GLASS Future Development

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Public

Correlation Views

Correlation Views

Background to specify your alternative correlations assumptions

- Informed investment decisions requires processing vast amounts of complex data
  - The Ortec Finance Scenario set (OFS) powered by the Dynamic Scenario Generator (DSG) software serve as powerful tool in investment decision making
- Correlations are a vital component in investment decision making
  - Dictates how risk aggregates over portfolio level
- Ability to adjust correlations is highly useful for both stress testing and imposing alternate views
- Due to current DSG setup, so far only able to adjust risk and return expectations
- Developed and validated methodology to also impose correlation views on scenarios

Correlation Views

Methodology

- Start from the Ortec Finance house view scenarios
- Standardize all assets and economic variables (i.e. set mean to zero, volatility to one, and pair-wise correlations to zero)
- Next, apply desired correlations to the adjusted scenarios (using the Cholesky decomposition of target correlation matrix)
- Finally, calibrate the scenarios to the desired means (shift) and volatilities (scale)

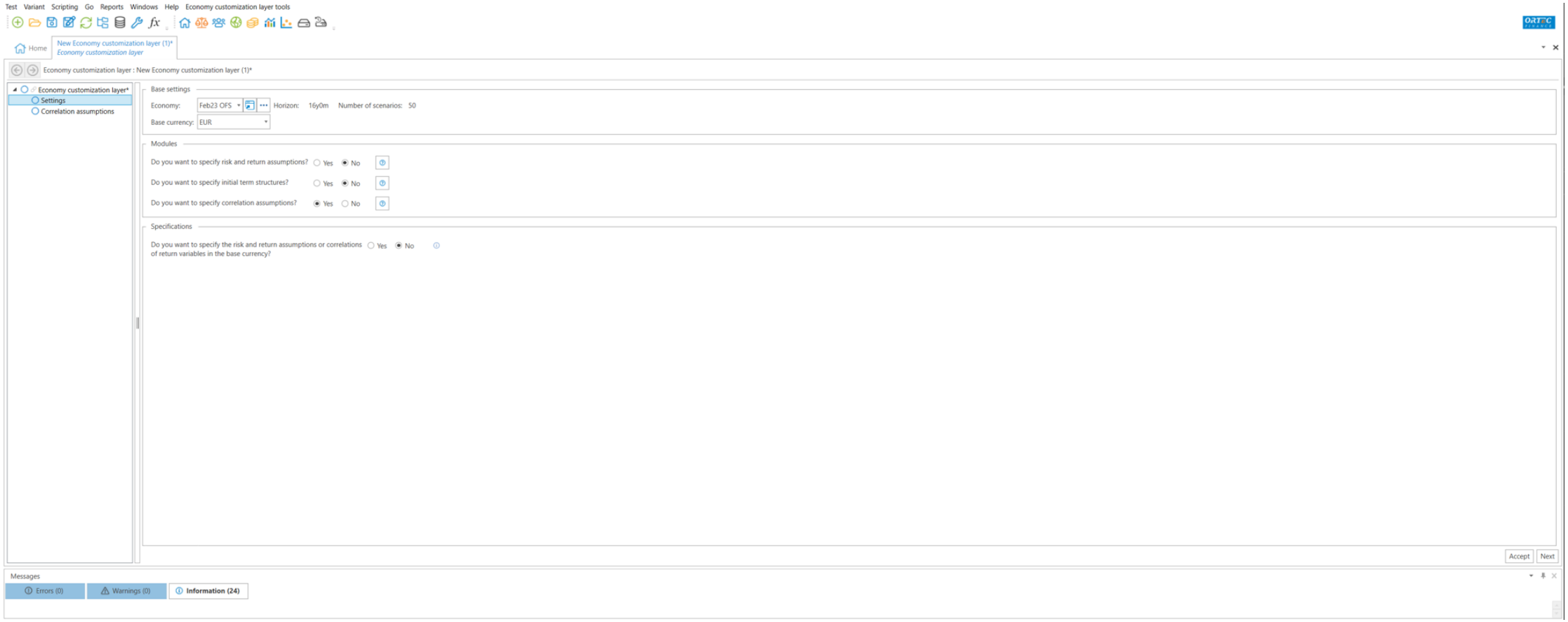
Correlation Views

Advantages

- Able to align with alternate views
- Impact on risk and return expectations is negligible
- Scenario correlation characteristics remain intact with respect to original scenarios
  - Changes in correlation views consistently impact tail correlations as well as term structure of correlations

