USER GUIDE

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PoMaTo
Portfolio Management Tool

=== PoMaTo User Guide Metadata ===

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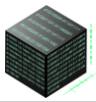


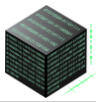
Preface

PoMaTo (Portfolio Management Tool) is an institutional-grade investment platform built to empower both individual investors and professionals with advanced portfolio management capabilities.

Integrating automation, performance optimization, and intuitive design, PoMaTo delivers tools once reserved for hedge funds and asset managers. Its streamlined interface and powerful analytics support efficient management across a wide range of investment strategies.

PoMaTo features a suite of proprietary optimizers tailored to diverse approaches, including Long Only, Long-Short, Market Neutral, and Index Replication. The platform supports the entire investment lifecycle—from portfolio construction and execution to ongoing monitoring and reporting—and accommodates multiple asset classes, including equities, ETFs, bonds, commodities, forex, and cryptocurrencies.

This user guide provides a step-by-step walkthrough of all **PoMaTo** features and functionalities, serving as a reference for effective and informed portfolio management.



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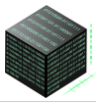


1 Before you Begin

1.1 Input Data

In PoMaTo, whenever a numeric value is required for percentages (such as portfolio weights, risk limits, or constraints), you must enter the value on a **decimal scale between 0 and 1**. Eg

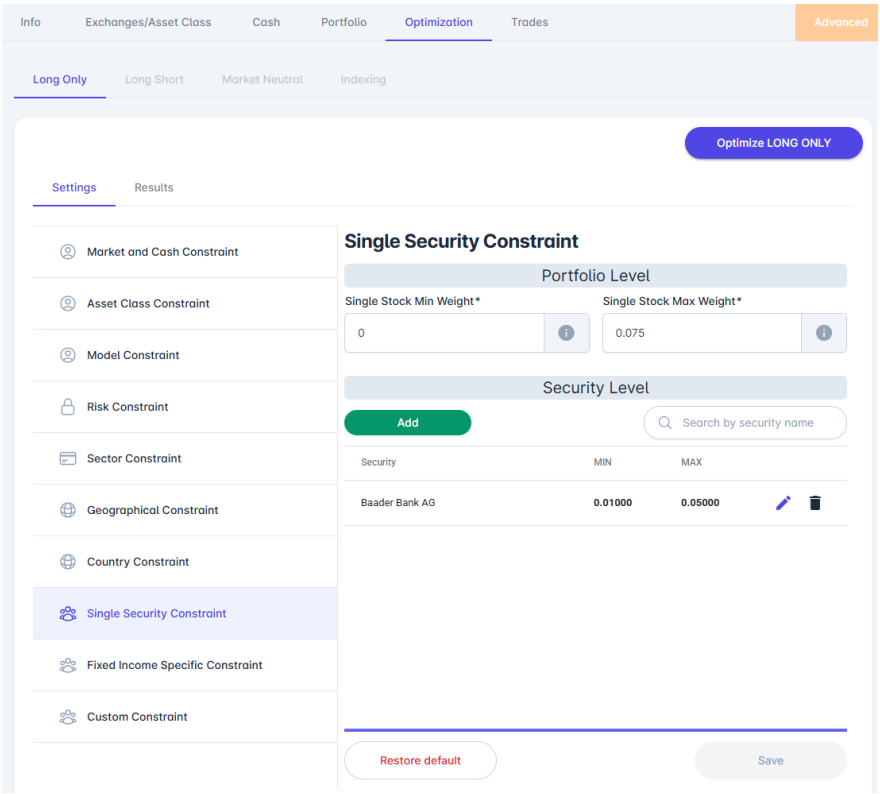
- **0** = 0%
- **0.5** = 50%
- **1** = 100%

This format applies **throughout the platform** in all numeric input fields, ***ensuring precision*** and consistency in calculations. For example:
If you want to set a **maximum single stock weight** of 7.5%, you must enter **0.075** (i.e 7.5/100 = 0.075).

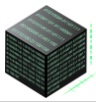
- Example: ***Single Security Constraint***

In the screenshot below, at ***Portfolio Level***, the *Single Stock Min Weight* is set to **0**, meaning 0%.
The *Single Stock Max Weight* is set to **0.075**, meaning 7.5%.
Similarly, under ***Security Level***, "Baader Bank AG" has a:

- minimum of **0.01000** (1%) and a
- maximum of **0.05000** (5%).



Tip: Always double-check your decimal entries. Entering **0.5** instead of **0.05** changes the value from 5% to 50%.



1.2 PoMaTo Master Glossary

Asset Class
A group of similar types of investments, such as equities (stocks), bonds, ETFs, commodities, currencies, or cash. PoMaTo supports multiple asset classes, with equities, ETFs, bonds, indexes, and FX live, and crypto/commodities planned.

Benchmark
A standard or index (e.g., S&P 500, FTSE 100) used to measure a portfolio's performance. PoMaTo can run optimizations against chosen benchmarks.

Bloomberg-Like ID
A synthetically generated identifier formatted for compatibility with Bloomberg workflows (e.g., XXX YY). **Not** an official Bloomberg identifier — PoMaTo creates this format when needed, based on exchange symbols and country codes.

BND (Bond)
A debt security where you lend money to a government or company in exchange for regular interest payments and repayment at maturity.

CCY (Currency)
Represents cash in a specific currency.

CMD (Commodity)
A raw material or primary agricultural product that can be bought and sold, such as gold or oil.

CRY (Crypto)
A digital or virtual currency secured by cryptography.

CUSIP (Committee on Uniform Securities Identification Procedures)
A 9-character alphanumeric code issued by CUSIP Global Services (CGS) for securities in the United States and Canada. PoMaTo does **not** create official CUSIPs. If no CUSIP exists, PoMaTo may generate an internal placeholder code.

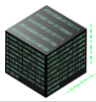
Direct Indexing
A strategy that seeks to replicate an index by directly holding its constituent securities rather than investing via an ETF or mutual fund.

EQY (Equity)
Represents ownership in a company, typically in the form of stock.

ETF (Exchange-Traded Fund)
A fund that trades on a stock exchange and holds a basket of assets (e.g., stocks, bonds, commodities) for diversification.

FOREX (Investment Position)
A currency position held as part of an active investment strategy, represented by a currency pair (e.g., USD_EUR). Classified as a financial instrument within PoMaTo.

FRX (Forex)
Represents foreign exchange transactions within PoMaTo, either as cash lines or as an asset class.



FUT (Futures)
A standardized legal agreement to buy or sell an asset at a predetermined price at a specified time in the future.

FX (Cash Management)
Cash held in different currencies purely to support trading activity (not as an investment). Managed as individual cash lines.

Google Finance ID
An identifier used in Google Finance, in the format XX:YYY (exchange code: symbol). Official Google Finance IDs are issued by Google. If unavailable, PoMaTo generates a **synthetic Google Finance-like ID**.

Hybrid Relative Value Equity Model (RVEM)
PoMaTo's proprietary strategy combining fundamental bottom-up stock analysis with systematic quantitative techniques to identify mispriced equities while managing risk.

IDX (Index)
A collection of securities representing a segment of the market (e.g., FTSE 100). Used for benchmarking or index replication.

Index Replication
A strategy aiming to match the performance of a market index by holding similar securities in similar proportions.

ISIN (International Securities Identification Number)
A 12-character alphanumeric code issued by official national numbering agencies to uniquely identify a security worldwide. PoMaTo does **not** create official ISINs. If a security does not have one, PoMaTo generates a **synthetic ISIN-like code** for internal use only.

LO (Long Only)
An investment strategy where you only buy assets expected to rise in value; no short selling.

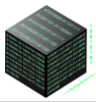
Long-Short (130/30 Strategy)
A portfolio that is 130% long (buying securities expected to rise) and 30% short (selling borrowed securities expected to fall), keeping net market exposure at 100%.

Market Neutral (MN)
A strategy aiming to remove market risk by balancing long and short positions so returns depend mainly on security selection.

OPT (Options)
A financial derivative giving the buyer the right, but not the obligation, to buy or sell an asset at a set price before a specified date.

Optimization
PoMaTo's process of determining the best asset mix for a given objective while respecting constraints such as sector, geography, or cash levels.

Portfolio Rebalancing
Adjusting holdings to maintain the desired asset allocation over time.



PoMaTo
PoMaTo stands for Portfolio Management Tool. It's the 'Po' from Portfolio, the 'Ma' from Management and the 'To' from Tool.

Reuters-Like ID
A synthetically generated identifier formatted for compatibility with Reuters/Refinitiv workflows (e.g., XXX.YY). **Not** an official Reuters identifier — PoMaTo creates this format when needed, based on symbol and exchange data.

Risk Management
PoMaTo tools and settings that limit exposure, control volatility, and prevent concentration in single assets or sectors.

SEDOL (Stock Exchange Daily Official List)
A 7-character alphanumeric code issued by the London Stock Exchange to identify securities in the UK and Ireland. PoMaTo does **not** create official SEDOLs. If no SEDOL exists, PoMaTo may generate an internal placeholder code.

Ticker Symbol (Ticker)
A unique code assigned to a security for trading on an exchange (e.g., AAPL for Apple Inc.).

Trading Execution
The process of placing and completing buy/sell orders. PoMaTo integrates with brokers for one-click execution.

Volatility
The degree of variation in an asset's trading price over time.

Weighting
The percentage of the portfolio allocated to a given asset.

Yahoo Finance ID
An identifier used in Yahoo Finance, in the format XXX.YY (symbol.exchange). Official Yahoo Finance IDs are issued by Yahoo. If unavailable, PoMaTo generates a **synthetic Yahoo Finance-like ID**.

1.3 Abbreviations in the App

Codes used in PoMaTo to classify securities:

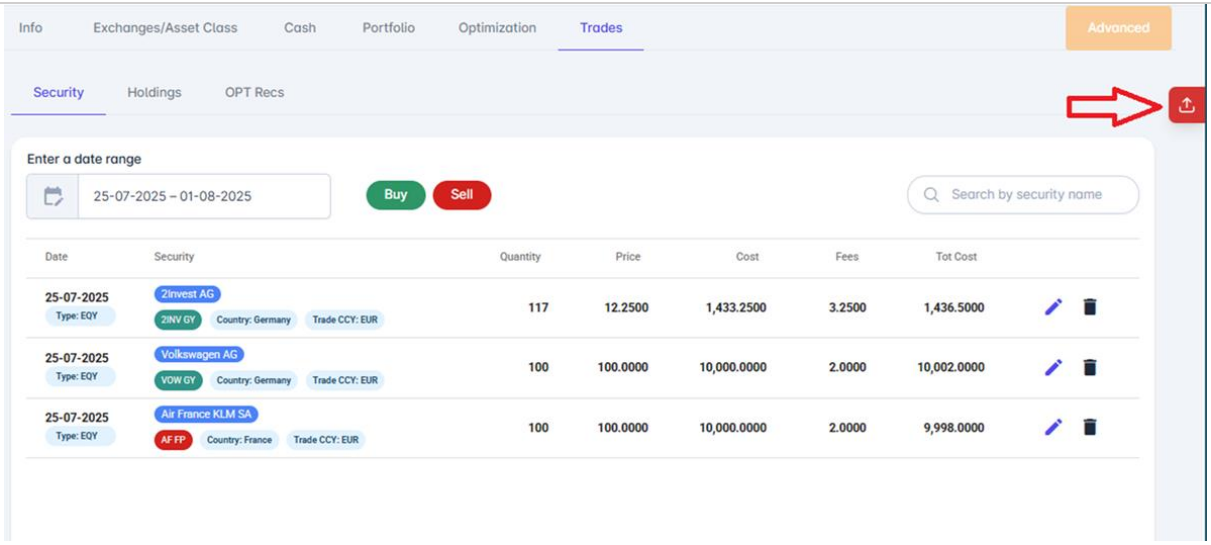
Abbreviation	Meaning
NAV	Net Asset Value — total portfolio value including all holdings and cash.
P&L	Profit and Loss — financial gain or loss from investments.
% P&L	Profit and Loss expressed as a percentage.
Var %	Value at Risk as a percentage of portfolio value.
Tot Cost	Total Cost — combined acquisition cost including fees.
FX	Foreign Exchange — currency transactions (cash or investment).
CC	Cash Change — entry for recording manual cash adjustments.
+CC / -CC	Add (+) or subtract (−) a cash change.
ITD	Inception-to-Date — performance since portfolio creation.
YTD	Year-to-Date — performance since the start of the current year.
QTD	Quarter-to-Date — performance since the start of the current quarter.
MTD	Month-to-Date — performance since the start of the current month.

1.4 The Red Side Button

In the PoMaTo interface, a **red side button** may appear on the right edge of the screen. This button indicates that additional context-specific actions or resources are available for the section being viewed. Selecting the button opens a quick-access panel that can:

- Display relevant guidance or instructions for the current screen.
- Provide downloadable templates for importing data (e.g., portfolio holdings, transaction history).
- Offer links to related help topics within the PoMaTo User Guide.

The red side button is only visible when additional actions are available for the active page.


Info
Exchanges/Asset Class
Cash
Portfolio
Optimization
Trades
Advanced
Security
Holdings
OPT Recs
Enter a date range
25-07-2025 – 01-08-2025
Buy
Sell
Search by security name
Date
Security
Quantity
Price
Cost
Fees
Tot Cost
25-07-2025
Type: EQY
2invest AG
2INV GY
Country: Germany
Trade CCY: EUR
117
12.2500
1,433.2500
3.2500
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25-07-2025
Type: EQY
Volkswagen AG
VOW GY
Country: Germany
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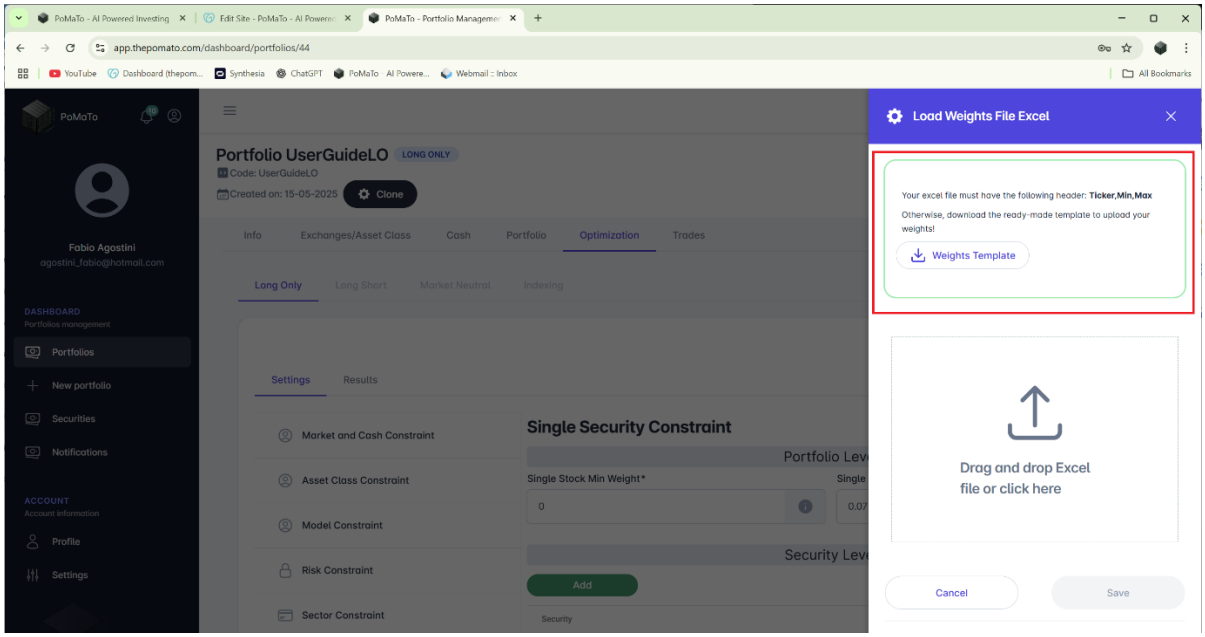
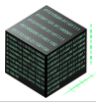

app.thepomato.com/dashboard/portfolios/44
PoMaTo
Fabio Agostini
DASHBOARD
Portfolios
New portfolio
Securities
Notifications
ACCOUNT
Profile
Settings
Portfolio UserGuideLO
LONG ONLY
Code: UserGuideLO
Created on: 15-05-2025
Clone
Info
Exchanges/Asset Class
Cash
Portfolio
Optimization
Trades
Long Only
Long Short
Market Neutral
Indexing
Settings
Results
Market and Cash Constraint
Asset Class Constraint
Model Constraint
Risk Constraint
Sector Constraint
Single Security Constraint
Portfolio Lev
Single Stock Min Weight*
Security Lev
Add
Load Weights File Excel
Your excel file must have the following header: Ticker,Min,Max
Otherwise, download the ready-made template to upload your weights!
Weights Template
Drag and drop Excel file or click here
Cancel
Save



2 Quick Guide

2.1 Introduction

Provides an overview of the data range and capabilities available in **PoMaTo**.

2.2 Portfolio Creation & Strategy Setup

Covers the process for creating a new portfolio, including the definition of investment strategy, strategy type, benchmark selection, and base currency. This foundational setup informs every subsequent action within the platform.

2.3 Forex vs FX

PoMaTo supports multi-currency portfolios, with foreign cash lines managed as **FX** for trading needs or as **FOREX** when part of an active investment strategy. FX impacts NAV through exchange rates, while FOREX positions are tracked as currency pairs.

2.4 Managing Portfolio Cash

PoMaTo enables efficient replication and recording of deposits and withdrawals made with banks, brokers, or custodians. This functionality ensures that the optimizer and reporting tools operate using accurate, up-to-date data. Proper cash management is essential for maintaining investment discipline and supporting realistic portfolio adjustments.

2.5 Portfolio Monitoring

Provides step-by-step instructions for monitoring portfolios, including understanding key metrics such as performance, composition, characteristics, and risk statistics.

2.6 Optimizing the Portfolio

PoMaTo's portfolio optimization balances risk and return through diversification across assets, sectors, and regions. Investors can choose from four proprietary algorithms with customizable settings and constraints to align portfolios with their goals while preventing over-concentration.

2.7 Run the Optimizer

Describes how to define constraints and preferences before running the optimizer, including the use of custom data inputs and other parameters that guide the optimizer to construct a portfolio aligned with strategic objectives.

2.8 Run the Optimizer

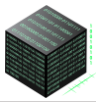
Once all parameters are set, the optimizer can be executed. The system solves for the mathematically optimal portfolio—balancing risk and return—while respecting all specified constraints. The output is a recommended allocation tailored to the investment rules provided

2.9 Trading

Trading activity can be recorded manually or transactions can be bulk uploaded to maintain an up-to-date portfolio

2.10Advanced Functions

Advanced tools include Portfolio Edit, Missing Start Flow, and Downloadable Data. Use these features for portfolio maintenance, exception handling, and exporting data for further analysis or external reporting.



3 Introduction to PoMaTo

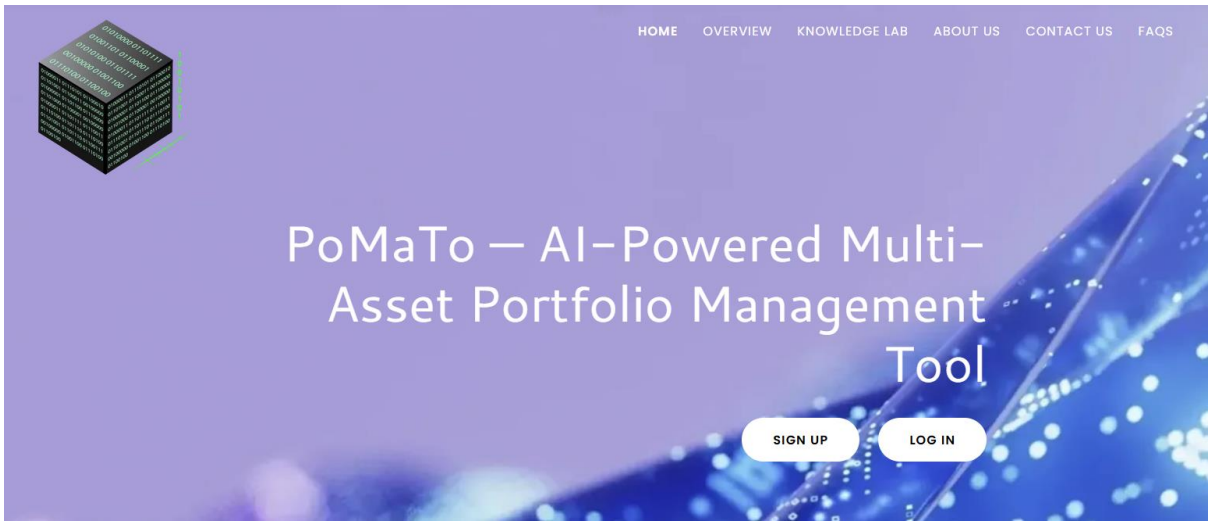
3.1 Overview

PoMaTo stands for **Portfolio Management Tool**. It is an all-in-one application designed to help both retail investors and finance professionals monitor, optimize, and manage their investment portfolios with ease.

PoMaTo enables:

1. **Construction and management of investment portfolios** across a broad range of asset classes, including:
    a) Equities
    b) Bonds
    c) ETFs
    d) Commodities
    e) Forex
    f) Crypto
    g) Cash
2. **Portfolio optimization** using a state-of-the-art Markowitz mean-variance optimizer, fully customizable to any investment objective or strategy. Four optimizer types are available:
    a) Long Only
    b) Long Short (130/30)
    c) Market Neutral
    d) Direct Indexing
3. **Comprehensive portfolio monitoring** with detailed analytics and insights, including
    a) Performance (Absolute, Relative, or Active)
    b) Composition by Asset Class, Sector, Country
    c) Value at Risk calculated under multiple scenarios
    d) Risk statistics including Beta, Volatility, Tracking Error, Drawdown, Sharpe Ratio, and Information Ratio
4. Management of portfolio cash flows through replication of deposits and withdrawals with banks, brokers, or custodians.
5. Trade import functionality, supporting both real-time entry and bulk upload at market close.
6. Handling of corporate actions such as dividends, coupons, rights issues, stock splits, and spin-offs impacting the portfolio.
7. **S**eamless integration with trading platforms through generation of compatible trade files.

3.2 Log in & Sign Up – www.thePoMaTo.com



When visiting the **PoMaTo** homepage (thepomato.com), two main options are displayed in the center of the screen:

- **Sign Up** – for creating a new account
- **Log In** – for accessing an existing account

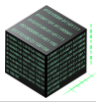
- **How to Sign Up**

1. Select **Sign Up**.
2. Enter the required details: name, email, and password.
3. Accept the Terms & Conditions and Privacy Policy.
4. Click **Create Account**.
5. A confirmation email will be sent; follow the link provided to activate the account.

- **How to Log In**

1. Select **Log In**.
2. Enter the registered email and password.
3. Click **Log In** to access the dashboard.
4. If the password is forgotten, select **Forgot Password?** to reset.

Tip: Once logged in, all portfolio management features are accessible from the main menu.



3.3 Data Sources and Accuracy

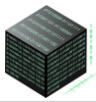
The data provided by **PoMaTo** is aggregated from multiple publicly available sources. While every effort is made to ensure accuracy and reliability, **PoMaTo** makes no representation or warranty, express or implied, regarding the accuracy, completeness, or timeliness of the data. **PoMaTo** shall not be held liable for any inaccuracies, errors, omissions, or decisions made based on this information.

The data available within PoMaTo includes:

1. **Benchmarks**: PoMaTo develops internal indexes and makes them available within the platform. The benchmark sets provided are:
    A. **CAMI Benchmarks:** Common Asset Market Indexes designed to have at least a 95% correlation with major index providers' benchmarks. CAMI Benchmarks. CAMI Benchmarks include:
        a) Equity Indexes
        b) Commodity Indexes
        c) Fixed Income Indexes
        d) Cryptocurrency Indexes
        e) Multi-Asset Class Indexes
    B. **CADI Benchmarks**: Common Asset Direct Indexes designed specifically for Direct Indexing strategies. They have at least a 95% correlation with major index providers (if available). CADI Benchmarks cover *equities only* and are country-specific indexes limited to 50 constituents each.

Security IDs: PoMaTo uses a static internal ID mapped according to the exchange symbol and exchange identification. From this mapping, PoMaTo extracts the ISIN code for each security, which serves as the primary identifier for mapping additional IDs within the platform.

A. **ISIN Code**: The International Securities Identification Number is a unique 12-character alphanumeric code used globally to identify securities such as stocks and bonds. For securities without an official ISIN (e.g., cryptocurrencies), PoMaTo generates a synthetic ISIN-like code.
B. **Yahoo Finance ID**: Mapped from ISIN to Yahoo Finance identifiers, enabling efficient security lookup on Yahoo Finance. If Yahoo Finance does not cover a particular market or security, PoMaTo generates a synthetic Yahoo Finance ID in the format XXX.YY, where XXX is the exchange symbol and YY is the exchange code. Accuracy is not guaranteed. This mapping facilitates reference across platform.
C. **Google Finance ID**: Mapped similarly for Google Finance, using the format XX:YYY, where XX is the exchange code and YYY is the exchange symbol. Synthetic IDs are generated when coverage is unavailable; accuracy is not guaranteed.
D. **Bloomberg-Like ID**: **PoMaTo** does not store official Bloomberg IDs, but synthetically generates Bloomberg-like IDs using exchange symbols and country codes in the format XXX YY. These IDs are designed for compatibility with Bloomberg terminal workflows; accuracy is not guaranteed.
E. **Reuters-Like ID**: Synthetic Reuters-like IDs are generated in the format XXX.YY for compatibility with Reuters terminal workflows; accuracy is not guaranteed.



2. **Security Classification:** Each security is classified to provide aggregated portfolio information and enable optimizer settings, aligned with investment goals.

   Classifications include:

   a. Asset Class (Data Source: Any) – Used in optimizer settings
   b. Market Cap (Data Source: Exchange) – Used in optimizer settings
   c. Volume (Data Source: Exchange) – Number of securities traded; used in optimizer settings
   d. Sector (Data Source: Investor Relations) – Internal classification similar in naming to MSCI sectors but not representing MSCI classifications; used in optimizer settings and portfolio composition display
   e. Industry (Data Source: Investor Relations) – Internal classification; used only for portfolio composition display
   f. Sub-Industry (Data Source: Investor Relations) – Internal classification; used only for portfolio composition display
   g. Country (Data Source: Investor Relations) – Internal classification; used in optimizer settings and portfolio composition display
   h. Region or Investment Zone (Data Source: Investor Relations) – Internal classification; used in optimizer settings and portfolio composition display
   i. Market Type (Developed or Emerging) (Data Source: Investor Relations) – Internal classification; used in optimizer settings and portfolio composition display

3.4 Securities Available

Within PoMaTo, any available security can be looked up regardless of account or portfolio setup.

To search for a security, select the “Securities” field in the left-hand menu. The main page displays a full list of securities. The search bar allows searches by name or any identifier.

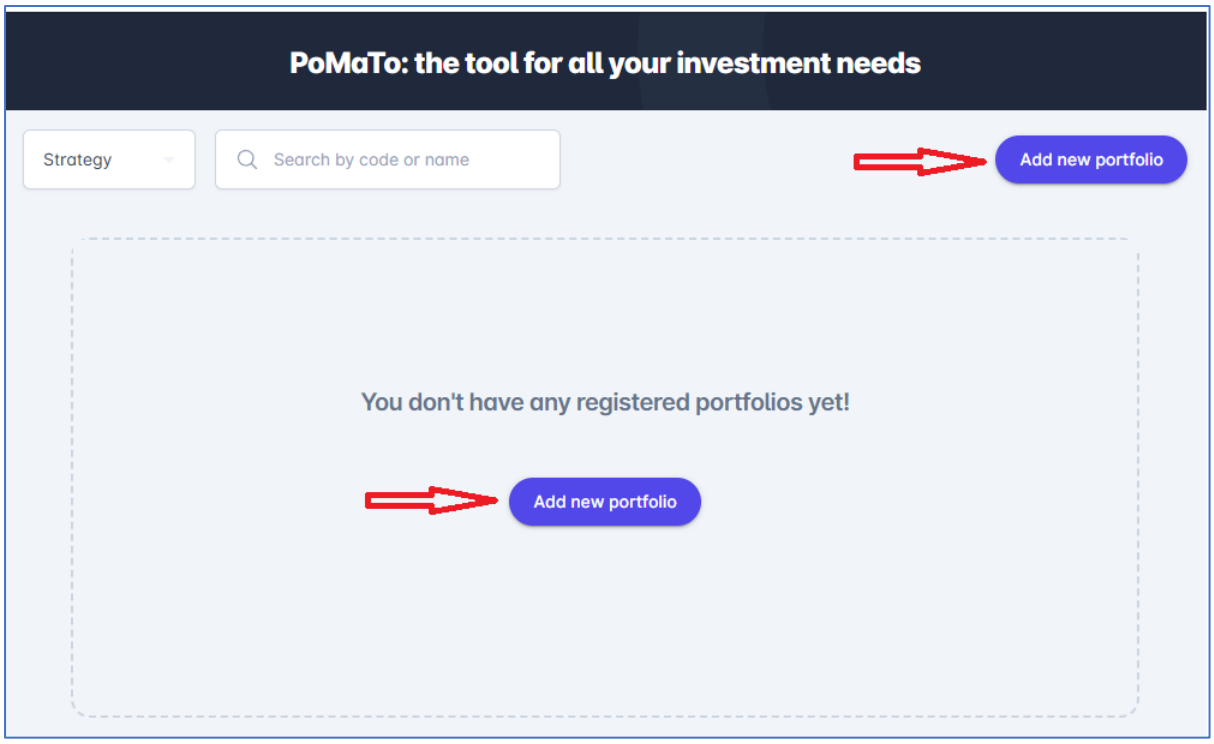
The application returns matching securities with key information including:

a. Name
b. Primary ID selected for the security
c. Country
d. Trading Currency
e. Sector
f. Zone (Region)
g. Market Type

Clicking on a security’s row will open a pane on the right side of the screen displaying additional details about that security, including all IDs used within PoMaTo to uniquely identify it.

4 Portfolio Creation & Strategy Setup

To create a new portfolio, from the initial page, click the **Add new portfolio** button:



Upon selecting the button, a new window opens to guide the Portfolio setup process in six steps.

Note: Each of the five setup steps must be completed and confirmed by pressing the **Next** button located at the bottom-right of each page

Note: After completing the final step, select the **Create and Commit** button located at the top right of the page to create and save the portfolio.

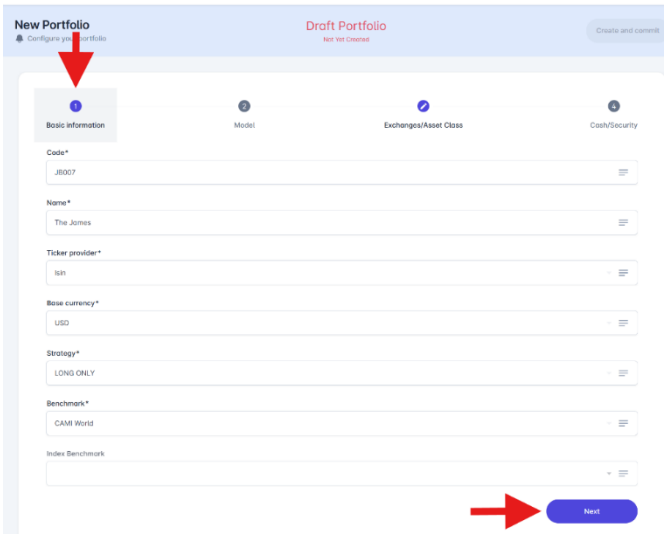
If this button is not selected, the portfolio will not be saved. “Draft Portfolio” will appear in red at the top of the page, and all entered information will be lost upon logout.

4.1 STEP 1: Basic Information

Fill in all the required fields for the Basic Information section.

This information helps to identify the correct portfolio during future logins, especially when multiple portfolios are associated with the account.

1. **Code**: a unique code associated with the new Portfolio – must be at least 5 characters
2. **Name**: a descriptive name for the portfolio Code (e.g. “Alice College Fund” but can also be same as the Code)
3. **Ticker Provider**: select the identifier provider from the drop-down menu.
   PoMaTo offers the option of choosing a different provider to identify a Security within the Portfolio. The selected provider will be used in every portfolio display tab.
   a. ISINs, **PoMaTo** can guarantee the accuracy of this provider
   b. Bloomberg or Reuters identifiers are provided on a “best match” basis on the assumption those can be derived by the local exchange instrument code
   c. Google or Yahoo identifiers are primarily for retail-level investing to surf the web in relation to Portfolio holdings. It is possible that Google or Yahoo do not offer coverage for a particular market, in which case a similar (“like”) code will be assigned which will not link to any of the other two providers.
4. **Base Currency**: Select the portfolio’s base currency from the drop-down menu. The chosen currency will be used across all portfolio display tabs. For retail investors, the base currency is typically the currency of the country of residence.
5. **Strategy**: Select the portfolio strategy from the drop-down menu. The selected strategy cannot be changed once portfolio setup is complete.
6. **Benchmark**: Select the benchmark from the drop-down menu. PoMaTo offers a wide range of benchmarks to monitor relative performance. Available benchmarks include both single-asset-class and multi-asset-class indices, all developed by PoMaTo to closely follow the construction methodologies of MSCI, Bloomberg, S&P, and various local exchanges.
7. **Index Benchmar**k: Select the benchmark to which the portfolio must be indexed, using the drop-down menu. This option is only available if the Direct Indexing strategy is selected. Direct Indexing is supported for equity portfolios only, using country-specific benchmarks developed by PoMaTo based on methodologies similar to the Eurostoxx50.



Once all the required information has been filled in, the **Next** button will become active.

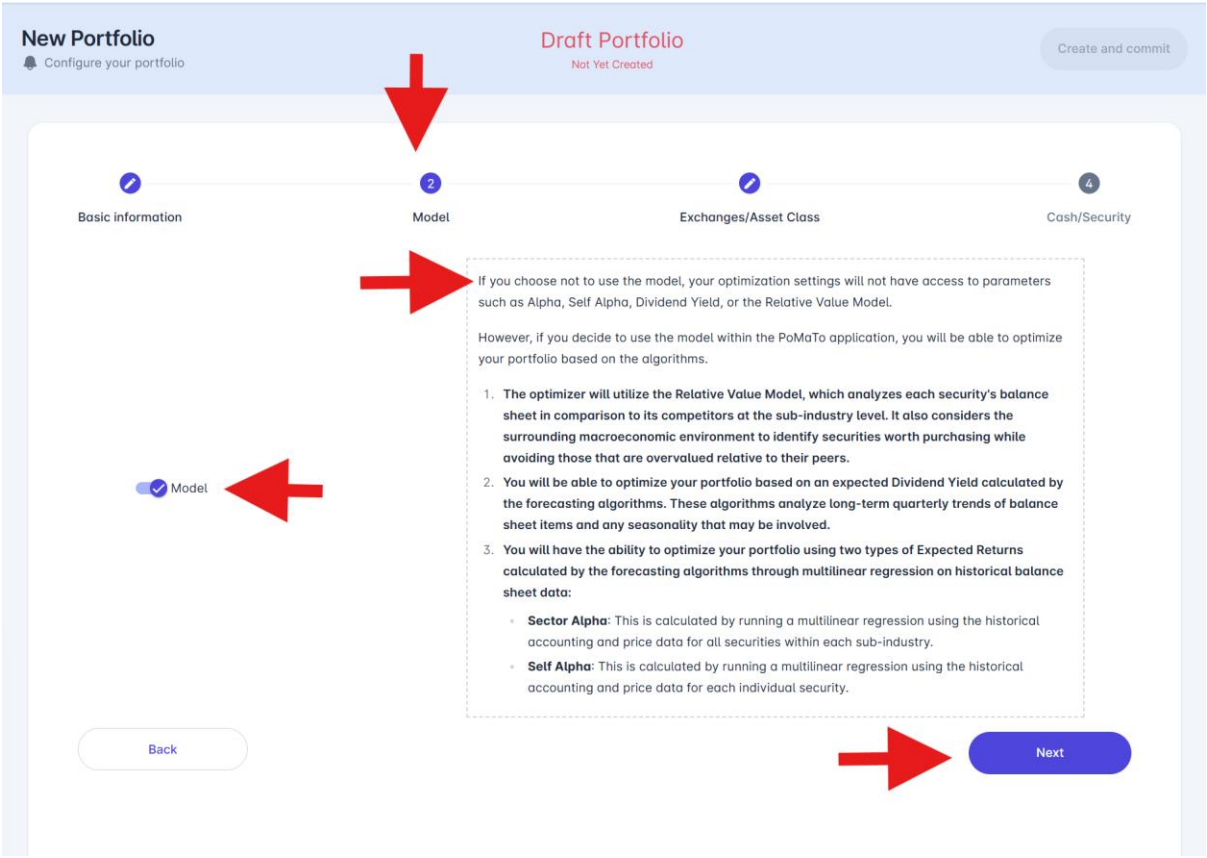
Click the **Next** button to continue with the Portfolio set up.

4.2 STEP 2: Model Portfolio Selection

The Model section allows for the choice of using or not using the *Relative Value Equity Model* within Portfolio Optimization – this is an important decision and the rational for this selection is detailed in the screen below.

The sliding toggle button is used to activate or deactivate the Equity model.

After selecting, select the **Next** button to continue with portfolio setup.



4.3 STEP 3: Exchanges/Asset Class Selection

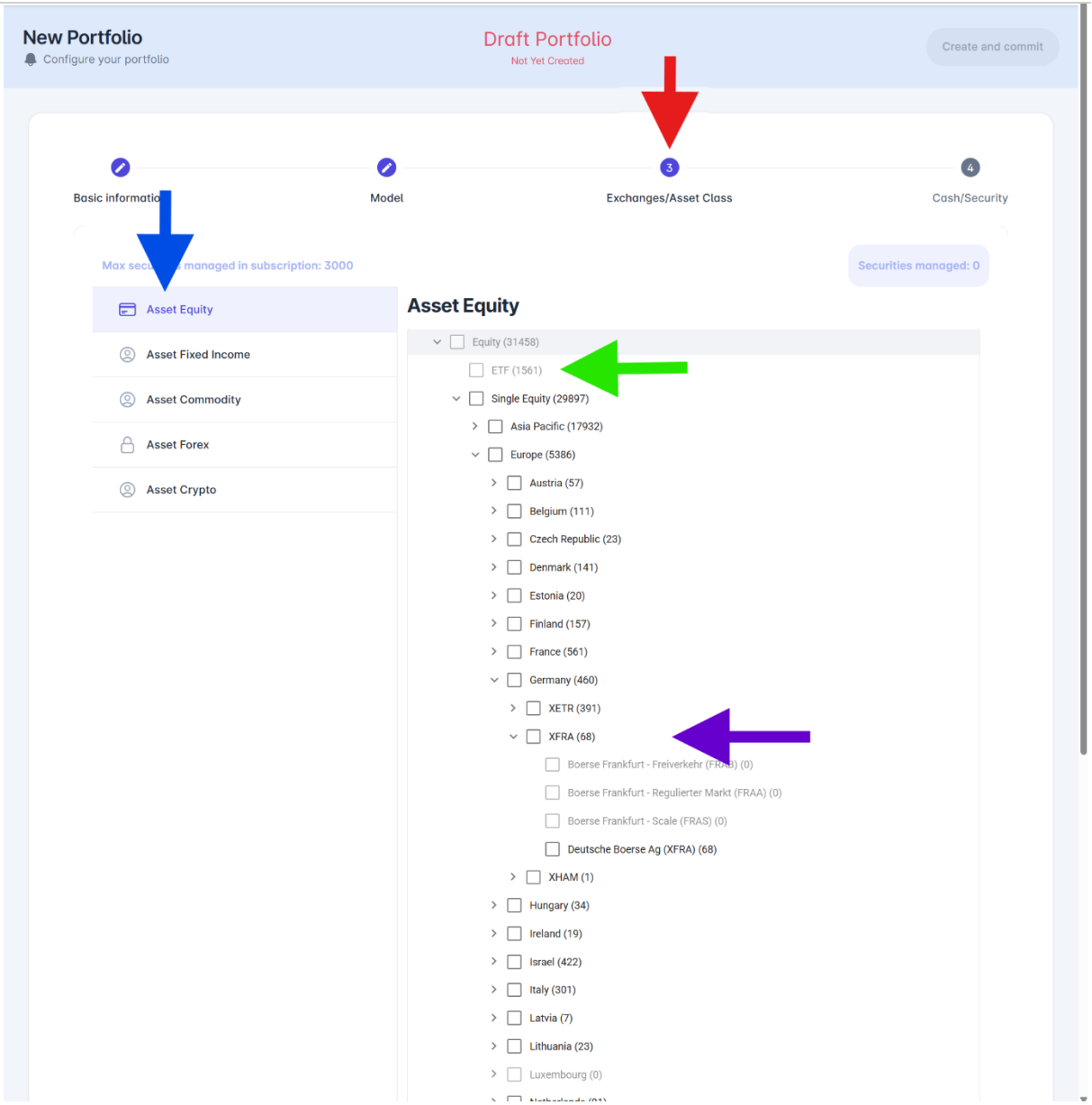
The Exchanges/Asset Class section will define the subset of financial instruments the Portfolio can be invested in.

Select the relevant boxes to specify which exchanges and asset classes are included for the investment portfolio and chosen strategy.

Selections can be made at various levels—independently or in combination, subject to certain restrictions—depending on portfolio requirements.

1. **Asset Class Level** – see **blue** arrow in the screen-shot
    - Equity
    - Fixed Income
    - Commodity
    - Forex
    - Crypto
2. **Instrument type within the Asset Class** – see **green** arrow in the screen-shot
    - ETFs
    - Single instruments within the asset class
3. **Single Stock (Equity)** – see **purple** arrows in the screen-shot; the choice made can be further detailed for:
    - Zone/Geographical area
    - Country
    - Exchanges

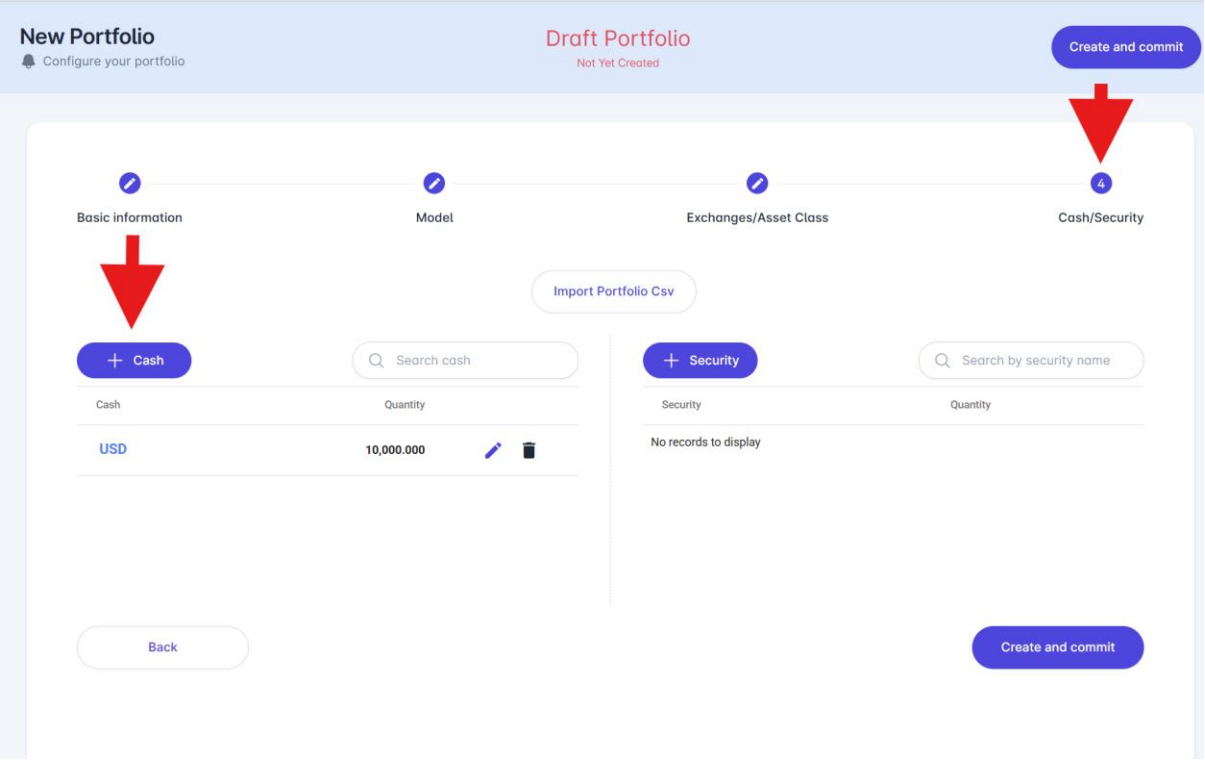
After selections are made, select the **Next** button to continue with portfolio setup.


