

System - Market Data Import

Format Descriptions

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This document describes the interface for importing market data (FX rates, implicit volatilities, interest rates, interest rate volatilities and security/commodity rates and credit spreads) into the System component of Coupa Treasury. Two types of import format are available: Market Data Import Format 2.0 (Flexible) and Market Data Import Format 1.0 (Fixed).

Differences between Formats 2.0 (Flexible) and 1.0 (Fixed)

Market Data Import Format 2.0	Market Data Import Format 1.0
The character following the prefix is automatically set as the field separator. All non-numeric values, with the exception of the dash (-) are permissible field separators.	The field separator is the semicolon (;).
Permissible date formats are dmy, mdy, and ymd, indicated in a separate field. The date format specified for the first set of data applies to all sets of data of a file.	The date format is dmy.
Permissible date separators are periods (.), dashes (-), and slashes (/).	The date separator is the period (.).
Permissible decimal separators are periods (.) and commas (,).	The decimal separator is the comma (,).
A decimal separator is mandatory for all decimals, even in the absence of decimal places.	Decimal separators are optional.

Market Data Import Format 2.0 (Flexible)

Field definition

Import of FX Rates

#	Name	Type	Mandatory	Comment
1	Prefix: d	char - 1	Yes	Enter "d" to mark the data set for the import of FX rates.
2	Date settings	char - 3	Yes	Permissible date conventions are dmy, mdy, and ymd.
3	Date	date	Yes	Date for which the FX rate is valid.
4	Currency	char - 3	Yes	ISO code for the currency of the FX rate.

#	Name	Type	Mandatory	Comment
5	Ask rate	decimal	No	Rate in relation to the group currency. When the ask rate is empty or ≤ 0 , it is automatically set to the mid rate.
6	Mid rate	decimal	Yes	Rate in relation to the group currency. The mid rate must be greater than 0.
7	Bid rate	decimal	No	Rate in relation to the group currency. When the bid rate is empty or ≤ 0 , it is automatically set to the mid rate.

Import of Implicit Volatilities (historical volatilities can be calculated in Coupa Treasury from FX rates)

#	Name	Type	Mandatory	Comment
1	Prefix: v	char - 1	Yes	Enter "v" to mark the data set for volatilities.
2	Date settings	char - 3	Yes	Permissible date conventions are dmy, mdy, and ymd.
3	Date	date	Yes	Date for which the volatility is valid.
4	Currency 1	char - 3	Yes	ISO code for the first currency of the volatility.
5	Currency 2	char - 3	Yes	ISO code for the second currency of the volatility.
6	Time range	integer	Yes	Time range for averaging.
7	Strike	decimal	Yes	Strike for averaging.
8	Volatility	decimal	Yes	Volatility value between currency 1 and currency 2.

Import of Interest Rates

#	Name	Type	Mandatory	Comment
1	Prefix: z	char - 1	Yes	Enter "z" to mark the data set for adding interest rates.
2	Date settings	char - 3	Yes	Permissible date conventions are dmy, mdy, and ymd.
3	Date	date	Yes	Date for which the interest rate is valid.
4	Currency	char - 3	Yes	Currency as ISO code.
5	Time range	integer	Yes	The number of days in the time range.
6	Period	char - 4	No	Any value available to select from the Period dropdown menu.
7	Interest rate in %	decimal	Yes	

Import of Interest Rate Volatilities

#	Name	Type	Mandatory	Comment
1	Prefix: i	char - 1	Yes	Enter "i" to mark the data set for adding interest volatilities.
2	Date settings	char - 3	Yes	Permissible date conventions are dmy, mdy, and ymd.
3	Date	date	Yes	Date for which the volatility is valid.

#	Name	Type	Mandatory	Comment
4	Currency	char - 3	Yes	Currency as ISO code.
5	Time range	integer	Yes	The number of days in the time range.
6	Period	char - 4	No	Any value available to select from the Period dropdown menu.
7	Interest rate in %	decimal	Yes	Volatility of the interest rate.

Import of Security Rates

#	Name	Type	Mandatory	Comment
1	Prefix: w	char - 1	Yes	Enter "w" to mark the data set for adding security rates.
2	Date settings	char - 3	Yes	Permissible date conventions are dmy, mdy, and ymd.
3	Date	date	Yes	Date for which the security rate is valid.
4	ISIN	char - 50	Yes	ISIN of the security.
5	Rate	decimal	Yes	Rate for the security for the date.

Import of Commodity Rates

#	Name	Type	Mandatory	Comment
1	Prefix: r	char - 1	Yes	Enter "r" to mark the data set for adding commodity rates.
2	Date settings	char - 3	Yes	Permissible date conventions are dmy, mdy, and ymd.
3	Date	date	Yes	Date for which the commodity rate is valid
4	Commodity	char - 3	Yes	Commodity rate as ISO code
5	Period	char - 4	Yes	Any value available to select from the Period dropdown menu.
6	Buying rate	decimal	Yes	Rate in relation to the group commodity currency.
7	Mid-marketrate	decimal	Yes	Rate in relation to the group commodity currency.
8	Selling rate	decimal	Yes	Rate in relation to the group commodity currency.