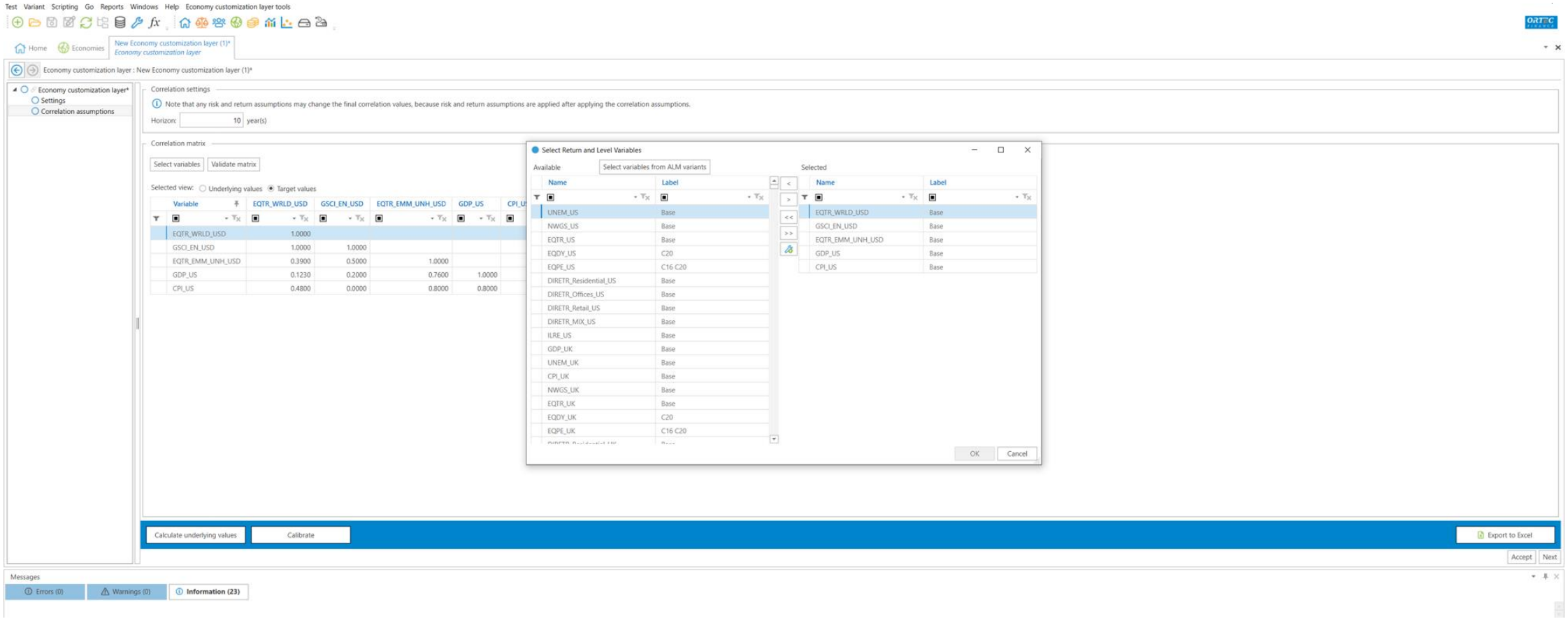
GLASS

ECL


Test Variant Scripting Go Reports Windows Help Economy customization layer tools
Home
New Economy customization layer (1)*
Economy customization layer
Economy customization layer : New Economy customization layer (1)*
Economy customization layer*
Settings
Correlation assumptions
Base settings
Economy: Feb23 OFS Horizon: 16y0m Number of scenarios: 50
Base currency: EUR
Modules
Do you want to specify risk and return assumptions? Yes No
Do you want to specify initial term structures? Yes No
Do you want to specify correlation assumptions? Yes No
Specifications
Do you want to specify the risk and return assumptions or correlations of return variables in the base currency? Yes No
Accept
Next
Messages
Errors (0)
Warnings (0)
Information (24)

