

Bloomberg data integration

How to get started

Vitec Aloc/HB/PLAR

Version 1.0

This document is based on the underlying system PORTMAN 7.27

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1. Background

With 'Bloomberg data integration' you can easily import a wide range of basic data, prices and similar from Bloomberg into PORTMAN.

Vitec Aloc has developed the 'Bloomberg data integration' module as a part of PORTMAN's Business Logic server. Data is retrieved via Bloomberg's Web Service in XML format, and PORTMAN processes and imports subsequent data. Calls are controlled from PORTMAN server batch, and you yourself control which instruments price data is retrieved for from PORTMAN's user interface.

1.1. Implementation

- You must have a Bloomberg data license to export data from Bloomberg.
- Bloomberg's Web Service is used.
- A Bloomberg certificate must be placed on the PORTMAN server, and credentials must be sent to Vitec Aloc. The certificate on the server must be installed by Vitec Aloc (or you may install the certificate yourself with guidance from Vitec Aloc).
- Vitec Aloc activates the integration solution via configuration in PORTMAN's server batch, including times for the import of prices.
- Vitec Aloc subsequently installs a new configuration package.

2. Contents

You can import two types of data. The following describes the scope of the opportunities.

2.1. Basic data

You can import that actual creation of basic data on shares, mutual funds and bonds. This can take place ad hoc at any time. Creation is done by filling in some of the fields in PORTMAN with data from Bloombergs web service, while some of the fields are completed by default values, such as loan type, calendar convention, etc.

Updates to the securities' basic data cannot yet be imported.

Basic data can be retrieved in two ways:

- Automatically via initiation from the XML trade transaction import, when registering trading in securities (sha., bon., mut.) that has not yet been registered in PORTMAN.
 - (See description in Bloombergs Basic Data Request (SWIFT))
- Call to PORTMAN API, e.g. through the POSTMAN tool, with FIGI code at exchange level as instrument-ID.
 - (See description in Bloombergs Basic Data Integration (API))

You can import basic data on the following instruments.

- Shares
- Mutual funds
- Bonds – bonds with cash flow
 - Basic data
 - Cash flow parameters
 - Suppl. basic data
 - Reference rates, if they are missing in the register
 - Presentation of cash flow (subsequently in PORTMAN)

2.2. Prices

For all data of the 'prices' type, you must set the time for import of the individual data type using a parameter in the PORTMAN server's configuration file. Setup of this is done in collaboration with Vitec Aloc Support.

You can import prices/rates for the following:

2.2.1. Securities rates

To fetch prices for securities (*), the following supplementary basic data must be entered.

1. The 'Provider' field, which consists of data provider, price type and price source.
 - a. For price type you may choose from PX_ASK, PX_BID, PX_LAST, PX_MID, PX_YEST.
 - b. For price source the options are BGN, BMRK, BVAL, CMPN, EXCH.
2. In order of priority, either a FIGI code exch. level, ISIN code, SEDOL code or CUSIP code registered as instrument ID.
3. Bloomberg Yellow key – not mandatory

Additional info. (Change)

ID code:	BL00000008	NYKRE 4 10/01/38	State:	Active	
Expanded name:	Nykredit Realkredit A/S			Omit from fee calc.:	No
Provider:	Bloomberg:PX_LAST		Omit from booking:	No	
FIGI code exch. level:	BBG000085P30		Omit from rebalancing:	No	
Unique security code:	BBG000085P30				
Bloomberg ticker:		Bloomberg yellow key:	F3 CORP - corporate debt		
Reuter code:					
SEDOL code:					
ISIN code:	DK0009761645				
CUSIP code:	ED9511970				
Price hierarchy:	None				
52a-share:	<input type="checkbox"/>	Capital adequacy:	0,00	Number of trades decimals:	Not specified
MIC code:					

(*) only except for instrument type: loan

You find the imported prices under Modules -> Prices etc. -> Prices.

ID code	Security name	Date	Price
BL00000008	NYKRE 4 10/01/38	18/01/2021	114,275000
		15/01/2021	114,306000
		14/01/2021	114,306000
		13/01/2021	114,350000
		12/01/2021	114,268000
		11/01/2021	114,268000
		08/01/2021	114,268000
		07/01/2021	114,268000
		06/01/2021	114,395000
		05/01/2021	114,283000
		04/01/2021	114,283000
		01/01/2021	114,410000
		31/12/2020	114,410000
		30/12/2020	114,410000

2.2.2. Currency rates

Setup of import for exchange rates occurs via basic data on the currency, and the Yellow key, Pricing type and possibly Pricing Source fields are filled in via:

Basic data, currency (Change)

Currency: SEK Sverige

Is active: Yes

Rounding method: RoundOff

Number of decimals: 2

Calendar: Unknown

Bloomberg

Yellow key: Foreign Currencies

Pricing type: PX_LAST

Pricing source: Unknown

Buttons: Help, Print, Close, OK

The imported exchange rates are found under Modules -> Currency/Country information -> Exchange rates.