New Portfolio
Configure your portfolio
Draft Portfolio
Not Yet Created
Create and commit
Basic informatio
Model
3
Exchanges/Asset Class
4
Cash/Security
Securities managed: 0
Asset Equity
Asset Fixed Income
Asset Commodity
Asset Forex
Asset Crypto
Asset Equity
Equity (31458)
ETF (1561)
Single Equity (29897)
Asia Pacific (17932)
Europe (5386)
Austria (57)
Belgium (111)
Czech Republic (23)
Denmark (141)
Estonia (20)
Finland (157)
France (561)
Germany (460)
XETR (391)
XFRA (68)
Boerse Frankfurt - Freiverkehr (FRAA) (0)
Boerse Frankfurt - Regulierter Markt (FRAA) (0)
Boerse Frankfurt - Scale (FRAS) (0)
Deutsche Boerse Ag (XFRA) (68)
XHAM (1)
Hungary (34)
Ireland (19)
Israel (422)
Italy (301)
Latvia (7)
Lithuania (23)
Luxembourg (0)

4.4 STEP 4: Current Portfolio & Cash Entry

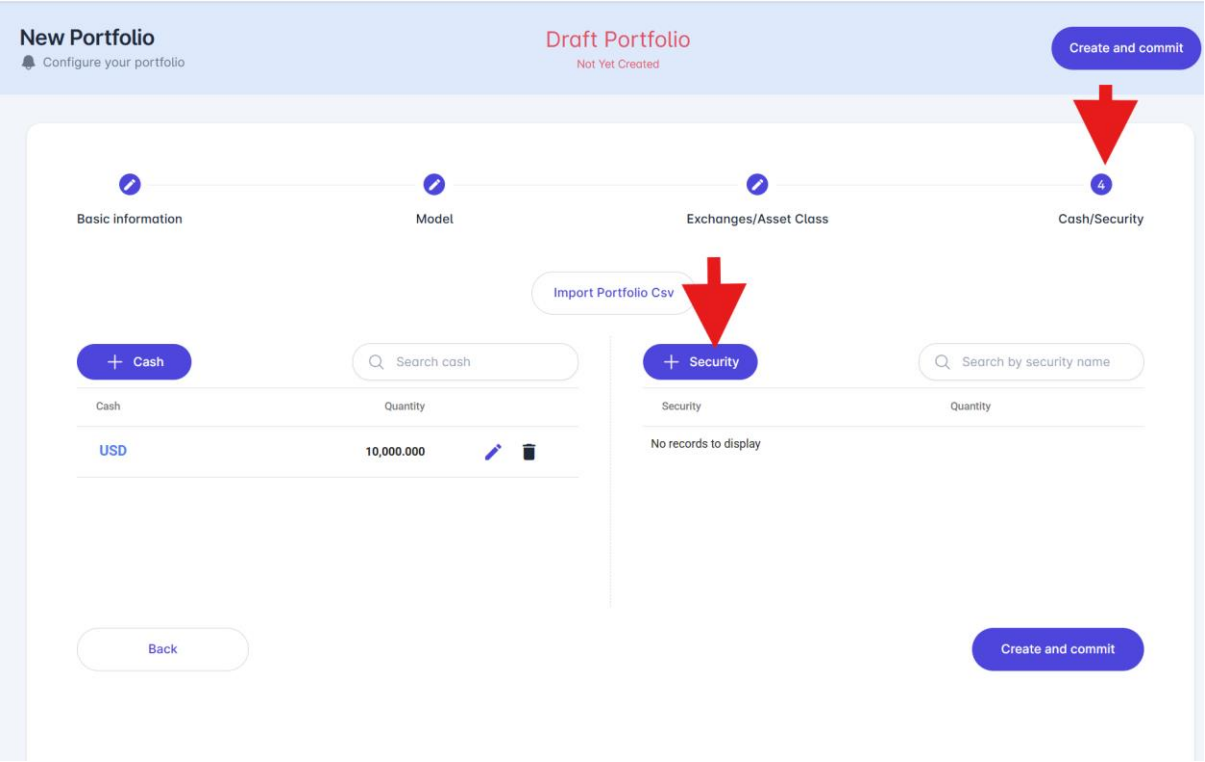
4.4.1 Import of a Current Portfolio.

The Import Portfolio section enables the import of an existing portfolio, either through manual entry or by importing a **CSV file**.



4.4.2 Manual Entry of a Current Portfolio.

By clicking the **+Security** button, it is possible to add any Securities which will be available based on the selection made on STEP 3.

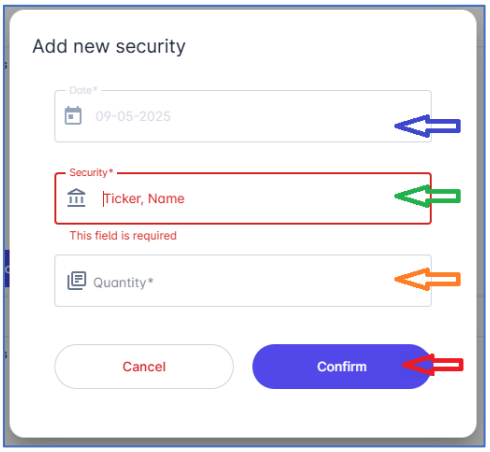


Note: that if in STEP 3 if the selection was Equity ➔ North America ➔ United States ➔ XNYS then individual securities traded on the Nasdaq (XNAS) will not be visible or selectable, as the entire **XNYS** market was chosen.

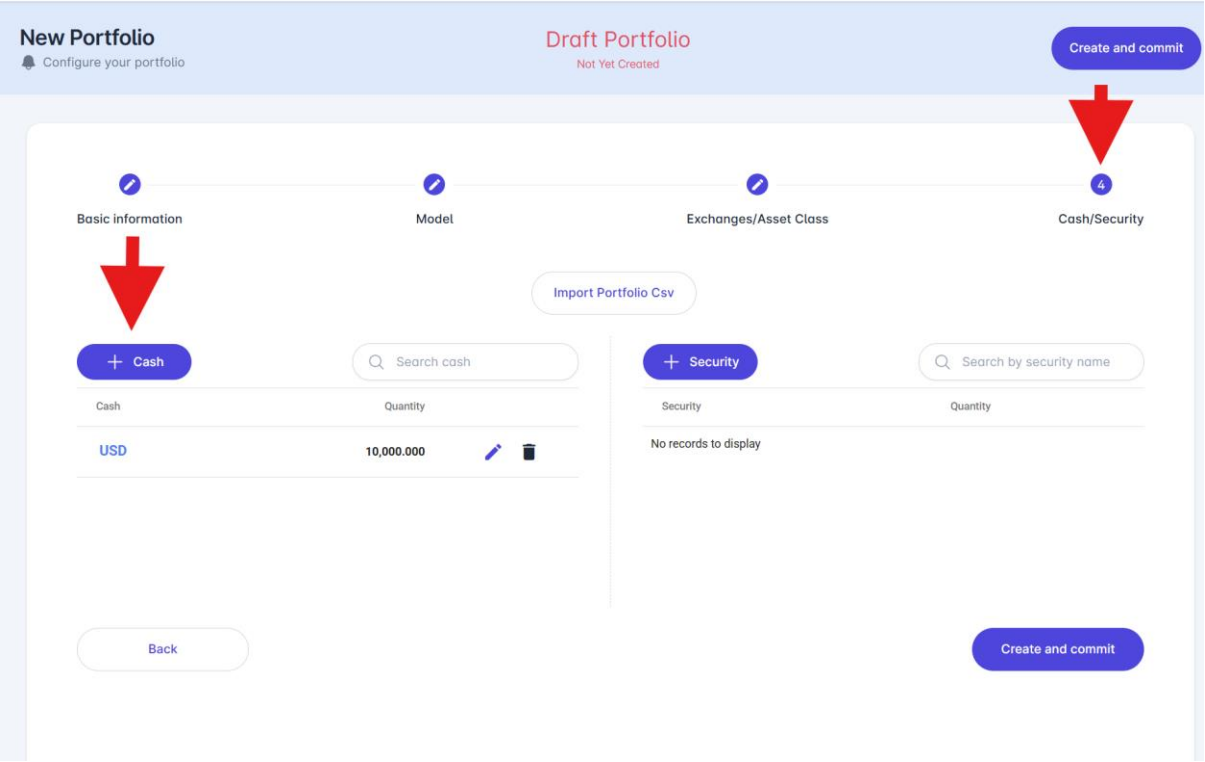
After pressing the **+Security** button, fill in the relevant fields with:

1. Date – **blue** arrow
2. Security – searchable by name or main identifier (set at STEP 1) – **green** arrow
3. Quantity held at portfolio level – **orange** arrow

Then click the **Confirm** button to commit the import – **red** arrow.



4.4.3 Cash Entry



By clicking the **+Cash** button, it is possible to add any cash line held at portfolio level.

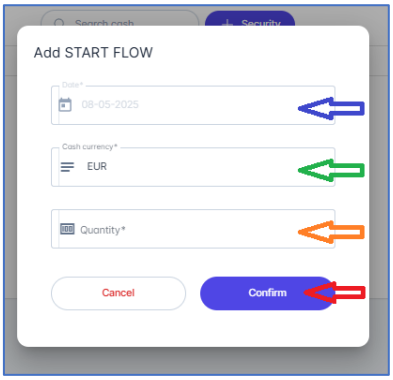
Note: the cash line, in this case, it is not considered to be a *Forex* instrument.

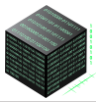
In case the cash position is a Forex investment, this will need to be added by pressing the **Security** button and choose the relevant pair for the *Forex* position.

After clicking the **+Cash** button, fill in the relevant fields with:

1. Date – **blue** arrow
2. Cash currency - ISO code of the cash to be added to the initial portfolio – **green** arrow
3. Quantity held at portfolio level – **orange** arrow

Then click the **Confirm** button to commit the import – **red** arrow.





5 FOREX vs FX

PoMaTo's Multi-Currency and FOREX Handling: Summary

PoMaTo fully supports multi-currency portfolios, enabling both accounts and portfolios to hold multiple cash lines—each denominated in a specific currency.
Cash balances held in a currency different from the portfolio's base currency are typically the result of trading foreign stocks. In such cases, these balances are considered operational cash (not investment assets), and are displayed as cash lines that can be managed via the Trade tab—FX sub-tab. For example, a USD-based investor trading EUR-denominated shares would maintain a EUR cash line to facilitate those trades.

However, even though these cash balances are not considered investment positions, they still impact the daily NAV and overall portfolio performance due to FX rate fluctuations.

When a currency balance is linked to an active FX investment strategy, it is treated as a FOREX asset in PoMaTo. In this scenario, the currency holding represents a deliberate investment position and is classified as a FOREX instrument, identified by a currency pair (e.g., USD_EUR, where USD is the base currency and EUR is the quote currency).

FX vs. FOREX in PoMaTo:

- **FX (Cash Management):**
  Cash held in different currencies purely to support trading activity (not as an investment) is managed as individual cash lines. For details, please section 6.4 Managing the Cash - Balances in a Currency Different from the Portfolio's Base Currency
- **FOREX (Investment Position):**
  If the currency balance is part of a specific FX investment strategy, it must be entered as a FOREX instrument, using the appropriate currency pair format. For details, please section 10.1.2 Trade FOREX.

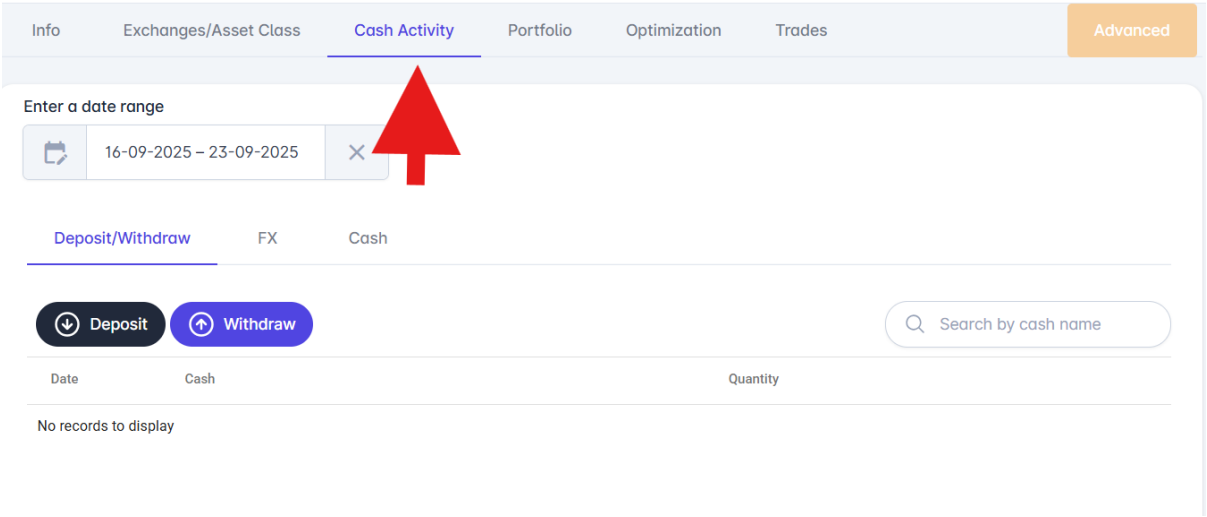
6 Managing Portfolio Cash

6.1 Manage the Cash

There are several methods that **PoMaTo** allows for the management of cash lines.

These methods are not interchangeable and should be used with care. While they may appear similar, each one affects how **PoMaTo** interprets the cash line and, as a result, impacts performance calculations differently.

Here is the **Cash Activity** top menu:

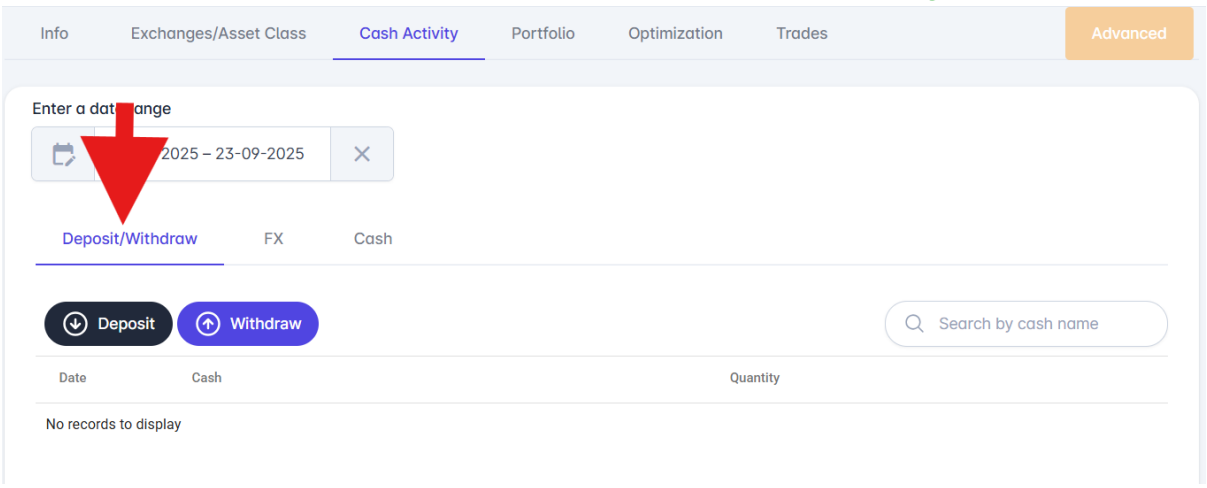


6.2 Manage the Cash - Deposit/Withdraw

The *Deposit/Withdraw* function has been designed to replicate back-office operations and the cash movements at the broker level.

Managing the cash via Deposit/Withdraw will have no impact on performance.

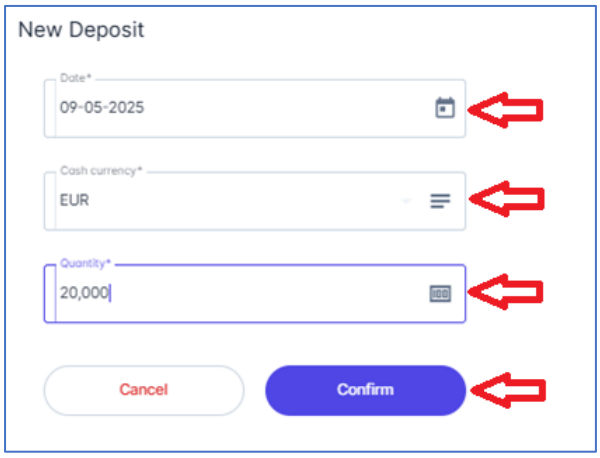
To access the *Deposit/Withdraw* function, from the top menu click on the ***Cash*** top menu then the ***Deposit/Withdraw*** tab and then click either the **Deposit** or **Withdraw** buttons.



Fill in all the fields in the pop-up window:

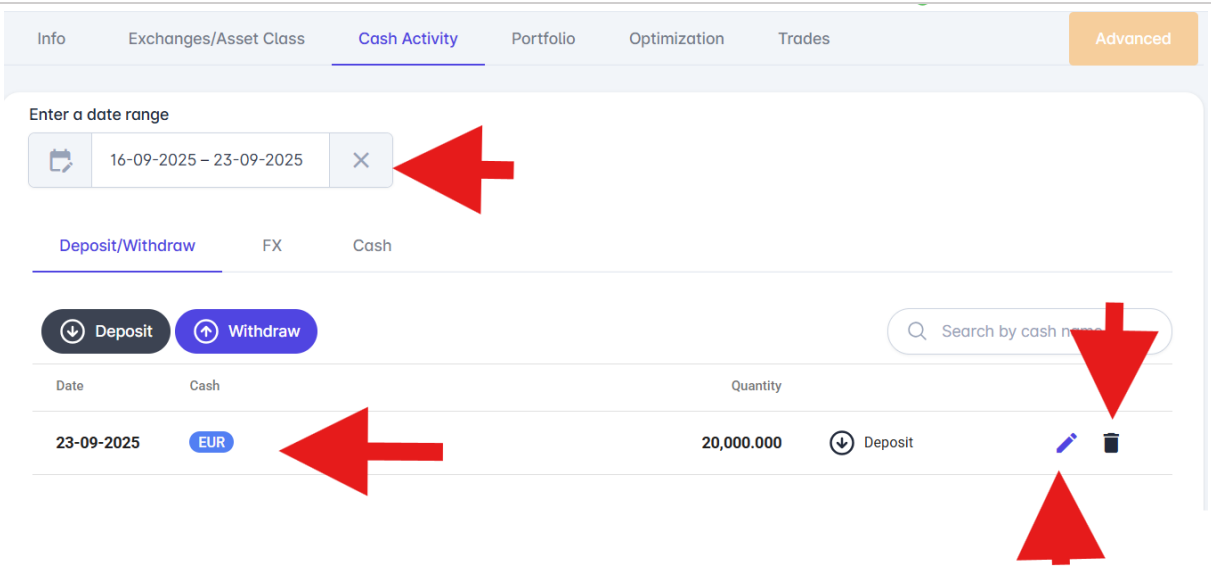
1. **Date** - of the *Deposit/Withdraw* – by default it will be today's date
2. **Cash currency** - in which the *Deposit/Withdraw* is made – by default it will the portfolio currency
3. **Quantity** - of the Deposit/Withdraw

Then click on the **Confirm** button to commit the *Deposit/Withdraw*.



Once confirmed, the *Deposit/Withdraw* will appear on the ***Deposit/Withdraw*** tab where it is possible to perform the following actions on the *Deposit/Withdraw*:

1. Display all - within a selected date range
2. Amend
3. Delete



6.3 Manage the Cash - Everything but the Deposit/Withdraw

PoMaTo has been designed to also handle all cash related activities (referred to as *Trade Cash*), that impacts portfolio performance.

While certain activities, such as dividends and coupons, are automatically processed by **PoMaTo**, other cash activities must be manually entered, as they are specific to each portfolio and may vary depending on factors such as broker, tax status, and account setup, etc.; known as *Cash Action.*

Note: Dividends and Coupons paid will automatically will be processed by **PoMaTo** and a notification will be displayed on the ex-date.

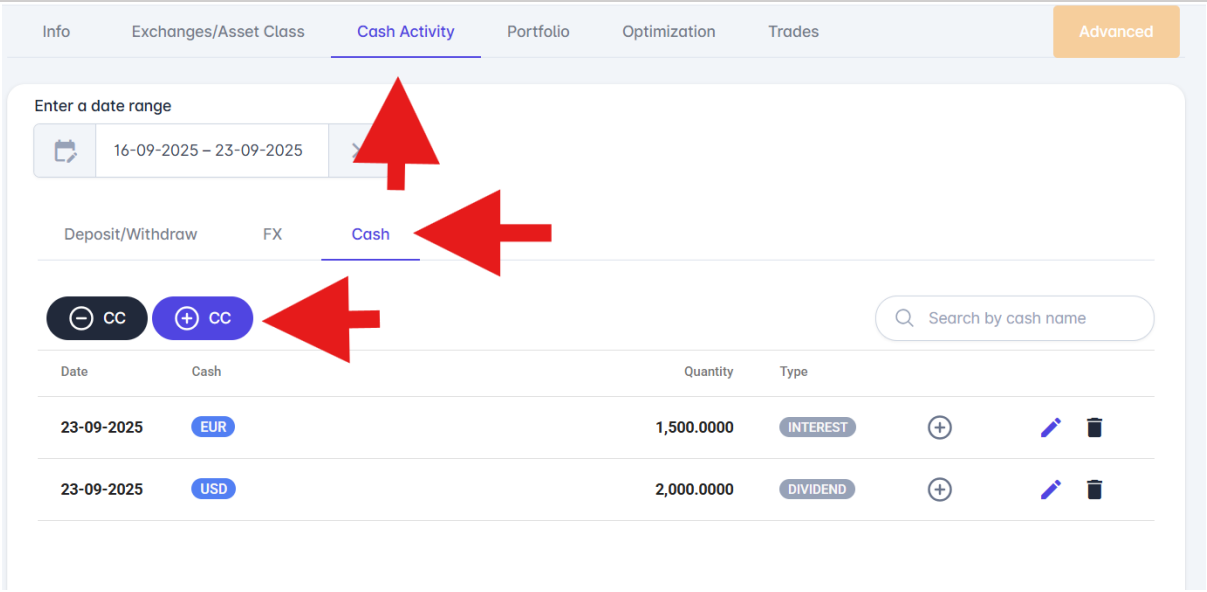
Managing the cash via Trade Cash will impact performance.

To ensure **PoMaTo** accurately handles Brokerage Fees, Trading Tax, Market Data Cost, Interest paid on the cash balance, or missed Dividends and Coupons paid (due to data sourcing limitations) this information must be provided directly to **PoMaTo**.

For the above cash management cases, click on ***Cash*** top menu from the top menu then click the *Cash* sub-tab.

From the ***Cash*** sub-tab click on **+CC** or **-CC** buttons depending on the cash action needed to be registered, i.e.:

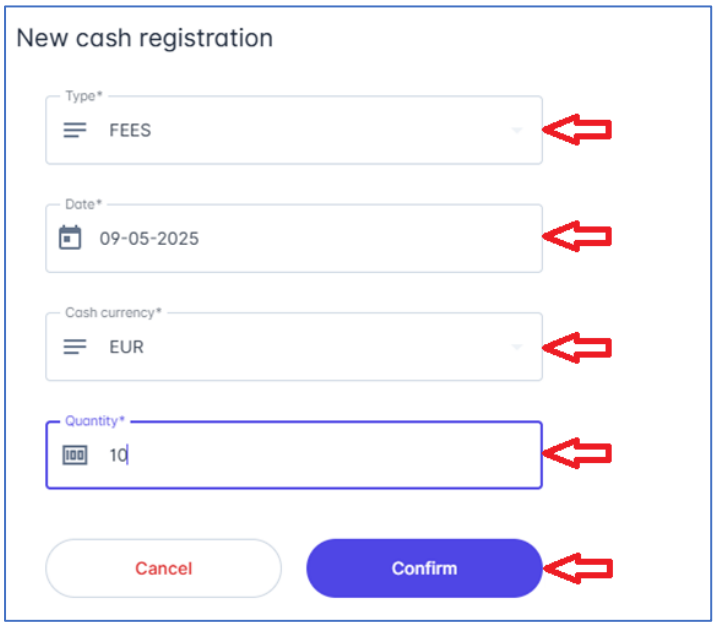
- Dividends received from a long position, click the **+CC** button
- tax payments, click the **-CC** button



By clicking either, the **+CC** or **-CC** button, cash action can be registered by the following steps:

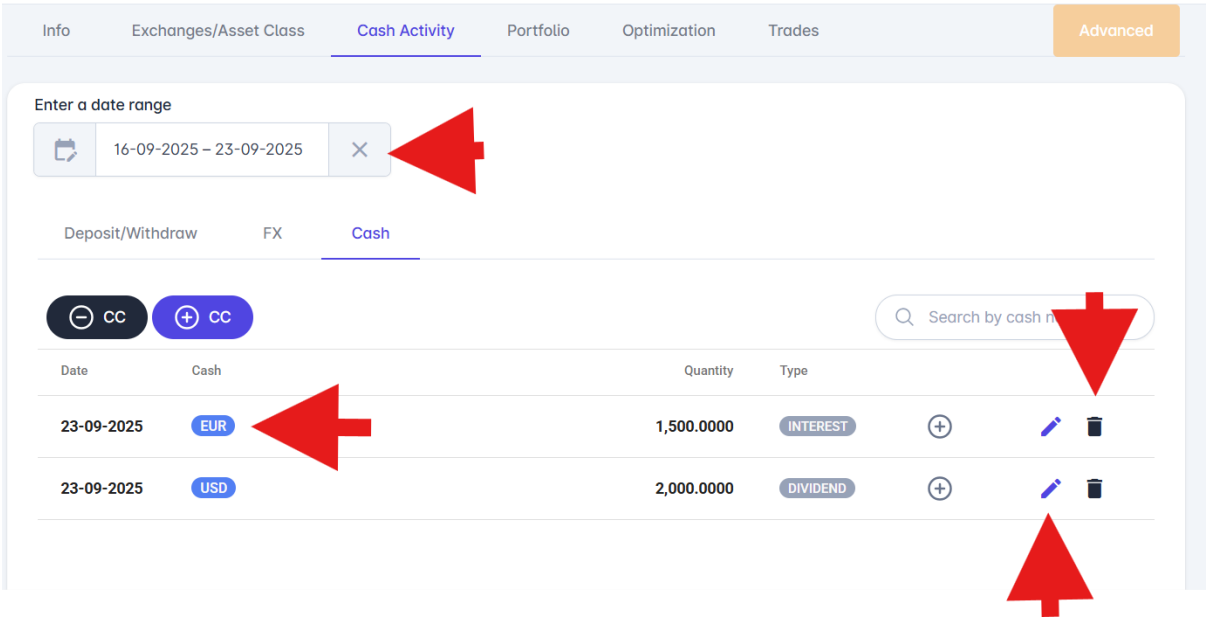
1. Type: select from the available options in the drop-down menu
2. Date: of the cash action (default is set for today)
3. Cash Currency: of the Cash action
4. Quantity: that will be processed in the portfolio related to the action Type selected above

Click the **Confirm** button to commit the cash registration



Once confirmed, the *Cash Action* will appear on the ***Cash*** page where it is possible to:

1. Display all *Cash Actions* within a selected date range
2. Amend a specific *Cash Action*
3. Delete a specific *Cash Action*



6.4 Managing the Cash - Balances in a Currency Different from the Portfolio's Base Currency

PoMaTo supports multi-currency portfolios, allowing both the account and portfolios to hold multiple cash lines - each denominated in a specific currency.

Cash balances held in a currency different from the portfolio's base currency will **not** be treated as investment assets; instead, they are considered as cash.

However, cash balances held in a currency different from the portfolio's base currency will affect the daily NAV and overall portfolio performance due to daily FX rate fluctuations - like the impact of holding those balances as a FOREX investment position.

If the account's currency balance is linked to a FX investment strategy (thereby representing an asset) it must classified as a FOREX instrument, which is represented by a currency pair.

Managing the cash in several currencies via "FX" will impact performance due to the daily movement of the exchange rate

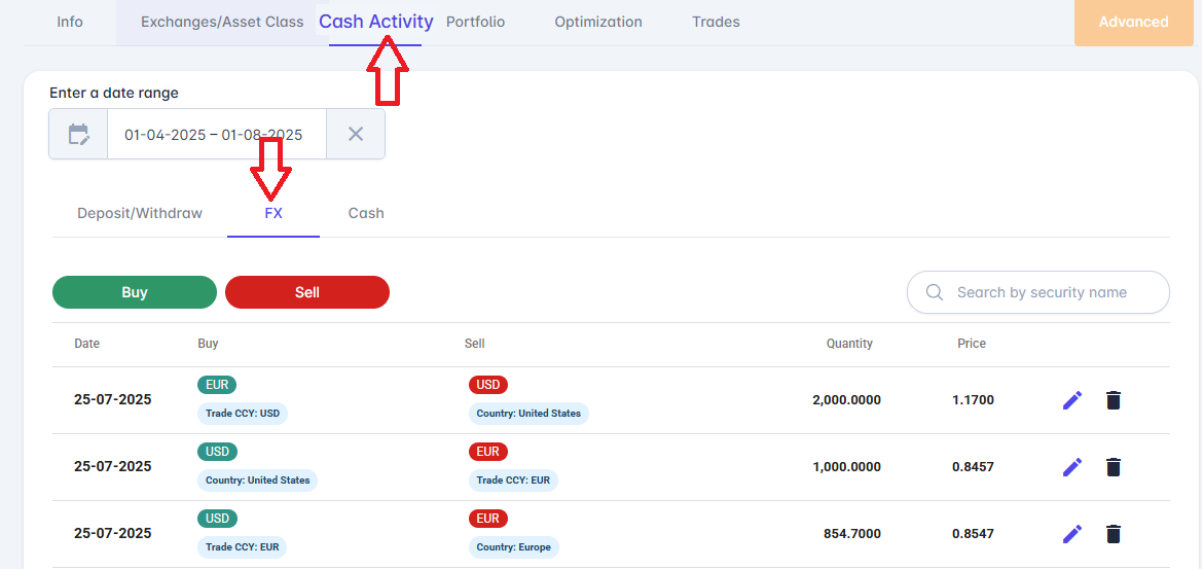
When cash balances in different currencies are held solely to support portfolio trading activity, each balance should be treated as a **separate cash line**.

For example, a USD-based investor trading EUR-denominated shares will typically hold a **EUR cash line** at their broker.

If this EUR balance exists **purely for trading purposes**, it should be treated as **FX** (not **FOREX**) under **PoMaTo's** classification.

To ensure PoMaTo handles these FX cash balances correctly:

1. Click on the **Cash** tab from the top menu
2. Then select the **FX sub-tab**
3. Enter the relevant FX activity accordingly



From the **FX sub-tab**, click either the **Buy** or **Sell** button depending on the type of FX transaction to be recorded. This is referred to as an **FX Trade**.

Example: An EU-based investor with a portfolio base currency in **EUR** purchases **$1,000 worth of Apple shares**. This results in a **–$1,000 USD** cash balance on their multicurrency account.

To settle this negative balance, the investor needs to **buy $1,000 USD** and **sell the equivalent amount in EUR**.

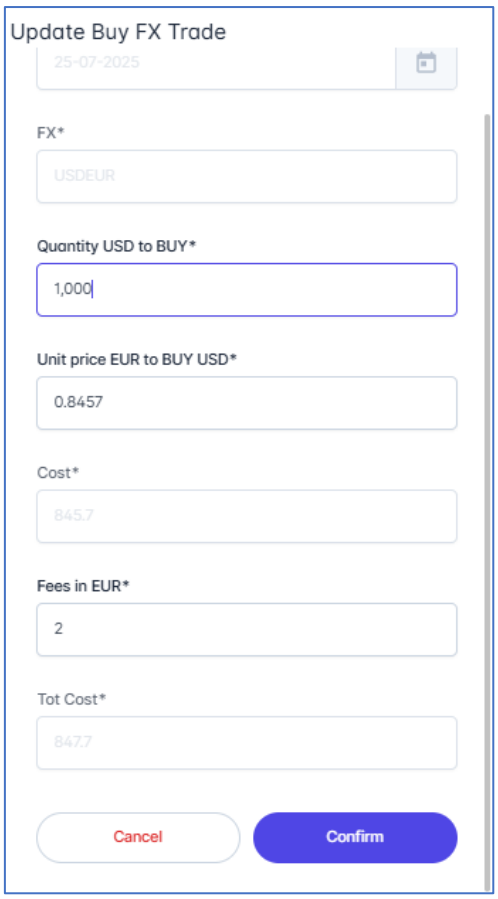
To do this in PoMaTo, choose one of the following options:

1. **Buy – USDEUR**
2. **Sell – EURUSD**

In both cases, PoMaTo is instructed to convert **EUR to USD** for the specified amount.

If the FX is performed within PoMaTo via a **Buy**, enter the following:

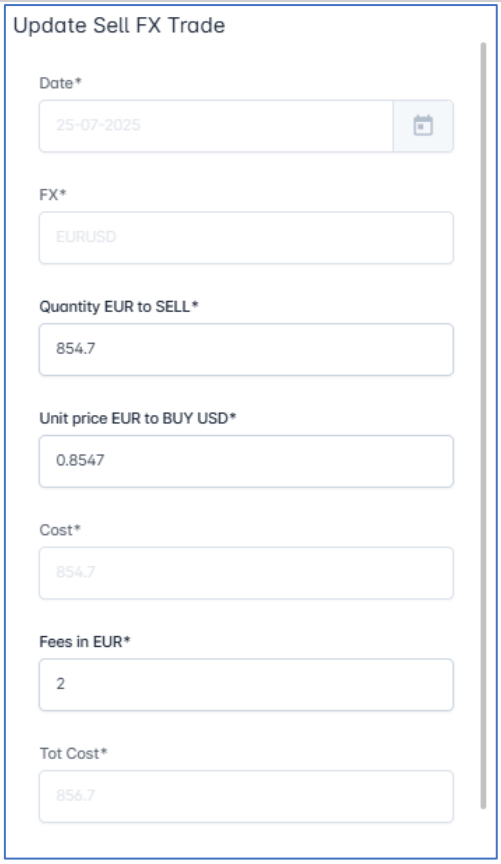
1) In the FX field USDEUR
2) The quantity of USD he wants to buy – 1,000 in this case
3) The EUR needed to buy 1 USD – this is the common USDEUR exchange rate
4) The fees which it will be in EUR



If the FX is performed within PoMaTo via a **Sell**, enter the following:

1) In the FX field EURUSD
2) The quantity of EUR he wants to sell – 1,000* USDEUR exchange rate
3) The EUR needed to buy 1 USD – this is the common USDEUR exchange rate

The fees which it will be in EUR



Notes on FX Fees and Base Currency:

In all cases, regardless of how the FX transaction is entered, **fees are always expressed in the currency being sold** — that is, the **base currency** in the trade.

Within PoMaTo, this means the fee must be entered in the currency being exchanged **out of** (i.e., sold) in order to obtain another currency.

For example, consider an **EU-based investor** with a portfolio base currency in **EUR** who **sells $2,000 worth of Apple shares**. This results in a **$2,000 USD** cash balance on their multicurrency account.

To convert this amount back into EUR, it is necessary to **sell $2,000 USD**.

As described earlier, this can be done using either a **Sell (EURUSD)** or a **Buy (USDEUR)** transaction. However, in this case, because **USD is the currency being sold**, **the fee will be denominated in USD**, not EUR.

1. Buy Transaction

Clicking the **Buy** button requires selecting the currency pair USDEUR.
This allows the FX trade to be recorded in PoMaTo as a **purchase of USD** and a simultaneous **sale of EUR**, based on the applicable exchange rate at the time of trade.

To correctly enter this transaction:

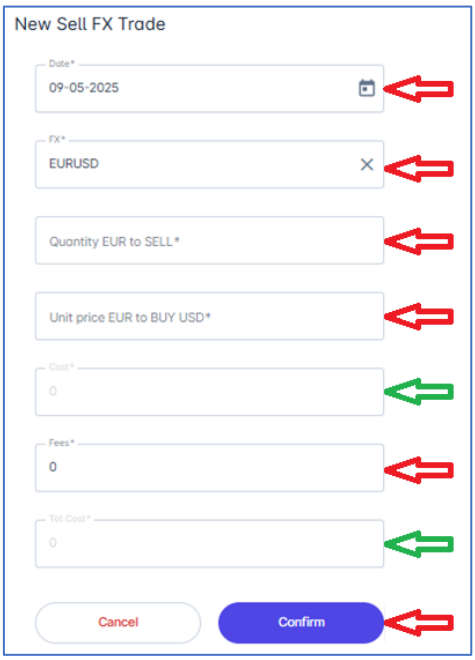
a) Enter the **trading date**
b) Enter the **FX pair**: USDEUR
c) Enter the **quantity of USD bought**
d) Enter the **EUR amount needed to buy 1 USD** (i.e., the FX rate)
e) Enter any **fees in EUR** paid to the broker
f) Click **"Confirm"** to register the transaction
g) The fields **"Cost"** and **"Tot Cost"** will be automatically calculated

2. Sell Transaction

Clicking the **Sell** button requires selecting the currency pair EURUSD.
This allows the FX trade to be recorded in PoMaTo as a **sale of EUR** and a simultaneous **purchase of USD**, based on the applicable exchange rate at the time of trade.

To correctly enter this transaction:

a. Enter the **trading date**
b. b. Enter the **FX pair**: EURUSD
c. c. Enter the **quantity of EUR sold**
d. d. Enter the **USD amount received per 1 EUR** (i.e., the FX rate)
e. e. Enter any **fees in USD** paid to the broker
f. f. Click **"Confirm"** to register the transaction
g. The fields **"Cost"** and **"Tot Cost"** will be automatically calculated



Once confirmed, the FX Trade will appear under the **FX sub-tab**, where it is possible to:

1. Display all FX Trades within a selected date range
2. Amend a specific FX Trade
3. Delete a specific FX Trade

7 Portfolio Monitoring

Portfolio monitoring can be a complex and time-consuming task, requiring intricate calculations and the aggregation of data from multiple sources.

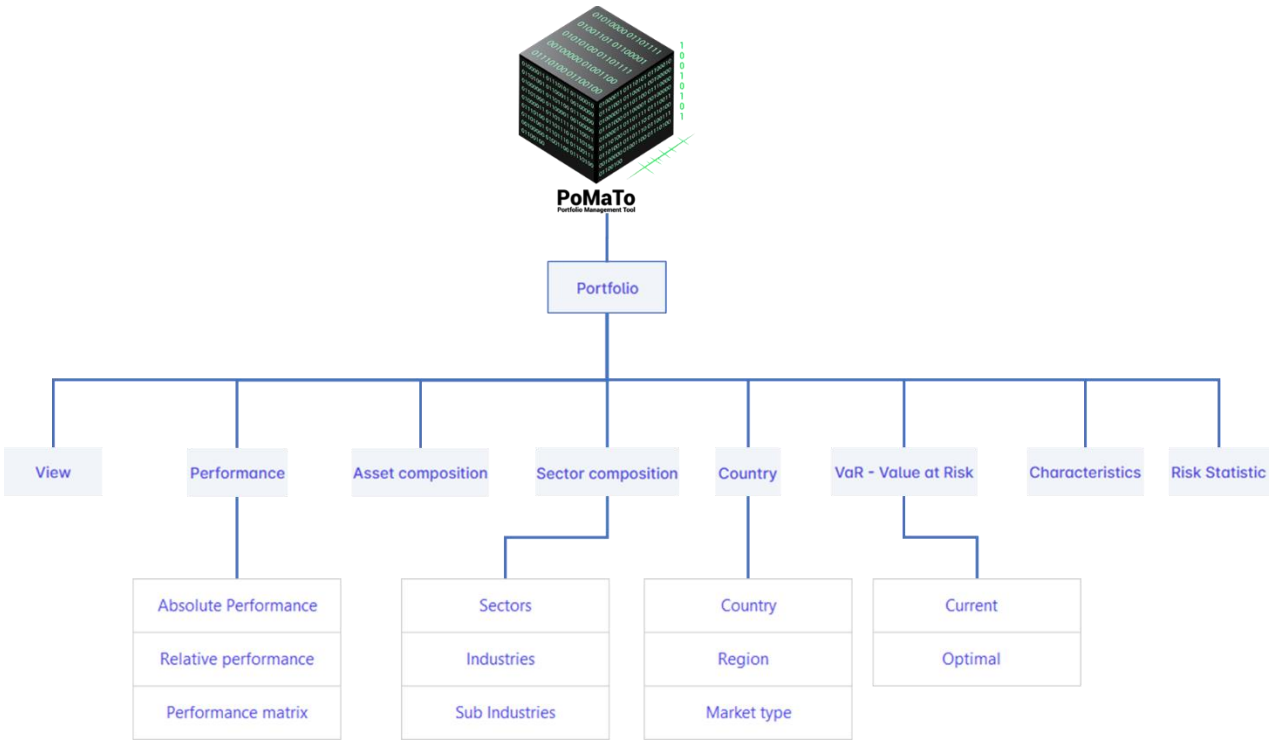
Portfolio monitoring involves regularly reviewing the individual securities or assets held within a portfolio, analyzing returns, assessing risk levels, and comparing performance against relevant benchmarks.

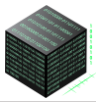
Effective monitoring enables the identification of opportunities for improvement, supports informed *buy/sell* decisions, and ensures that the portfolio remains aligned with defined investment objectives.

PoMaTo streamlines this process by providing all the necessary information at the click of a mouse.

The ***Portfolio*** tab provides the Portfolio monitoring features

The diagram below illustrates the menu navigation structure for monitoring portfolio performance via the ***Portfolio*** tab.





By clicking to the ***Portfolio*** tab, the it is possible to drill through to the following sub-tabs:

- View
- Performance
- Asset composition
- Sector composition
- Country
- Var – Value at Risk
- Characteristics
- Risk Statistics

These sub-tabs provide insights how the portfolio is distributed across each respective dimension. These views help assess diversification and exposure by asset class, industry sector, and geographic region by drilling through to the following sub-tabs - each detailed in its own section below

7.1 View

In the ***View*** sub-tab, the portfolio can be monitored by its composition based on the securities held.

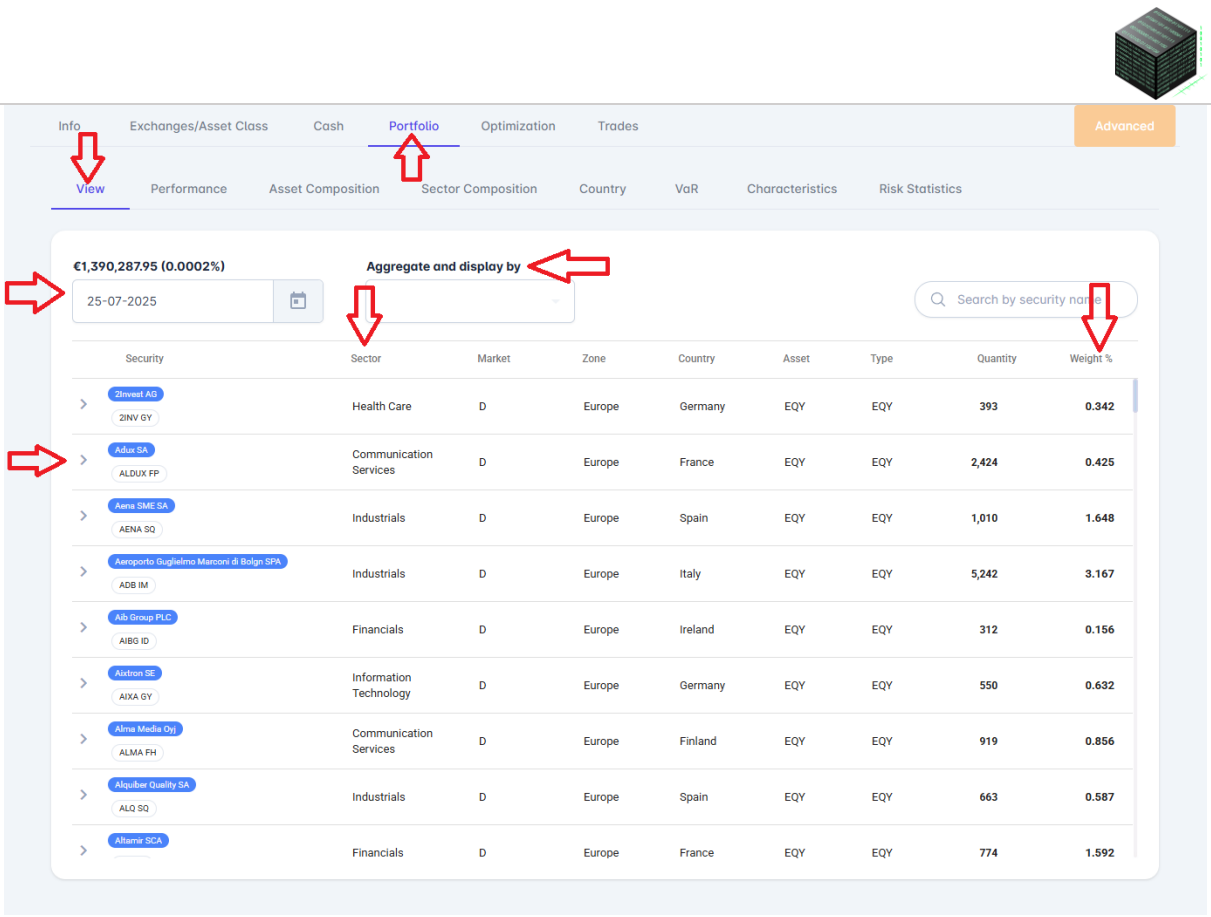
By default, **PoMaTo** displays the portfolio composition as of today; however, it is possible to select a specific date to view historical data. Each individual asset held in the portfolio is shown by default, but the display format can be customized.