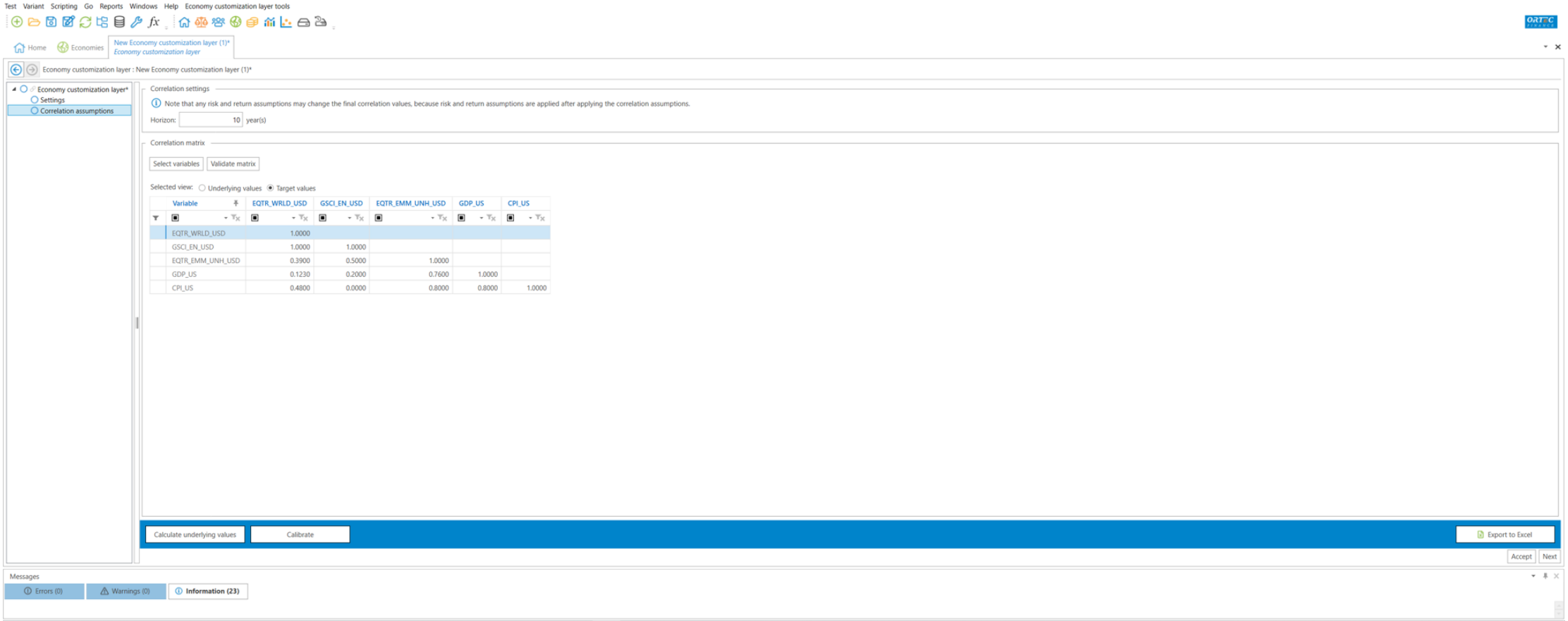
GLASS

Selecting variables



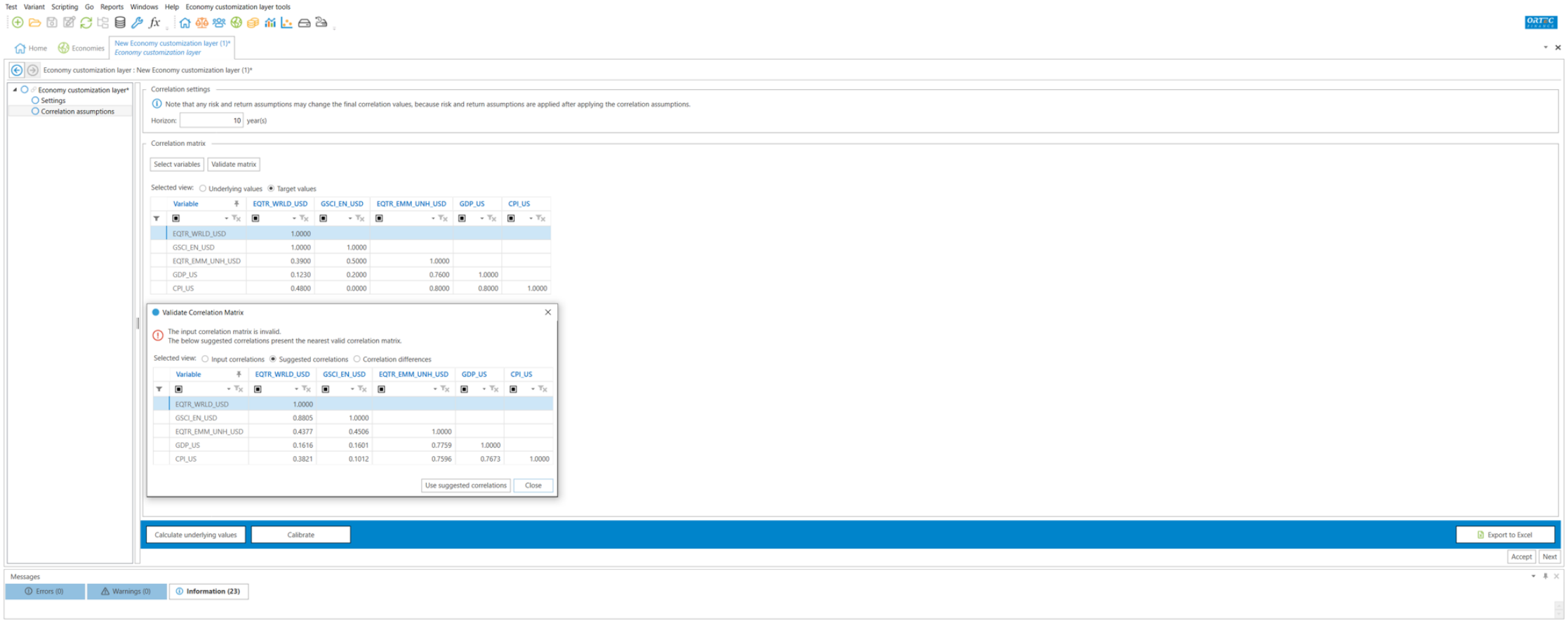
GLASS

Specifying correlation views



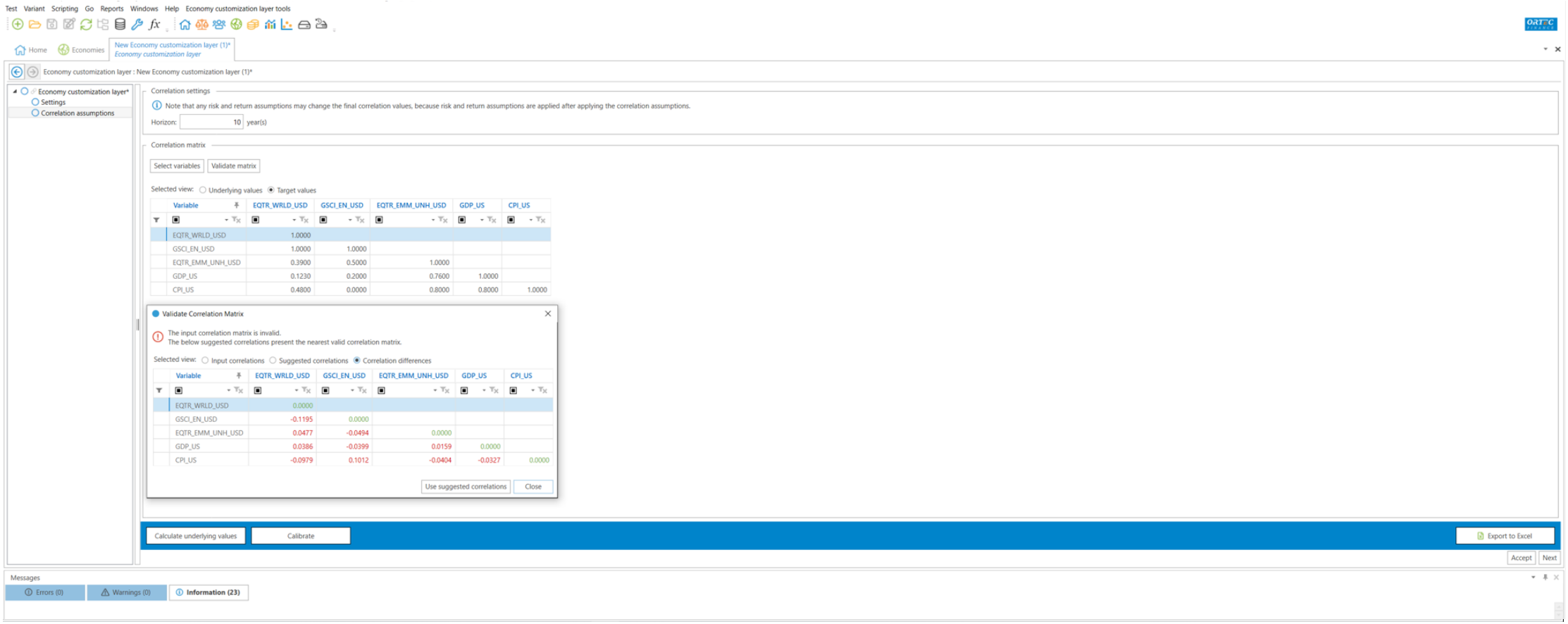
GLASS

Validating correlation views



GLASS

Validating correlation views



GLASS Workflow automation

powered by API

Workflow automation

Goal

- Automate repetitive GLASS-related workflows
  - Primary focus on:
    - Monthly/Quarterly processes,
    - Automated reporting layers outside of GLASS
- Improve efficiency and employee satisfaction, reduce costs and manual errors
  - No more manual updating of fields in Glass
  - Fully automated process and integrated workflow by means of API functionality

API supports an integrated workflow

Input

- Your data warehouse contains up to date input values
- Scheduled Call API will retrieve new values and send it over the internet to the Glass API which automatically updates Glass

Simulation Glass API starts and monitors simulations

Output Glass API retrieves output and sends it back, so it can be stored in your data warehouse

Conditions

Conditions

- ✓ You have the desire to automate repetitive GLASS-related work (e.g., reporting related)
- ✓ You like to automate your reporting tools with GLASS output
- ✓ You are an Ortec Finance Hosting client
- ✓ You have the internal resources to connect GLASS input and output to internal data and/or reporting platforms