Date	Currency code	Currency name	Exchange rate
18/01/2021	ZAR	South African Rand	5,430000
	USD	US dollar	82,820000
	TRY	Turkish Lira	11,045000
	SGD	Singapore Dollar	62,230000
	SEK	Swedish Krona	9,862000
	RUB	Russian Ruble	1,120000
	PLN	Polish Zloty	22,079000
	NZD	New Zealand Dollar	58,940000
	NOK	Norwegian Krone	9,640000
	MXN	Mexican Peso	4,180000
	HKD	Hong Kong Dollar	10,680000
	GBP	Pound Sterling	112,390000
	DKK	Danish Krone	13,440000
	CNY	Yuan Renminbi	12,754000
	CHF	Swiss Franc	92,930000
	CAD	Canadian Dollar	64,880000

2.2.3. Market rates

You can import rates on indices such as CIBOR6M via Bloomberg.

Here you must also enter supplementary basic data with Provider and Bloomberg Yellow Key. ID Code must be Bloomberg's instrument id.

The imported market rates are found in the price table via Modules -> Prices etc. -> Prices.

The screenshot shows a window titled 'Prices' with a 'Price set:' dropdown menu set to 'Bloomberg'. Below the menu is a table with the following data:

ID code	Security name	Date	Price
CIBO06M	CIBOR 6 months	18/01/2021	-0,120000
		15/01/2021	-0,116700
		14/01/2021	-0,116700
		13/01/2021	-0,120000
		12/01/2021	-0,126700
		11/01/2021	-0,123300
		08/01/2021	-0,130000
		07/01/2021	-0,130000
		06/01/2021	-0,136700
		05/01/2021	-0,130000
		04/01/2021	-0,116700
		01/01/2021	-0,116700
		31/12/2020	-0,116700
		30/12/2020	-0,113300
		29/12/2020	-0,110000

2.2.4. Spread points – for building Pricing curves

PORTMAN Pricing curves are used for pricing and calculations on instruments and on simulations of interest scenarios. For this you import spreads from Bloomberg, and they are set up in the Pricing Curve module. (see PORTMAN Pricing Curves – how to get started – for a more detailed review of the module).

The screenshot shows the 'Spread curve - Edit' window. It contains the following configuration fields:

- Spread curve ID: EURNOK_XCCY
- Description: (empty field)
- Application: Before Calculation
- Provider: Bloomberg:PX_ASK

Below the configuration fields is a table titled 'Spread points' with the following data:

Spread point ID	Maturity	Description
NKEBS1 CMPN Curcy	1Y	NKEBS1 CMPN
NKEBS2 CMPN Curcy	2Y	NKEBS2 CMPN
NKEBS3 CMPN Curcy	3Y	NKEBS3 CMPN
NKEBS5 CMPN Curcy	5Y	NKEBS5 CMPN
NKEBS7 CMPN Curcy	7Y	NKEBS7 CMPN
NKEBS10 CMPN Curcy	10Y	NKEBS10 CMPN
NKEBS15 CMPN Curcy	15Y	NKEBS15 CMPN
NKEBS20 CMPN Curcy	20Y	NKEBS20 CMPN

2.2.5. Key figures

- o Delta

With regard to key figures, Delta may be imported. This is used e.g. on derivatives.

Type	ID code	Security name	Date	Value
Delta	PS3200EU092	Put 3200 EuroStoxx 50 09/20	21/08/2020	-0,39400
	PS3200EU092	Put 3200 EuroStoxx 50 09/20	20/08/2020	-0,35900
	PS3200EU092	Put 3200 EuroStoxx 50 09/20	19/08/2020	-0,28900
	PS3200EU092	Put 3200 EuroStoxx 50 09/20	18/08/2020	-0,34500
	PS3200EU092	Put 3200 EuroStoxx 50 09/20	17/08/2020	-0,31000
	PS3200EU092	Put 3200 EuroStoxx 50 09/20	14/08/2020	-0,32300
	PS3200EU092	Put 3200 EuroStoxx 50 09/20	13/08/2020	-0,26200
	PS3200EU092	Put 3200 EuroStoxx 50 09/20	12/08/2020	-0,23700
	PS3200EU092	Put 3200 EuroStoxx 50 09/20	11/08/2020	-0,29200
	PS3200EU092	Put 3200 EuroStoxx 50 09/20	10/08/2020	-0,40500
	PS3200EU092	Put 3200 EuroStoxx 50 09/20	07/08/2020	-0,40400
	PS3200EU092	Put 3200 EuroStoxx 50 09/20	06/08/2020	-0,42500

