

OTC Derivatives

Customization Upgrade Guide
Release 5.9
Area: Derivatives & Structured Products

Latest version of this document

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Version history

Version / date	Section	Description of the change
5.9v0 / 18 October 2024		This is a new document.

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1 Introduction



This information relates only to the following areas:

- **FX OTC option (OOFX)** (for example, for the override of the SWIFT MT 306 barrier)
- **Dual currency investment (DCD)**

This document is for customization specialists. It describes the changes that you need to make to your customization when you upgrade to Avaloq Core release 5.9 to keep the existing functionality of the FX OTC option (OOFX) and dual currency investment (DCD) business types.

The upgrade steps are required because a new `pretty_lv1` field has been created in addition to the `lv1` field so that the ownership of the two fields can be separated. Clients must now use the new `pretty_lv1` field.

This new functionality is not considered to be a de-release because the existing `lv1` field has not been removed. However, many clients use the existing `lv1` field in their client customization sources, so there is a real risk of introducing regression. You must therefore check your customization and verify any possible regression before upgrading to Avaloq Core release 5.9.

1.1 What was the problem?

The problem affects FX barriers, which are used by the FX OTC option (OOFX) and dual currency investment (DCD) business types.

For exchange rates, there is an **internal interpretation** and an **external view** (bank or client). If these conventions differ (in other words, the exchange rate picture is not "1"), a conversion occurs between the two views. These values are stored in the `strike` and `pretty_strike` asset conversion fields.

The following screenshot shows an example where the exchange rate picture has been changed to a hypothetical value of "-100" to demonstrate how the internal and external views of exchange rates can differ and why conversions between these two views are necessary. The **Strike** and **Picture** fields are highlighted in red.

Conversion Information

Basics

Component Structure	OTC Option Forex	Group	
Exercise Type	Optional	Short/Long Factor	(long)

Option

Option type	Call	Option style	European
Barrier	Single Barrier Out, Down & Out, 168.05.		

Execution

Execution Calendar	At Maturity	Fixing Calendar	
Processing Calendar Location	Component	Fixing Calendar Location	
Start of conversion	01-SEP-2022	End of conversion	01-SEP-2022

Conversion

Conversion Type	Physical delivery
Underlying	JPY
Time Series	
Underlying Basket	
Payout	
Conversion Calculation Method	
Partial Conversion Quantity	
Conversion Ratio: Underly.	1
Option/Future	1
Minimum Exercise Quantity	

Strike

Strike Type	Plain	Strike Unit	Money
Strike	0.581226387678000581...	Strike Currency	CHF
Pretty Strike	172.05	Picture	-100
Valuation Factor		Valuation Currency	

In this case, the negative value illustrates a scenario where the internal interpretation and external view of the rate do not align, requiring the system to perform a conversion to maintain consistency between the calculations and client-facing displays.

For barriers, the barrier level is stored in a single field (**Level**) within the barrier list. Currently, the OOFX and DCD business types populate this field with the **external view** of the exchange rate. For more information about this subwindow, see *Assets - Business User Guide (doc ID: 3543)*.

The following screenshot shows the **Level** field in the **Barrier** subwindow highlighted in red.

[illegible]

Internal calculations such as asset evaluation, however, require an **internal interpretation** of the barrier level. To address this requirement, a new field, `pretty_lvl`, has been introduced. This means that all consumers of the old barrier `lvl` field must now be redirected to the new `pretty_lvl` field.

This screenshot shows the new **Pretty Barrier Level** field highlighted in red.

	Barrier Level	Pretty Barrier Level
23529412	0.595238095238095238095238095	168

1.2 Key changes

The following key changes have been made:

- The `pretty_lvl` field has been added to the following data dictionaries:
 - `ASSET_BARR` (DDIC)
 - `MEM_DOC_ASSET_BARR` (DDIC)
 - `DOC_TAB_ASSET_BARR` (DDIC)
- The `pretty_lvl` field now holds the external (client) view of the barrier level, while the existing `lvl` field is used for the internal (bank) interpretation of the exchange rate.
- The existing barrier level values (`lvl`) have been migrated to the new `pretty_lvl` field for the OOFX and DCD business types.
- All kernel sources, for example INTF definitions and SWIFT messages, have been redirected to use the new field.
- The UI fields in OOFX and DCD have been updated to reflect this change. There is no impact on the user because the values displayed remain the same.

1.3 Upgrade steps



These upgrade steps apply only to the **FX OTC option (OOFX)** and **dual currency investment (DCD)** business types.

You must follow these upgrade steps:

- ["Step 1: Redirect to the new field \(OOFX and DCD only\)" below](#)
- ["Step 2: Make specific adjustments" below](#)

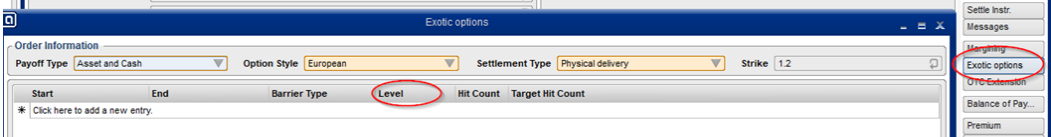
Step 1: Redirect to the new field (OOFX and DCD only)

For the OOFX and DCD business types, you must redirect all consumers of the `lvl` field to the new `pretty_lvl` field.

This redirection is necessary because the `lvl` field will now contain the internal rate interpretation.

Step 2: Make specific adjustments

This table describes specific areas that must be adjusted for the OOFX and DCD business types.

Area	Description
UI adjustments	<p>If the UI (INTF) definition has been manually overridden in the Exotic options subwindow, ensure that the field now points to the new <code>pretty_lvl</code> value.</p> <p>This screenshot shows the Exotic options subwindow button and the Level field highlighted in red.</p> 

Advices	<p>Replace the use of <code>barr.lvl</code> with <code>barr.pretty_lvl</code>, or a combination of both, prioritizing <code>pretty_lvl</code>.</p> <p>Here is some example code:</p> <pre>booking.col_3.val := barr.barr_type.name ' @ ' coalesce(barr.pretty_lvl, barr.lvl);</pre>
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SWIFT messages	<p>For SWIFT MT306 messages, if <code>SWIFT_MT306_BARRIER_BLOCK</code> or <code>SWIFT_MT306_BARR_LIB</code> have been overwritten, ensure they reference the new <code>pretty_lvl</code> field.</p> <p>The following screenshot shows this change.</p> 
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Area	Description
Reports	<p>Update any client-specific reports to reference the new <code>pretty_lvl</code> field, particularly the following:</p> <ul style="list-style-type: none">• TASK_BARR_HIT• TASK_POS_LIST_DCD• TASK_POS_LIST_OOFX