The information displayed in the ***View*** sub-tab includes, for each Security held. Click the column name to change the sort order:

- Security: the name and the identifier (chosen as main identifier during initial setup)
- Sector: industry category
- Market: Developed or Emerging
- Zone: geographical region
- Country: nation where the issuing company is headquartered or listed
- Asset: class of financial instrument
- Type: further classification of the financial instrument
- Quantity: number of units held in the portfolio
- Weight: proportion of the portfolio's total value that is allocated to that specific security

The information can be aggregated by selecting the aggregation field in the aggregate box:

- Sector
- Market
- Zone
- Country
- Asset



Clicking on the line of any security held in the portfolio will open a popup window, providing a detailed review of that specific security, including an analysis of the results of actions taken so far.

The popup will display information related to the selected security:

- Top section: Displays the Security Descriptive Data already available on the ***View*** sub-tab
- Lower section: Presents details of the trading activity involving the security, with return analysis shown in both Portfolio Currency and Local Currency, where:
    - *Portfolio Currency* refers to data computed based on the currency selected during the initial portfolio setup
    - *Local Currency* refers to data computed based on the currency in which the security was traded

For both Portfolio and Local Currency, **PoMaTo** provides the following information for each security held within the portfolio:

- Currency: the currency of the security
- Traded Price: weighted average of the security's traded price
- Current Price: price in both currencies
- Var %: Value at Risk percentage
- Book Cost: including any Brokerage Fees Paid
- Book Value: original cost of acquiring the security
- Profit & Loss: P&L amount, including any Brokerage Fees Paid
- P&L %: including any Brokerage Fees Paid

7.2 Performance

The ***Performance*** sub-tab displays the portfolio's performance through additional views, accessible via the corresponding further-sub-tabs detailed below:

- ***Absolute Performance***
- ***Relative Performance***
- ***Performance Matrix***

7.2.1 Absolute performance

This tab will display a chart of the portfolio and selected benchmark performance, in absolute terms, by displaying the performance (with base 100 at inception date) for both portfolio and benchmark.

Regardless of the benchmark selected during initial portfolio set-up, benchmark can be changed at any time.

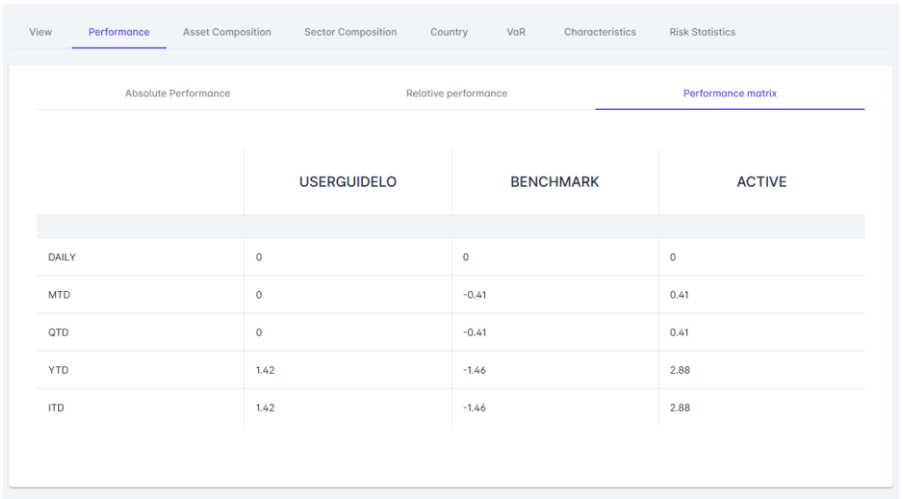
7.2.2 Relative performance

This tab displays the performance of the investment portfolio relative to the selected benchmark from the initial setup or the benchmark chosen in the Absolute Performance tab. The chart, set with a base value of 100 at inception, represents the difference between portfolio performance and the selected benchmark

7.2.3 Performance matrix

This tab will display a performance matrix table which can be used to monitor the Portfolio, the Benchmark, and the Active performance across commonly used timeframes:

- DAILY: Daily performance
- MTD: Month-to-Date
- QTD: Quarter-to-Date
- YTD: Year-to-Date
- ITD: Inception-to-date

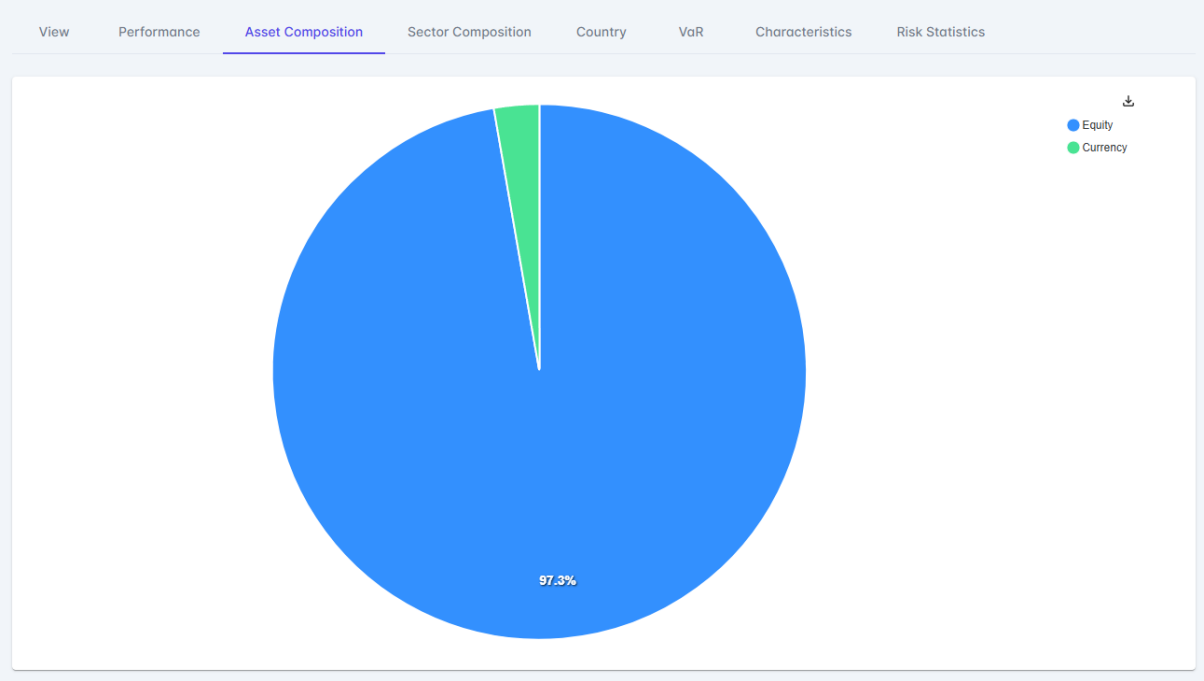


	USERGUIDELO	BENCHMARK	ACTIVE
DAILY	0	0	0
MTD	0	-0.41	0.41
QTD	0	-0.41	0.41
YTD	1.42	-1.46	2.88
ITD	1.42	-1.46	2.88

7.3 Asset composition

This tab will display the portfolio's exposure to each asset class.

If the chart includes a smaller pie segment labelled Others, clicking on this will reveal a detailed breakdown of the underlying components.



7.4 Sector Composition:

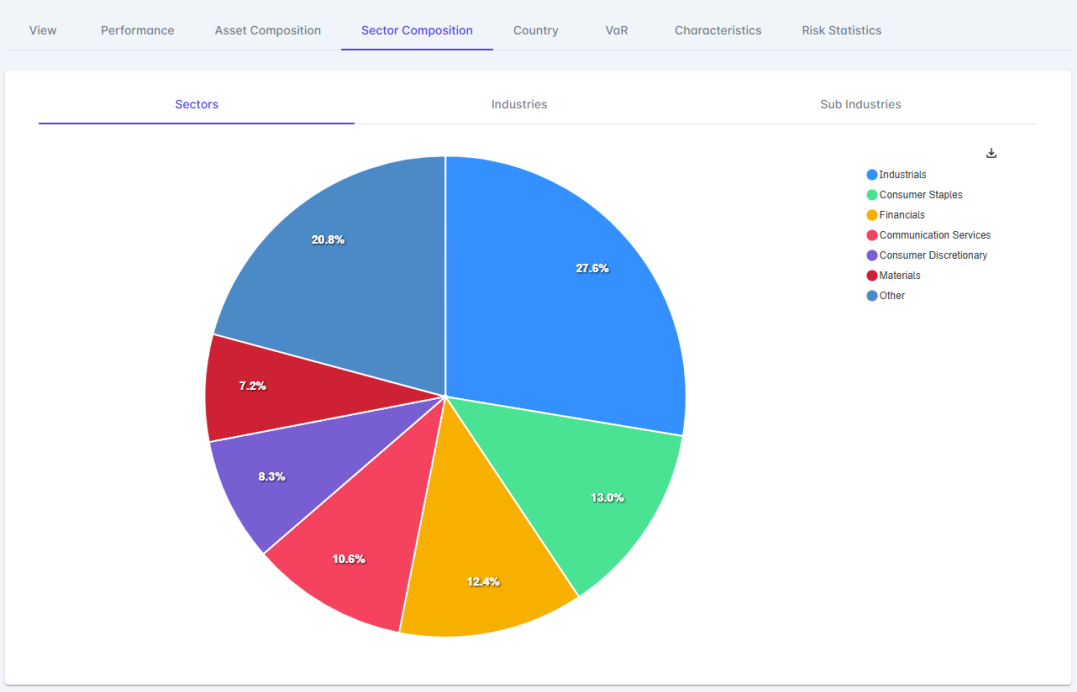
The ***Sector composition*** sub-tab, displays the portfolio's exposure through additional views, accessible via the corresponding further-sub-tabs detailed below:

- ***Sectors***
- ***Industries***
- ***Sub Industries***

If any chart includes a smaller pie segment labelled *Others*, clicking on it will reveal a detailed breakdown of the underlying components.

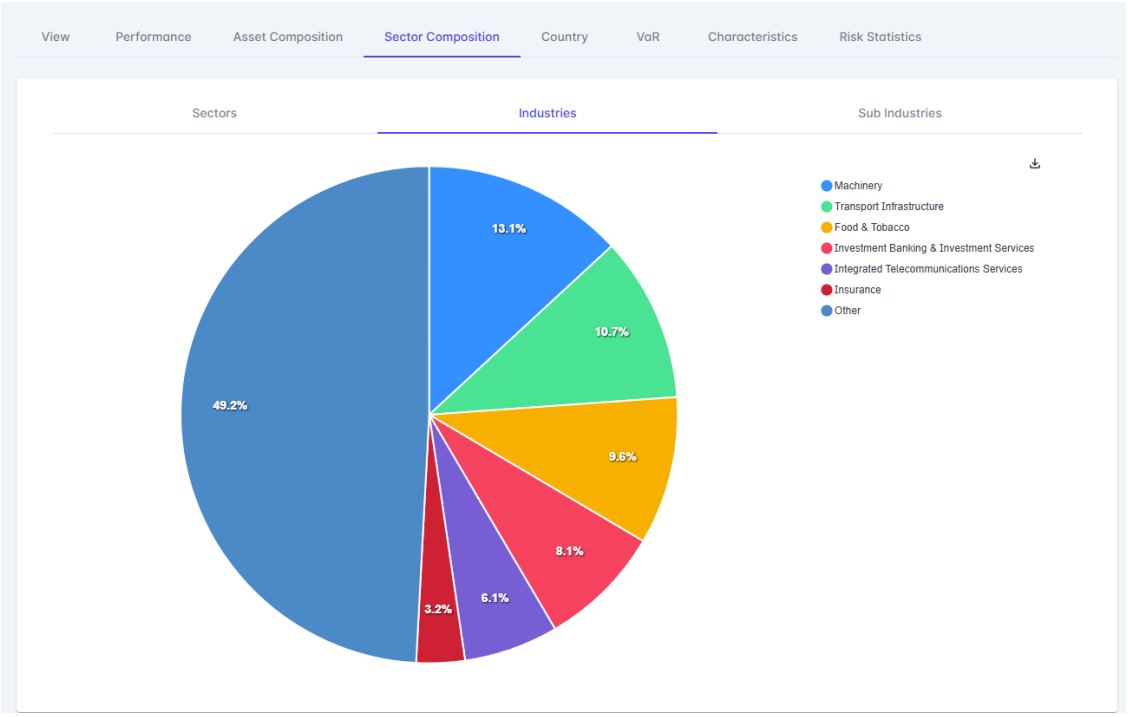
7.4.1 Sectors

This further-sub-tab, shows the portfolio's allocation across high-level sectors such as Technology, Healthcare, or Financials.



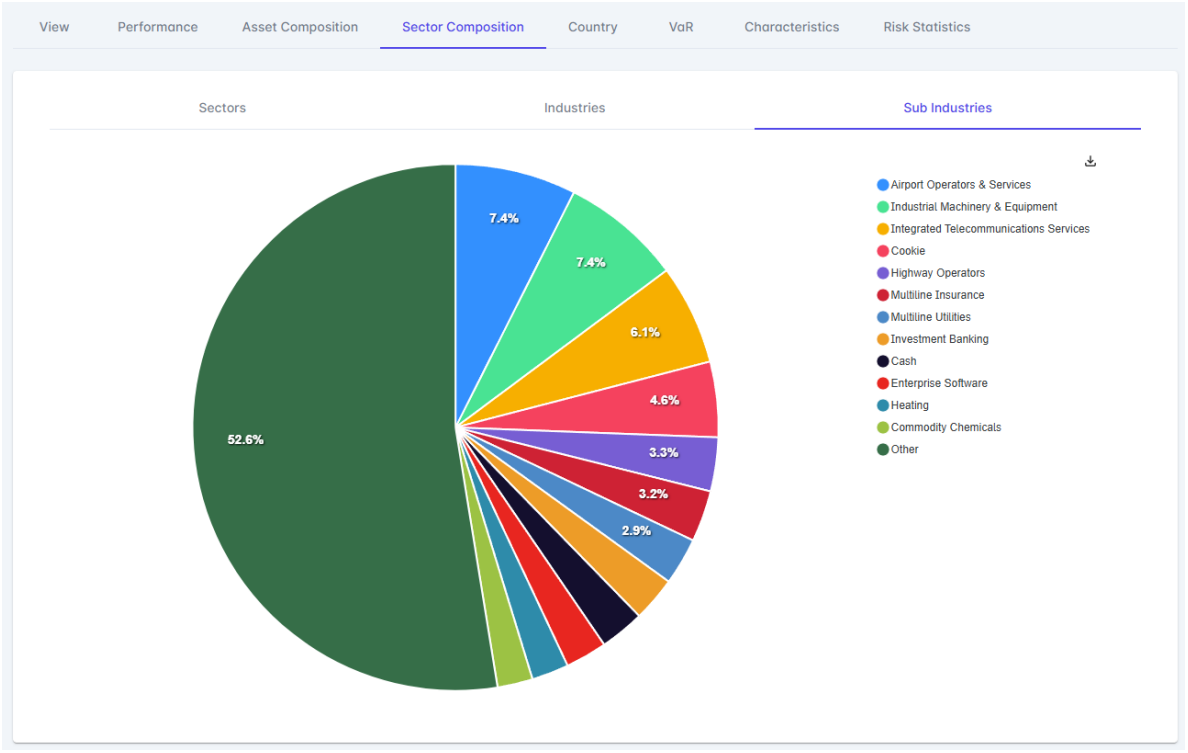
7.4.2 Industries

This further-sub-tab, breaks down sector exposure into specific industries, providing a more granular view (e.g., within Technology: Software, Semiconductors, etc.)



7.4.3 Sub Industries

This further-sub-tab, offers the most detailed view by highlighting exposure to sub-industries within each industry (e.g., Application Software within Software).



7.5 Country

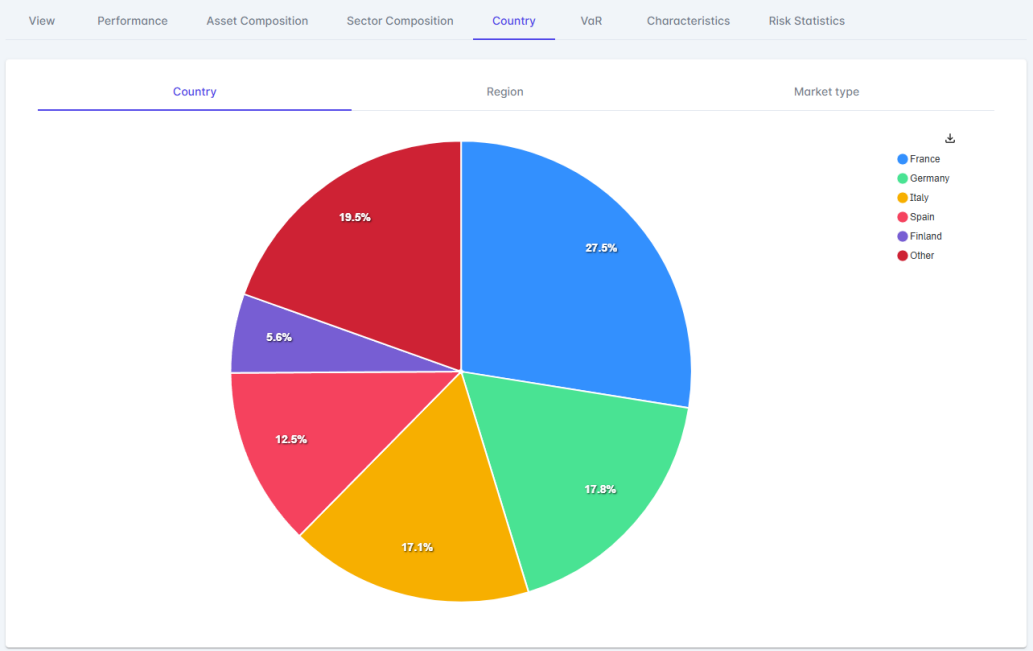
The ***Country*** sub-tab, displays the portfolio's exposure through additional views, accessible via the corresponding further-sub-tabs detailed below:

- Country
- Region
- Market Type

If any chart includes a smaller pie segment labelled Others, clicking on it will reveal a detailed breakdown of the underlying components.

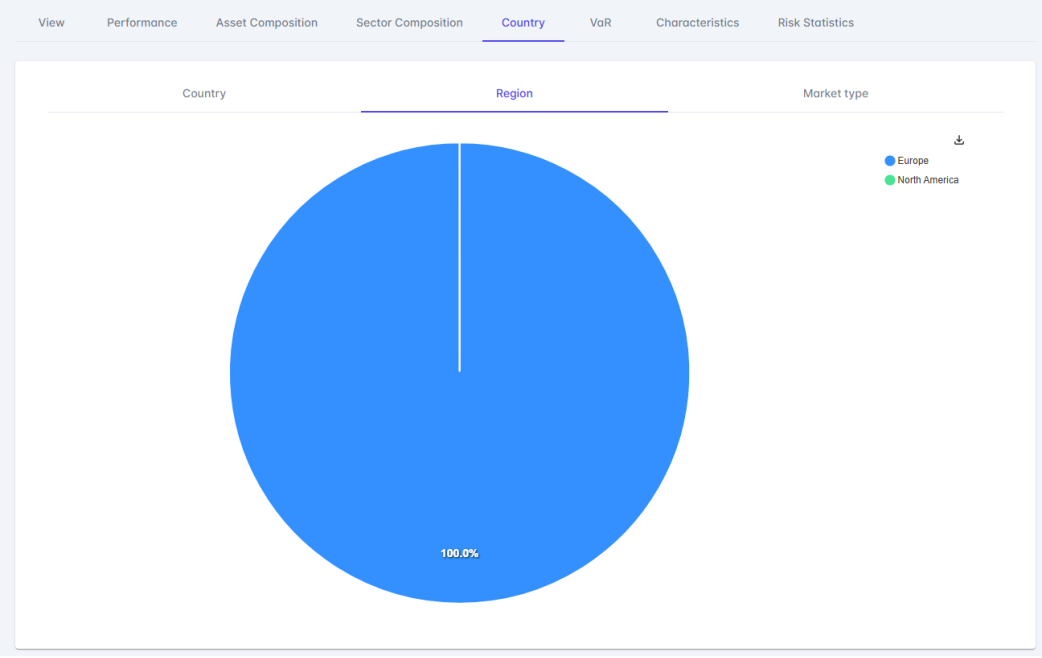
7.5.1 Country

This further-sub-tab, displays the portfolio's allocation to individual countries, highlighting specific geographic exposure.



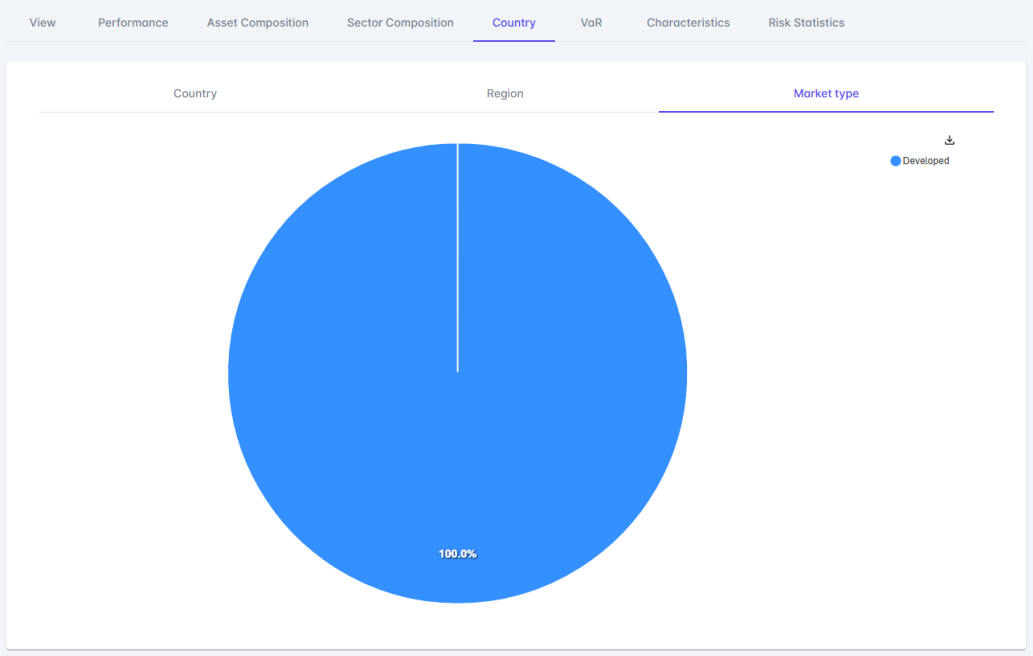
7.5.2 Region

This further-sub-tab, aggregates countries into broader regions (e.g., Europe, North America, etc.), offering a high-level view of regional distribution



7.5.3 Market Type

This further-sub-tab, classifies exposure by market categories such as Developed or Emerging to assess the portfolio's risk and diversification profile.



7.6 VaR - Value at Risk

VaR, is a statistical measure that quantifies the potential financial loss of a portfolio over a specific period, with a given level of confidence.

Unlike other providers, **PoMaTo** enables the following:

- Choose the level of confidence associated to the VaR calculations
- Calculate the portfolio's risk under three different scenarios for both current and optimized portfolio, either in percentage term or absolute terms:
    a. **Normal**: assumes the portfolio carries risk typical of periods where market volatility falls within the range of historically observed data
    b. **T-Dist**: assumes the portfolio carries risk in a period of higher-than-usual historic market volatility
    c. **Cauchy**: assumes the portfolio carries risk during periods of market turmoil and extreme displacement

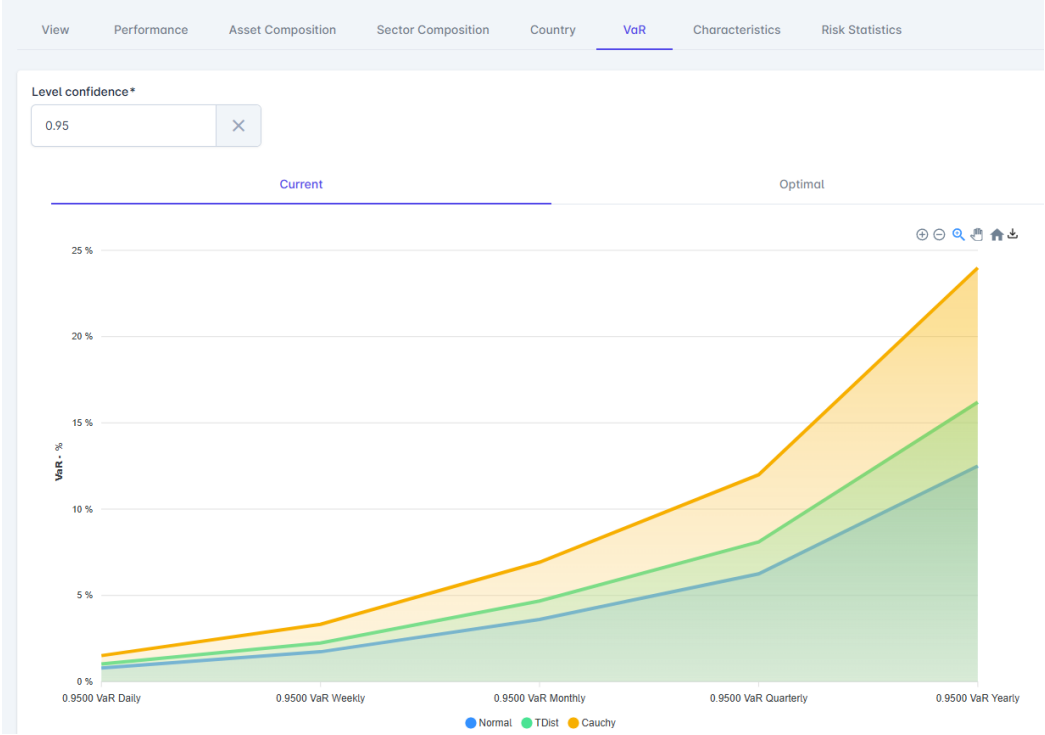
PoMaTo clearly enables understanding of the risks associated with the portfolio, as well as potential losses under different scenarios and timeframes. Additionally, **PoMaTo** provides insights into how risk can be reduced or mitigated through the implementation of the optimized portfolio

The Value at Risk sub-tab displays the portfolio's Value at Risk through additional views, accessible via the corresponding further-sub-tabs detailed below:

- Current
- Optimal

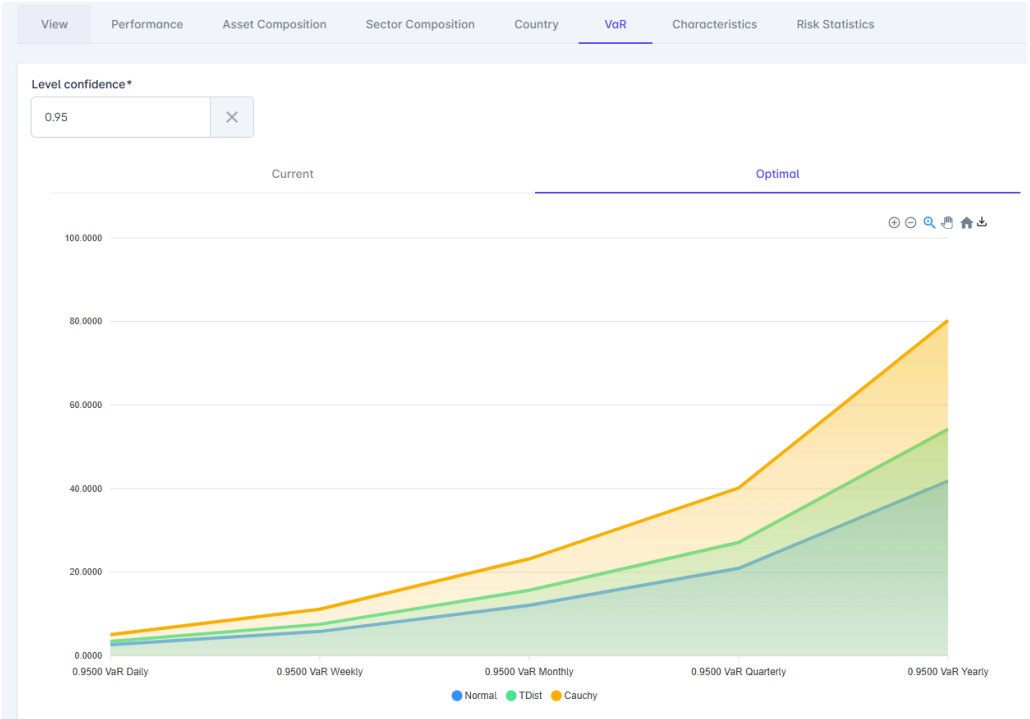
7.6.1 Current

This further-sub-tab, displays the Value at Risk based on the current portfolio composition, reflecting the existing exposure and associated risk.



7.6.2 Optimal

This further-sub-tab, shows the Value at Risk for the model-optimized portfolio, enabling comparison against the current VaR to evaluate potential risk reduction or efficiency.



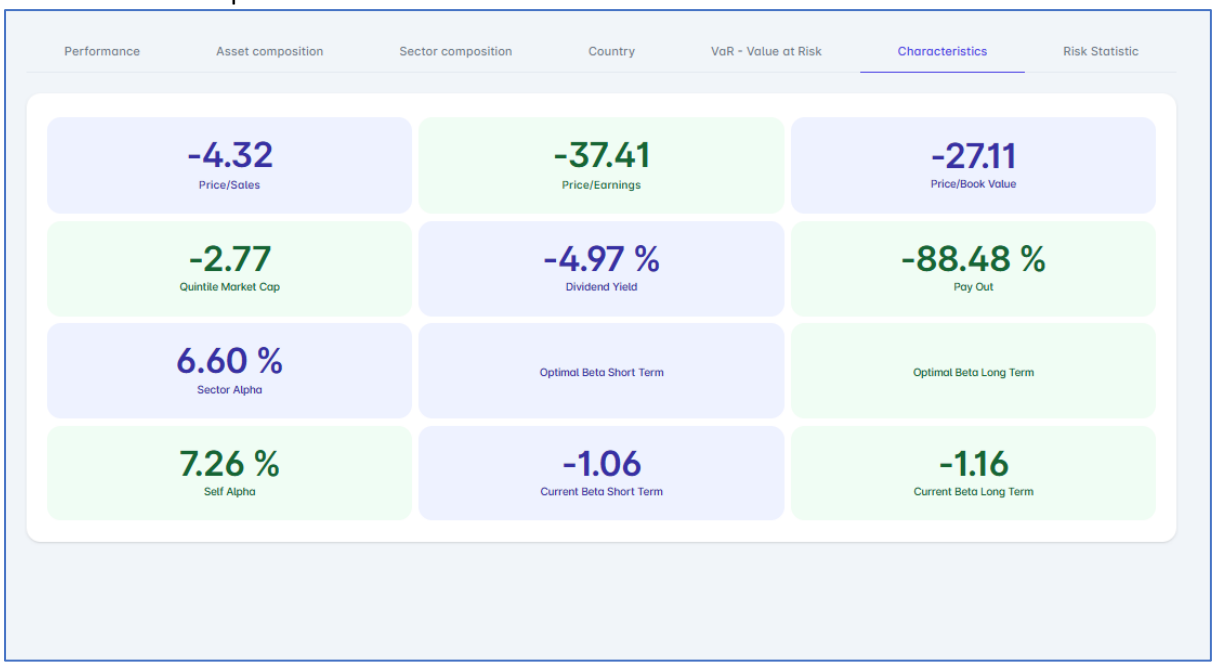
7.7 Characteristics

PoMaTo provides an in depth understanding of the portfolio invested in *equity*.

The ***Characteristics*** sub-tab provides an overview of commonly used fundamental metrics for monitoring an equity portfolio. These twelve metrics are displayed:

1) Price/Sales: Price to Sales ratio	**2) Price/Earnings:** Price to Earnings ratio	**3) Price/Book Value:** Price to Book Value ratio
4) Quintile Market Cap: Market Cap Exposure	**5) Dividend Yield:** Percentage of portfolio value returned to investors in the form of dividends	**6) Pay Out:** proportion of a company's earnings distributed to shareholders in the form of dividends
7) Sector Alpha: excess return that a portfolio has generated from sector allocation decisions	**8) Optimal Beta Short Term:** market sensitivity over a recent short-term period	**9) Optimal Beta Long Term:** market sensitivity over a longer historical period
10) Self Alpha: excess return attributed to the actual securities selected	**11) Current Beta Short-Term:** actual beta of the current portfolio, over a recent, short-term period	**12) Current Beta Long-Term:** actual beta of the current portfolio, over a longer historical period

These values are represented in the ***Characteristics*** sub-tab:



7.8 Risk Statistics

The ***Risk Statistic*** sub-tab, allows for monitoring of the commonly used risk metrics related to an investment portfolio. These eight metrics are displayed:

1) Fund Expected Volatility: projected standard deviation of returns for a portfolio	**2) Fund Realized Volatility:** actual historical standard deviation of returns
3) Benchmark Volatility: standard deviation of returns for a benchmark index	**4) Tracking Error:** volatility of the difference between a portfolio's returns and the returns of its benchmark
5) Max Drawdown: largest peak-to-trough decline in the value of a portfolio	**6) Max Drawdown in Days:** longest period (in days) taken to recover from largest drawdown before reaching a new high
7) Information Ratio: risk-adjusted return of a portfolio relative to its benchmark	**8) Sharpe Ratio:** risk-adjusted return, calculated by dividing the portfolio's excess return by standard deviation

These values are represented in the ***Risk Statistic*** sub-tab:

8 Optimizing the Portfolio

Portfolio optimization is a core component of portfolio management and serves as **PoMaTo**'s key differentiator. **PoMaTo** the only product offering this level of capability within an integrated, fully configurable platform.

Portfolio optimization is the process of constructing an investment portfolio that aims to maximize returns while minimizing risk, based on specific goals and settings defined within the optimizer. This is achieved by selecting an optimal mix of assets expected to deliver the best possible return within established constraints.

Diversification across asset classes, sectors, and regions reduces overall portfolio risk. The optimization process uses mathematical models and algorithms to determine the most effective asset allocation, considering expected returns, volatility, and asset correlations. The objective is to maximize return while minimizing risk by applying specified constraints, or to minimize risk for a targeted return, based on portfolio requirements.

PoMaTo offers a state-of-art *Markowitz mean-variance Optimizer,* fully customizable to suit any investment objective and strategy.

With the **PoMaTo** optimizer settings, it is possible to select from four proprietary optimization algorithms, enabling the implementation of a wide range of investment strategies:

1. Long Only
2. Long Short (130/30)
3. Market Neutral
4. Direct Indexing

8.1 Optimization Settings

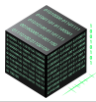
Clicking on the ***Optimization*** Tab, opens the ***Settings*** page of the *Strategy/Optimizer* selected during initial portfolio set up.

From this page, Optimizer parameters can be configured to achieve the desired portfolio composition while minimizing risk.

Parameter constraints help maintain diversification by preventing excessive concentration in any single investment class, thereby reducing the impact of class-specific events on overall portfolio performance.

The available parameters depend on the chosen Strategy/Optimizer—only the relevant input fields will be displayed.

In the subsequent sections, the text boxes for the parameters are detailed and at which point they are displayed – when selecting the strategy. Each heading for the input fields details the following:



	Value	Example(s) in User guide text
What level the field applies	Portfolio Security	*Application ➔ Portfolio Level* *Application ➔ Security Level*
What Asset Classes	Equity Fixed Income Commodity Forex Crypto	*Asset Class ➔ Equity, Fixed Income* *Optimizer ➔ Long Only*
What Field input value required	Decimal [0,1] [0,NAV] Etc	*Field ➔ for Long Only ➔ Decimal [0,1]*
What Optimizers the field applies to	Long Only Long Short Market Neutral Direct Indexing	*Optimizer ➔ Long Only, Long Short*

PoMaTo's range of optimizers allows the setting constraints in the following Constraint categories:

1. Market and Cash Constraint
2. Model Constraint
3. Risk Constraint
4. Asset Class Constraint
5. Sector Constraint
6. Geographical Constraint
7. Country Constraint
8. Single Security Constraint
9. Fixed Income Specific Constraint
10. Custom Constraint

Within each constraint available in the sidebar settings, there are **two types of constraints**, which can be applied at either the **Portfolio Level** or the **Security/Single Cluster Level**:

1. **Portfolio Level Constraints**

   This constraint specifies limits across the entire portfolio.

   a) In the Portfolio Constraint tab, the cash constraint sets the desired cash balance to be maintained after all trades are executed.
   b) In the Geographic Constraint tab, applying the Portfolio Level constraint affects all zones equally, setting minimum and maximum weights for the entire portfolio.

2. **Security Level Constraints**

   This constraint sets limits on each individual security.

   a) For example: In the Portfolio Constraint tab, the minimum trade size constraint sets a threshold for the size of trades on each individual security. If the optimizer suggests a trade smaller than this minimum size, that trade will be excluded from execution.
   b) In the Geographic Constraint tab, if the constraint is applied at the security level, it will only apply to the specific zone it relates to.

In other words:

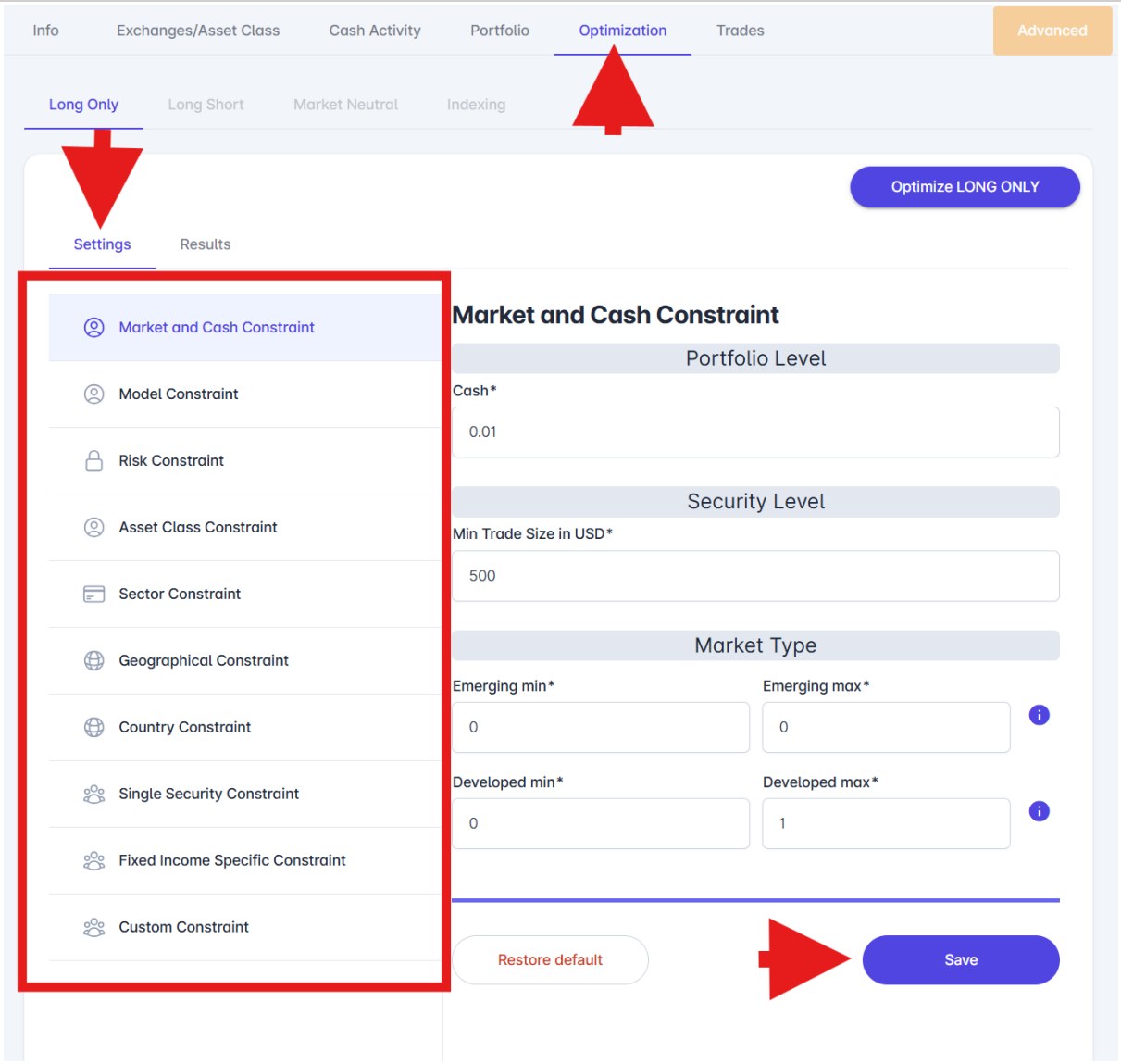
Portfolio-level constraints act as a blanket rule across the entire portfolio, while security-level constraints are applied only to the specific parameter or group of securities they relate to (such as a single security or all securities within a particular cluster).

These constraints are found in *Sidebar Menu format* under the ***Optimization*** menu.

NOTE:

The fields displayed are identical for both Market Neutral and Long-Short configurations.

The fields displayed are identical for both Long-Only and Direct Indexing configurations.



Note: any changes made within any of the available constraints must be committed by clicking the **Save** button at the bottom page of each constraint category. If changes are not saved, the information entered will be lost and the optimizer will not take them into account.

Parameter Entry Validation

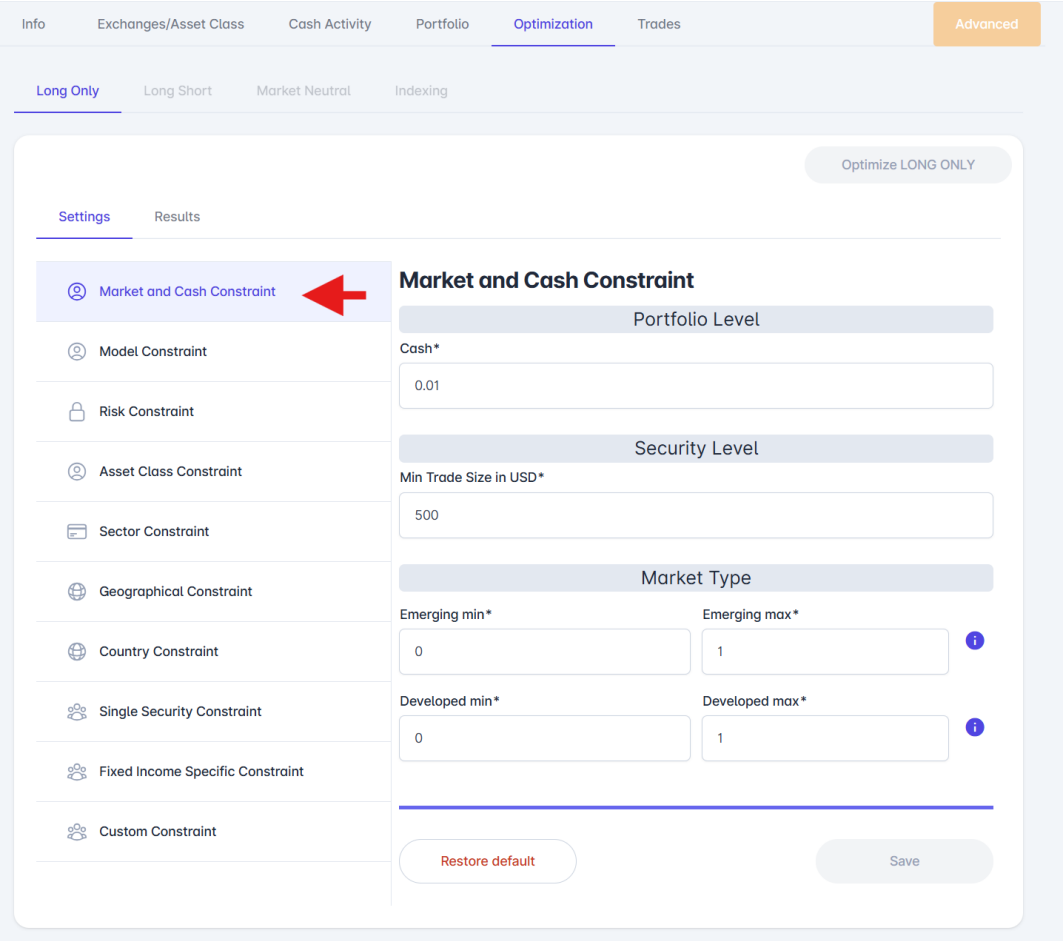
In the entry boxes, for each parameter, there is data input validation logic, that allows only for correct values to be entered.

Any value between 0 and 1 can be entered. For example, a value of 0.25 means 25%.