Import of Credit Spreads

#	Name	Type	Mandatory	Comment
1	Prefix: c	char - 1	Yes	Enter "c" to mark the data set for adding credit spreads.
2	Date settings	char - 3	Yes	Permissible date conventions are dmy, mdy, and ymd.
3	Date	date	Yes	Date for which the credit spread is valid.
4	Entity	char - 50	Yes	Abbreviation for the entity in Coupa Treasury.
5	Period	char - 3	Yes	Any value available to select from the Period dropdown menu.
6	Credit spread	decimal	Yes	Credit spread in basis points.

Functional Description

The function is located on the page **System > Market Data / Scenarios > Import**.

Required setting: on **System > System Settings > System Settings** under **Market Data**, select **Receive by File** or **Receive by Web**.

The import function can process text files coded in one of the following standards:

- ASCII
- Unicode

One file may contain information about FX rates, implicit volatilities, interest rates, interest rate volatilities, security rates, commodity rates and credit spreads.

Format Rules

The file may not contain any headers or format descriptions.

Each row in the file contains exactly one data set:

- ASCII Code 13: carriage return denotes the end of a data set.
- ASCII Code 10: new-line denotes the end of a data set.
- The last data set concludes by an end-of-file (EOF).

Permissible field separators are all non-numeric values, with the exception of the dash (-).

The field separator may not appear elsewhere within the sets of data.

Field separators must also be placed

- for fields of a fixed length.
- for optional fields left blank.

Field separators, date separators and decimal separators are detected automatically.

For decimal values:

- Permissible separators are commas (,) and periods (.).
- Separators are mandatory, even in the absence of decimal places.
- Thousands separators are not allowed.
- Negative amounts are marked with a minus sign (-). Spaces between the minus sign and the amount are allowed.
- Examples: **12345,99** or **-12345.00** or **12345**, or **0,0231**

For integer values:

- Decimal or thousands separators are not permitted
- Example: **12345**

Empty data sets are dismissed.

For text values, there are no quotation marks. The char value is the maximum number of characters for that field.

Days and months are always 2-digit values, whereas years are 4 digits. Date sequence may be dmy, mdy, or ymd (lower-case). Date separator may be slash (/), comma (,), or dash (-).

- Examples: **31.12.2021**, **12-31-2021**, **2021/12/31**

Example Data Sets

Import of FX Rates

```
d;dmy;26.09.2021;USD;1,3361;1,3391;1,3421
d;mdy;09-27-2021;USD;1,3362;1,3392;1,3422
d;ymd;2021/09/28;USD;1,3363;1,3393;1,3423
d|dmy|25.09.2021|USD|1,3364|1,3394|1,3424
d;dmy;22.09.2021;CHF;1,1;1,1;1,2
```

Import of Implicit Volatilities

```
v;dmy; 29.09.2021;CAD;EUR;30;0;;8,39
```

Import of Interest Rates

```
z;dmy; 29.09.2021;CAD;60;;2,46833
```

Import of Interest Rate Volatilities

```
i;dmy; 29.09.2021;CAD;30;;8,39
```

Import of Security Rates

```
w;dmy; 29.09.2021;6511811640;120,9551
```

Import of Commodity Rates

```
r;dmy; 29.09.2021;XAU;3M;675,465;675,465;675,465
```

Import of Credit Spreads

```
c;dmy; 29.09.2021;DB Frankfurt;5Y;135,52
```

Market Data Import Format 1.0 (Fixed)

Field definition

Import of FX Rates

#	Name	Type	Mandatory	Comment
1	Prefix: d	char - 1	Yes	Enter "d" to mark the data set for the import of FX rates.
2	Date	date	Yes	Date for which FX rate is valid.

#	Name	Type	Mandatory	Comment
3	Currency	char - 3	Yes	Currency of FX rate as ISO code.
4	Ask rate	decimal	No	Rate in relation to group currency; when the ask rate is left empty or ≤ 0 it will be populated with the mid rate.
5	Mid rate	decimal	Yes	Rate in relation to group currency; the mid rate cannot be ≤ 0 .
6	Bid rate	decimal	No	Rate in relation to group currency; when the bid rate is left empty or ≤ 0 it will be populated with the mid rate.

Import of Implicit Volatilities (historical volatilities can be calculated in Coupa Treasury from FX Rates)

#	Name	Type	Mandatory	Comment
1	Prefix: v	char - 1	Yes	Enter "v" to mark the data set for volatilities.
2	Date	date	Yes	Date for which volatility is valid.
3	Currency 1	char - 3	Yes	First currency of volatility as ISO code.
4	Currency 2	char - 3	Yes	Second currency of volatility as ISO code.
5	Time range	integer	Yes	Time range for averaging.
6	Strike	decimal	Yes	Strike for averaging.
7	Volatility	decimal	Yes	Volatility value between currency 1 and currency 2.

