Financial Instruments

Customization Upgrade Guide
Release 5.8
Area: Market Data

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Version history

Version / Date	Section	Description of the change
5.8v1 12 September 2024	• "Change to eval_css.calc_rfig function for futures" on page 6	Added new section.
5.8v0 / 29 April 2024		This is a new document.

Contents

1 Introduction

This topic is for customization specialists. It describes changes that you may need to make to your existing customization **before** you upgrade to Avaloq Core release 5.8.

1.1 Replacement of EVAL_SCEN_CSS by EVAL_CSS

You can opt to update your customization for this change before upgrading to Avaloq Core release 5.8:

- In releases 5.2 to 5.6, the Asset Evaluation Engine supports both the new and the old customization. By default it continues to use the old customization, but you can set the `avq.ae` base parameter's `use_legacy_param` item to false to enable the new customization described in this section.
- Starting with release 5.7, the new customization will automatically be used.
- For releases 5.7 and above, both parameters need to be set to false. **This is mandatory for all clients.**

The following changes in customization are included in the Avaloq Asset Evaluation Engine in release 5.8:

- The source EVAL_SCEN_CSS is removed and replaced by the EVAL_CSS source.
- The task **Calculate evaluation scenarios** (id: 1847; task_eval_scen) no longer exists. It was originally used to improve performance, but is no longer needed. There is no replacement.
- The checkbox `use pre-calculated values` on task **Evaluation of financial products program** (id: 1848; task_eval) is removed because task **Calculate evaluation scenarios** no longer exists.
- The following `eval_css` functions need to be overwritten in customization, as the return values of ‘null’ in kernel are no longer mapped automatically to the kernel models:
  - `cf_mdl_id`: must return `code_eval_mdl.dcf`. At the moment there is no other model available.
  - `opt_mdl_id`: must return the appropriate option pricing models, depending on the asset class, for example `code_eval_mdl.bs` for equity, commodity and FX options.

In the past, the Asset Evaluation Engine had a lot of performance and memory problems associated with the use of the MEM_DOC_ASSET data dictionary by the EVAL_SCEN_CSS source. The problems were caused by the fact that the asset order was loaded into memory.

To solve these problems, in Avaloq Core release 5.8 we:

- Changed the data dictionary used by the Asset Evaluation Engine's customization from MEM_DOC_ASSET to a new data dictionary, MEM_ASSET
- Replaced the CSS source used by the Asset Evaluation Engine from EVAL_SCEN_CSS to a new source, EVAL_CSS

The new MEM_ASSET data dictionary is faster because asset orders are no longer loaded into memory. It is accessed by the new customization source EVAL_CSS.

For all functions of the new EVAL_CSS:

- The `i_doc_asset` parameter from the MEM_DOC_ASSET data dictionary is replaced by `i_asset` from the new MEM_ASSET data dictionary
- The `i_eval_date` parameter from the MEM_DOC_ASSET data dictionary is not present in the new MEM_ASSET data dictionary

The following EVAL_SCEN_CSS functions are removed completely:

Function removed	Explanation
`cf_hor_in_years`	Perpetuals need to have a call or put date otherwise no evaluation is possible
`use_par_flo`	The new Avaloq kernel code now behaves as if `use_par_flo` is set to false
`notnl_date_expr`	Depended on `use_par_flo`

The following functions are renamed:

Old function name in EVAL_SCEN_CSS	New function name in EVAL_CSS
`pb_rfig_intr_calc_method_id`	`intr_calc_method_id`
`pb_rfig_compd_mtd_id`	`compd_mtd_id`
`pb_rfig_src_price_type_id`	`src_price_type_id`
`vlt_struct_collect_id`	`vsc_id`

The following functions have new default behaviour:

Function name	New default setting in EVAL_CSS
`opt_mdl_id`	Null
`alw_vlt_fallbk`	False
`intr_calc_method_id`	Null
`compd_mtd_id`	Null
`src_price_type_id`	Null

1.2 Change to eval_css.calc_rfig function for futures

In ACP 5.8, the simple delta model for futures (evaluation model `smpl_delta`) now allows you to calculate the future’s present value based on the underlying price and the delta of the future. The present value is stored as usual in the pv market data domain.

In the `eval_css.calc_rfig` function for futures, for the market data domain, you now have to return either "delta" or "pv", but not both together. If you return both, you will get an error message in ACP 5.8.

Here's the function definition:

```
function calc_rfig(
    i_asset                                         mem_asset
   ,i_calc_md_scen_id                               id table code_md_scen
   ,i_md_domn_id                                  id table code_md_domn
  ) return Boolean
  is begin
    if i_asset.class(btt.asset.obj_extn.ass_type_id) in
         (btt.asset.obj_extn.ass_type.class.fuin, btt.asset.obj_extn.ass_type.class.fubo,
          btt.asset.obj_extn.ass_type.class.fuco) then
       return i_md_domn_id = code_md_domn.delta;
    else
     --  .....
    end if;
exception
   when others then
      err.raise_fa('eval_css.calc_rfig('||i_asset||', '||i_calc_md_scen_id||', '||i_md_domn_
id||')');
end calc_rfig;
```