First clients implemented as of early October 2020

- Lead time is around 8 weeks (will be a lot faster once cloud native)

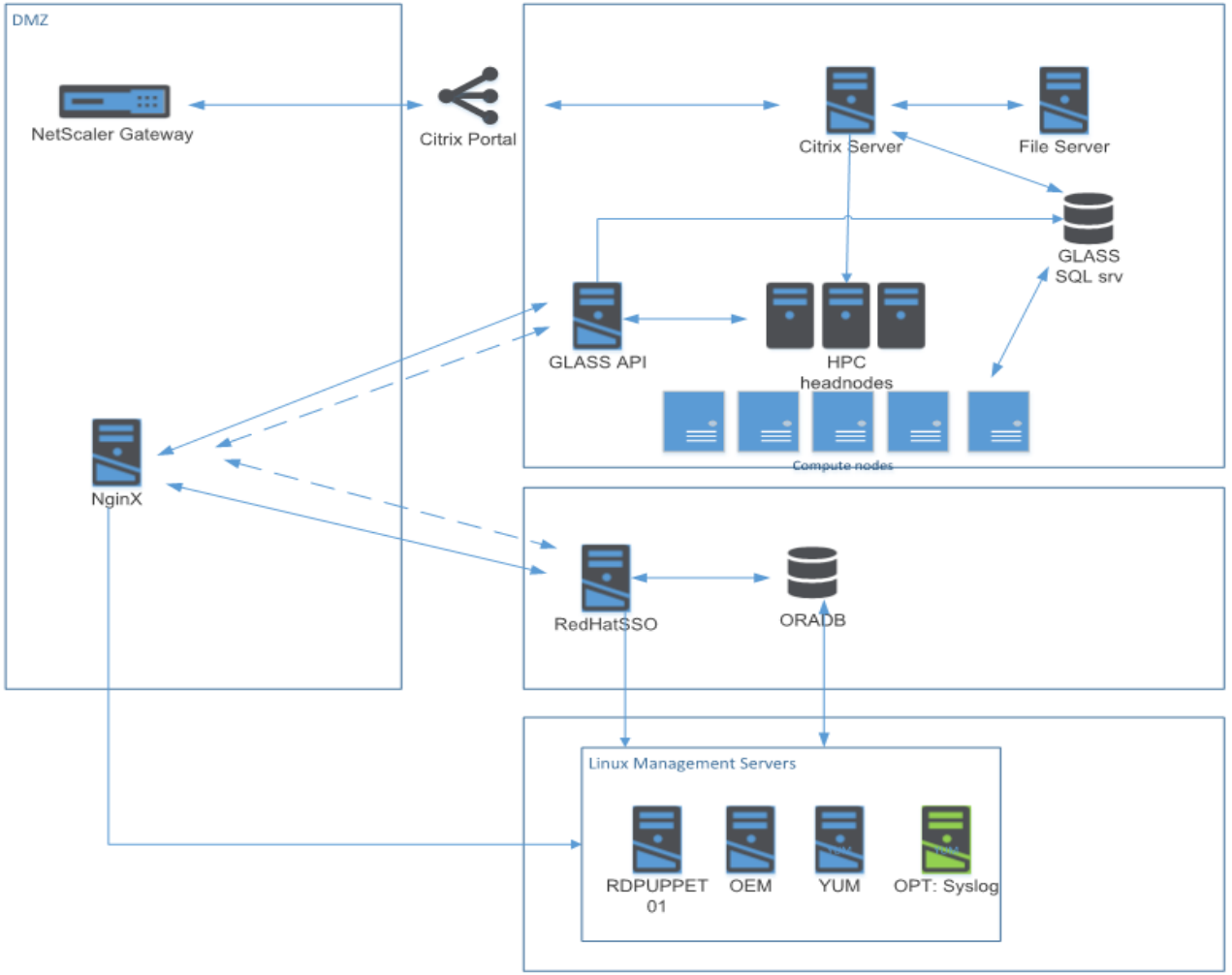
Pricing

- 15% of Glass license fee (excl. hosting)