2.2.6. Benchmarks

You can also import Benchmarks (index) from Bloomberg. On supplementary basic data the ID code must match Bloomberg Ticker, and the Provider and Bloomberg Yellow Key must be filled in.

The screenshot shows a software interface with two main panels. The left panel, titled 'Basic data - Benchmark Indexes (Change)', contains the following fields: ID code (OSEFX), Security name (Oslo Børs fond indeks), Currency code (NOK), Short name, Start date (31/12/2008), and an 'Advanced options' checkbox. Below these fields is a list of benchmark codes and names, with 'OSEFX Oslo Børs fond indeks' selected. The right panel, titled 'Additional info. (Change)', contains: ID code (OSEFX), Expanded name (Oslo Børs fond indeks), State (Active), Provider (Bloomberg:PX_YEST_CLOSE), FIGI code exch. level (BBG00053YW13), Bloomberg ticker (OSEFX Index), and Bloomberg yellow key (F10 INDEX - indexes). Other fields include Reuter code, SEDOL code, ISIN code, CUSIP code, Price hierarchy (None), \$2a-share (0,00), MIC code, Country code, Issuer org. no., Ultimate parent, Additional asset type (None), and Report code (None).

3. Practice

When data has been collected from Bloomberg’s web service, import and registration takes only minutes.

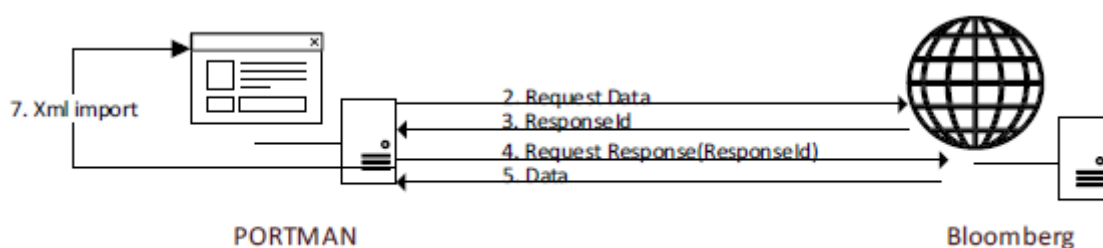
The greatest time consumption is thus in the built-in delay in the customer’s Bloomberg data license, which typically is 5-6 minutes (50 sec. delay in processing query and 5 minute delay in sending return response). In reality we experience shorter response times on Vitec Aloc’s own Test Account.

You must also be aware that there may be different delays on certain types of data, for example some pricing information requires that you have a real-time license with Bloomberg to avoid experiencing very long delays. For example, market rates such as PX Last (last bid/offer) have a 15 minute response delay unless you have a real-time license.

3.1. Flow

When the server batch with one of the four applications is started, the following occurs:

1. The batch sends a transaction (with the type) to the server.
 - a. Spreads
 - b. Prices
 - c. MarketRates
 - d. ExchangeRates
2. The PORTMAN server sends an order/request to Bloomberg, which responds with a response ID.
3. PORTMAN queries Bloomberg every xx seconds (configurable) whether a response to the response ID has arrived.
4. Response returned from Bloomberg with data.
5. When there is a response to the response ID, the PORTMAN server generates an XML file and a sem file. These are placed in the import folder.
6. The XML file is imported to PORTMAN.
7. The XML file is renamed to <filename>.1.
8. The batch point changes status to done.



3.2. Technology

Because 'Bloomberg data integration module' is an integrated part of PORTMAN BL server, the application will be available in both PROD and TEST environment. This means that if certificates are installed on both environments, it will also be possible to retrieve data from Bloomberg in both

environments.

4. Control of import

In the PORTMAN 'Import Manager' module all imports are managed, which come in XML format. Here you can monitor the individual import and make any required corrections.

A typical error is that a security has expired and that there therefore no longer are prices for the security. In this case you open the security on supplementary basic data and remove 'Provider'.