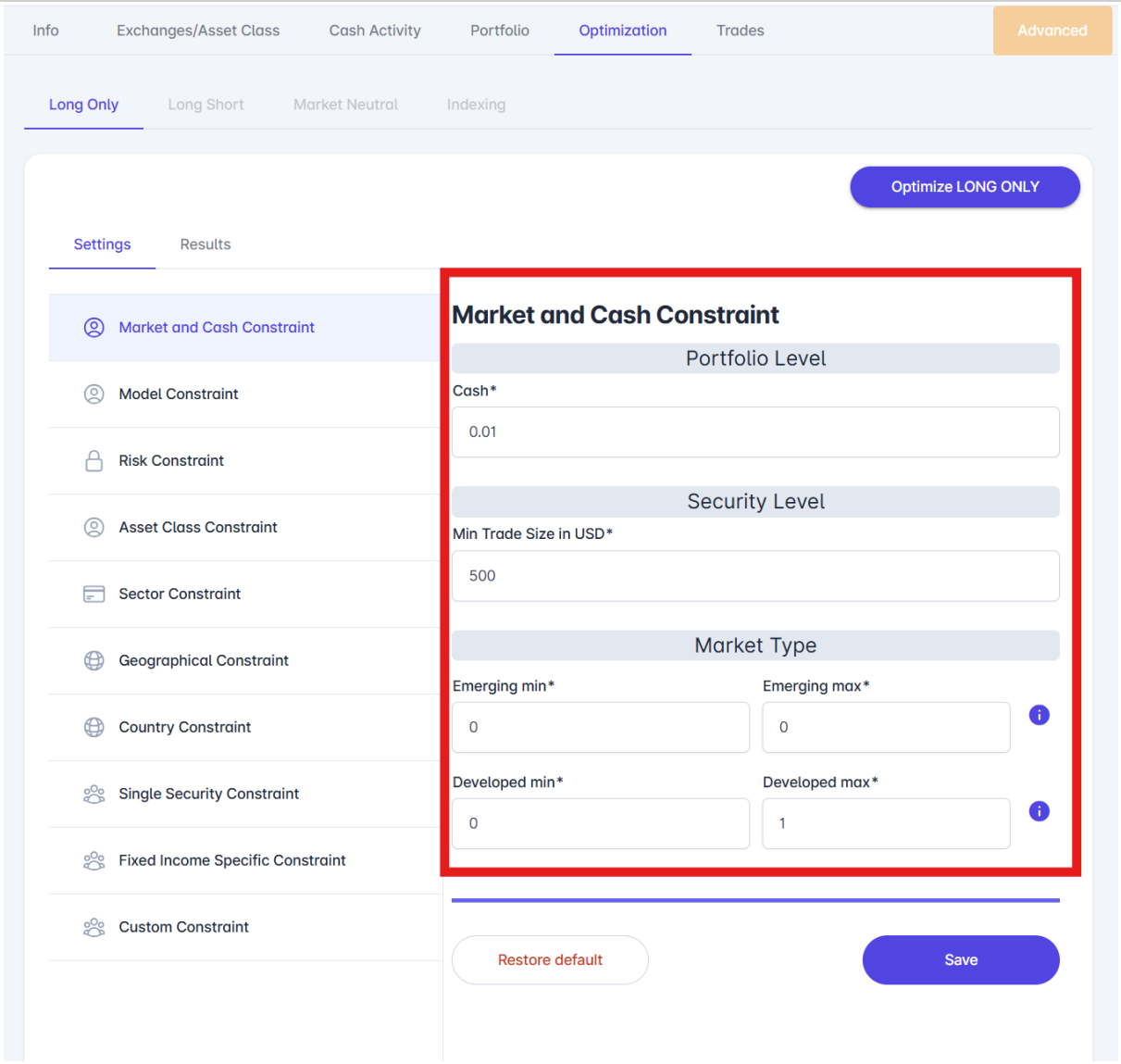
This value, expressed as a decimal, represents the constraint of the parameter – wither a MIN or a MAX value. These values are input into the optimizer.

8.1.1 Market and Cash Constraint

The following parameters can be set for Market and Cash Constraints and are detailed in in their own section below:



- Cash
- Min Trade Size
- Emerging Min & Max
- Developed Min & Max



8.1.1.1 *Cash*

Application ➔ Portfolio Level
Asset Class ➔ Equity, Fixed Income, Commodity, Forex, Crypto
Field ➔ Decimal [0,1]
Optimizer ➔ Long Only, Long Short, Market Neutral, Direct Indexing

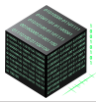
The Cash constraint defines the Min cash amount the portfolio will hold.

Any value between 0 and 1 can be entered. This value, expressed as a decimal, represents the minimum cash allocation.

For example, entering 0.01 means the optimizer will generate a portfolio where the post-trade cash balance is at least 1%.

8.1.1.2 *Min Trade Size*

Application ➔ Security Level
Asset Class ➔ Equity, Fixed Income, Commodity, Forex, Crypto
Field ➔ Integer - Monetary Amount [0,NAV]
Optimizer ➔ Long Only, Long Short, Market Neutral, Direct Indexing



The Min Trade Size constraint sets a lower bound limit, in monetary terms, for the minimum trade size allowed in a single transaction

For example, if the minimum trade size is set to 5,000 EUR, the optimizer will exclude any trades smaller than this amount.

8.1.1.3 Emerging Min and Max

Application ➔ Portfolio Level
Asset Class ➔ Equity, Fixed Income, Commodity, Forex, Crypto
Field ➔ for Long Only, Direct Indexing ➔ Decimal [0,1]
Field ➔ for Long Short, Market Neutral ➔ Decimal [-1,1]
Optimizer ➔ Long Only, Long Short, Market Neutral, Direct Indexing

The *Emerging Market* parameters define limits on the portfolio's exposure to the Emerging Markets, regardless of the Geographical Area the Emerging Market is in (i.e., Latin America [e.g. Brazil] vs Asia Pacific [e.g. India]).

This parameter applies at the blanket level, applying at the Portfolio Level by specifying the Min and Max range for Emerging Market exposure.

For example, setting *Emerging Min* to 0.01 and *Emerging Max* to 0.025 instructs the optimizer to construct a portfolio where the exposure to the Emerging Market is between 1% and 2.5% of the total portfolio weight.

8.1.1.4 Developed Min and Max

Application ➔ Portfolio Level
Asset Class ➔ Equity, Fixed Income, Commodity, Forex, Crypto
Field ➔ for Long Only, Direct Indexing ➔ Decimal [0,1]
Field ➔ for Long Short, Market Neutral ➔ Decimal [-1,1]
Optimizer ➔ Long Only, Long Short, Market Neutral, Direct Indexing

The *Developed Market* parameters define limits on the portfolio's exposure to the Developed Markets, regardless of the Geographical Area the Developed Market is in (i.e. North America [e.g. Canada] vs Europe [e.g. Germany])

This parameter applies at the blanket level, applying at the Portfolio Level by specifying the Min and Max range for Developed Market exposure.

For example, setting *Developed Min* to 0.01 and *Developed Max* to 0.025 instructs the optimizer to construct a portfolio where the exposure to the Emerging Market is between 1% and 2.5% of the total portfolio weight.

8.1.2 Model Constraints

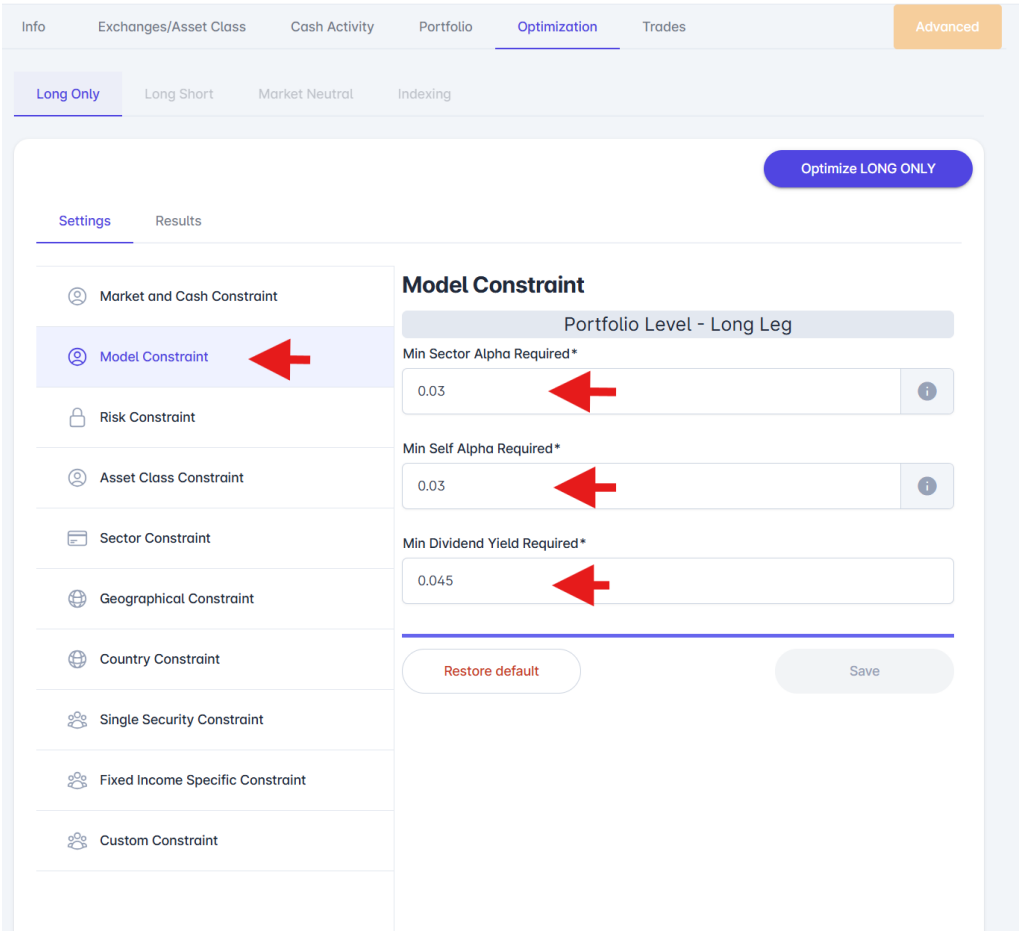
The *Model Constraints* can only be configured if the *Model* selection option was enabled during initial portfolio setup.

The parameters detailed below apply **only to the Equity portion of the portfolio**.

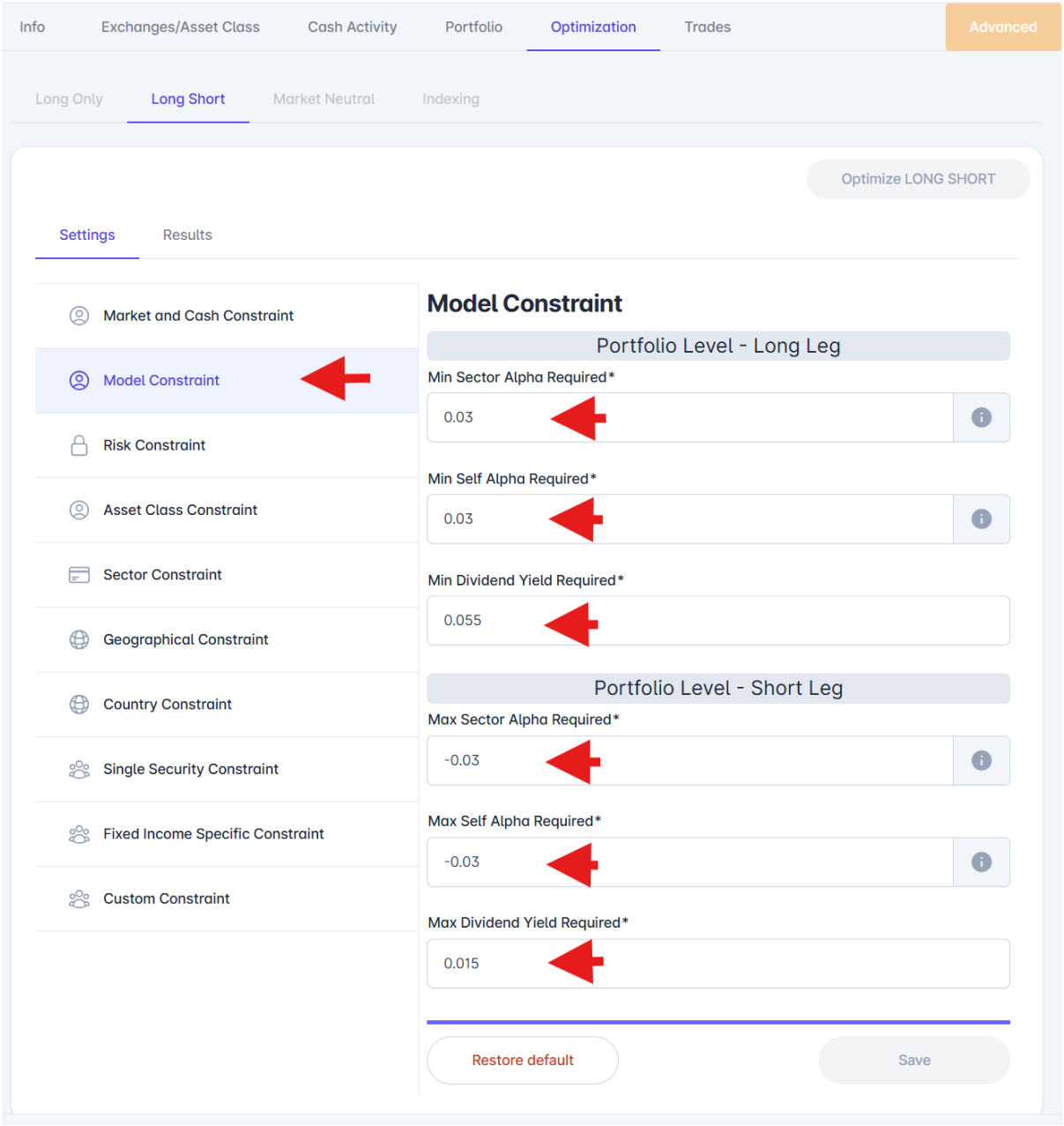
They are presented in their own dedicated section and only the **relevant parameter inputs** will be displayed, depending on the strategy selected.

- Cash
- **Min Sector Alpha**
- Max Sector Alpha
- **Min Self Alpha**
- Max Self Alpha
- **Min Dividend Yield**
- Max Dividend Yield

Here is a Long Only screen example:



Here is a Market Neutral/Long Short screen example

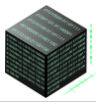


8.1.2.1 *Min Sector Alpha Required*

Application ➔ Portfolio Level
Asset Class ➔ Equity
Field ➔ Decimal [0,1]
Optimizer ➔ Long Only, Long Short, Market Neutral, Direct Indexing

The Sector Alpha constraint defines the minimum expected return of the portfolio based on the *Relative Value Equity Model* grounded on fundamental data.

Any value between 0 and 1 can be entered. This value, expressed as a decimal, represents the minimum expected return of the portfolio, based on the weighted sum of each security's Alpha. The



optimizer uses this input to ensure the portfolio's Sector Alpha meets or exceeds the specified threshold.

For example, entering a value of 0.03 instructs the optimizer to generate a portfolio with a Sector Alpha of at least 3%.

8.1.2.2 Max Sector Alpha Required

Application ➔ Portfolio Level
Asset Class ➔ Equity
Field ➔ Decimal [-1,0]
Optimizer ➔ Long Short, Market Neutral

When the optimizer runs in a Long-Short or Market Neutral configuration, it is possible to set a maximum Sector Alpha for the short leg and a minimum Sector Alpha for the long leg of the portfolio.

Any value between -1 and 0 can be entered for the short leg. This value, expressed as a decimal, represents the maximum expected return for the short leg - calculated as the sum product of security weights and their corresponding Alpha values.

For example, setting the value to -0.03 instructs the optimizer to generate a portfolio where the Sector Alpha of the short leg is less than or equal to -3%.

8.1.2.3 Min Self Alpha Required

Application ➔ Portfolio Level
Asset Class ➔ Equity
Field ➔ Decimal [0,1]
Optimizer ➔ Long Only, Long Short, Market Neutral, Direct Indexing

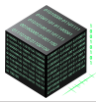
The Min Self-Alpha constraint defines the minimum expected return of the portfolio based on the discrepancy between observed historical returns and those predicted by a regression model. This discrepancy, also known as the residual error, reflects the portion of return variability not explained by the regression.

Any value between 0 and 1 can be entered. This value, expressed as a decimal, represents the minimum expected return of the portfolio - calculated as the sum product of security weights and their respective Self-Alpha values.

For example, setting a value of 0.05 instructs the optimizer to generate a portfolio where the Self Alpha is at least 5%.

8.1.2.4 Max Self Alpha Required

Application ➔ Portfolio Level
Asset Class ➔ Equity
Field ➔ Decimal [-1,0]
Optimizer ➔ Long Short, Market Neutral



When the optimizer runs in a Long Short or Market Neutral configuration, the Max Self-Alpha constraint can be set for the short leg of the portfolio, while the Min Self-Alpha constraint applies to the long leg.

Any value between -1 and 0 can be entered. This value, expressed as a decimal, represents the maximum expected return of the portfolio's short leg, based on the weighted sum of each security's Alpha. The optimizer uses this input to ensure the short leg's Self Alpha does not exceed the specified threshold.

For example, entering a value of -0.05 instructs the optimizer to generate a portfolio where the short leg's Self Alpha is less than or equal to -5%.

8.1.2.5 Min Dividend Yield Required

Application ➔ Portfolio Level
Asset Class ➔ Equity
Field ➔ Decimal [0,1]
Optimizer ➔ Long Only, Long Short, Market Neutral, Direct Indexing

The Dividend Yield constraint defines the minimum expected dividend yield for the portfolio, based on the output of the *Relative Value Equity Model*.

Any value between 0 and 1 can be entered, representing the required minimum portfolio dividend yield in decimal form. This is calculated as the sum product of the portfolio weights and the individual dividend yields of the selected securities.

For example, entering a value of 0.045 instructs the optimizer to construct a portfolio with an expected dividend yield of at least 4.5%.

8.1.2.6 Max Dividend Yield Required

Application ➔ Portfolio Level
Asset Class ➔ Equity
Field ➔ Decimal [0,1]
Optimizer ➔ Long Short, Market Neutral

When running in a Long-Short or Market Neutral configuration, a maximum Dividend Yield constraint can be applied to the short leg of the portfolio. This defines the upper limit for the expected dividend yield of the short positions.

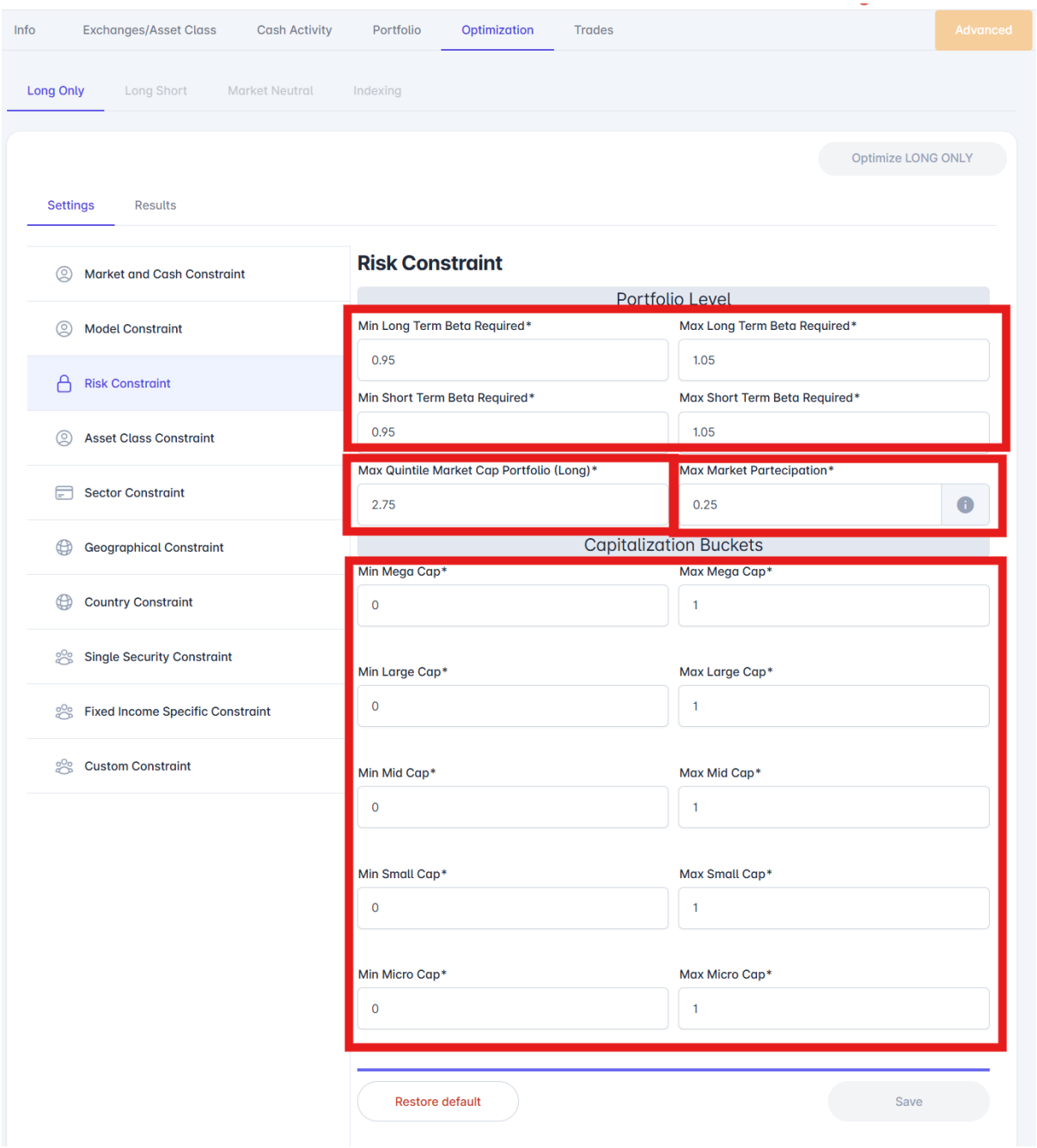
Any value between 0 and 1 can be entered, representing the maximum allowable dividend yield in decimal form. This is calculated as the sum product of the short leg weights and the individual dividend yields of the securities in the short leg.

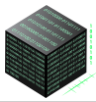
For example, entering a value of 0.015 instructs the optimizer to construct a portfolio where the short leg's dividend yield is less than or equal to 1.5%.

8.1.3 Risk Constraint

The following parameters can be set for Risk Constraints and are detailed in in their own section below:

- Beta (Various Entries)
- Max Quintile Market Cap Portfolio (Long)
- Min Quintile Market Cap Portfolio (Short)
- Market Cap Size (Various Entries)
- Max Market Participation





8.1.3.1 Beta (Various Entries)

Application ➔ Portfolio Level
Asset Class ➔ Equity, Fixed Income, Commodity, Forex, Crypto
Field ➔ Decimal [-2,+2]
Optimizer ➔ Long Only, Long Short, Market Neutral, Direct Indexing

A portfolio beta is a measure of the portfolio's sensitivity to market movements compared to a benchmark. A beta of 1 indicates that the portfolio's returns move in line with the benchmark, while a beta greater than 1 suggests the portfolio is more volatile than the market, and a beta less than 1 indicates that the portfolio is less volatile than the market.

A setting of both a minimum and a maximum Beta can be set, which constrains the portfolio's sensitivity to market movements within a defined range.

Beta constraints can be applied to reflect both the long-term and short-term behavior of the portfolio relative to the market.

- Min Long Term Beta Required
- Max Long Term Beta Required
- Min Short Term Beta Required
- Max Short Term Beta Required

8.1.3.2 Max Quintile Market Cap Portfolio (Long)

Application ➔ Portfolio Level
Asset Class ➔ Equity, Fixed Income, Commodity, Forex, Crypto
Field ➔ Decimal [1,5]
Optimizer ➔ Long Only, Long Short, Market Neutral, Direct Indexing

It is possible to assign each available security to a *Market Capitalization* bucket.

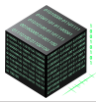
There are five buckets in total, each representing one of the following categories:

- *Quintile 1*, are the Mega Cap securities
- *Quintile 2*, are the Large Cap securities
- *Quintile 3*, are the Mid Cap securities
- *Quintile 4*, are the Small Cap securities
- *Quintile 5*, are the Micro Cap securities

A maximum Market Cap Quintile limit can be applied at the portfolio level.

For example, setting a maximum quintile of 3 at the Portfolio level allows the optimizer to include securities from higher quintiles (e.g., Quintile 5) from the Security level, provided the weighted average of the recommended holdings does not exceed 3.

In other words, the selected constraint value (ranging from 1 to 5) determines how the portfolio or strategy is positioned in relation to average market capitalization.



8.1.3.3 Min Quintile Market Cap Portfolio (Short)

Application ➔ Portfolio Level
Asset Class ➔ Equity, Fixed Income, Commodity, Forex, Crypto
Field ➔ Decimal [1,5]
Optimizer ➔ Long Short, Market Neutral

When the optimizer runs in a Long-Short or Market Neutral configuration, it is possible to set a minimum Quintile limit for the short leg and a maximum Quintile limit for the long leg of the portfolio.

For example, setting a Min Quintile of 2 means that the weighted average of the securities in the short leg—based on their weights and Market Cap Quintiles—must be equal to or greater than 2. The same logic used for the Max Quintile constraint on the long leg applies here: individual securities outside the specified range may still be included, as long as the overall weighted constraint is respected.

8.1.3.4 Max Market Participation

Application ➔ Security Level
Asset Class ➔ Equity, Fixed Income, Commodity, Forex, Crypto
Field ➔ Decimal [0,1]
Optimizer ➔ Long Only, Long Short, Market Neutral, Direct Indexing

The Market Participation constraint relates to the average daily trading volume of each individual security.

Any value greater than 0 can be entered. The value, expressed as a decimal, represents the maximum portion of a security's average daily volume that can be traded when building the portfolio position

For example, a value of 0.25 means the optimizer will be restricted to buying no more than 25% of the average daily volume for any given security. This can be interpreted as the maximum acceptable liquidity take-up.

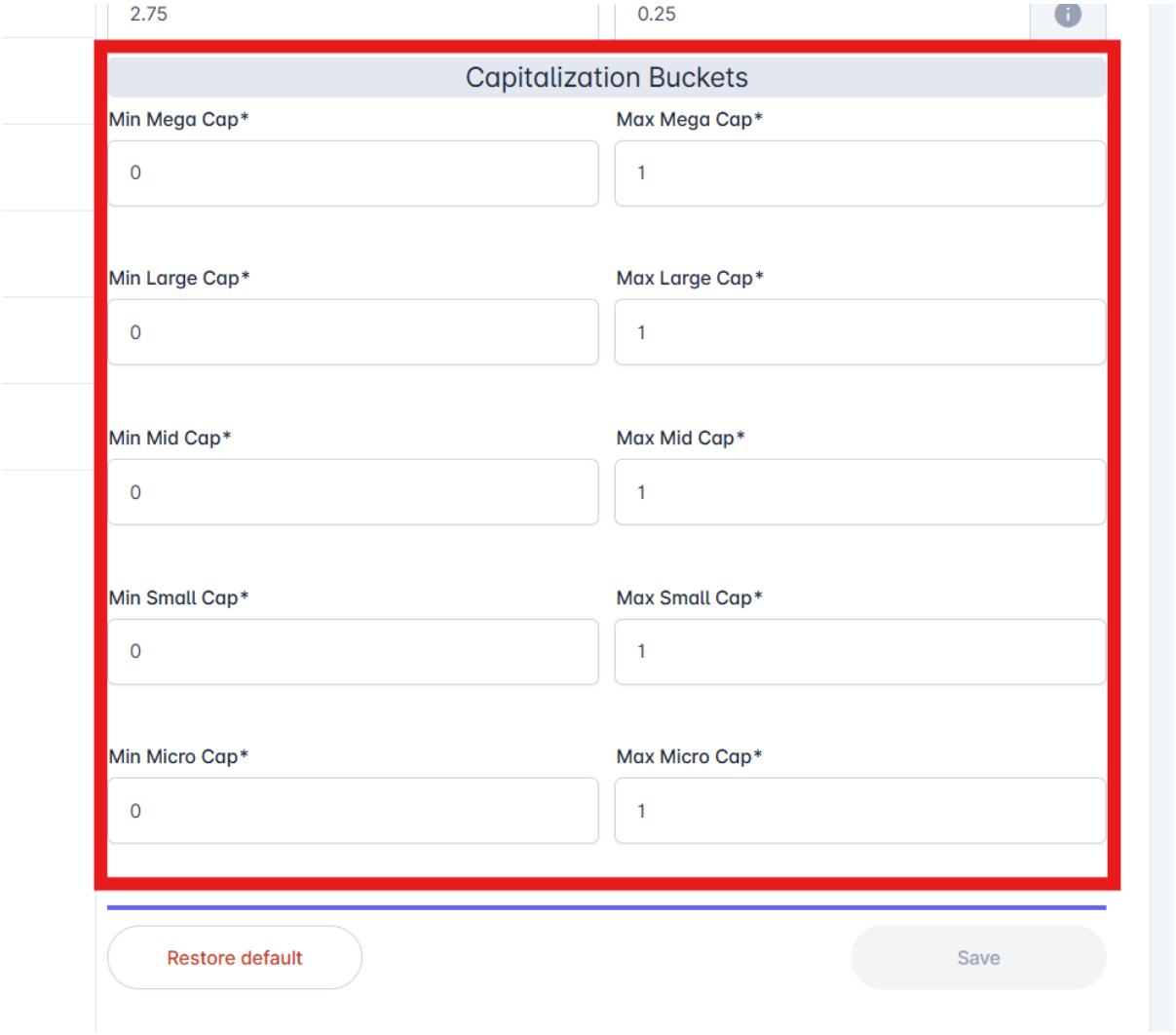
8.1.3.5 Market Cap Size (Various Entries)

Application ➔ Security Level
Asset Class ➔ Equity, Fixed Income, Commodity, Forex, Crypto
Field ➔ for Long Only ➔ Decimal [0,1]
Field ➔ for Long Short, Market Neutral ➔ Decimal [-1,1]
Optimizer ➔ Long Only, Long Short, Market Neutral

Alongside the Max Quintile of Market Cap, which applies at the portfolio level, it is also possible to set the minimum and maximum weights that the portfolio can hold within each Market Cap bucket by configuring the following fields:

- *Min Mega Cap*
- *Max Mega Cap*
- *Min Large Cap*
- *Max Large Cap*

- *Min Mid Cap*
- *Max Mid Cap*
- *Min Small Cap*
- *Max Small Cap*
- *Min Micro Cap*
- *Max Micro Cap*



The value entered represent, in decimal, the minimum and the maximum weight the portfolio will hold for each Market Cap bucket.

For example, setting the minimum for the Mega Cap bucket to 0.05 and the maximum to 0.1 instructs the optimizer to return a portfolio where the total weight of securities in the Mega Cap category is at least 5% but less than or equal to 10%.

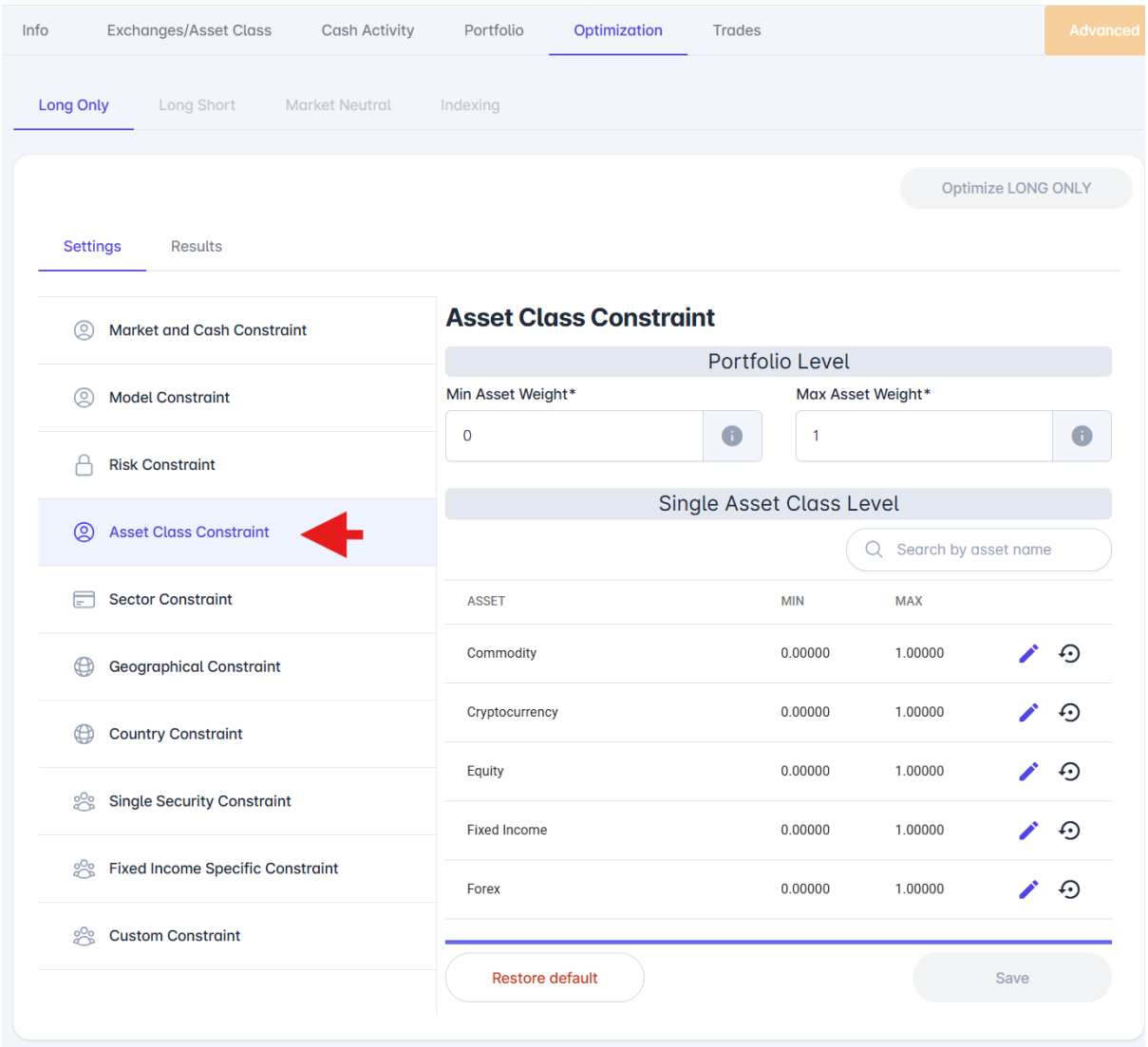
8.1.4 Asset Class Constraints

The Asset Class parameters define limits on the portfolio's exposure to specific asset classes.

Application ➔ Portfolio Level
Asset Class ➔ Equity, Fixed Income, Commodity, Forex, Crypto
Text Box ➔ for Long Only, Direct Indexing ➔ Decimal [0,1]
Text Box ➔ for Long Short, Market Neutral ➔ Decimal [-1,1]
Optimizer ➔ Long Only, Long Short, Market Neutral, Direct Indexing

The following parameters can be set for each Asset Class and are detailed in their own section below:

- Blanket range applying to all Asset Classes
- Specified Min and Max range for each Asset Class



In both cases, any value permitted by the text box can be entered, based on the optimizer configuration selected at initial portfolio set up.

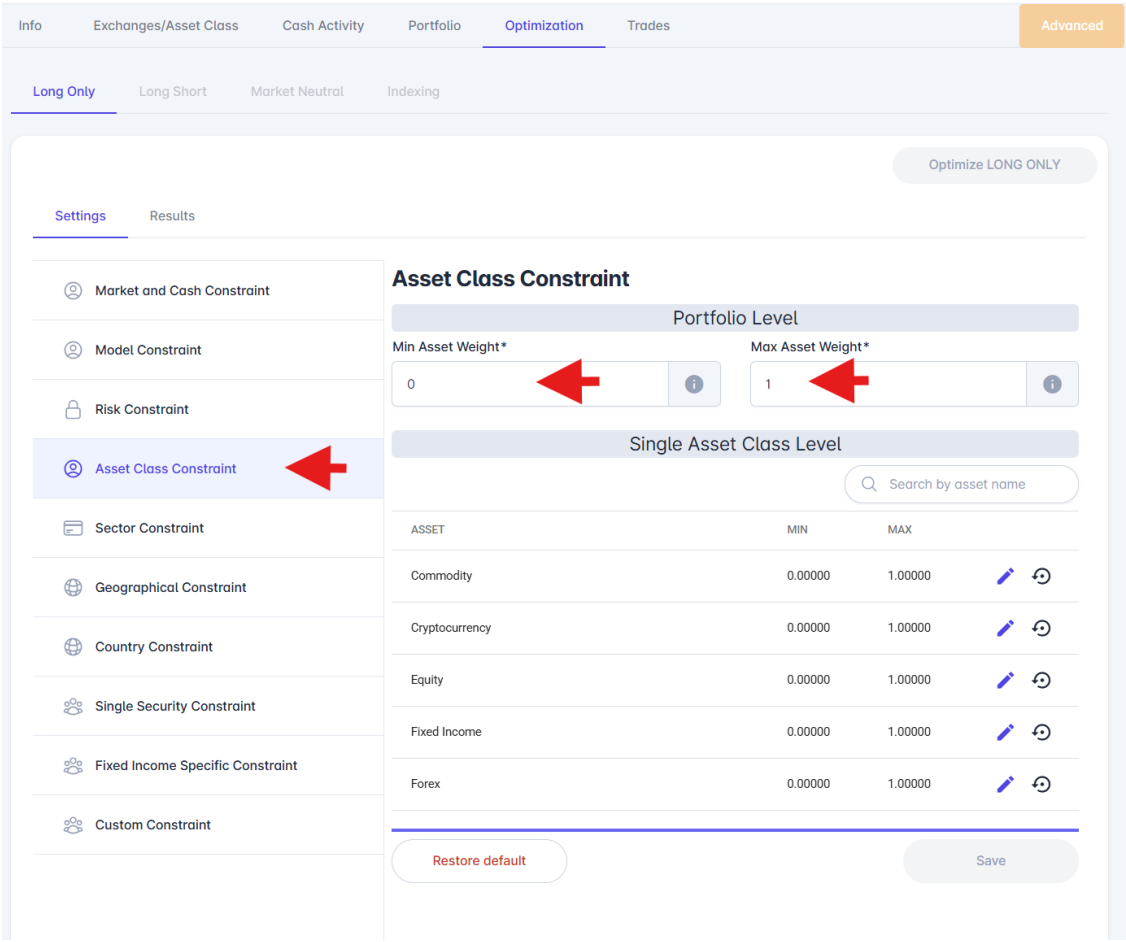
Each value, expressed as a decimal, defines the MIN and MAX portfolio weight allocated to each specific Asset Class.

For example, setting a blanket Min Asset Weight to 0.05 and a Max Asset Weight to 0.25 instructs the optimizer to construct a portfolio where each Asset Class holds between 5% and 25% of the total portfolio weight.

The same logic applies when setting individual minimum and maximum weights for each available for each individual Asset Class.

8.1.4.1 Blanket range applying to all Asset Class

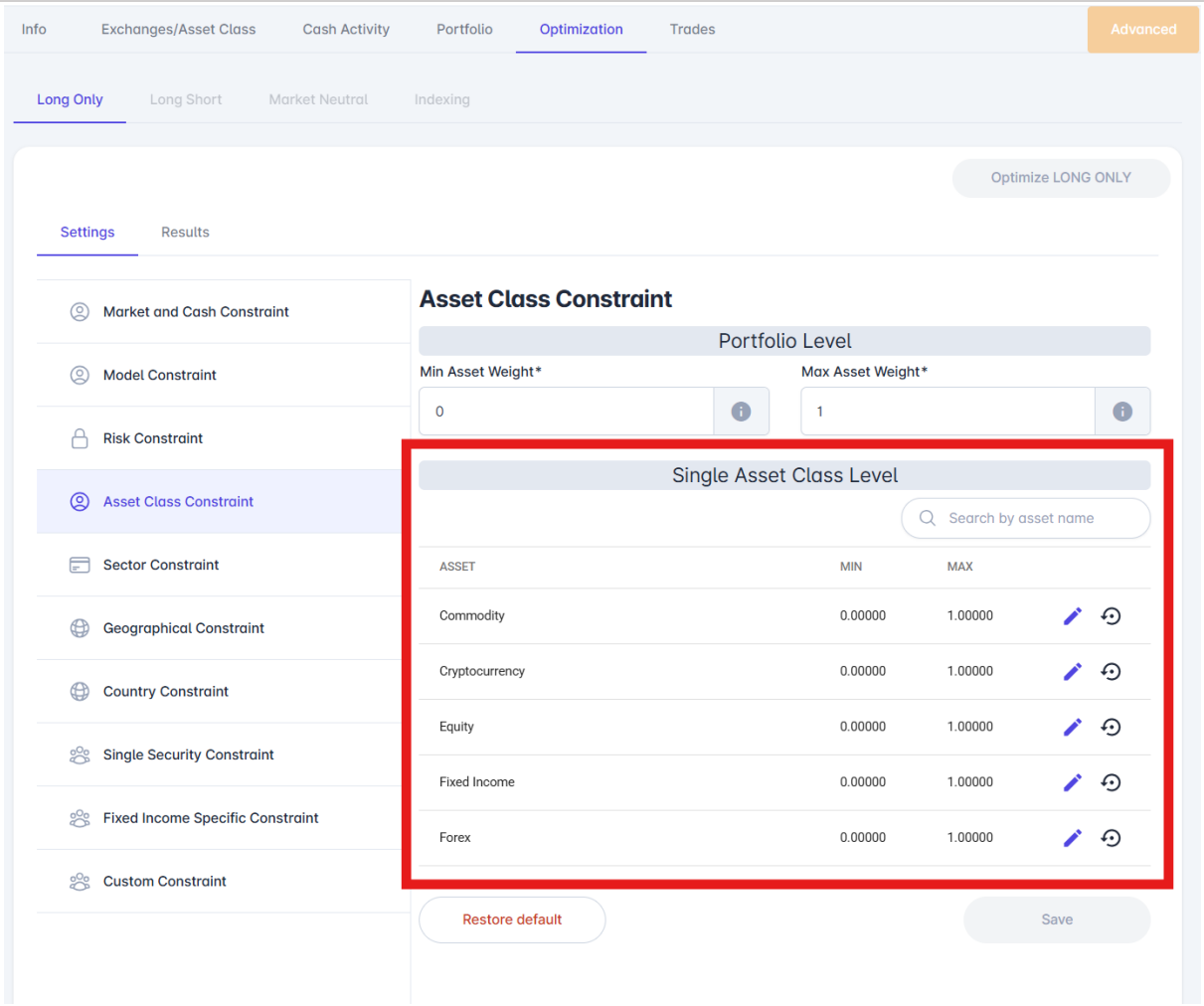
The Portfolio Level Asset Class range can be set here as indicated.



