!—ABM Covered Bonds>
<xsd:enumeration value="634"/>
<!—ABM Government Guaranteed Bonds>
<xsd:enumeration value="636"/>
<!—ABM Government Owned Enterprises Bonds>
<xsd:enumeration value="628"/>
<!—ABM Industry and commercial bonds>
<xsd:enumeration value="620"/>
<!-–  ABM Municipal bonds-->
<xsd:enumeration value="626"/>
<!—ABM Mortgage Bank Bonds>
<xsd:enumeration value="614"/>
<!—ABM Perpetual hybrid tier 1>
<xsd:enumeration value="630"/>
<!—ABM Subordinated bonds->
<xsd:enumeration value="623"/>
<!—ABM Convertible bonds->
<xsd:enumeration value="632"/>
<!—ABM Senior Preferred bonds->
<xsd:enumeration value="604"/>
<!—OB Covered Bonds Benchmark-->
<xsd:enumeration value="605"/>
```

```
<!—OB ESG bonds-->
<xsd:enumeration value="600"/>
<!—OB Bank and Insurance Bonds-->
<xsd:enumeration value="622"/>
<!—OB Convertible Bonds-->
<xsd:enumeration value="608"/>
<!—OB Loan Certificates-->
<xsd:enumeration value="602"/>
<!—OB Covered bonds-->
<xsd:enumeration value="612"/>
<!—OB Government Bonds-->
<xsd:enumeration value="633"/>
<!—OB Government Guaranteed Bonds-->
<xsd:enumeration value="635"/>
<!—OB Government Owned Enterprises Bonds-->
<xsd:enumeration value="627"/>
<!—OB Industry and commercial Bonds->
<xsd:enumeration value="619"/>
<!--OB Municipal bonds-->
<xsd:enumeration value="625"/>
<!—OB Mortgage Bank Bonds-->
<xsd:enumeration value="613"/>
<!—OB Perpetual hybrid tier 1-->
<xsd:enumeration value="629"/>
<!—OB Subordinated bonds-->
<xsd:enumeration value="616"/>
<!—OB Government Bills-->
<xsd:enumeration value="631"/>
<!—OB Senior Preferred bonds-->
<xsd:enumeration value="UNK"/>
<!--Used only if the bond is not categorized-->
```

3. FTP DIRECTORY STRUCTURE

The Oslo Børs Fundamental Data - Bond file is offered via FTP pull via the internet.

3.1 FTP PULL

The customer can download the files with ftp from the following FTP server:

- Production: ftp.data.euronext.com
- EUA: ftp.eua-data.euronext.com

Euronext will provide a User ID and a password to the customer that will remain valid until the subscription to the product is cancelled.

3.2 DIRECTORY STRUCTURE ON FTP SERVER

- Most Recent Files

```
/FI_EU_OSL_REF_MASTER_BOD
        /CURRENT/
```

- Historical Files

```
/ FI_EU_OSL_REF_MASTER_BOD
      /FI_EU_OSL_REF_MASTER_BOD_YYYY
            /FI_EU_OSL_REF_MASTER_BOD_YYYYMM
```