Technical infrastructure

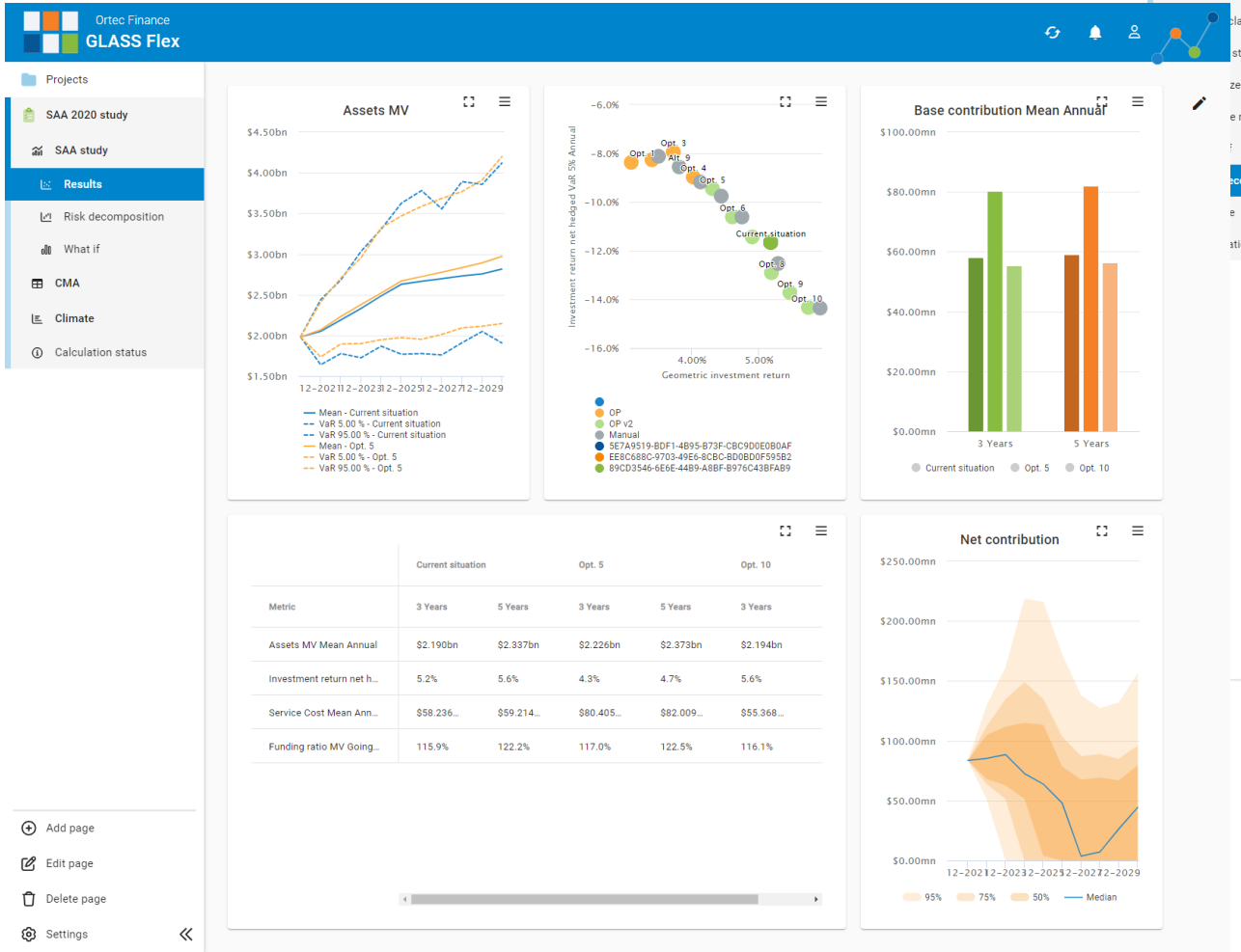
Schematic overview

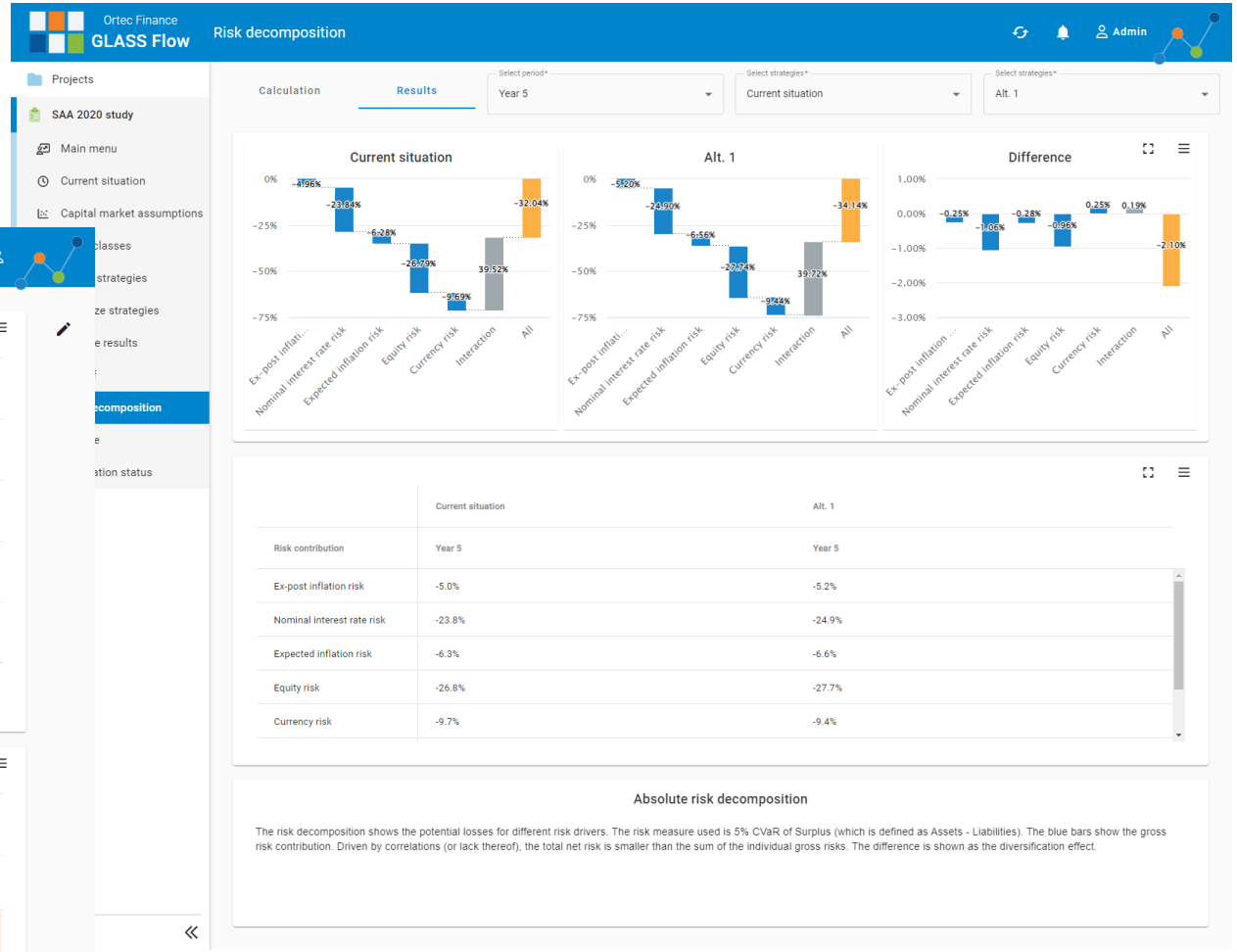
- Communication via Web-proxy server
- API runs on dedicated IIS website
- Authorization via Token Server with RHSSO (via OAuth 2.0)



GLASS web-based modules