Import of Interest Rates

#	Name	Type	Mandatory	Comment
1	Prefix: z	char - 1	Yes	Enter "z" to mark the data set for adding interest rates.
2	Date	date	Yes	Date for which interest rate is valid.
3	Currency	char - 3	Yes	Currency as ISO code.
4	Time range	integer	Yes	The number of days in the time range.
5	Period	char - 4	No	Period; permitted values as they can be selected from dropdown menu in Coupa Treasury.
6	Interest rate in %	decimal	Yes	

Import of Interest Rate Volatilities

#	Name	Type	Mandatory	Comment
1	Prefix: i	char - 1	Yes	Enter "i" to mark the data set for adding interest volatilities.
2	Date	date	Yes	Date for which volatility is valid.
3	Currency	char - 3	Yes	Currency as ISO code.

#	Name	Type	Mandatory	Comment
4	Time range	integer	Yes	The number of days in the time range.
5	Period	char - 4	No	Period; permitted values as they can be selected from dropdown menu in Coupa Treasury.
6	Interest rate volatility	decimal	Yes	Volatility of interest rate.

Import of Security Rates

#	Name	Type	Mandatory	Comment
1	Prefix: w	char - 1	Yes	Enter "w" to mark the data set for adding security rates.
2	Date	date	Yes	Date for which security rate is valid.
3	ISIN	char - 50	Yes	ISIN of security.
4	Rate	decimal	Yes	Rate for security for stated day.

Import of Commodity Rates

#	Name	Type	Mandatory	Comment
1	Prefix: r	char - 1	Yes	Enter "r" to mark the data set for adding commodity rates.
2	Date	date	Yes	Date for which commodity rate is valid.
3	Commodity	char - 3	Yes	Commodity rate as ISO code.
4	Period	char - 4	Yes	Period; permitted values as they can be selected from dropdown menu in Coupa Treasury.
5	Buying rate	decimal	Yes	Rate in relation to group commodity currency.
6	Mid-market rate	decimal	Yes	Rate in relation to group commodity currency.
7	Selling rate	decimal	Yes	Rate in relation to group commodity currency.

Import of Credit Spreads

#	Name	Type	Mandatory	Comment
1	Prefix: c	char - 1	Yes	Enter "c" to mark the data set for adding credit spreads.
2	Date	date	Yes	Date for which credit spread is valid.
3	Entity	char - 50	Yes	Short name of Coupa Treasury entity.
4	Period	char - 3	Yes	Period; permitted values as they can be selected from dropdown menu in Coupa Treasury.
5	Credit spread	decimal	Yes	Credit spread in basis points.

Functional Description

The import function can process text files coded in one of the following standards:

- ASCII
- Unicode

One file may contain information about FX rates, implicit volatilities, interest rates, interest rate volatilities, security rates, commodity rates and credit spreads.

The function is located on the page **System > Market Data > Import**.

Required setting: **System > Administration > System Settings > Market Data** must be set to "File" or "File or Web".

Format Rules

The file may not contain any headers or format descriptions.

Each row in the file contains exactly one data set:

- ASCII Code 13: carriage return denotes the end of a data set.
- ASCII Code 10: new-line denotes the end of a data set.
- The last data set concludes by an end-of-file (EOF).

The data set field delimiter is the semicolon (;). The semicolon may not appear elsewhere within the sets of data.

Field separators must also be placed

- for fields of a fixed length.
- for optional fields left blank. .

For decimal values:

- Permissible separator is the comma (,).
- Separators are optional for numbers without decimal places.
- Thousands separators are not allowed.
- Negative amounts are marked with a minus sign (-). Spaces between the minus sign and the amount are allowed.
- Examples: **12345,99** or **-12345.00** or **12345** or **0,0231**

For integer values:

- Decimal or thousands separators are not permitted.
- Example: **12345**

Empty data sets are dismissed.

For text values, there are no quotation marks. The char value is the maximum number of characters for that field.

Days and months are always 2-digit values, whereas years are 4 digits. Date sequence is dmy (lower case).

Permissible date separator is the period (.).

- Example: **31.10.2021**

Example Data Sets

Import of FX Rates

d;26.09.2021;USD;1,3362;1,3392;1,3422

Import of Implicit Volatilities

v;29.09.2021;CAD;EUR;30;0,;8,39

Import of Interest Rates

z;29.09.2021;CAD;60;;2,46833

Import of Interest Rate Volatilities

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Import of Security Rates

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Import of Commodity Rates

r;29.09.2021;XAU;3M;675,465;675,465;675,465

Import of Credit Spreads

c;29.09.2021;DB Frankfurt;5Y;135,52