8.1.4.2 Specified Min and Max range for each asset class:

The following Individual Asset Class constraints can be set at these class levels:

- Commodity
- Cryptocurrency
- Equity
- Fixed Income
- Forex



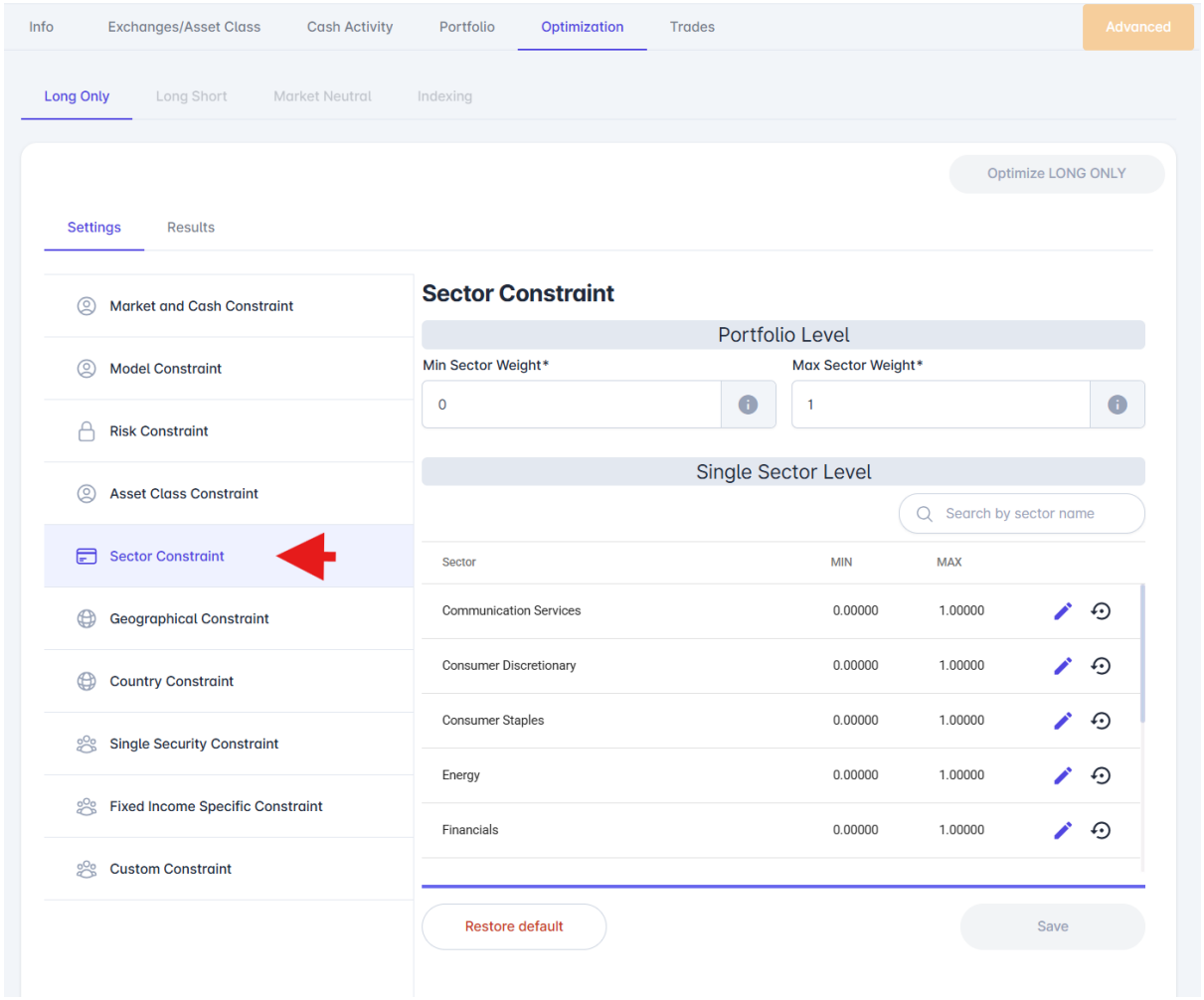
8.1.5 Sector Constraints

The Sector parameters define limits on the portfolio's exposure to specific industrial sectors.

Application ➔ Portfolio Level
Asset Class ➔ Equity, Fixed Income, Commodity, Forex, Crypto
Field ➔ for Long Only, Direct Indexing ➔ Decimal [0,1]
Field ➔ for Long Short, Market Neutral ➔ Decimal [-1,1]
Optimizer ➔ Long Only, Long Short, Market Neutral, Direct Indexing

The following parameters can be set for each Sector and are detailed in their own section below:

- Blanket range applying to all Sectors
- Specified Min and Max range for each Sector



In both cases, any value permitted by the text box can be entered, based on the optimizer configuration selected at initial portfolio set up.

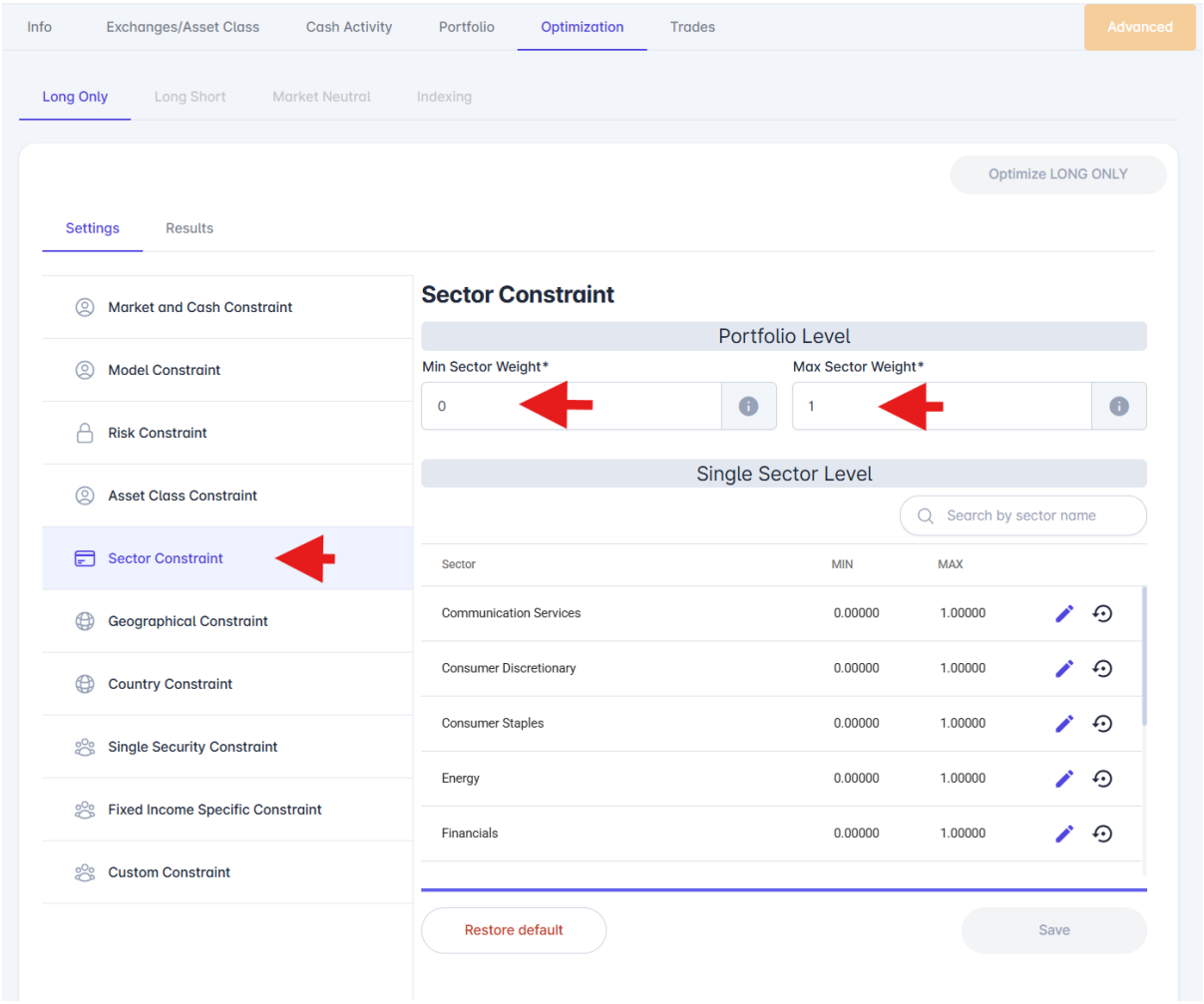
Each value, expressed as a decimal, defines the MIN and MAX portfolio weight allocated to each specific Sector.

For example, setting a blanket Min Asset Sector to 0.05 and a Max Asset Sector to 0.2 instructs the optimizer to construct a portfolio where each Sector holds between 5% and 20% of the total portfolio weight.

The same logic applies when setting individual minimum and maximum weights for each available for each individual Sector.

8.1.5.1 *Blanket range applying to all Sector*

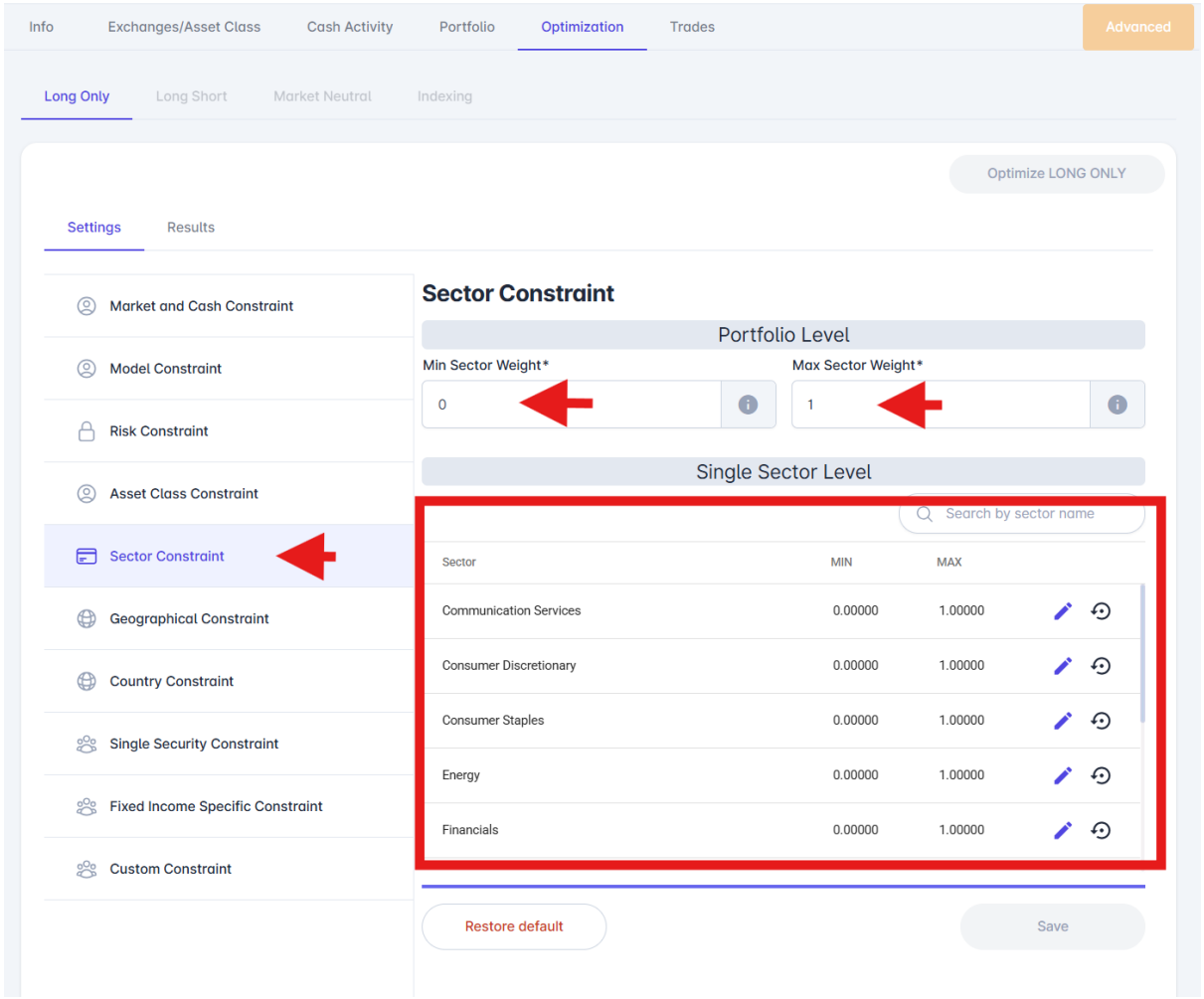
The blanket Sector range can be set here as indicated:



8.1.5.2 *Specified Min and Max range for each Sector*

The following Individual Sector constraints can be set at these Sector levels:

- Communication Services
- Consumer Discretionary
- Consumer Staple
- Energy
- Financials
- Health Care
- Industrials
- Information Technology
- Materials
- Real Estate
- Utilities


Info
Exchanges/Asset Class
Cash Activity
Portfolio
Optimization
Trades
Advanced
Long Only
Long Short
Market Neutral
Indexing
Optimize LONG ONLY
Settings
Results
Market and Cash Constraint
Model Constraint
Risk Constraint
Asset Class Constraint
Sector Constraint
Geographical Constraint
Country Constraint
Single Security Constraint
Fixed Income Specific Constraint
Custom Constraint
Sector Constraint
Portfolio Level
Min Sector Weight*
0
Max Sector Weight*
1
Single Sector Level
Search by sector name
Sector
MIN
MAX
Communication Services 0.00000 1.00000
Consumer Discretionary 0.00000 1.00000
Consumer Staples 0.00000 1.00000
Energy 0.00000 1.00000
Financials 0.00000 1.00000
Restore default
Save

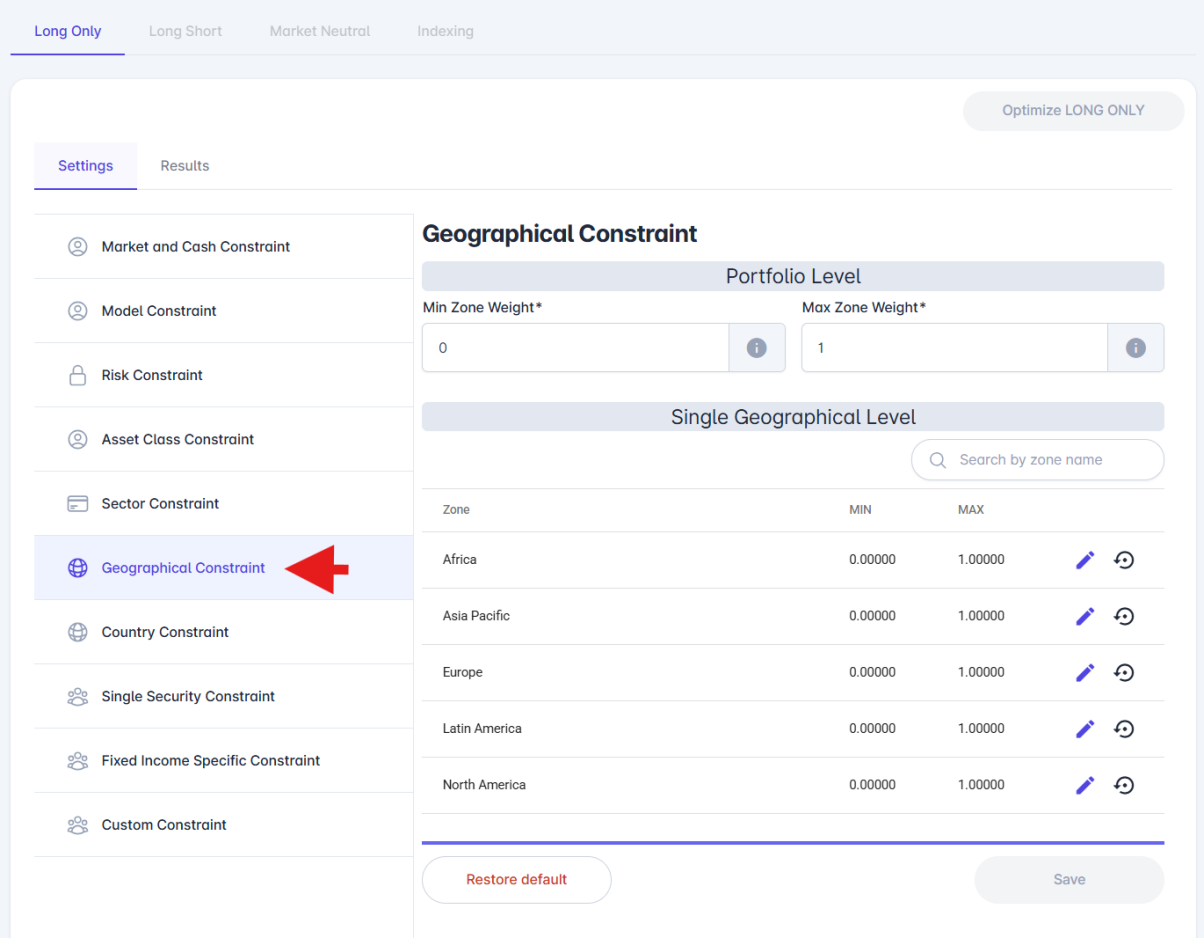
8.1.6 Geographical Constraints

The *Geographical Area* parameters define limits on the portfolio's exposure to specific industrial sectors.

Application ➔ Portfolio Level
Asset Class ➔ Equity, Fixed Income, Commodity, Forex, Crypto
Field ➔ for Long Only, Direct Indexing ➔ Decimal [0,1]
Field ➔ for Long Short, Market Neutral ➔ Decimal [-1,1]
Optimizer ➔ Long Only, Long Short, Market Neutral, Direct Indexing

The following parameters can be set for each Geographical Area and are detailed in their own section below:

- Blanket range applying to all Sectors
- Specified Min and Max range for each Sector



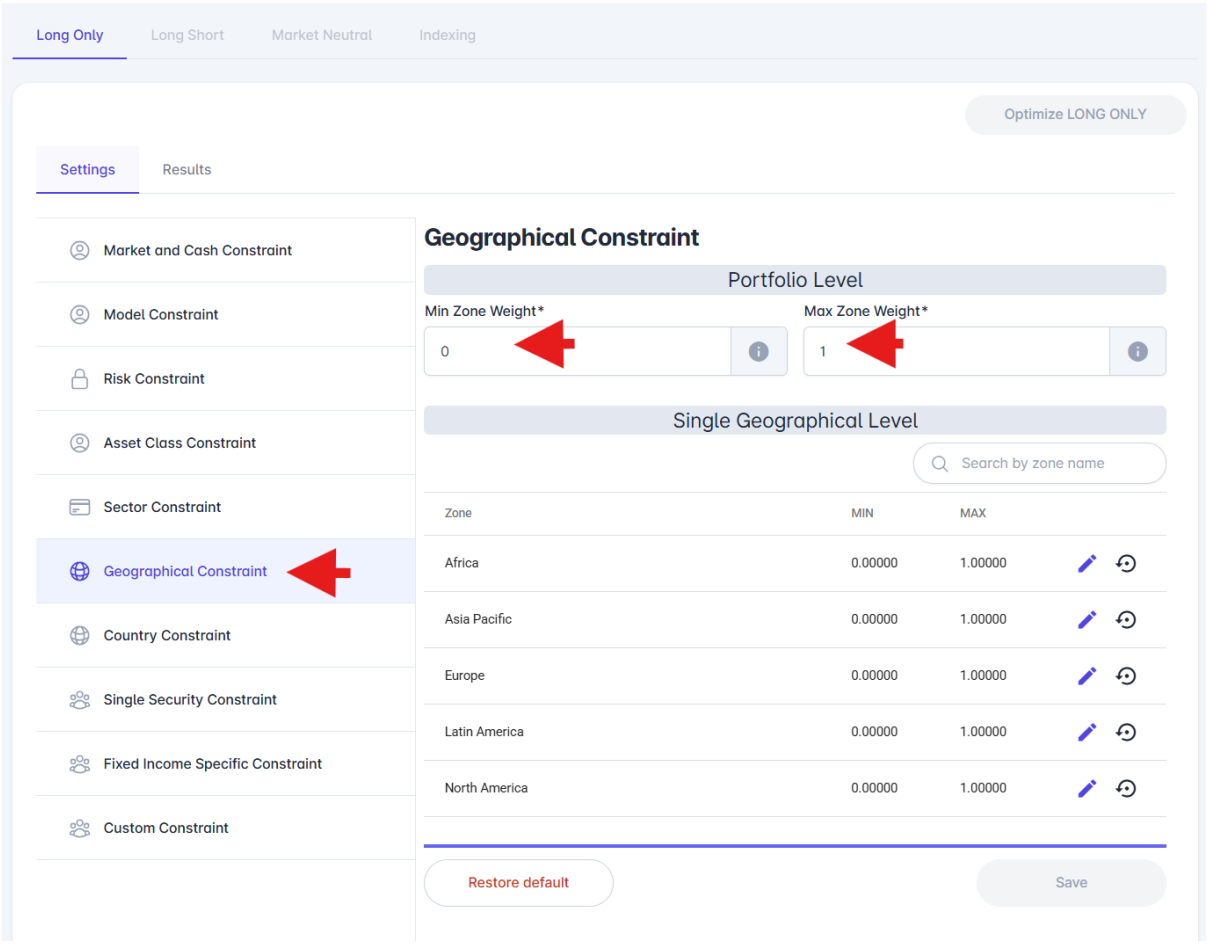
In both cases, any value permitted by the text box can be entered, based on the optimizer configuration selected at initial portfolio set up.

Each value, expressed as a decimal, defines the MIN and MAX portfolio weight allocated to each specific Geographical area.

For example, setting a blanket *Min Geographical Location Weight* to 0.01 and a *Max Geographical Location Weight* to 0.25 instructs the optimizer to construct a portfolio where each Geographical area holds between 1% and 25% of the total portfolio weight.

8.1.6.1 Blanket range applying to all Geographical area

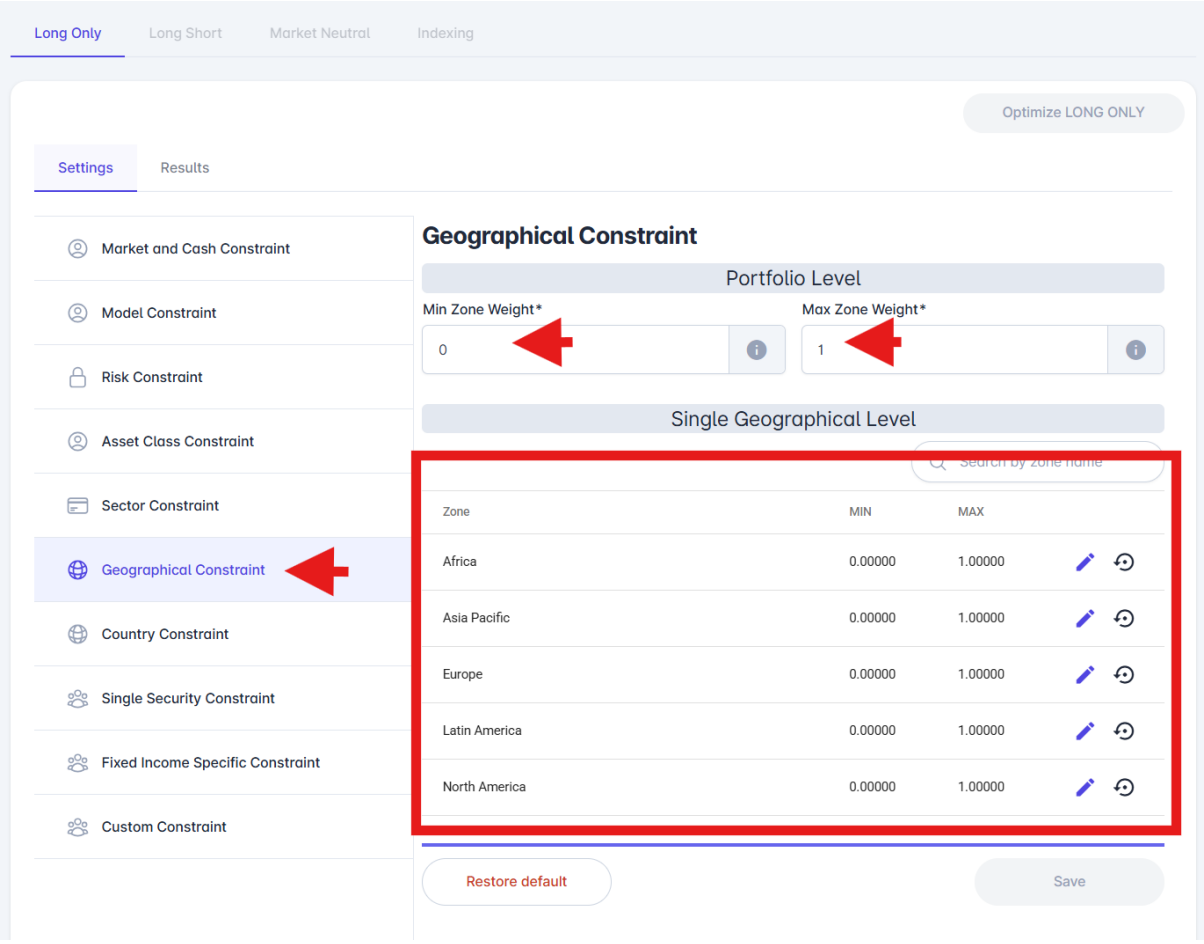
The blanket *Geographical Area* range can be set here as indicated:



8.1.6.2 Specified Min and Max range for each Geographical area

The following Individual *Geographical Area* constraints can be set at these *Geographical Area* levels:

- North America
- Europe
- Asia
- Latin America
- Africa



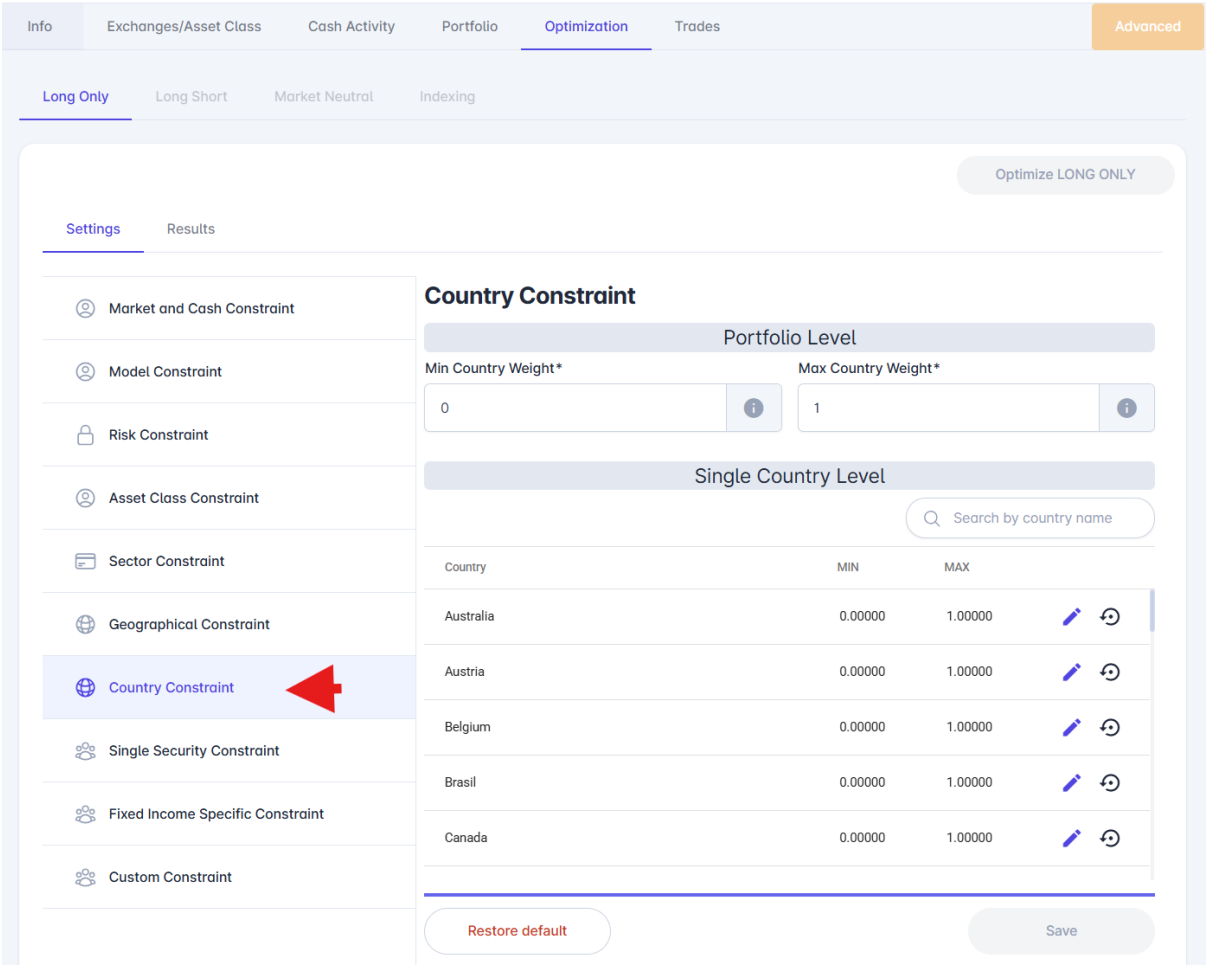
8.1.7 Country Constraints

The Country constraint defines limits on the portfolio's exposure to specific Country locations.

Application ➔ Portfolio Level
Asset Class ➔ Equity, Fixed Income, Commodity, Forex, Crypto
Field ➔ for Long Only, Direct Indexing ➔ Decimal [0,1]
Field ➔ for Long Short, Market Neutral ➔ Decimal [-1,1]
Optimizer ➔ Long Only, Long Short, Market Neutral, Direct Indexing

The following parameters can be set for each *Country* and are detailed in their own section below:

1. Blanket range applying to all Sectors
2. Specified Min and Max range for each Sector



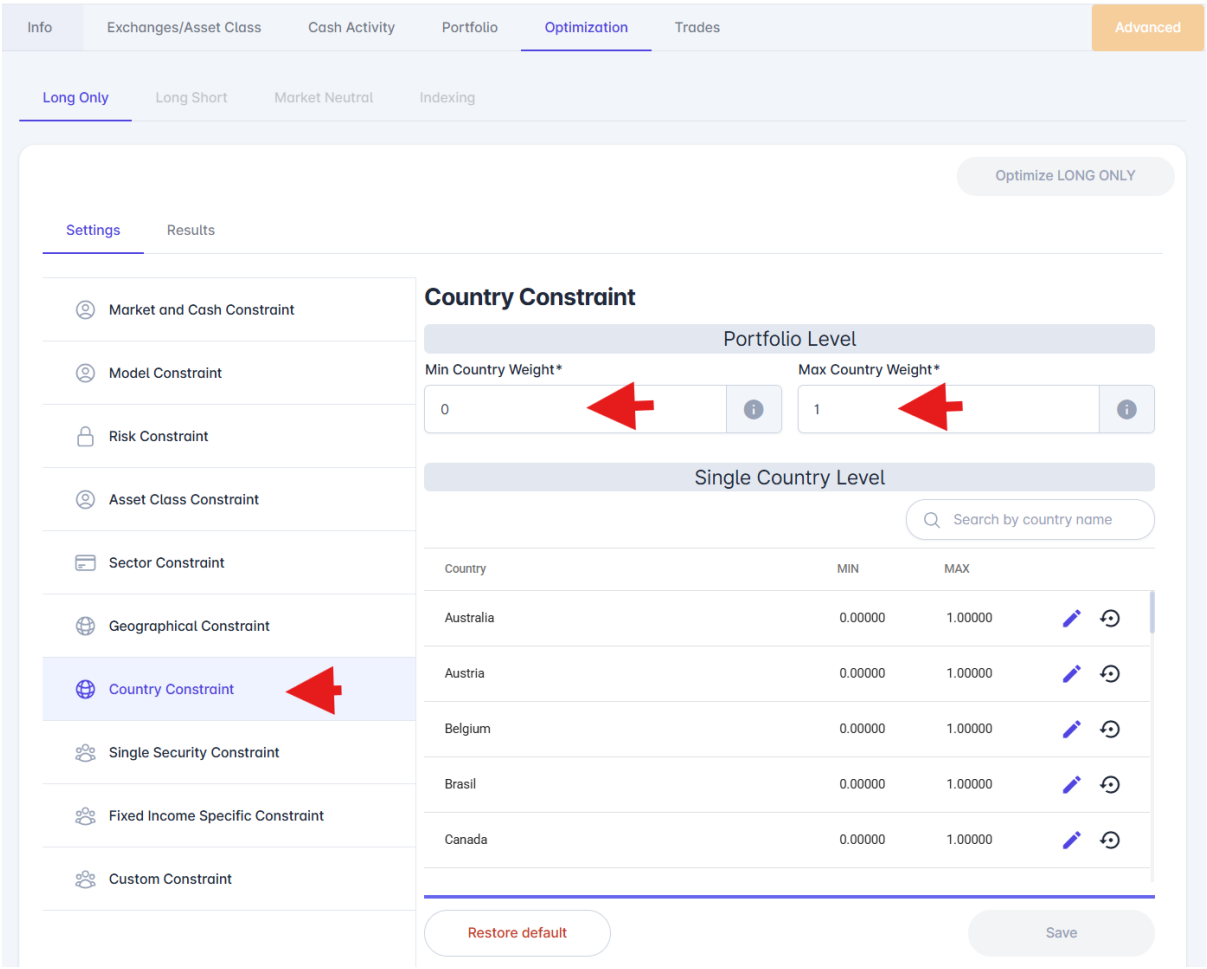
In both cases, any value permitted by the text box can be entered, based on the optimizer configuration selected at initial portfolio set up.

Each value, expressed as a decimal, defines the MIN and MAX portfolio weight allocated to each specific Country.

For example, setting a blanket Min Country Weight to 0.01 and a Max Country Weight to 0.25 instructs the optimizer to construct a portfolio where each Country area holds between 1% and 25% of the total portfolio weight.

8.1.7.1 Blanket range applying to all Countries – unless otherwise specified

The blanket *Country* range can be set here as indicated:

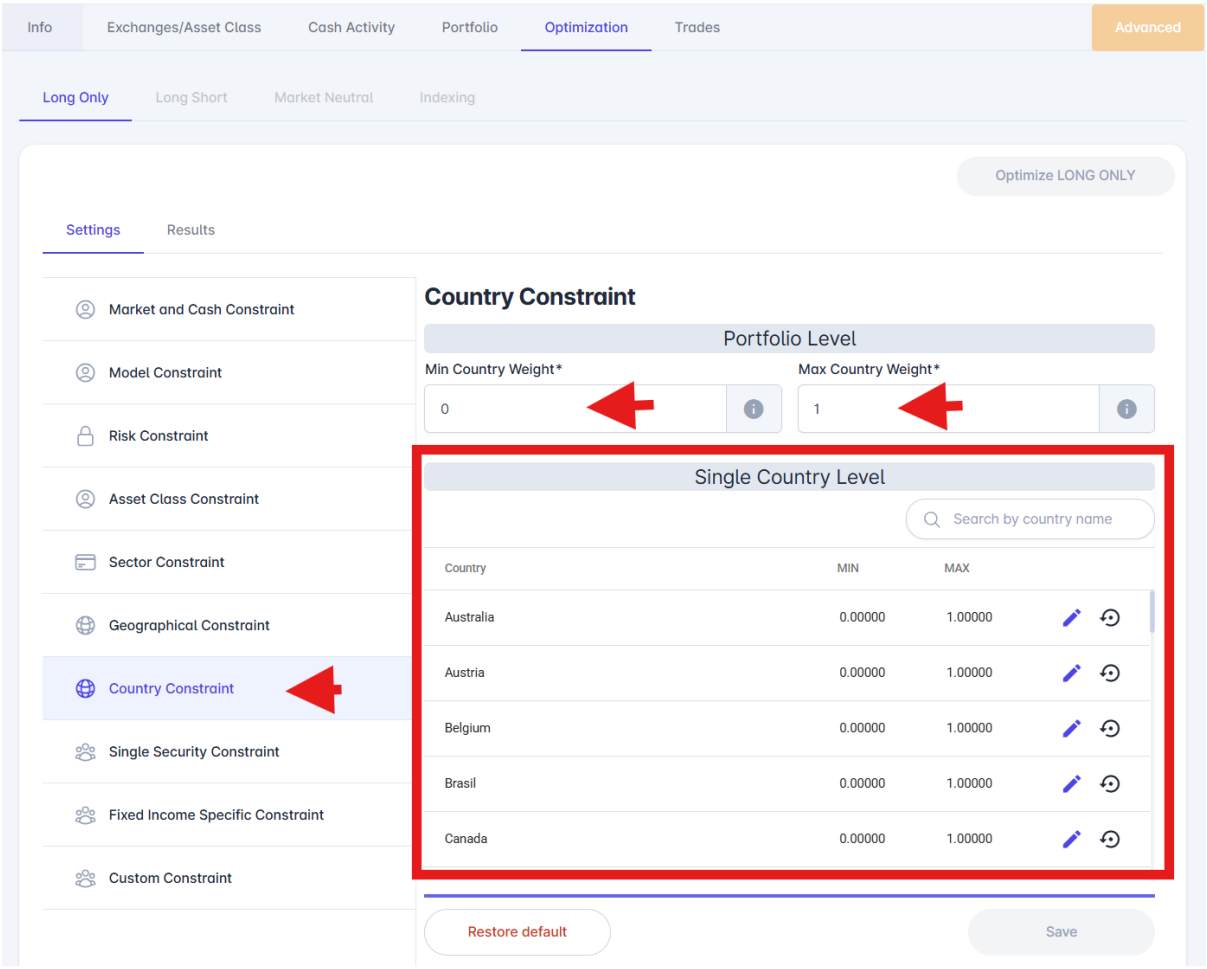


8.1.7.2 *Specified Min and Max range for each Country*

PoMaTo offer country constraint for all countries covered which are the ones that can be seen at SETP 3 of the initial portfolio setting under *Equity* ➔ *Single Equity* ➔ *Zone.*

Overall, there are

- 8 Countries in Asia
- 24 Countries in Europe
- 2 Countries in North America
- 2 Countries in Latin America



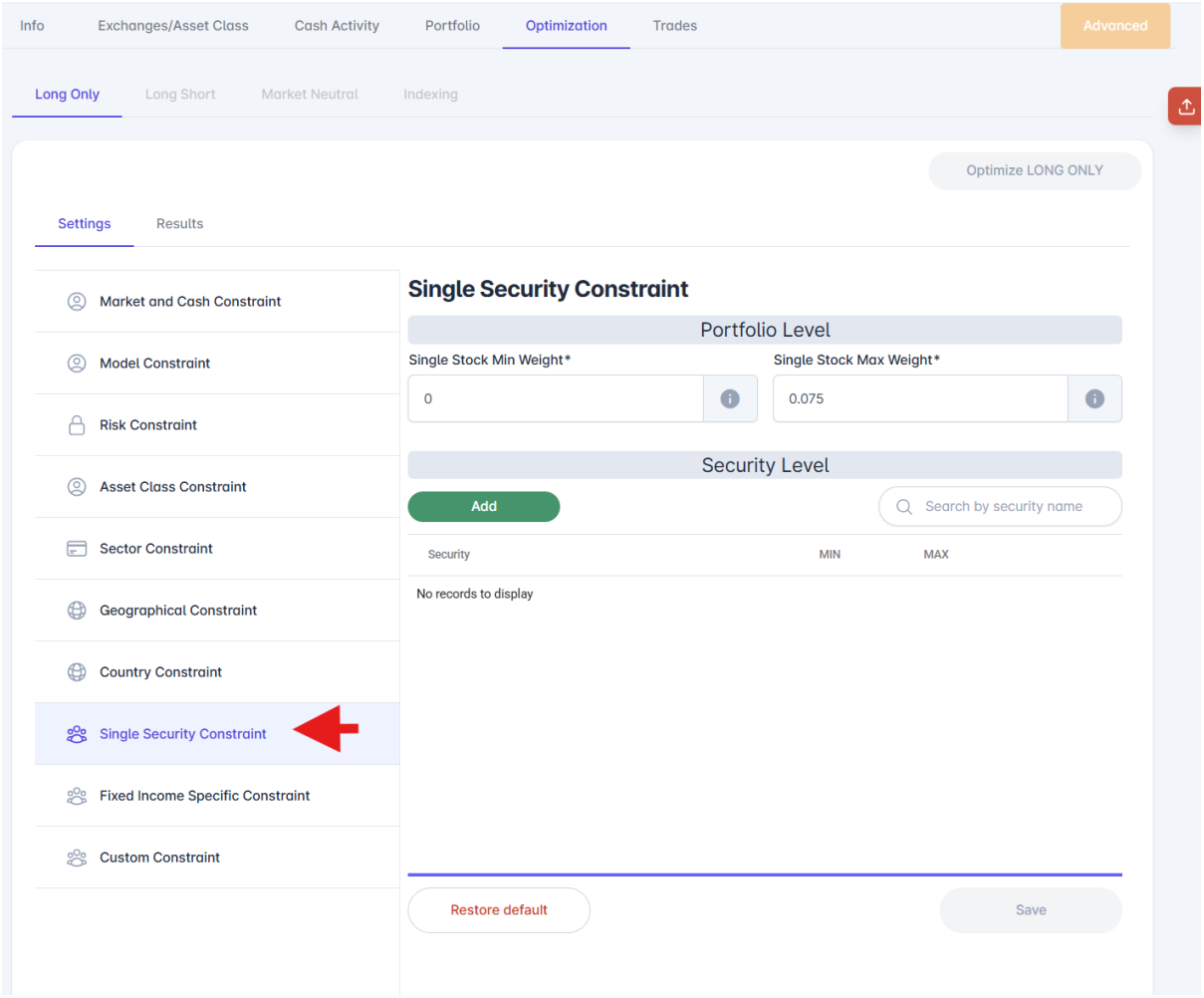
8.1.8 Single Security Constraints

Application ➔ Security Level
Asset Class ➔ Equity, Fixed Income, Commodity, Forex, Crypto
Field ➔ for Long Only, Direct Indexing ➔ Decimal [0,1]
Field ➔ for Long Short, Market Neutral ➔ Decimal [-1,1]
Optimizer ➔ Long Only, Long Short, Market Neutral, Direct Indexing

Single Security Constraints apply at the individual security level, setting minimum and maximum weight limits to ensure the portfolio does not hold more than a specified amount of any single security.