Vision I





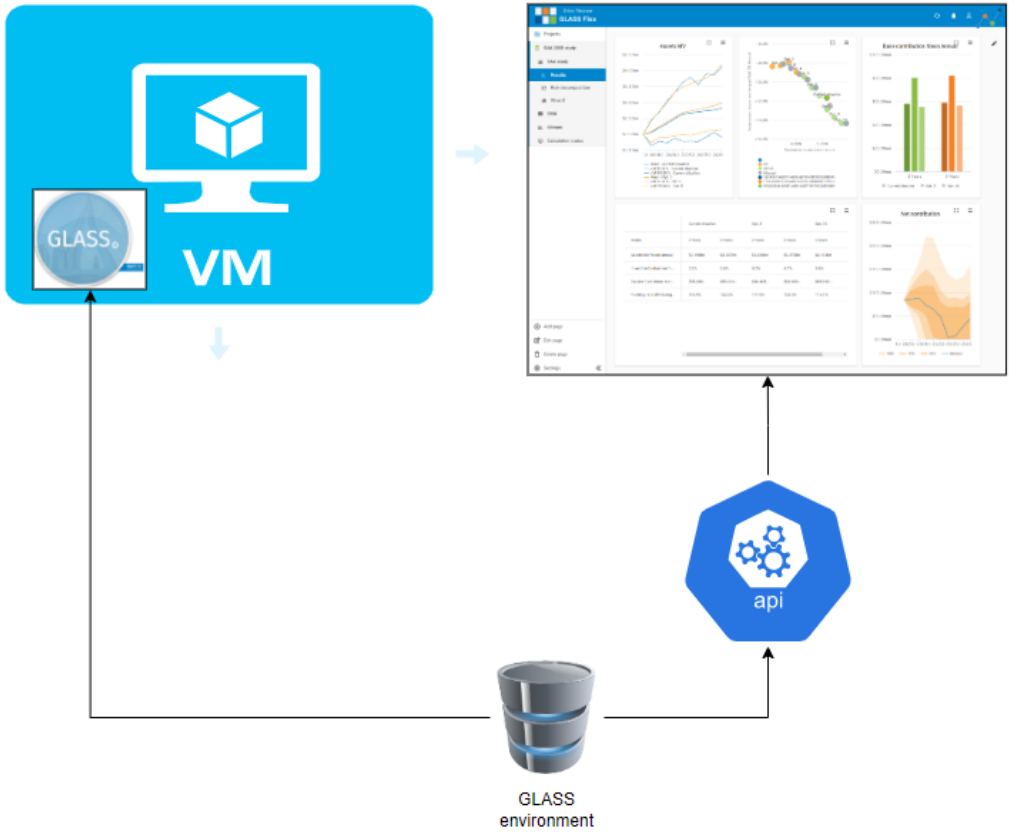
Risk contribution	Current situation Year 5	Alt. 1 Year 5
Ex-post inflation risk	-5.0%	-5.2%
Nominal interest rate risk	-23.8%	-24.9%
Expected inflation risk	-6.3%	-6.6%
Equity risk	-26.8%	-27.7%
Currency risk	-9.7%	-9.4%