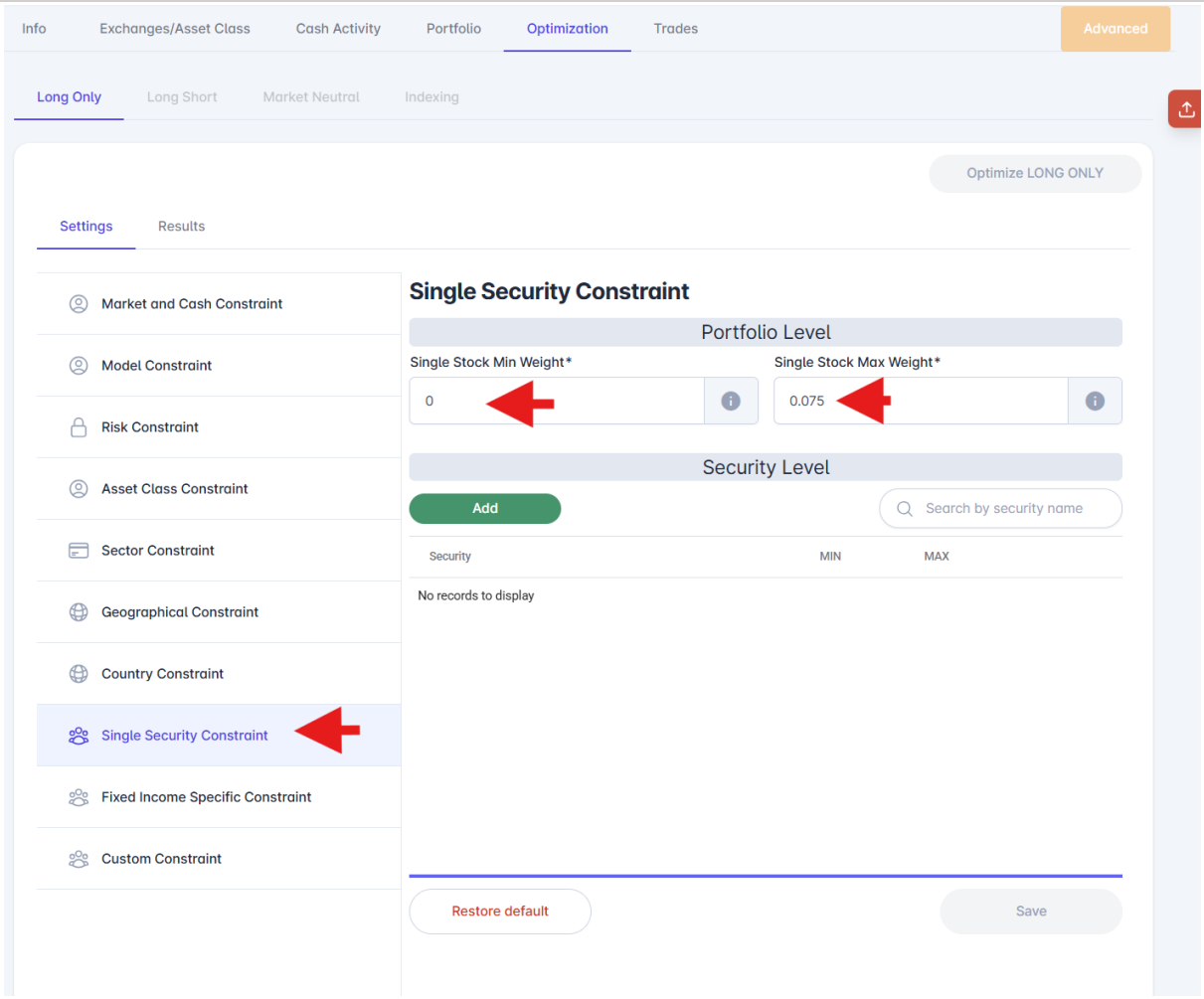
The following parameters can be for each Single Security and are detailed in their own section below:

- Blanket range applying to all Securities
- Specified Min and Max range for each Single Security



8.1.8.1 A blanket range applying to all Security

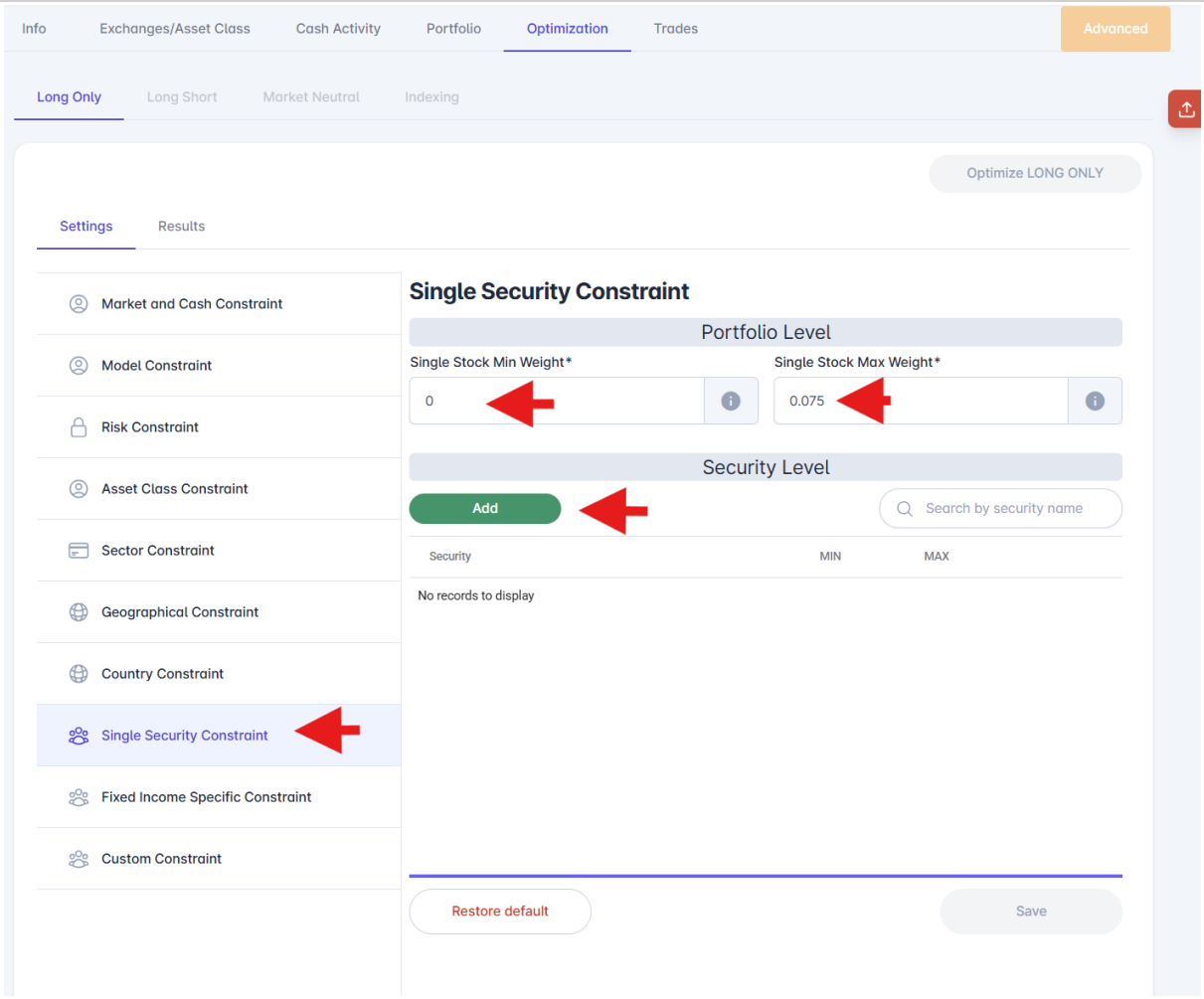
The blanket *Security* range can be set here as indicated:

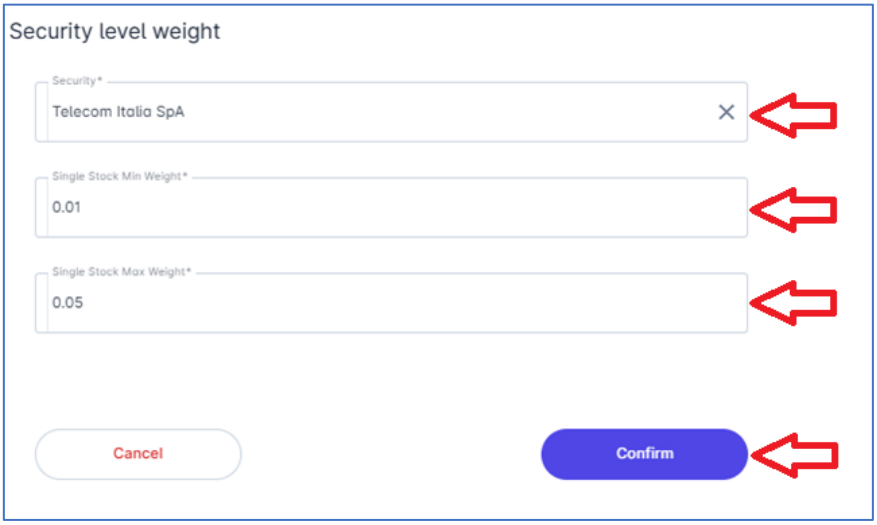


8.1.8.2 A specified Min and Max range for a Particular Security

To specify a Min and Max weight for a particular security, follow these steps:

1. *Add the Security*: Click the *Add* button to open pop-up window to search for the security that needs to have a different Min and Max constraint from the blanket Min and Max constraint.
2. Set the Weights: Once the security is selected, enter the desired Min and Max weight. This will apply to that security only
3. Confirm the Entry: After entering the values, confirm the selection to apply the constraint.





In both cases, any value permitted by the text box can be entered, based on the optimizer configuration selected at initial portfolio set up.

Each value, expressed as a decimal, defines the MIN and MAX portfolio weight will hold for any security.

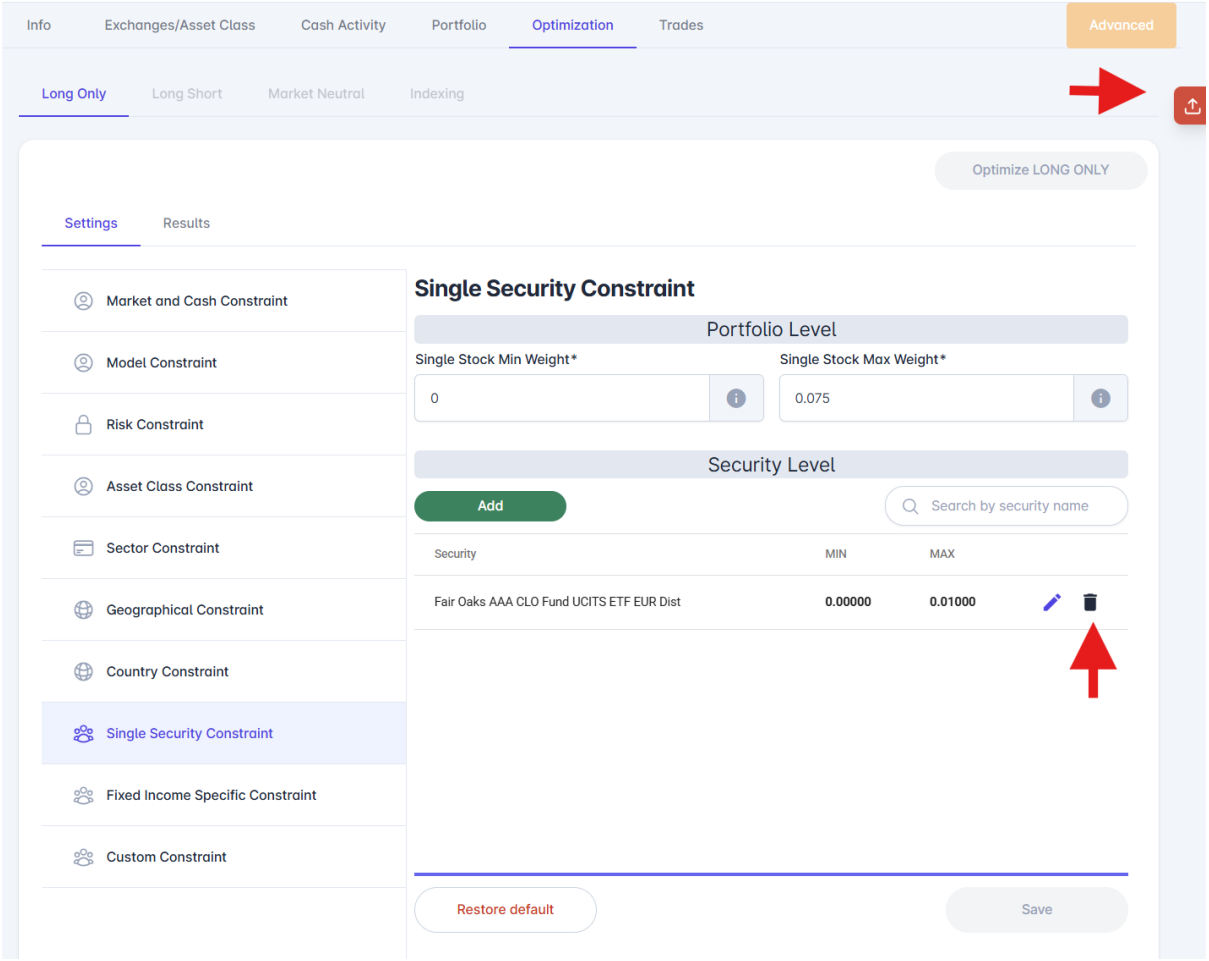
For example, if the blanket Min weight is set to 0 and the Max to 0.05, the optimizer will be required to construct a portfolio where any eligible security can be held with a weight no greater than 5%.

The same logic applies when setting Min and Max weight constraints for the individual securities—those limits will apply specifically to the selected security.

When the optimizer is run in a Direct Indexing configuration, the Single Security Constraint page will be automatically populated with the securities that make up the benchmark index selected during initial portfolio set up.

In Direct Indexing mode, Min and Max weights are pre-set based on a predefined deviation from the benchmark weight. These default values are not visible but can be modified if required.

Additional securities can be added without restriction in relation to the benchmark constituents, provided they are traded on the *same exchange* as the benchmark index.



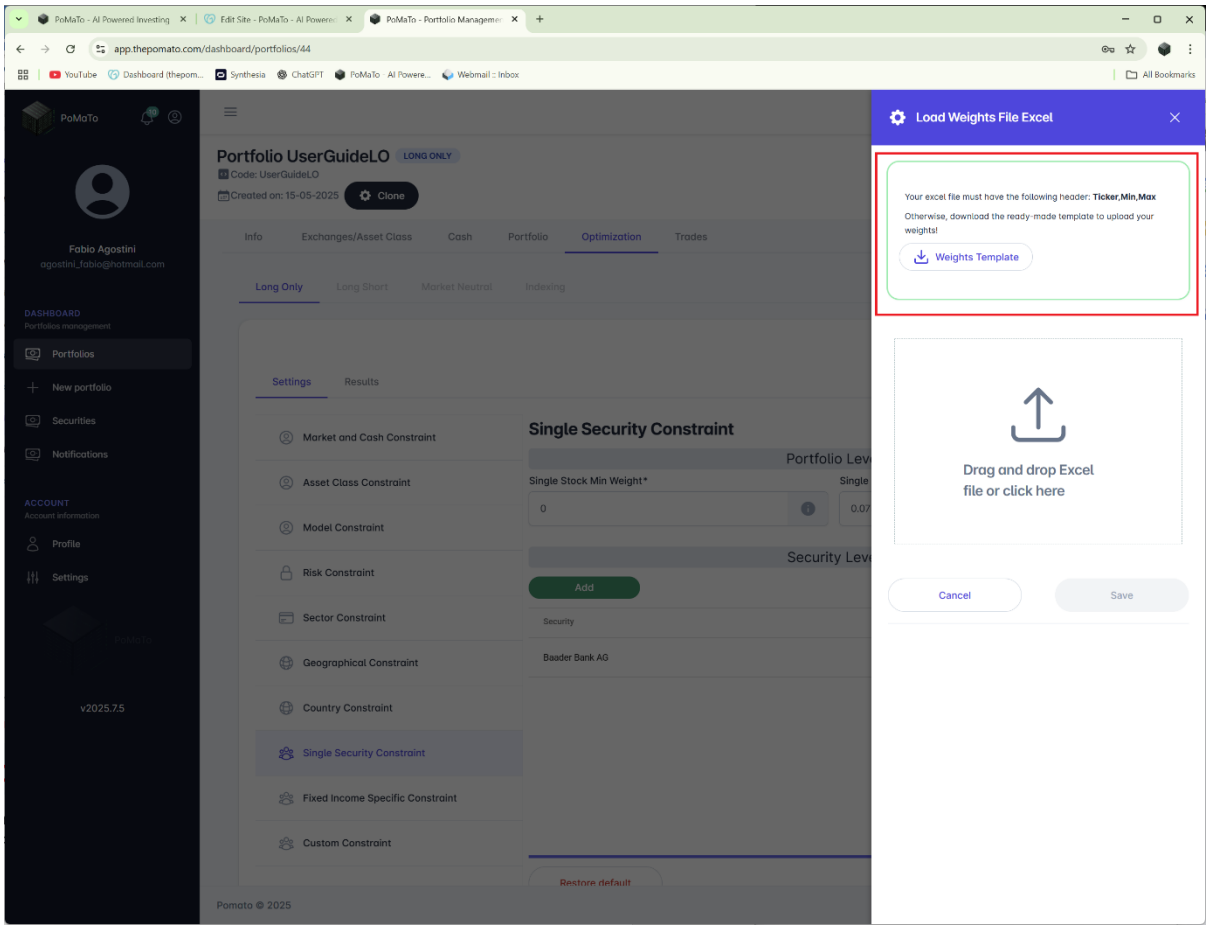
8.1.8.3 *Import a Single Security Constraint file*

Trades can also be registered in bulk by importing a CSV file – click the red icon.

Import a *Single Security Constraint* file with data to be used by the optimizer.

Click the **red** upload button as indicated in the screen-shot.

To make the *Single Security Constraint* upload easier, **PoMaTo** provides a template that can be downloaded using red button.

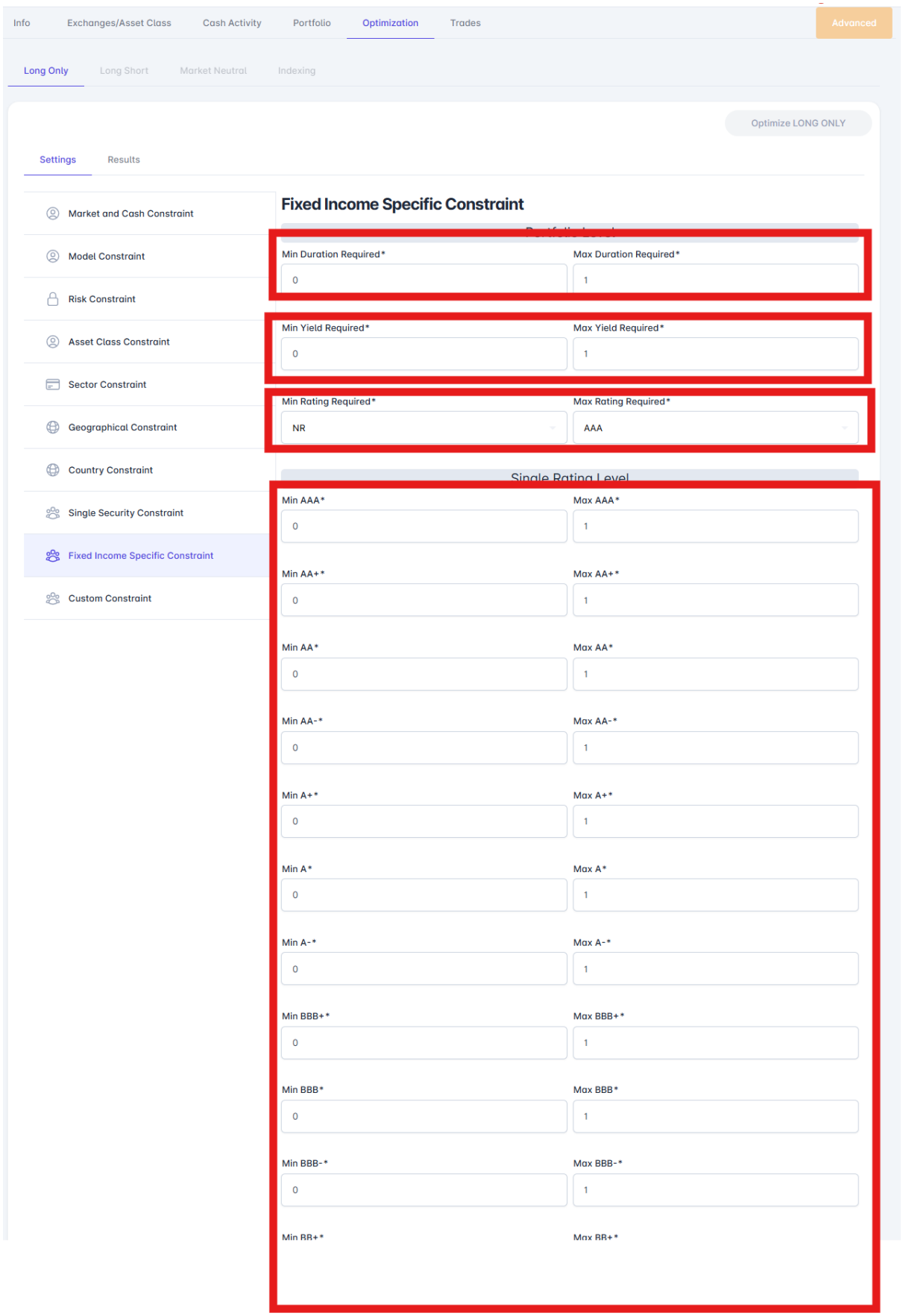


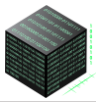
Once the file has been properly formatted, the file can be dropped where indicated.

8.1.9 Fixed Income Constraints

The following parameters can be set for Fixed Income Constraints and are detailed in in their own section below:

- Duration
- Yield
- Rating – Portfolio Level
- Rating – Security Level


Info
Exchanges/Asset Class
Cash Activity
Portfolio
Optimization
Trades
Advanced
Long Only
Long Short
Market Neutral
Indexing
Optimize LONG ONLY
Settings
Results
Market and Cash Constraint
Model Constraint
Risk Constraint
Asset Class Constraint
Sector Constraint
Geographical Constraint
Country Constraint
Single Security Constraint
Fixed Income Specific Constraint
Custom Constraint
Fixed Income Specific Constraint
Min Duration Required*
Max Duration Required*
0
1
Min Yield Required*
Max Yield Required*
0
1
Min Rating Required*
Max Rating Required*
NR
AAA
Single Rating Level
Min AAA*
Max AAA*
Min AA+*
Max AA+*
Min AA*
Max AA*
Min AA-*
Max AA-*
Min A+*
Max A+*
Min A*
Max A*
Min A-*
Max A-*
Min BBB+*
Max BBB+*
Min BBB*
Max BBB*
Min BBB-*
Max BBB-*
Min BB+*
Max BB+*



8.1.9.1 Duration

Application ➔ Portfolio Level
Asset Class ➔ Fixed Income
Field ➔ Decimal [0,100]
Optimizer ➔ Long Only, Long Short, Market Neutral, Direct Indexing

Duration measures the time it takes, in years, for an investor to be repaid a bond's price through its total cash flows.

Both the Min and Max portfolio Duration can be specified by entering a value between 0 and 100.

The values entered represent the Min and Max Duration for the overall Fixed Income portfolio, calculated as sum products of the weights and Duration for each security.

For example, if the minimum duration is set to 1.5 and the maximum to 10, the optimizer will be constrained to return a portfolio where the weighted average duration of the holdings is at least 1.5 but no greater than 10.

Note that this constraint applies at the portfolio level in terms of weighted average Yield, meaning the portfolio may include Zero Coupon Bonds.

8.1.9.2 Yield

Application ➔ Portfolio Level
Asset Class ➔ Fixed Income
Field ➔ Decimal [0,1]
Optimizer ➔ Long Only, Long Short, Market Neutral, Direct Indexing

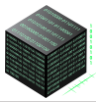
Yield, in the context of Fixed Income, provides a measure of the income generated relative to the investment's cost.

Yield refers to the return an investor can expect to earn from a bond, over a specific period. It is expressed as an annual percentage rate taking into account interest payments and the price of the bond.

The Min and Max Yield values are set at the portfolio level. The values define the Min and Max Yield for the overall Fixed Income portfolio, calculated as sum products of the weight and Yield for each security.

For example, if the minimum yield is set to 0.01 and the maximum to 0.05, the optimizer will be required to construct a portfolio where the weighted average yield is at least 1% but no greater than 5%.

Note that this constraint applies at the portfolio level in terms of weighted average Yield, meaning the portfolio may include Zero Coupon Bonds.



8.1.9.3 *Rating – Portfolio Level*

Application ➔ Portfolio Level
Asset Class ➔ Fixed Income
Field ➔ VarChar [NR,AAA]
Optimizer ➔ Long Only, Long Short, Market Neutral, Direct Indexing

Rating refers to an evaluation assigned by credit rating agencies that assesses the creditworthiness of the issuer of a bond. These ratings indicate the likelihood that the issuer will be able to meet its financial obligations, including the timely payment of interest and principal. Ratings are used by investors to gauge the risk associated with investing in a particular fixed income instrument.

Higher-rated securities are generally considered safer but offer lower yields, whilst lower-rated securities may offer higher yields to compensate for increased risk.

The Min and Max Yield Rating are set at the portfolio level. The alphabetic values define the Min and Max Rating for the overall Fixed Income portfolio, calculated as sum products of the weight and Yield for each security.

For example, if the Min Rating is set to BBB and Max Rating is set to AAA, optimizer will be required to return a portfolio where the sum product of the weighs and the Yield of the holdings will be at least BBB but less than or equal to AAA.

Note: that this constraint applies at the portfolio level in terms of weighted average Rating, meaning the portfolio may include CCC rated securities.

8.1.9.4 *Rating – Security Level*

Application ➔ Security Level
Asset Class ➔ Fixed Income
Field ➔ for Long Only, Direct Indexing ➔ Decimal [0,1]
Field ➔ for Long Short, Market Neutral ➔ Decimal [-1,1]
Optimizer ➔ Long Only, Long Short, Market Neutral, Direct Indexing

In addition to portfolio-level *Rating* constraints, **PoMaTo** also allows *Rating* constraints to be applied at security level. This enables control over the portfolio's exposure to specific credit ratings, by requiring the portfolio to hold (or not hold) securities belonging to a particular Rating.

For each available rating, a Min and Max weight can be defined

For example, if the Min is set to **0.30** and the Max to **0.75** for the **AAA** rating, the optimizer will be required to construct a portfolio where the total weight of AAA-rated securities is at least **30%** but no more than **75%**.

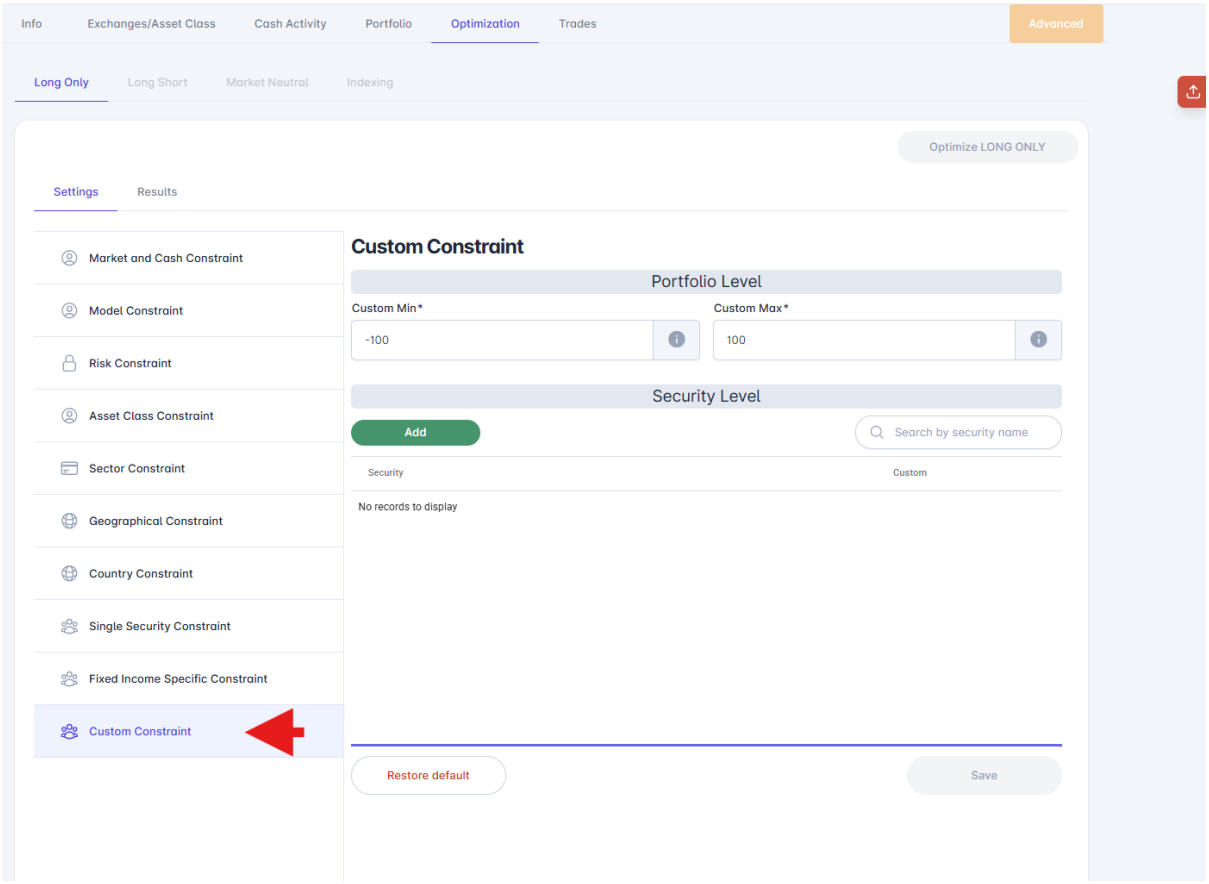
8.1.10Custom Constraints

PoMaTo is designed with a customer-focused approach. Although the available optimizer settings are expected to meet most requirements, additional features allow for the inclusion of Custom

Constraints. This enables the optimizer to incorporate external data -such as rankings, expected returns, or any other relevant input - for tailored portfolio construction.

Custom data, consisting of numerical values (either integers or decimals), can be added by the following methods

- Import a Custom Data file
- By Each Security



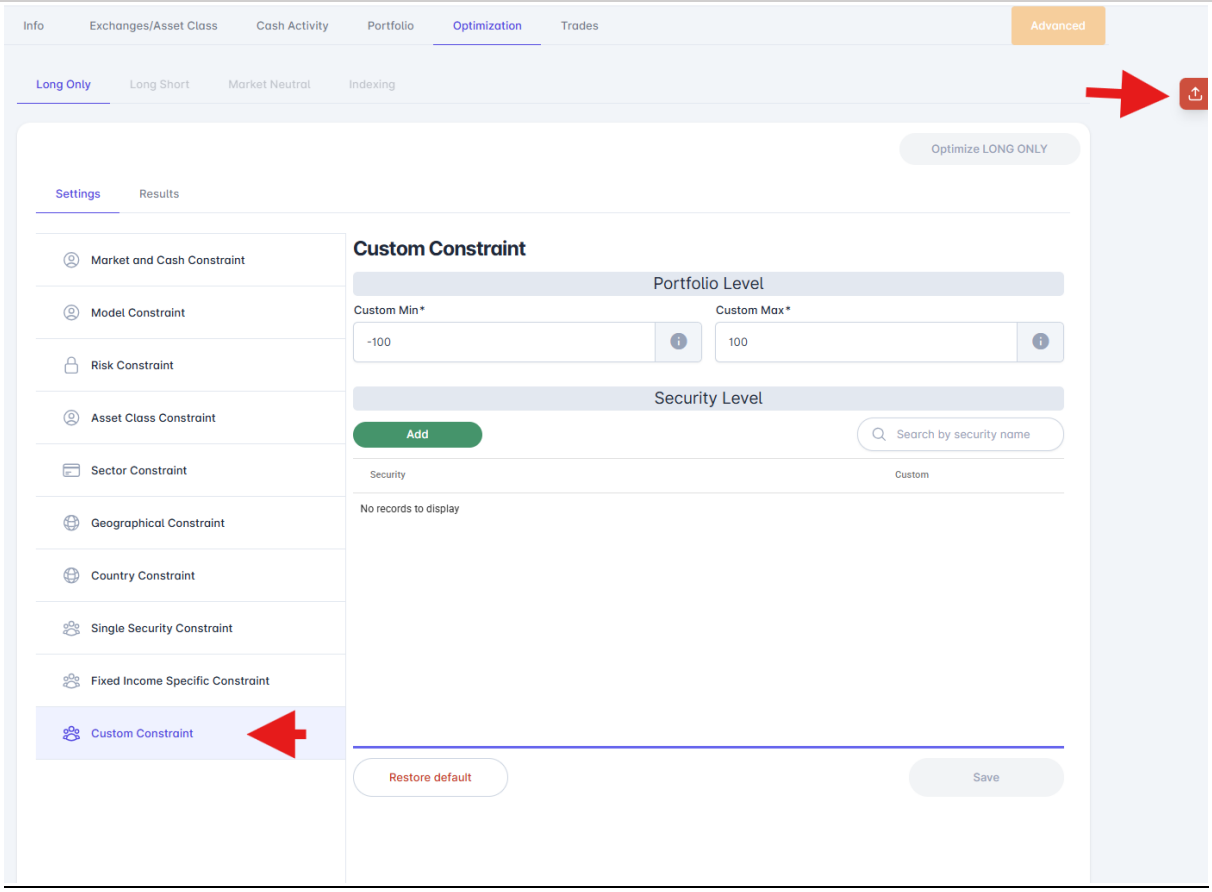
8.1.10.1 Import a Custom Data file

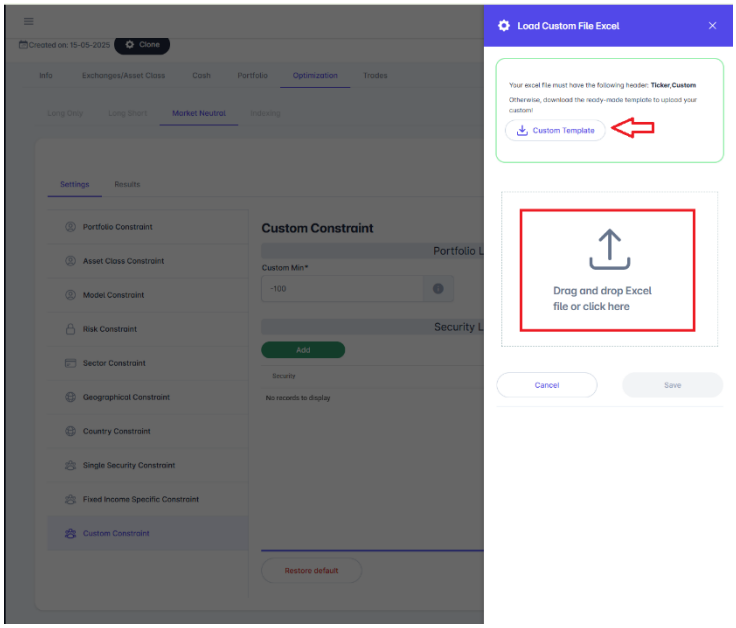
Import a Custom Data file with data to be used by the optimizer.

Click the **red** upload button as indicated in the screen-shot.

To make the Custom data upload easier, **PoMaTo** provides a template that can be downloaded using the *Custom Template* button.

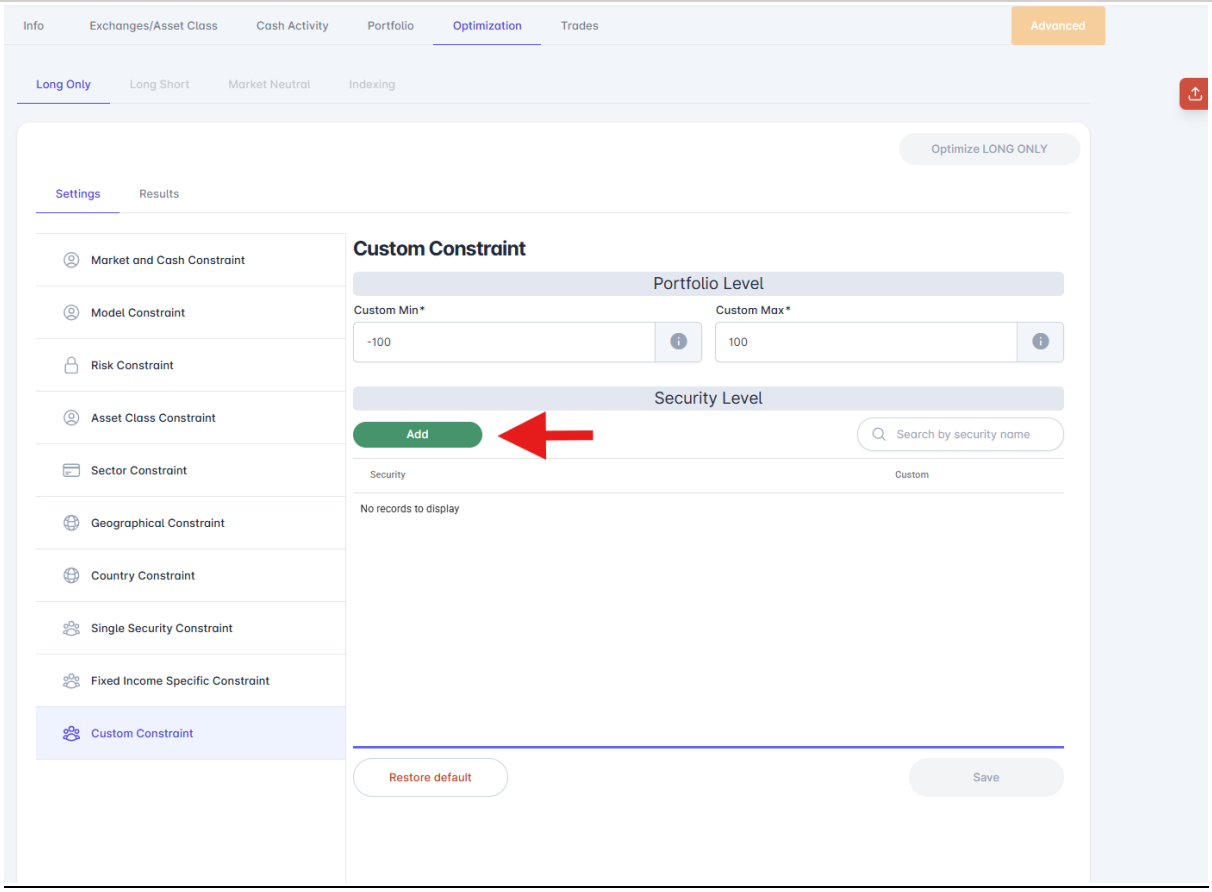
Once the Custom Data file has been properly formatted, the file can be dropped where indicated.

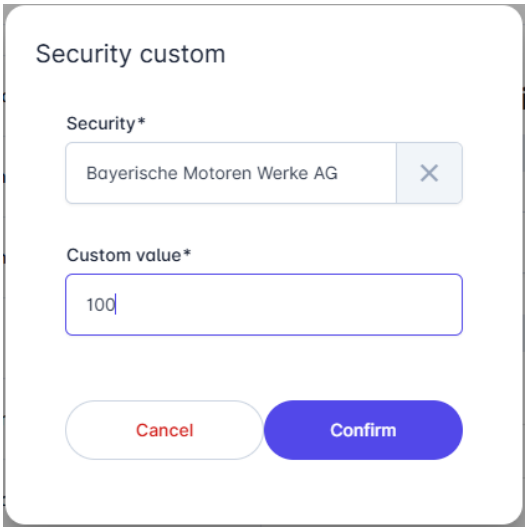




8.1.10.2 By Each Security

Custom Data can also be entered for each security by clicking the Add button. A pop-up window will appear, allowing a security to be selected and a Custom Data value to be assigned.



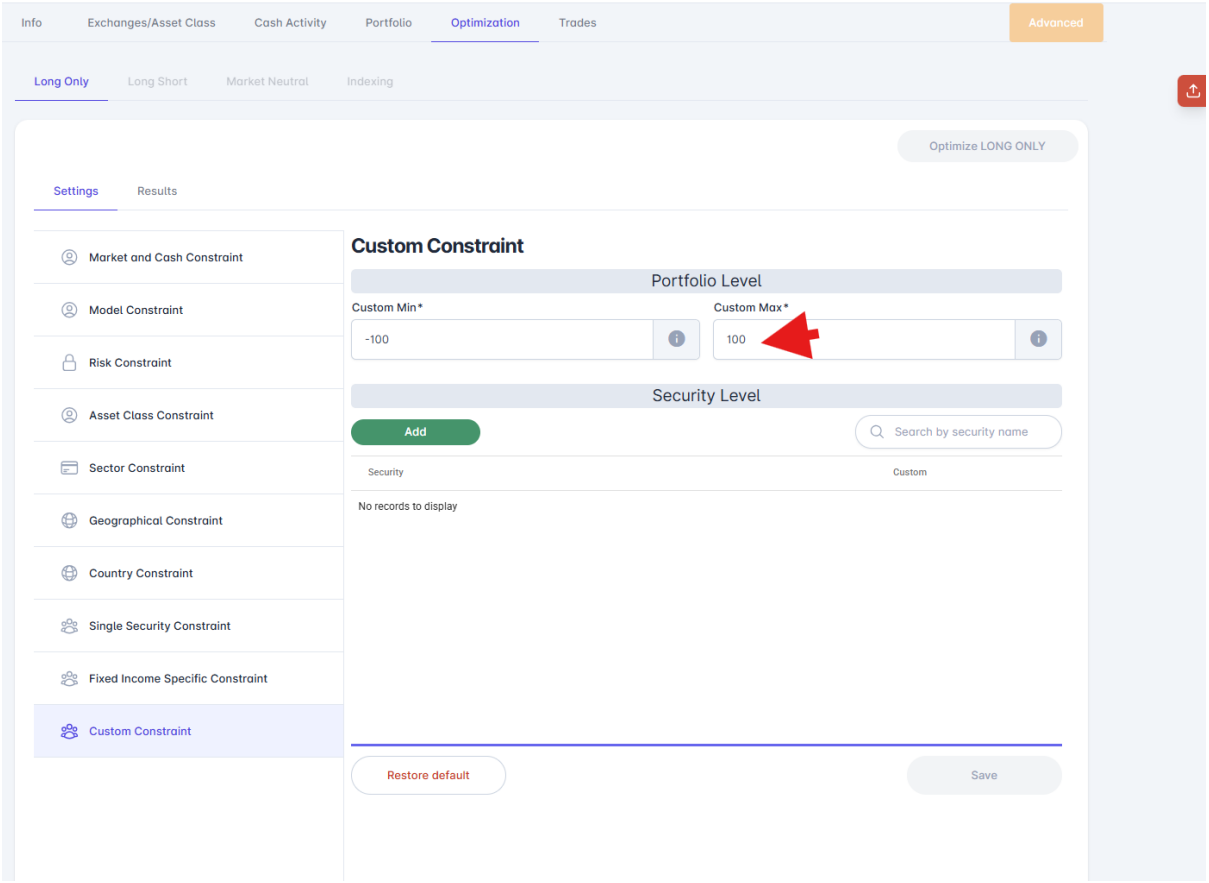


Once the data is loaded, the following parameters can be set:

Application ➔ Portfolio Level
Asset Class ➔ Equity, Fixed Income, Commodity, Forex, Crypto
Field ➔ Decimal [-100,+100]
Optimizer ➔ Long Only, Long Short, Market Neutral, Direct Indexing

For example, setting Min Custom to 10 and Max Custom to 50 will require the optimizer to return a portfolio where the sum product of the weights and Custom Data for each recommended security is at least 10 but less than or equal to 50.

For example, if Min Custom is set to 10 and Max Custom to 50, the optimizer will return a portfolio where the sum product of the weights and Custom Data values across all selected securities is at least 10 but no greater than 50.



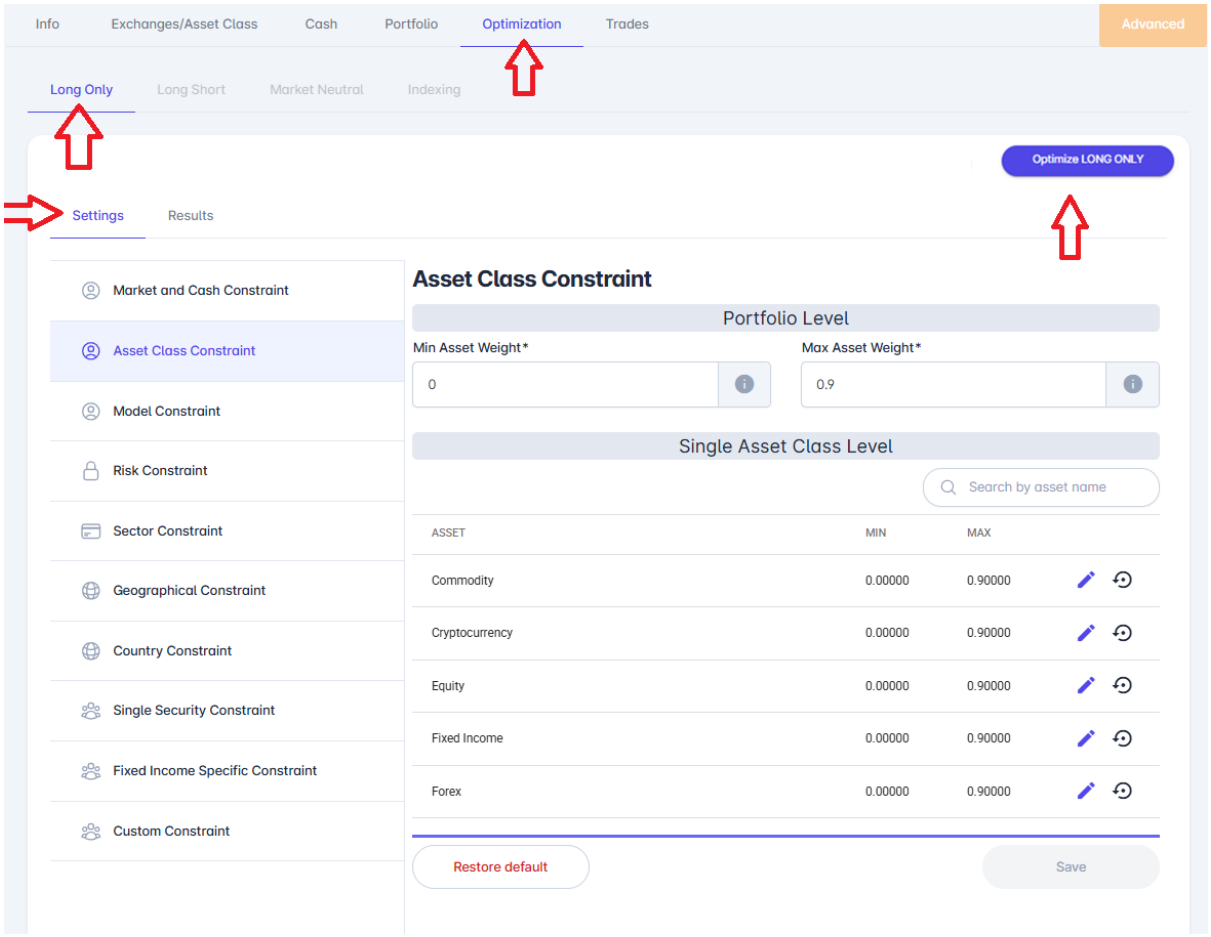
9 Run the Optimizer

Once the *Optimizer* setup is complete, **PoMaTo** is ready to run the optimization process!

The optimizer seeks the mathematical solution that maximizes return while minimizing risk, selecting a mix of assets that satisfy all defined constraints.

9.1 Running the Optimizer

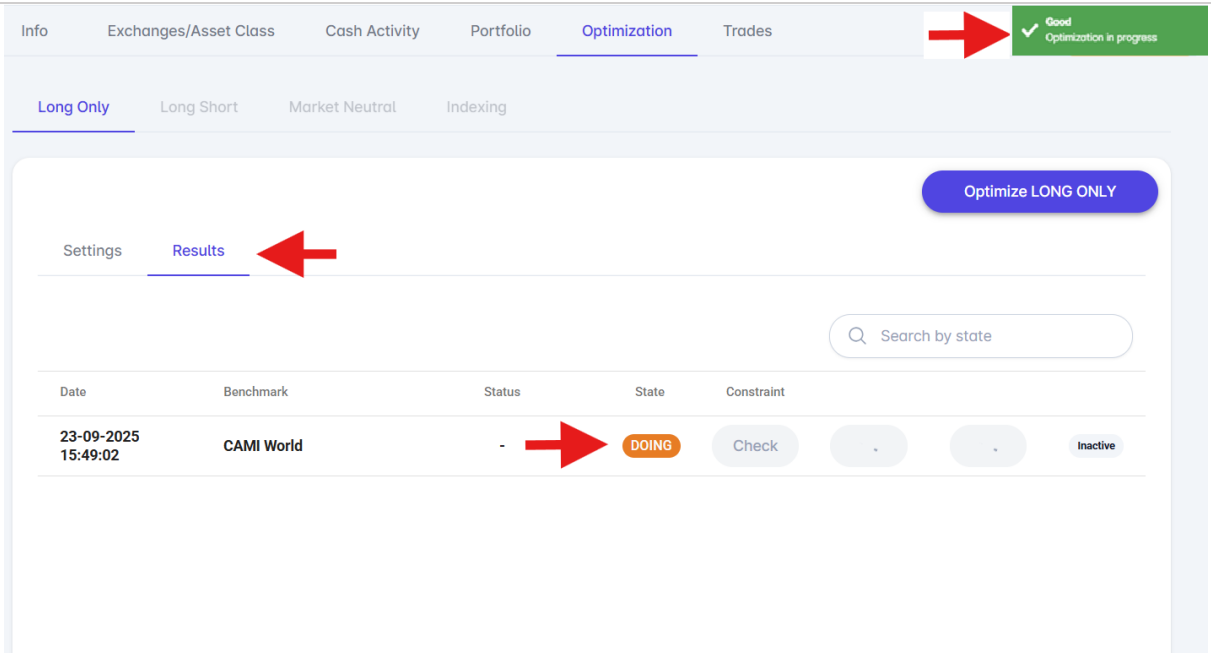
The optimizer can be run by clicking the Optimize button, located at the top right-hand side of any Optimization Constraints sub-tab.



By clicking the Optimize button the user will be taken to the ***Results*** sub-tab within the ***Optimization*** tab which will confirm the optimization is running and provide its run status.

The time taken for the optimization to run will depend from the number of securities entering the optimization process.

While the optimization process is running, **PoMaTo** will display the run status with an orange DOING sign to indicate progress.



9.1.1 Optimizer Run Time

The average estimated processing time is approximately *5 minutes* for a security universe of around 40,000+ securities across all asset classes. The smaller the number of securities involved, the shorter the processing time.

As an example, an optimization involving 6,000 securities will take approximately 8 minutes on its first run and around 3 minutes for each subsequent run.

The longer duration for the initial run is due to the need to load the full dataset, construct the necessary matrices, and apply all relevant constraints.

It is important to note that the relationship between the number of securities and the time required is not linear, but exponential. The times provided above are for guidance only and should be considered as indicative.

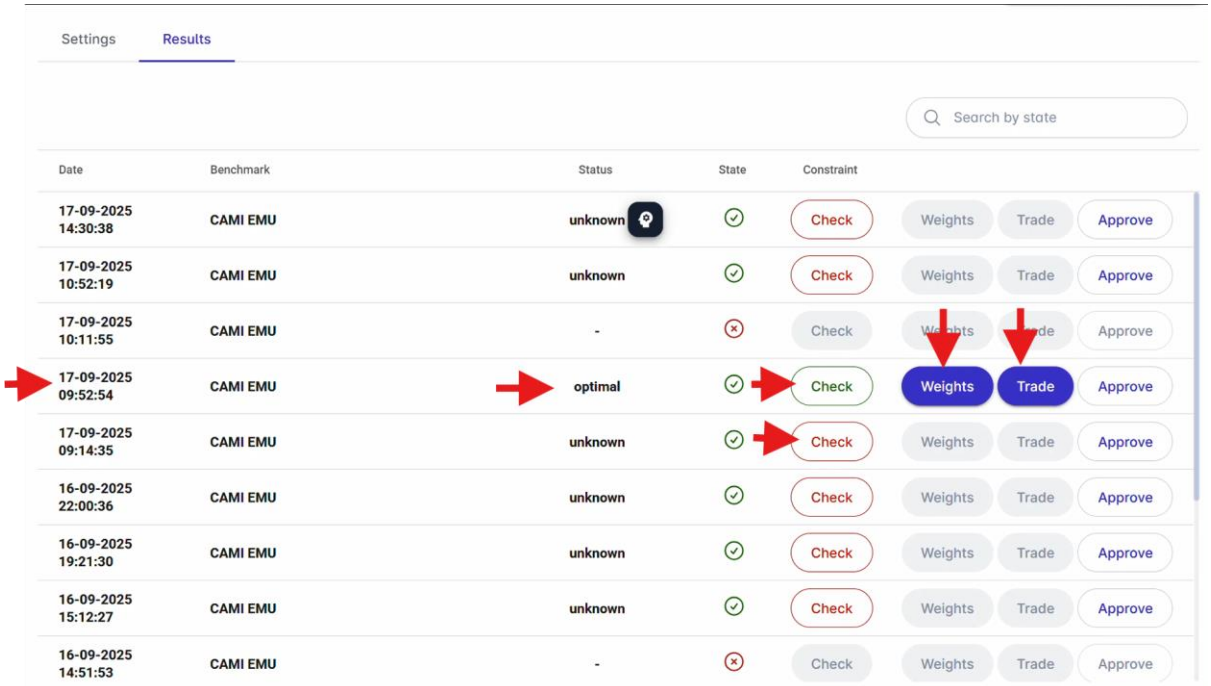
9.2 Optimization Results

Once optimization is complete, detailed information about the optimization, along with the history of all previous runs, will be displayed.

The orange **DOING** button will disappear and all the following fields will be populated:

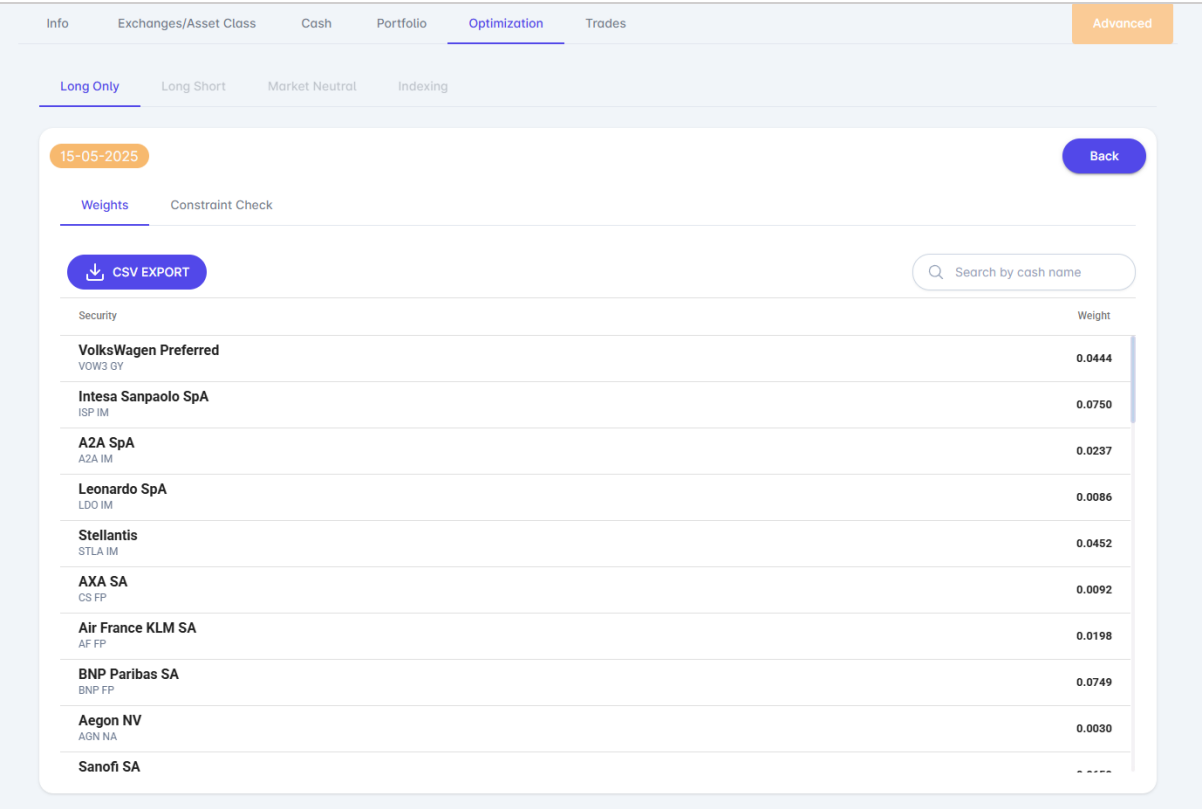
- Date: date the optimization was run
- Benchmark: benchmark used to run the optimization
- Status*:* if the optimizer found a solution (indicated with **Optimal**) or if the optimizer could not find a solution (indicated with **Unknown**)
- State: if the optimization processes have completed successfully
- Constraint: enables checking of the optimization results against the specified settings
- Weight Button: displays the optimizer results in terms of the weights

- Trade button: displays the trades suggested by the optimizer

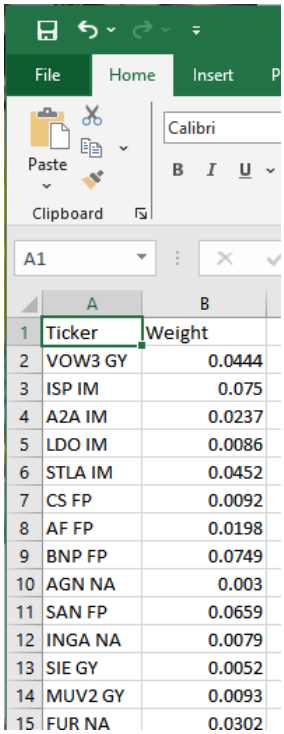


9.2.1 Weights -Check

After the optimization has run, clicking the **Weights** button opens a new tab displaying the optimizer results in terms of the weights allocated to each individual security, fully reflecting the configured optimization settings.



From the **Weights** sub-tab, the optimization results can also be downloaded for further analysis or additional checks on the suggested portfolio weights - **CSV EXPORT** button.



9.2.2 Constraint Check

After the optimization has run, clicking the **Check** button enables reviewing all the entered optimization settings and the optimizer's outcome relative to those settings, allowing for potential fine-tuning.

The **Check** button status indicates:

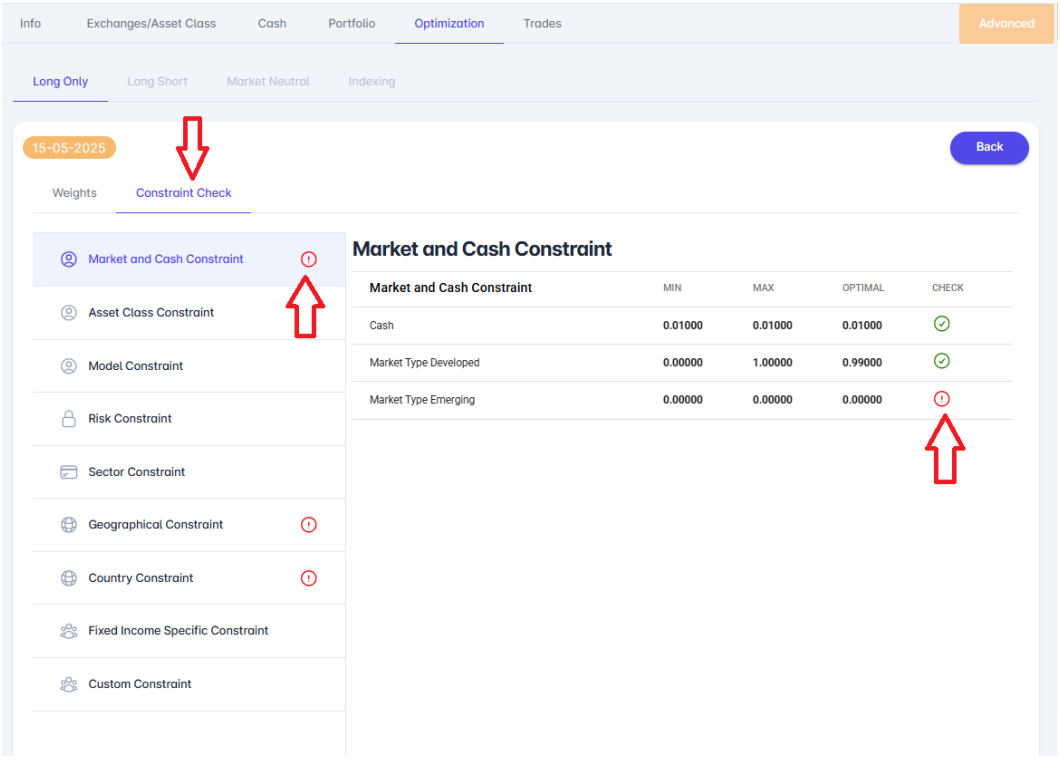
1. **Green**: The optimizer found a solution and the status is *optimal*. This suggests reviewing constraints to determine if settings can be adjusted to better align with the desired goals.
2. **Red**: The optimizer could not find a solution and the status is *unknown***.** This indicates that some constraints cannot be satisfied, possibly due to:
    a. Conflicting constraints (e.g., a minimum-security weight of 1% for Vodafone while the maximum country weight for the United Kingdom is set to 0).
    b. Constraints that are impossible to satisfy

Clicking the **Check** button navigates to the ***Constraint Check*** sub-tabs within the ***Optimization*** tab, displaying all constraints applied to the optimizer.
For each constraint, the following information is shown:

- **Min** and **Max** values set in the optimization settings
- Solution values found by the optimizer
- An indicator showing whether the constraint was satisfied (**green**) or not (red)

By analyzing the optimization results in relation to the settings, the next steps may be to:

- Correct settings that prevent the optimizer from finding a solution
- Fine-tune the optimization settings
- Accept the optimization results as they are.



9.2.3 AI Optimizer Agent Check

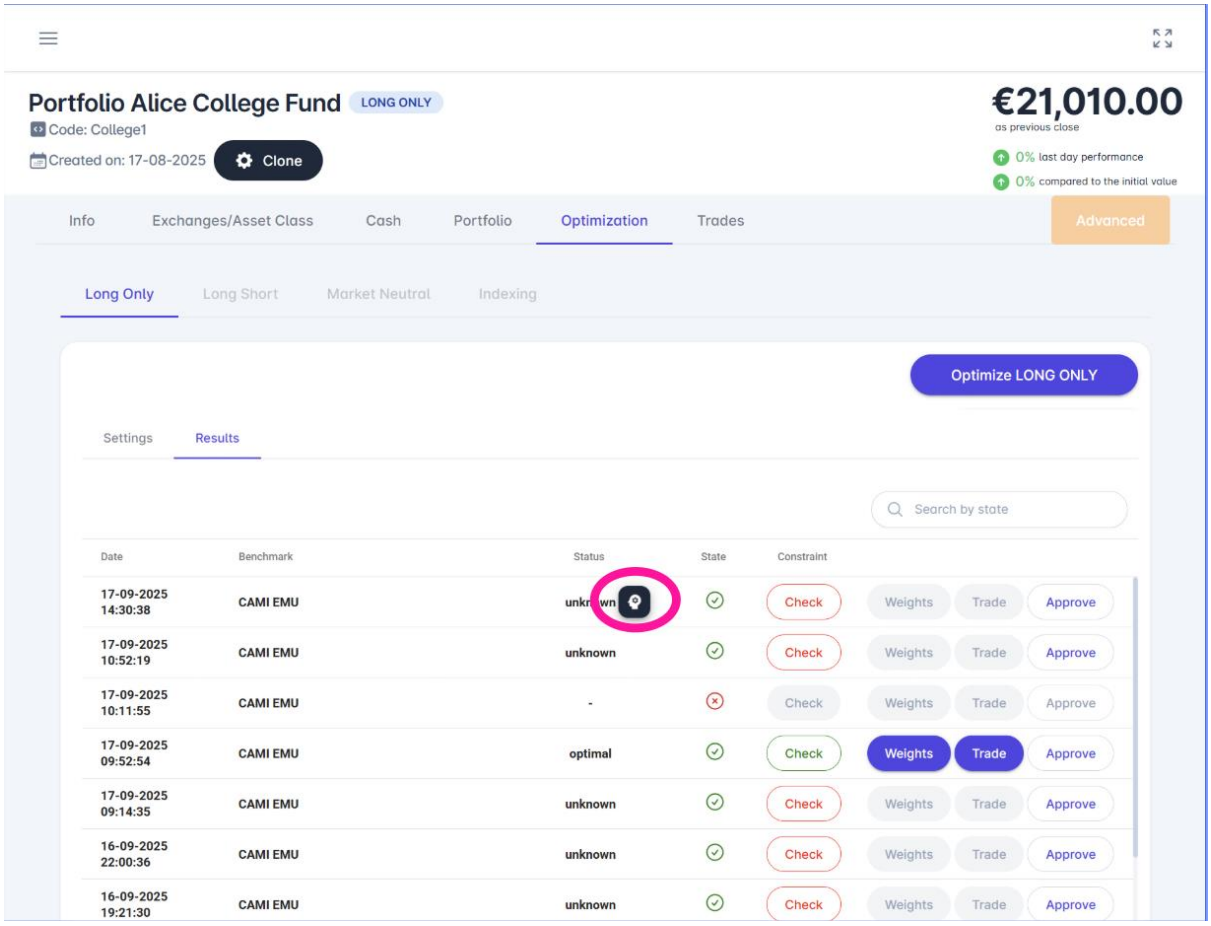
When the optimizer status is shown as **Unknown**, the **AI Optimizer Agent** can be launched to assist with troubleshooting.

The AI Agent will:

- Review the optimization settings.
- Detect inconsistencies or conflicts that may have caused the optimizer to fail.
- Provide recommended adjustments to help the optimizer run successfully.

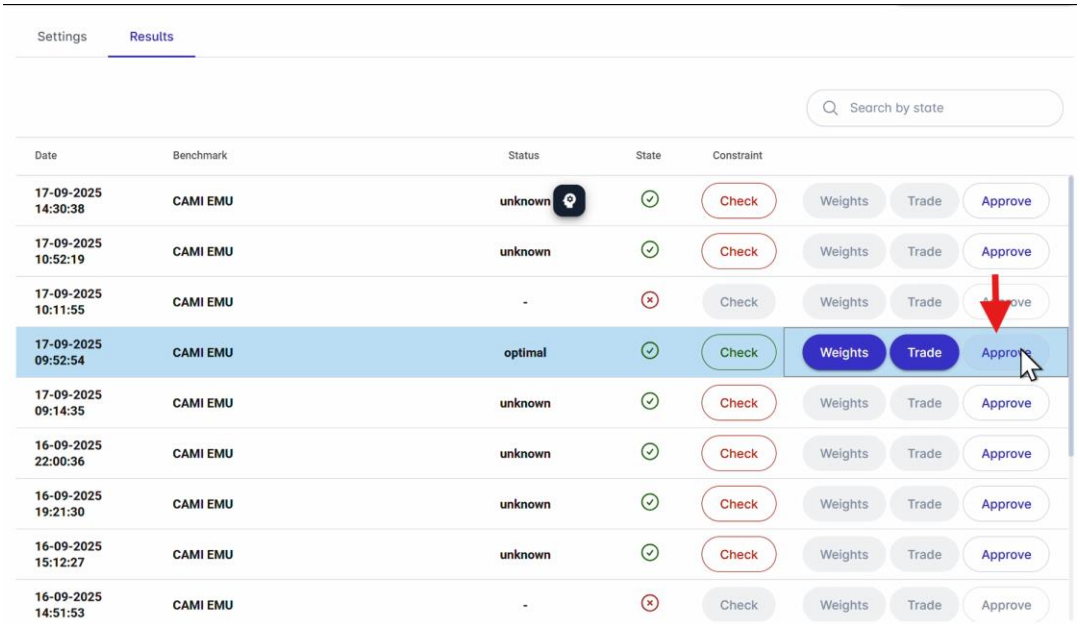
This feature ensures optimization issues are quickly identified and resolved, supporting a smoother portfolio management process.

Click the icon where indicated.



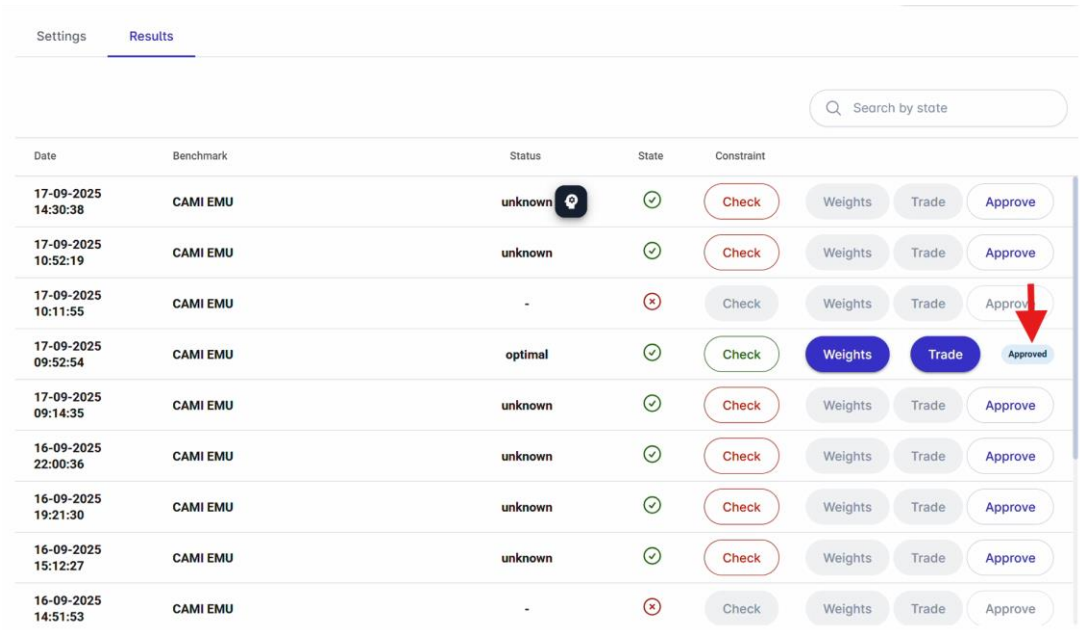
9.2.4 Approve an Optimization Run

Once an optimization run has completed successfully, the **APPROVE** button must be clicked to lock in the optimization run intended for trading.



Clicking the Approve button, locks in the optimization run, you wish to trade. It enables the Trade button for that run while disabling all other Trade buttons linked to any other successful optimization run.

This process ensures that only one optimization run is committed to trading at any given time, providing consistency and preventing accidental execution of outdated recommendations.



10 Portfolio Trading

Portfolio Trading is a key component of portfolio management, enabling accurate tracking and optimization of investment portfolios.

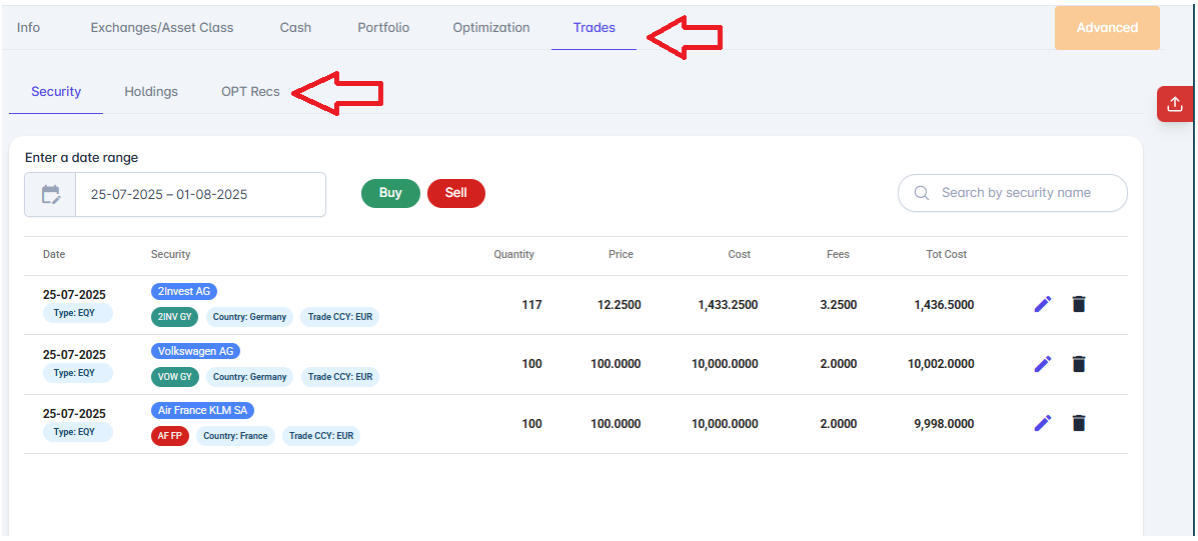
Within **PoMaTo**, trading activity can be recorded to replicate executions at broker level. This ensures the portfolio reflects actual cash and security holdings—both in terms of names and quantities - held at the broker or custodian.

PoMaTo provides **three interchangeable methods** for processing trading activity. All methods are handled identically by the system and are designed to accommodate different trading intents:

- Trade any security available in PoMaTo
- Trade securities currently held in the portfolio
- Trade based on optimization results

Access the trading functionality via the ***Trade*** tab.

By default, the platform opens the ***Securities*** sub-tab, where any of the three trading methods can be used.



10.1Trade Any Security Available Within **PoMaTo**

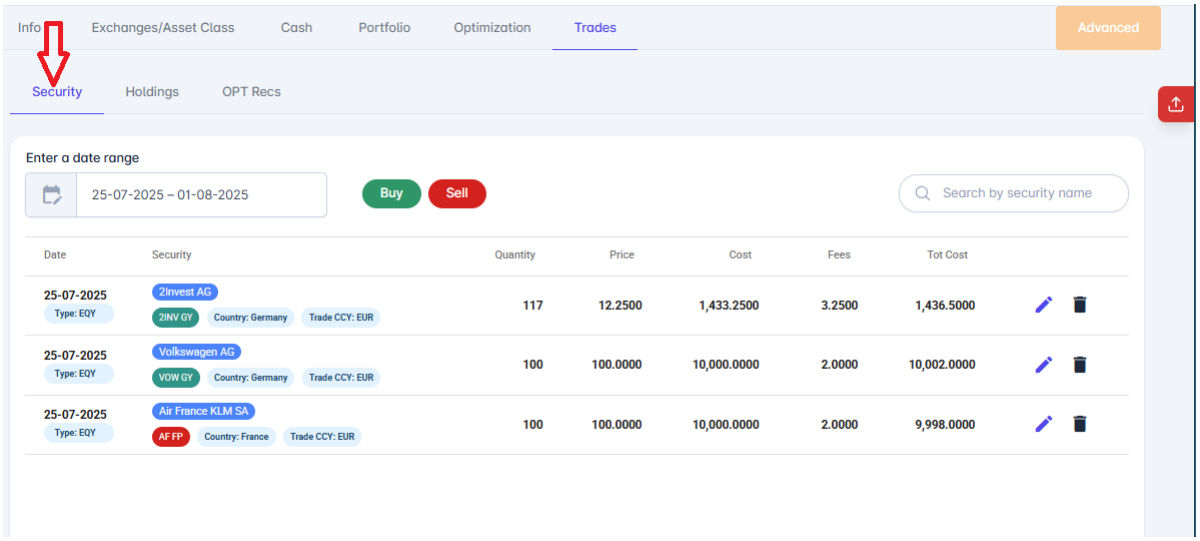
Use for ➔ *Basket Trading, Discretionary Trading, Optimization Trading*

This feature enables recording of trades in any security available within **PoMaTo**. It is suitable for:

1. Discretionary Trading
2. Basket Trading

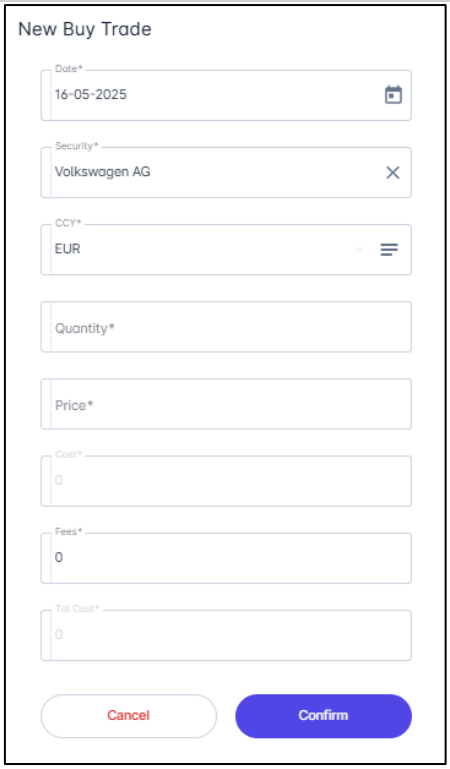
For portfolio monitoring without the use of the optimizer, trades can be registered using this feature.

To record a trade, select the **Trade** tab and then the **Securities** sub-tab. Any **Buy** or **Sell** trade can be registered by clicking the respective button.



By clicking the **Buy** or **Sell** button, a new pop-up window opens where the following information can be entered:

a. **Trade Date**: it is the date the trade was executed – by default it will be today or the latest trading day
b. **Security**: it is the security traded – the field allow to search for any security available in PoMaTo
c. **CCY**: this is the currency in which the trade took place – by default the currency is the trading currency of the selected security
d. **Quantity**: it represents the number of securities traded
e. **Price**: it is the trade execution price
f. **Cost**: the field will be automatically filled with a value which is the Security quantity times Price
g. **Fees**: this represents the fees paid to the broker to execute the trade
h. **Tot Cost**: the field will be automatically filled with a value which is the Security times Price plus any brokerage fees paid

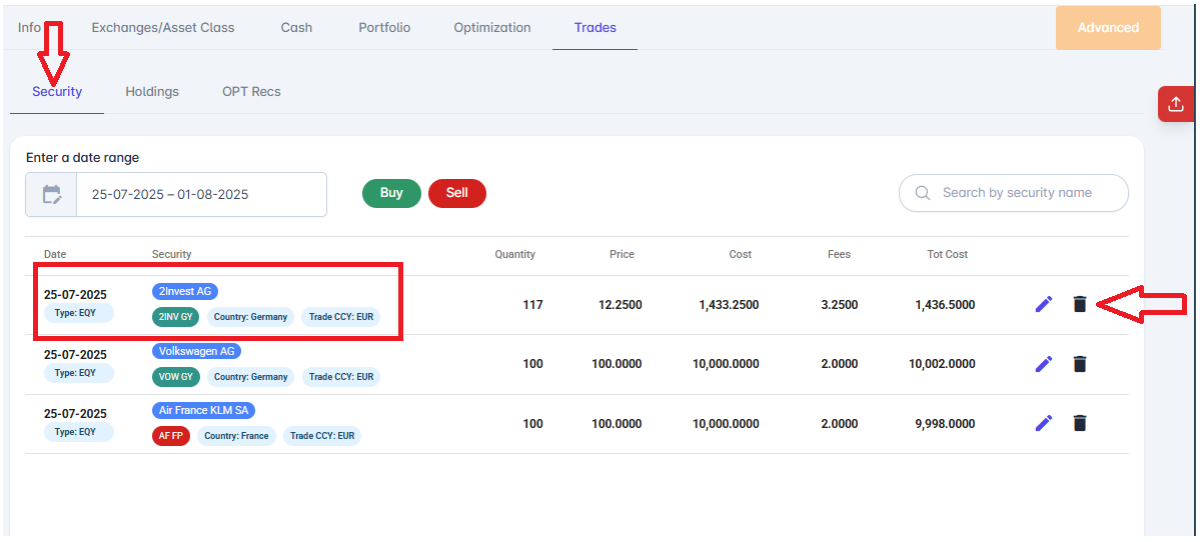


After all fields are completed, confirm the trade execution by pressing the **Confirm** button.

Once processed by **PoMaTo**, each trade is displayed at the bottom of the page along with related trading data and security information.

The ticker appears green for buy trades and red for sell trades.

Trade data can be edited by clicking the pencil icon to amend any errors, or deleted by clicking the trash icon.

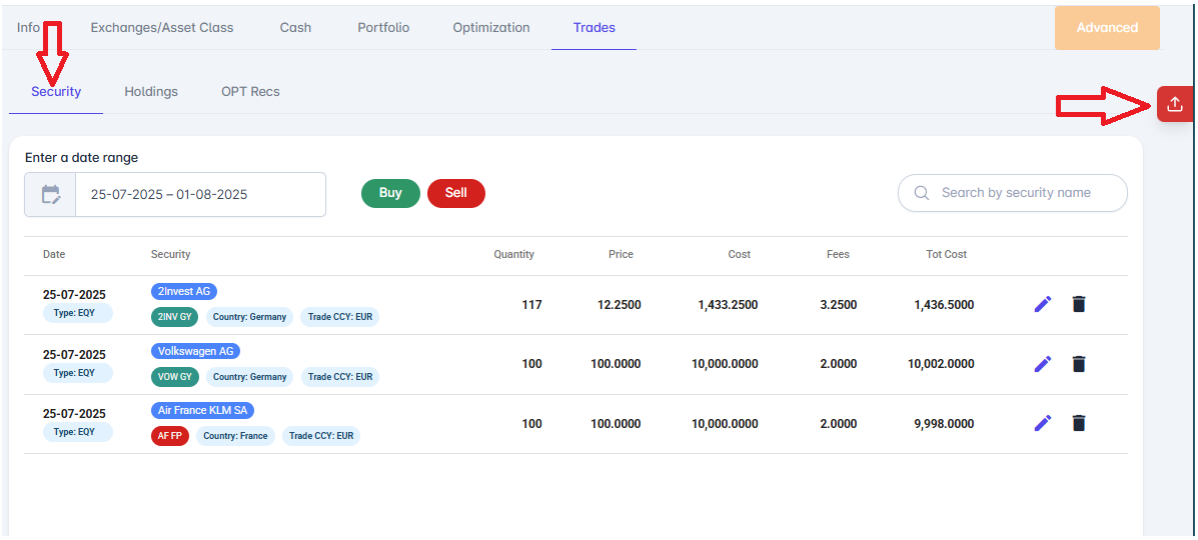


Once the trade has been executed and processed by **PoMaTo**, the results are immediately reflected in the portfolio.

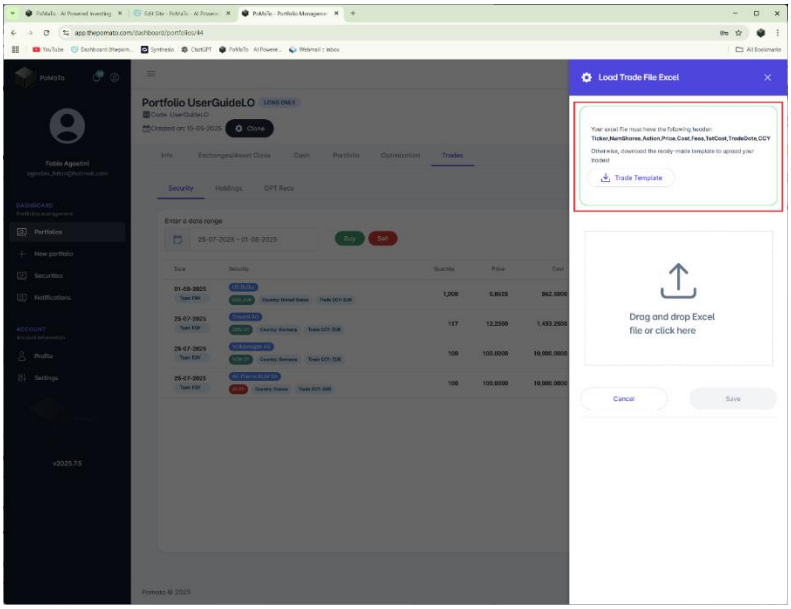
10.1.1.1 Import a Trade file

Trades can also be registered in bulk by importing a CSV file – click the red icon.

Each row of the file should contain a trade executed, with the same set of information required for manual trade entry.



The template for the file can be obtained from the red button:



Template:

	A	B	C	D	E	F	G	H	I	J	K
1	Ticker	NumShares	Action	Price	Cost	Fees	TotCost	TradeDate	CCY		
2											
3											
4											

10.1.2Trade FOREX

There is a particular case for trading FOREX.

As previously stated, although there is no impact on NAV when using FX or FOREX, the two serve different purposes.

When a non-base currency appears within the account, it is typically the result of trading foreign stocks. In this case, the currency is not intended as a held investment position; rather, it is displayed as a cash line that the user can interact with via the Trade tab—FX sub-tab.

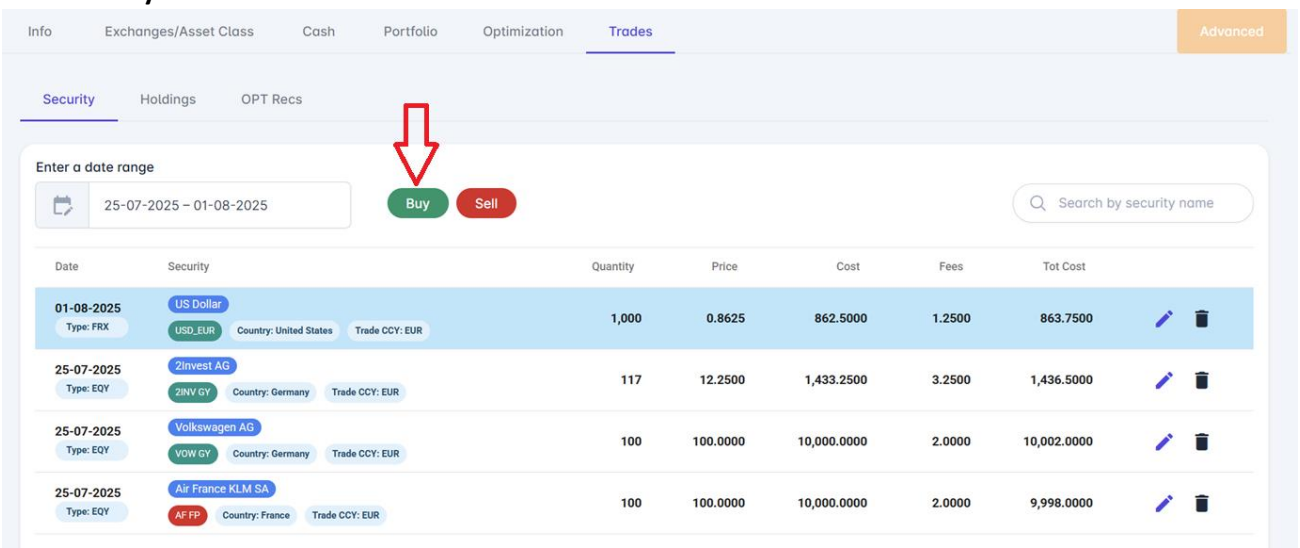
Conversely, when a currency balance is linked to an FX investment strategy (and thus represents an asset), it must be classified as a FOREX instrument. This is represented by a currency pair.

Currency pairs for FOREX are shown as XXX_YYY, where XXX is the base currency and YYY is the quote currency.

To align with common broker practice (noting that conventions may vary), fees for FOREX trades are considered to be paid in the quote currency (YYY) of the pair.

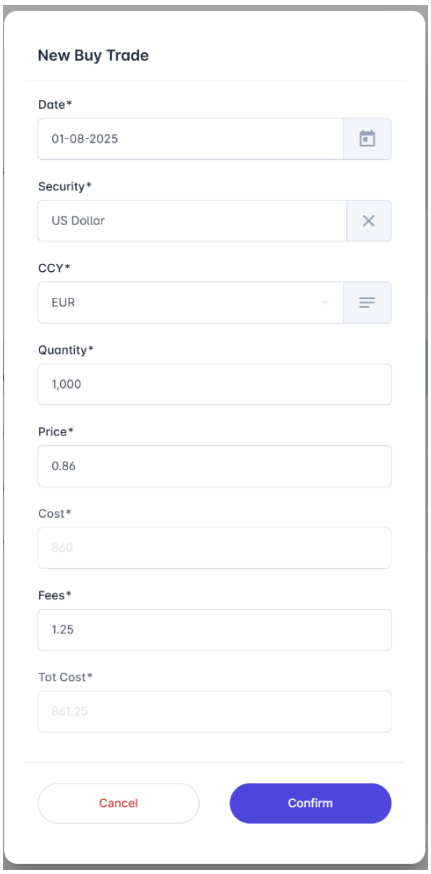
Below is a screen shot example for FOREX USD_EUR **Buy**:

Click the **Buy** button:



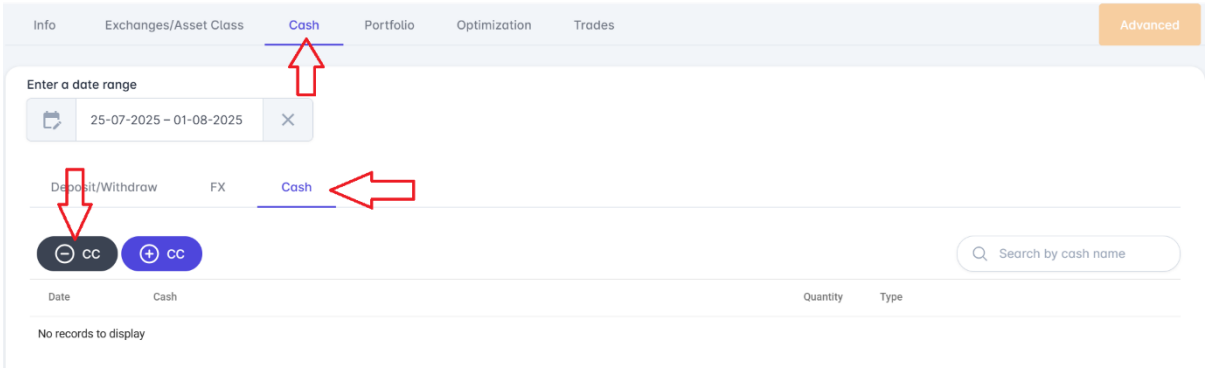
And enter the trade data:

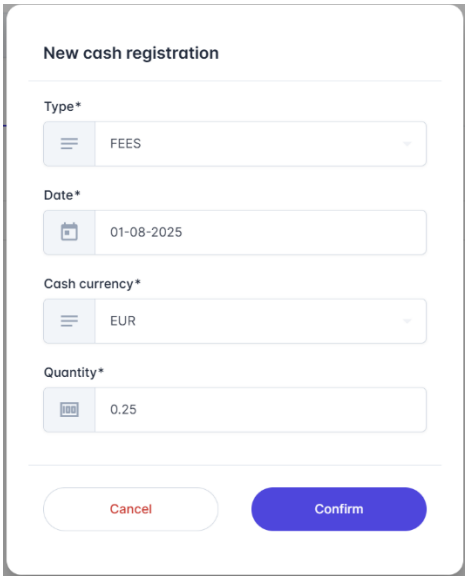
a. **Trade Date**: it is the date the trade was executed – by default it will be today or the latest trading day
b. **Security**: it is the security traded – the field allow to search for any security available in PoMaTo – in this example **USD** is a **BUY**
c. **CCY:** this refers to the quote currency of the FOREX pair, as explained above. It is the second currency listed in the pair. For example, in the pair USD/EUR, the quote currency (CCY) is **EUR**
d. **Quantity**: this represents the number of units of the base currency in the FOREX pair—in this instance, USD
e. **Price**: this is the trade execution price, i.e., the exchange rate between USD and EUR, representing the USDEUR exchange rate
f. **Cost**: the field will be automatically filled with a value which is the Security times Price
g. **Fees**: this represents the fees paid to the broker to execute the trade, expressed in the quote currency of the FOREX pair—in this instance, EUR
h. **Tot Cost**: the field will be automatically filled with a value which is the Security times Price plus any brokerage fees paid



If your broker charges fees in the base currency of the account or the base currency of the FOREX pair, you can handle this in PoMaTo by splitting the trade into two steps:

1. **Import the FOREX trade with fees set to 0.**
2. **Record the fees separately:**
   Go to the Cash tab, select **-CC**, and in the pop-up, window choose **FEES** for Type. Then select the currency in which the fee was paid and enter the fee amount charged by your broker.