- GLASS is an advance tool with numerous parameters
- Impossible to make just web-based

Vision II

How it works (very stylized)

- Start with a calibrated model
- Only expose relevant parameters
- Advantage that also Glass Desktop can be used



Poll

Go to https://www.menti.com, code 6200 2296

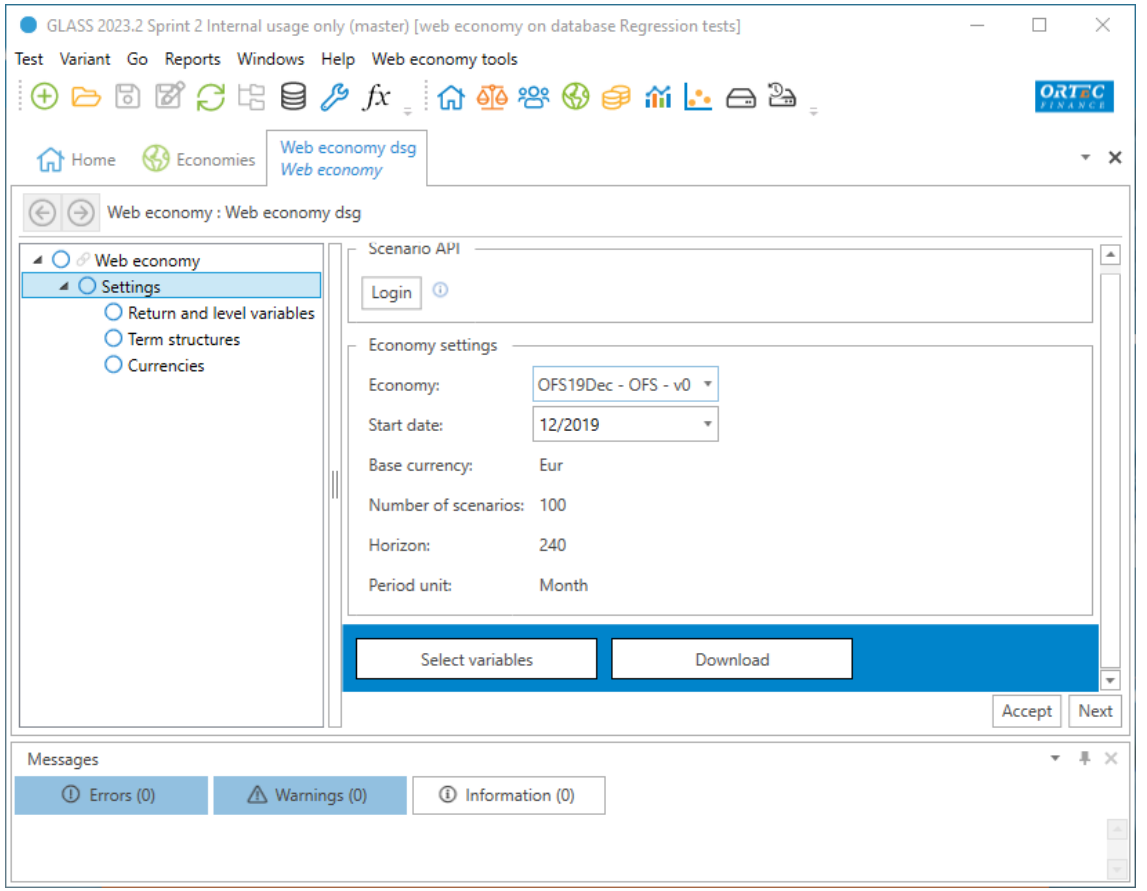
- Do you always use GLASS in the same way?
  - I usually play around with all kinds of parameters, there is no common ground to be found
  - I basically change same parameters every time
- How much flexibility do you prefer?
  - A model with a lot of configuration options that gives much flexibility
  - A model with a far less configuration options designed for a specific use case
- How do you like to use GLASS?
  - I really like the desktop application
  - I prefer using a web-based application

Web Economy

Vision III

Web Economy & ECL

- Economy generator DSG is considered as too complex for most clients
- Longer term vision is to replace it with
  - Web Economy (just download the OFS)
  - Economy customization layer to create your own views on top of it
- DSG is then used only internally for OFS production
- Far better suited for web-based usage



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