10.2 Trade Portfolio Held Securities

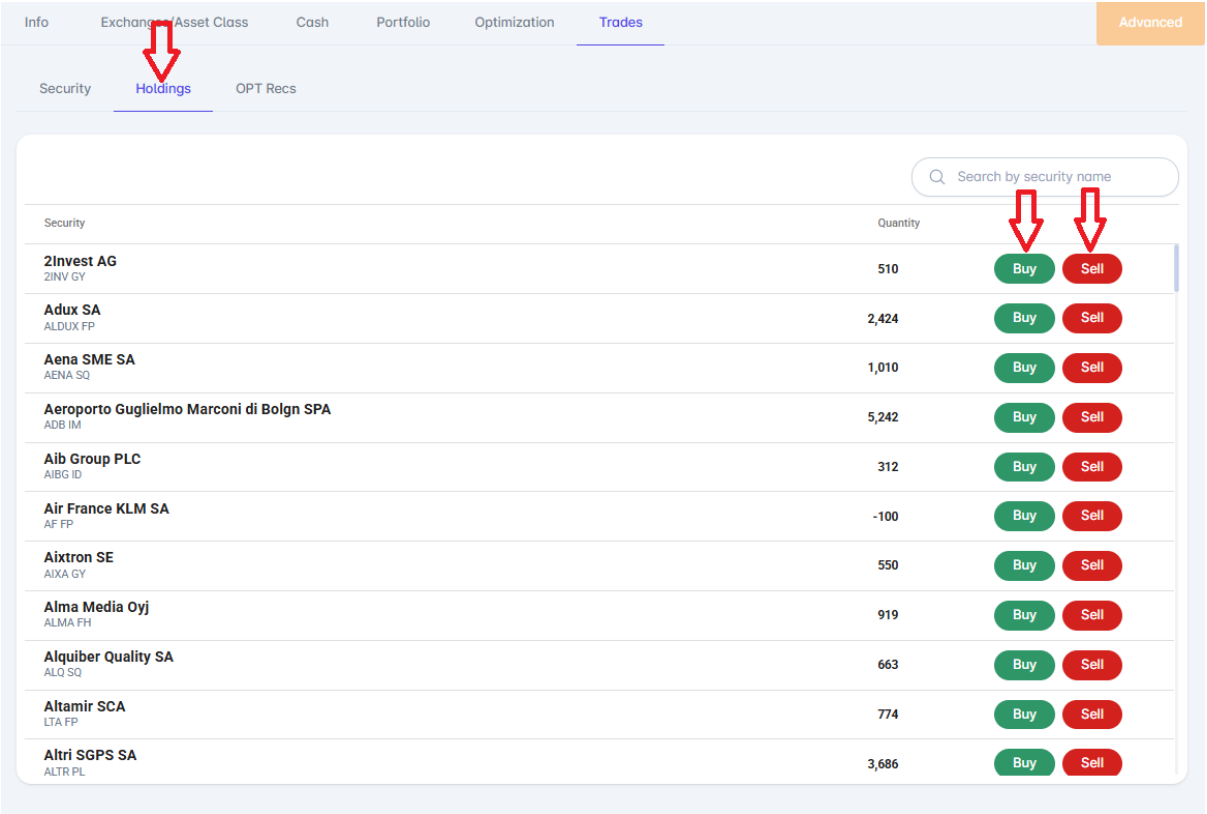
Use for ➔ *Discretionary Trading, Corporate Action Related Trading*

This feature allows and facilitates the registration of trades for any securities currently held in the portfolio. It is suitable for:

1. Discretionary trading
2. Corporate action-related trading

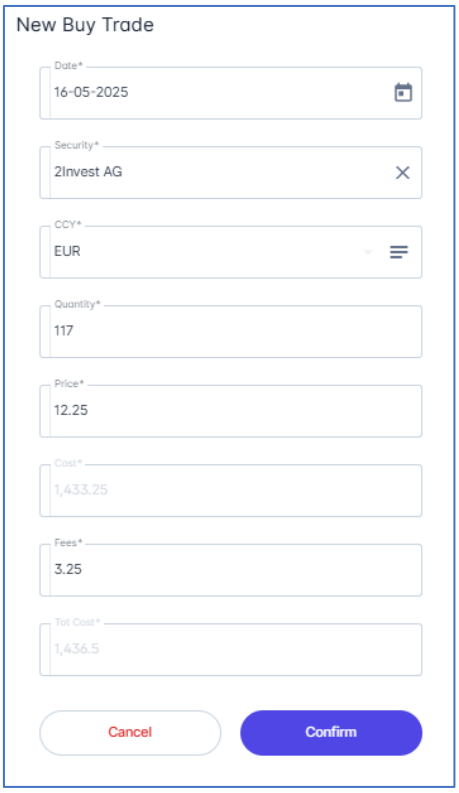
To register a trade, select the **Trade** tab and then the **Holding** sub-tab. **PoMaTo** will display a window listing all currently held securities along with their quantities.

For each security, **Buy** and **Sell** buttons are available.



By clicking either **Buy** or **Sell**, a new pop-up window opens where the following information can be entered:

a. **Tarde Date**: it is the date the trade was executed – by default it will be today or the latest trading day
b. **Security**: by default, this is the security associated with the **Buy** or **Sell** button that was clicked
c. **CCY**: this is the currency in which the trade took place – by default the currency is the trading currency of the selected security
d. **Quantity**: it represents the number of securities traded
e. **Price**: it is the trade execution price
f. **Cost**: the field will be automatically filled with a value which is the Security times Price
g. **Fees**: this represents the fees paid to the broker to execute the trade
h. **Tot Cost**: the field will be automatically filled with a value which is the Security times Price plus any brokerage fees paid

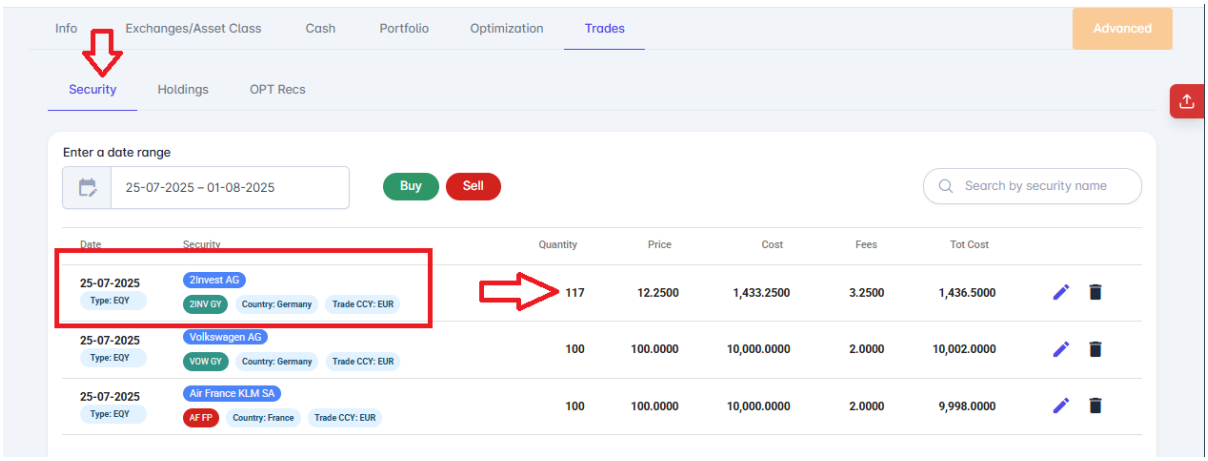


After all fields are completed, confirm the trade execution by pressing the **Confirm** button.

Once a trade has been processed in PoMaTo, it will appear at on the page of the **Security** sub-tab (see section above), alongside key details about the security.

- The **ticker** of a security will be displayed with a **green** label for a **buy trade**, and in **red** for a **sell trade**.
- To **edit** a trade, click the **pencil icon** and amend any incorrect details.
- To **delete** a trade, click the **trash icon**.

All changes will be saved automatically and reflected in your portfolio records.



Once a trade has been executed and processed by PoMaTo, the results will be instantly reflected in your portfolio.

10.3 Trade the Optimization Results

Use for ➔ *Optimization Results Trading*

This feature is designed to register and process all trades suggested by the optimizer. It is particularly suitable for:

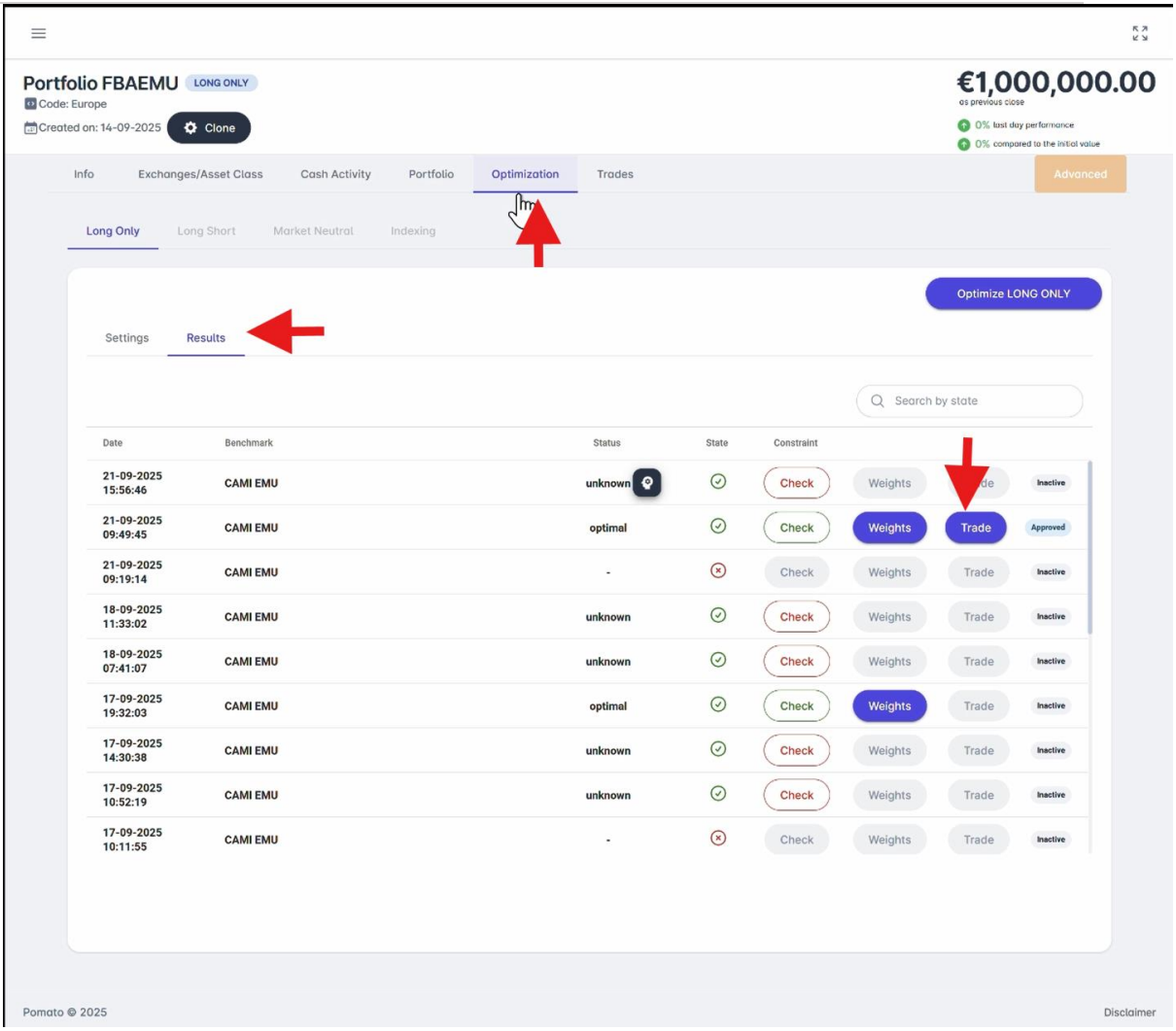
1. Optimization Trading
2. Basket Trading to align the Portfolio to the Optimizer results

This feature can be accessed in two ways:

1. **Optimization tab**
2. **Trade tab**

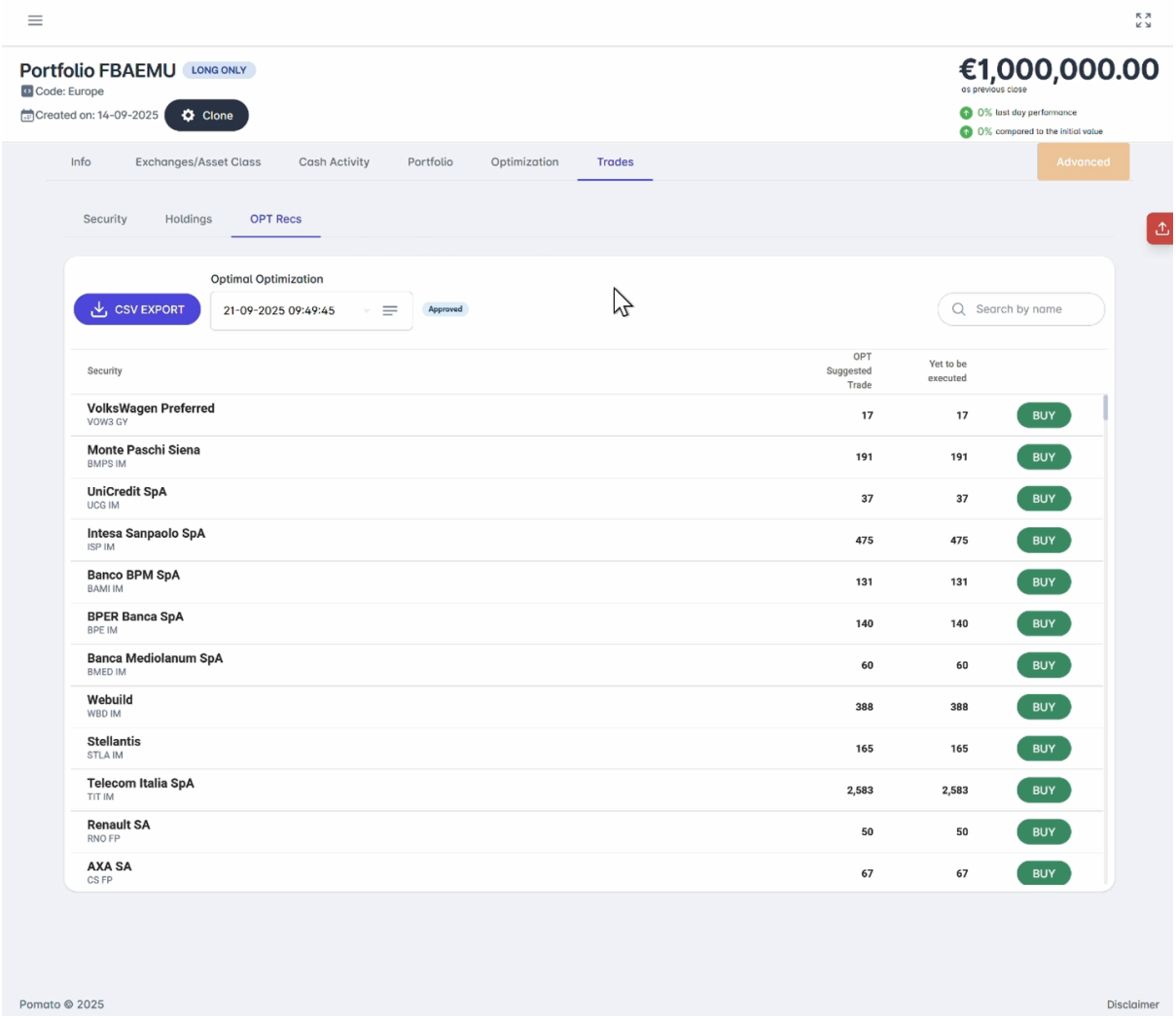
Both methods are detailed below.

1. **Optimization tab**: After the optimization has run, while on the **Optimization** tab, **Results** sub tab, click the button **Trade**.



The system redirects to the **Trade** tab, **OPT Trade** tab, where all trades suggested by the Optimizer are displayed to align the current portfolio with the optimal portfolio.

2. **Trade tab**: After the optimization has run, it is possible to click the **Trade** tab, **OPT Trade** sub-tab to view all trades suggested by the Optimizer in order to align the current portfolio with the optimal portfolio.
   Note that accessing the feature this way implies that if the optimization was not run for the current trading day, the page will be blank.



The **OPT Recs** sub-tab displays all trades suggested by the Optimizer. For each security that needs to be traded, a line will show several pieces of information:

1. **Security Name and Identifier**
2. **OPT Suggested Trade** – Represents the amount to be traded to align the portfolio with the optimal portfolio
3. **Yet to Be Executed** – Represents the remaining quantity that still needs to be traded to align the portfolio with the optimal portfolio

10.3.1 Register and Process OPT Trads

Depending on how the trades are executed at the broker, there are two options to register and process all the trades: either partially or fully.

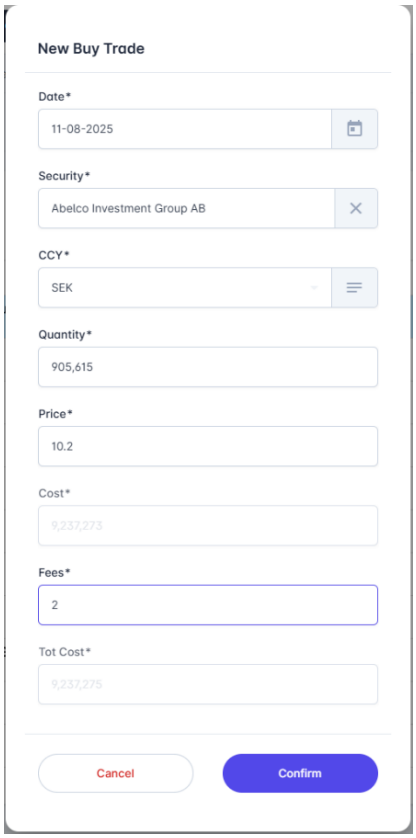
Trades can be processed in two ways:

1. *Process the trades as they get executed*
2. *After market close bulk-load the trade executed*

Both methods are detailed below.

1. *Process the trades as they get executed*:
   This option is designed for situations where trades are being actively monitored and are not executed in a single transaction, either due to algorithmic implementation or trade slicing. In this case, trades can be registered and processed as they are executed by clicking the **Buy** or **Sell** button for the relevant security suggested by the Optimizer .

   Clicking this opens a new window where the executed trade is registered by entering the following information:
   a. **Tarde Date**: it is the date the trade was executed – by default it will be today
   b. **Security**: by default, this is the security associated with the **Buy** or **Sell** button that was clicked
   c. **CCY**: this is the currency in which the trade took place – by default the currency is the trading currency of the selected security
   d. **Quantity**: represents the number of securities traded. By default, it is set to the quantity suggested by the Optimizer. This value can be adjusted to reflect the actual quantity traded
   e. **Price**: it is the trade execution price
   f. **Cost**: the field will be automatically filled with a value which is the Security times Price
   g. **Fees**: this represents the fees paid to the broker to execute the trade
   h. **Tot Cost**: the field will be automatically filled with a value which is the Security times Price plus any brokerage fees paid

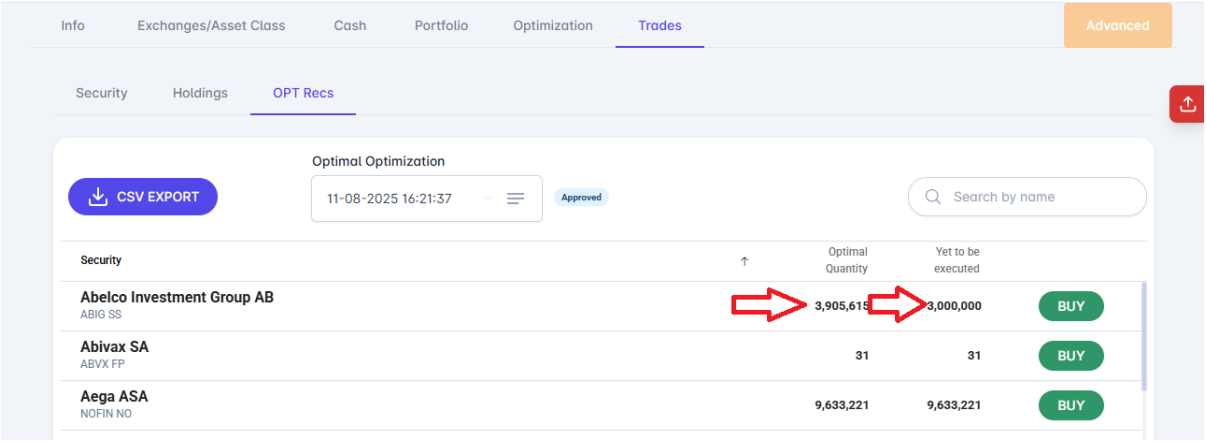


Once all values have been entered, trade execution must be confirmed by pressing the **Confirm** button.

Once the trade has been processed by PoMaTo, it will be reflected in the **OPT Trade** sub-tab.

The **Yet to Be Executed** quantity will update to show the remaining amount needed to reach optimal exposure.

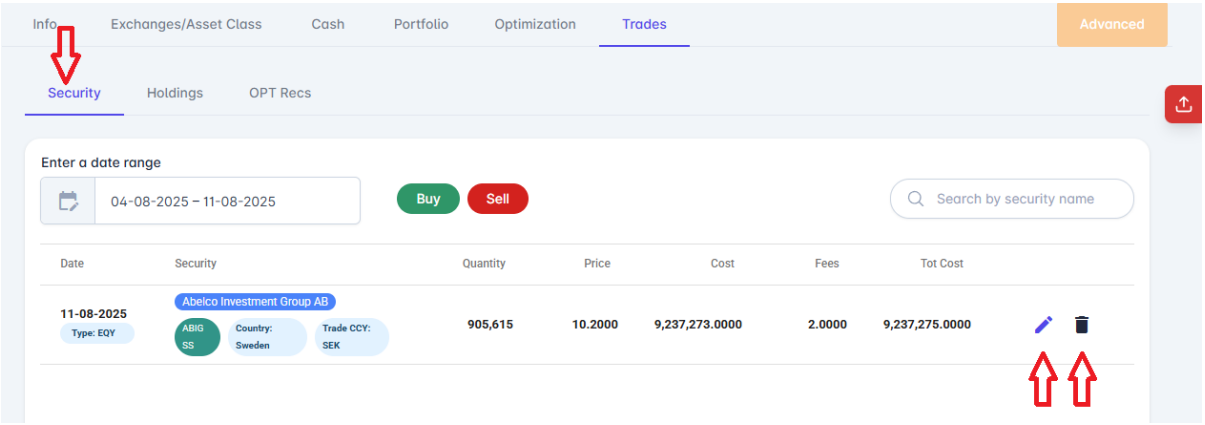
The **Optimal Quantity** will continue to display the trade originally suggested by the Optimizer, making it easy to see how much of the suggested trade has been executed so far.



Once the trade has been processed by PoMaTo, it will on the page, where all trading data is displayed along with key information about the security on the OPT Recs tab and – on the ***Security*** sub-tab

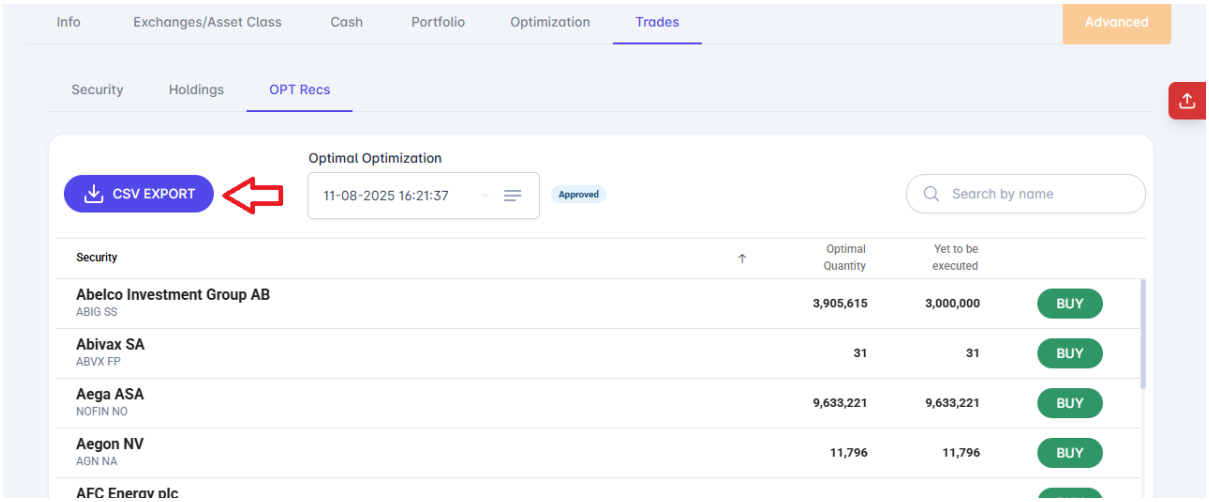
The ticker of a traded security appears+ **green** for a **buy** and **red** for a **sell**.

Trade details can be corrected by clicking the **pencil** icon and amending any errors. A trade can also be deleted by clicking the **trash** icon.



Once the trade has been executed and processed by PoMaTo, the results of the trading activity are immediately reflected in the portfolio and visible on the ***Security*** sub-tab.

2. *After market close bulk-load the trade executed*:
   This option is designed for sending trades to a broker for execution as **Basket Trading**.
   A **Basket Trading** file can be sent to the broker by downloading the trades suggested by the Optimizer using the **CSV Export** button.

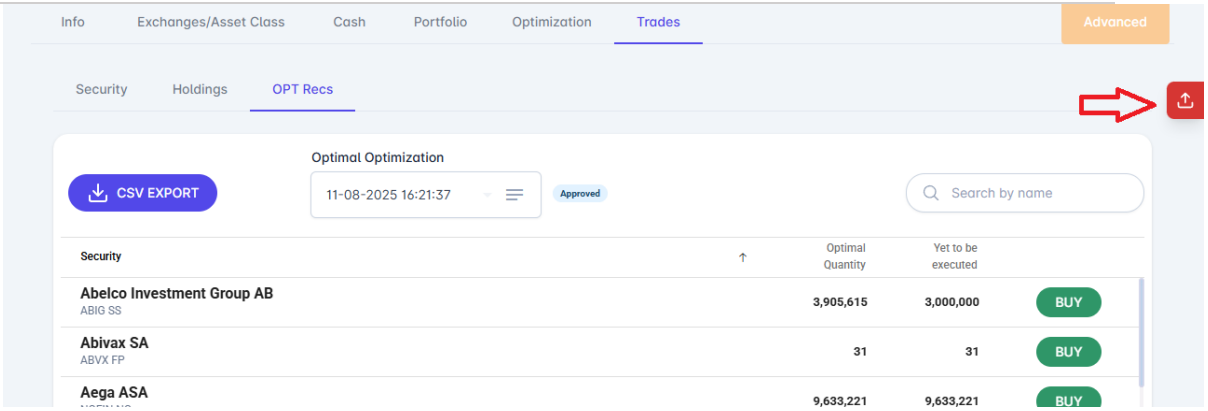


The downloaded CSV file can be modified to match the broker's required format, including updating identifiers or adding additional columns for algorithmic trading settings to be passed to the broker.

	A	B	C
1	Ticker	Optimal Quantity	Action
2	A2A IM	17452	BUY
3	INGA NA	94	BUY
4	TKA GY	1476	BUY
5	VER AV	58	BUY
6	ETL FP	3050	BUY
7	PROX BB	422	BUY
8	KNEBV FH	60	BUY
9	PSM GY	731	BUY
10	SGL GY	15313	BUY
11	TMV GY	772	BUY
12	CPI LN	772	BUY
13	PTEC LN	915	BUY
14	DBV FP	4171	BUY

If trading via **Basket Trading**, a confirmation file from the broker—detailing the status of the basket execution—will be received after market close.

Once the broker file is available, the trade template can be downloaded and used within PoMaTo to process all executed trades. This can be uploaded into the Trade screen by using the red button (the upload template is also available from this button).



The PoMaTo trade template file can then be filled with all the information provided by the broker.

	A	B	C	D	E	F	G	H	I	J	K
1	Ticker	NumShares	Action	Price	Cost	Fees	TotCost	TradeDate	CCY		
2											
3											
4											

Once the trade has been loaded and processed by PoMaTo, it will appear at the bottom of the page, where all trading data is displayed along with key information about the security.

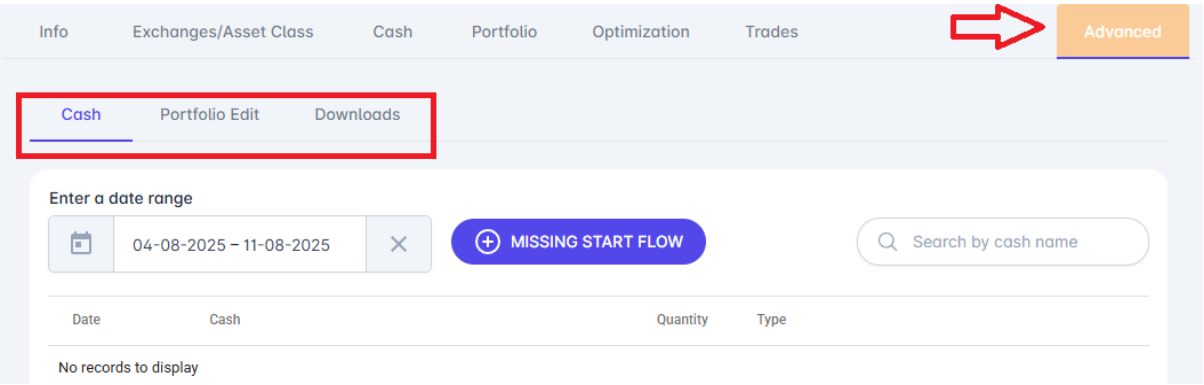
The ticker of a traded security appears **green** for a buy and **red** for a sell.

Trade details can be corrected by clicking the **pencil** icon to amend any errors. A trade can also be deleted by clicking the **trash** icon.

Once the trade has been executed and processed by PoMaTo, the results of the trading activity are immediately reflected in the portfolio and visible on the ***Security*** sub-tab

11 Advanced Features

Within **PoMaTo**, the **Advanced** tab provides several tools for portfolio maintenance and data access:



1. **Cash**
   Missing Start Flow
   Enables amendments or additions to any initial missed flow (cash line). This feature is not intended for recording cash flows (deposits or withdrawals) that occur after the initial portfolio setup. It is designed to adjust the initial cash lines imported at **STEP 4**.
   Any changes may impact historical NAV and, therefore, all portfolio data, including performance figures.
   Use of this feature is recommended only when fully aware of its potential impact.

2. **Portfolio Edit**
   Allows corrections to mistakes or errors made during the initial portfolio import at **STEP 4**. This feature is not intended for importing an initial portfolio, but solely for correcting items that were imported incorrectly. Any changes made in this section may affect the historical Net Asset Value (NAV) and, as a result, all portfolio data, including performance and related metrics.
   It is strongly recommended to use this feature only when fully aware of the impact on historical portfolio data.

3. **Download Data**
   Provides access to data used by the optimizer. This includes downloading the Variance-Covariance Matrix and both long-term and short-term Beta values.

The advanced features are explained in detail below

11.1 Cash- Adding a Missing Starting Flow

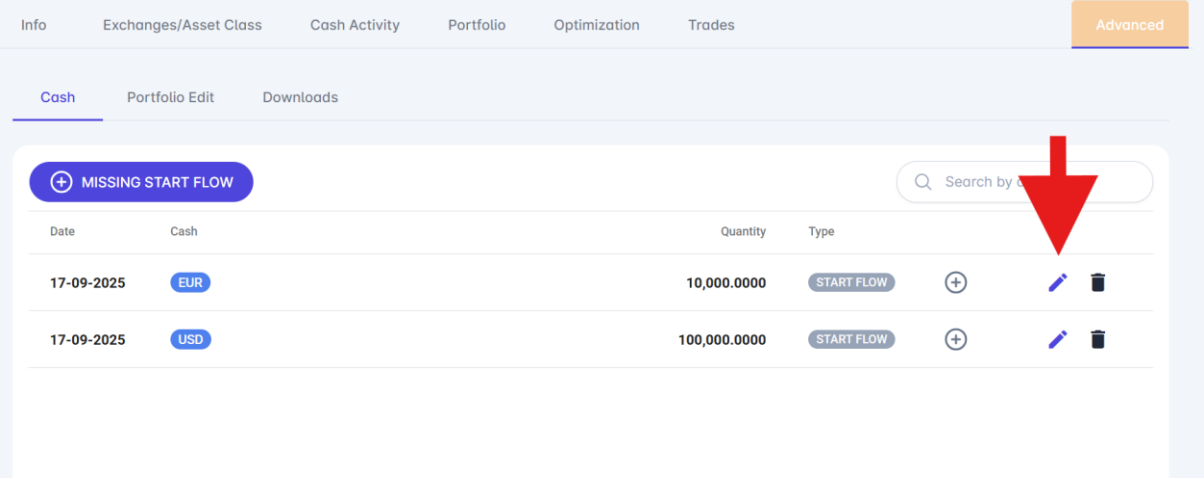
If a cash line was not loaded during initial portfolio creation, it can be added by selecting the **Advanced** tab, then the **Cash** sub-tab.

There are two ways to add cash.

1. Amend the Original cash line entry (if initially entered incorrectly) or
2. add a new cash line in a currency other than the initial cash line.

11.1.1Amend the Original cash Line Entry

If you incorrectly entered your initial cash entry, you can simply click the Pencil icon.

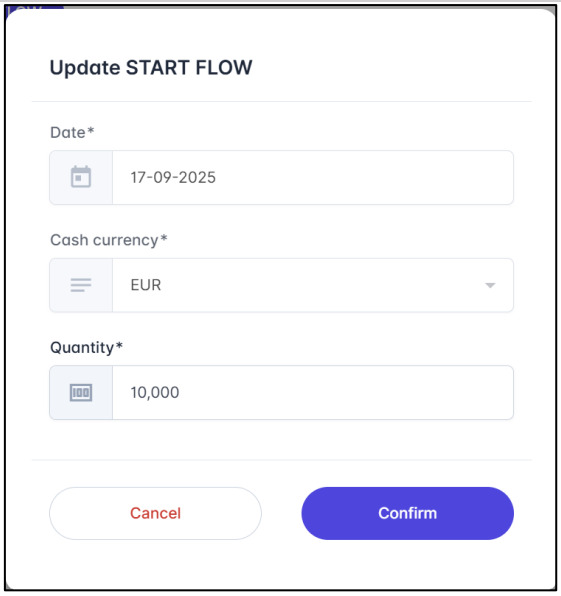


Then in the popup amend the amount.

A pop-up window will open to enter the following values:

- Date of the missing flow will default to the portfolio start or setup date within PoMaTo; this date cannot be changed.
- Currency of the initial flow or the missed currency line at portfolio setup.
- Quantity (number of units) of the currency held at setup.

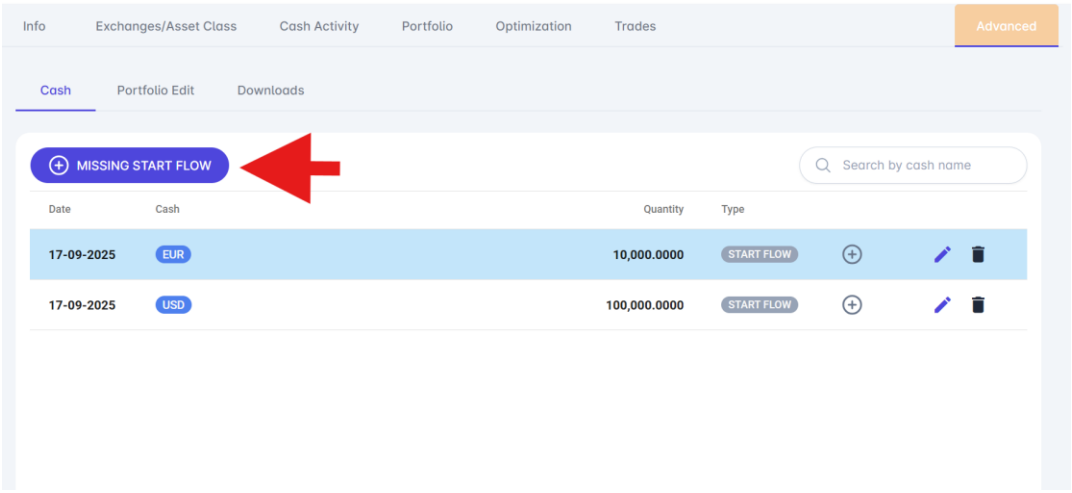
Confirmation is required after entering the new cash flow.



11.1.2 New Cash Line Entry

The other method to add a cash line is by clicking the "+ Missing Start Flow" button.

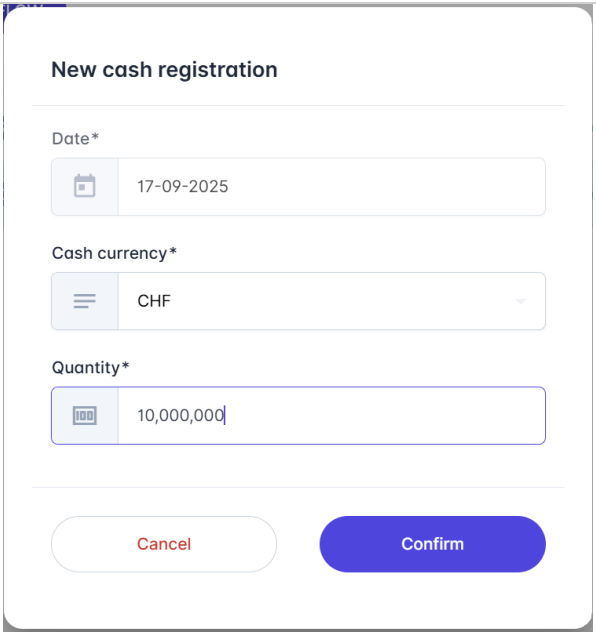
Note this method is for cash line currencies other than the existing currency cash lines.



By clicking **+ Missing Start Flow**, a pop-up window will open to enter the following values:

1. **Date** of the missing flow will default to the portfolio start or setup date within **PoMaTo**; this date cannot be changed
2. **Currency** of the initial flow or the missed currency line at portfolio setup
3. **Quantity** (number of units) of the currency held at setup

Confirmation is required after entering the new cash flow.



11.2 Portfolio Edit

This feature is designed to correct or amend the portfolio originally imported during account setup.

Portfolio Edit must be managed with care, as any adjustment will change the portfolio composition and the Net Asset Value (NAV). Changes take effect from the moment they are implemented; edits are not retroactive.

Editing a holding today will result in a NAV jump equal to the adjusted value (holding by price), and this jump will be counted as performance.

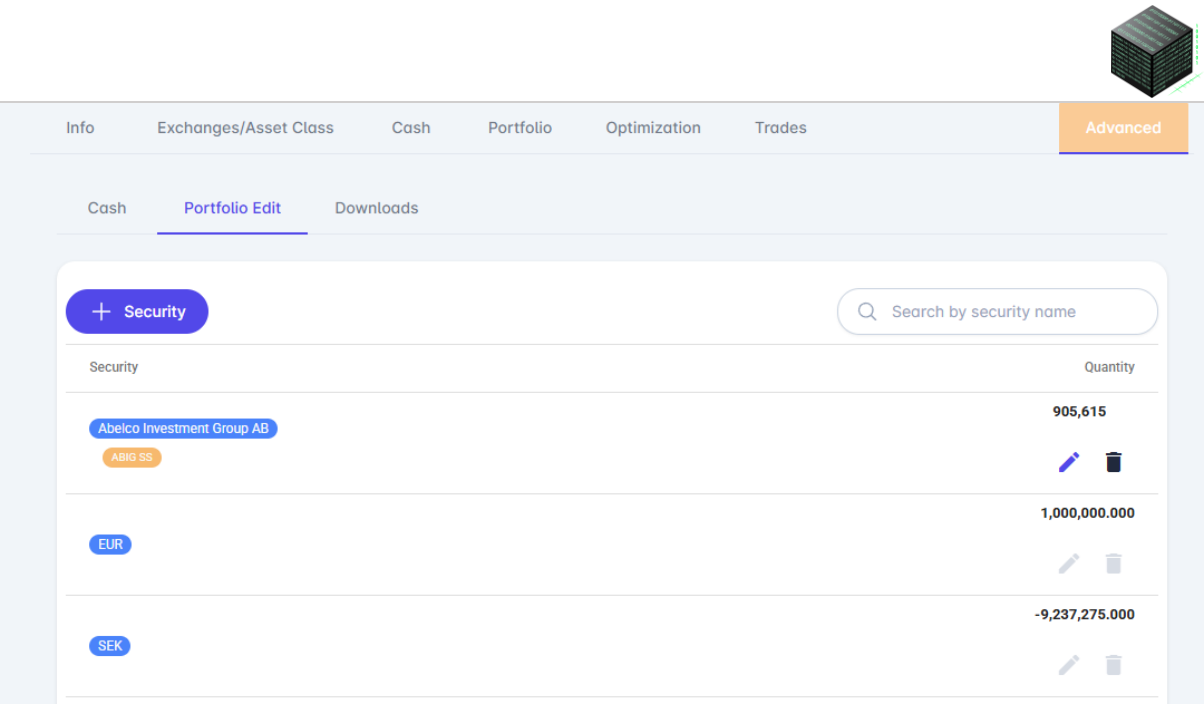
PoMaTo strongly recommends using this feature only to correct mistakes on the day the portfolio was created or set up within the application. Subsequent edits may result in misleading portfolio information.

This feature is not intended for importing or recording an initial portfolio after account setup, but solely for correcting items that were imported incorrectly. Any changes made may affect historical NAV and, consequently, all displayed portfolio data.

It is recommended to use this feature only when fully aware of its impact.

To access **Portfolio Edit**, click the **Advanced** tab, then select **Edit**. The following actions are available:

1. Add a missed security
2. Amend the quantity of a wrongly imported security
3. Delete an incorrectly imported security



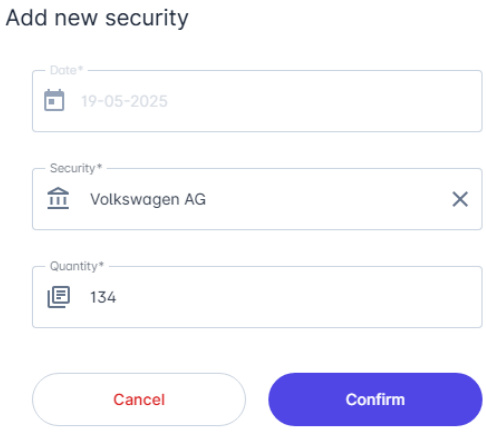
11.3 Adding a Missing Security

If a security was not loaded during portfolio creation at **STEP 4**, it can be added by selecting the **Advanced** tab, choosing the **Edit** sub-tab, and clicking the **+ Security** button.

By clicking **+ Security**, the following can be entered:

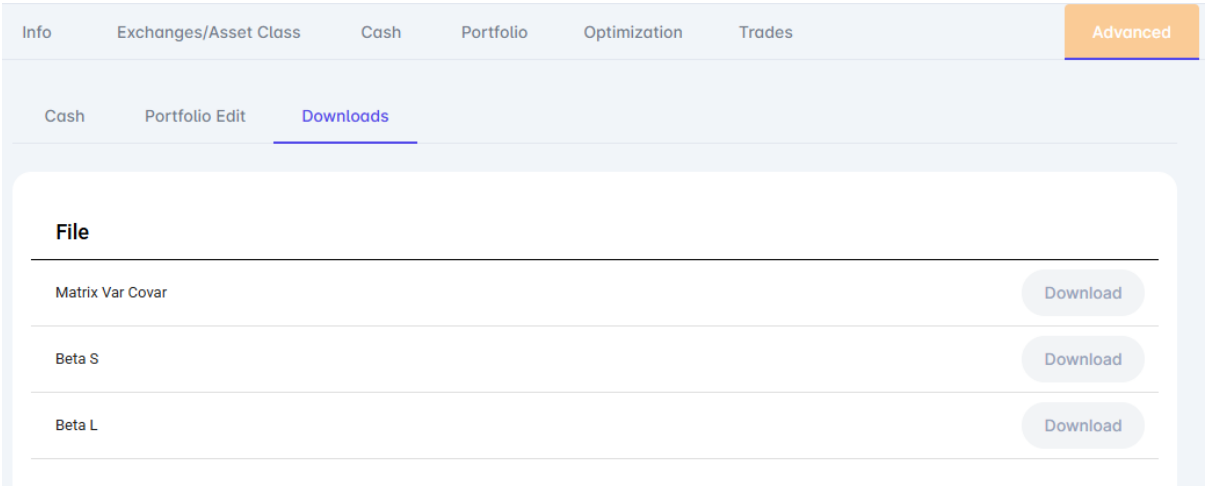
1. The security to be added
2. The relevant quantity originally held

The addition date is set to the current day and cannot be changed. Confirmation of the addition is required through the editing process.



11.4 Downloads

PoMaTo is unique among professional investment platforms for its exceptional openness and accessibility. The platform makes institutional-grade tools and transparency available to all, without differentiating between retail, professional, or institutional clients. The goal is to bring features previously reserved for institutions to a broader audience at low cost and with complete transparency.



Unlike traditional “black box” solutions, **PoMaTo** enables direct access to the key data behind portfolio optimization. The following can be downloaded at any time after an optimization run:

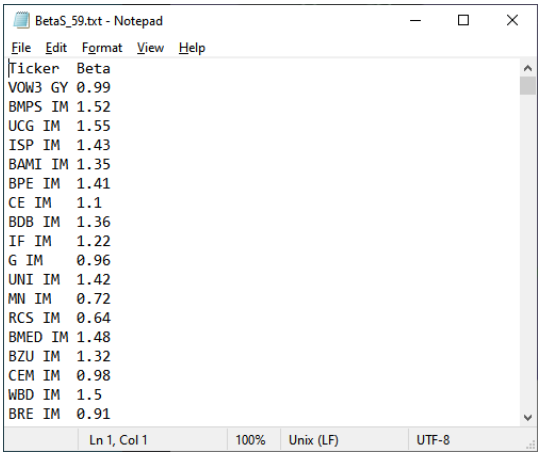
1. The risk model (Variance-Covariance Matrix)
2. Long-Term Beta
3. Short-Term Beta

All data is accessible from the **Advanced** tab then the **Download** sub-tab. Click any of the three available buttons to download a CSV file containing the relevant data.

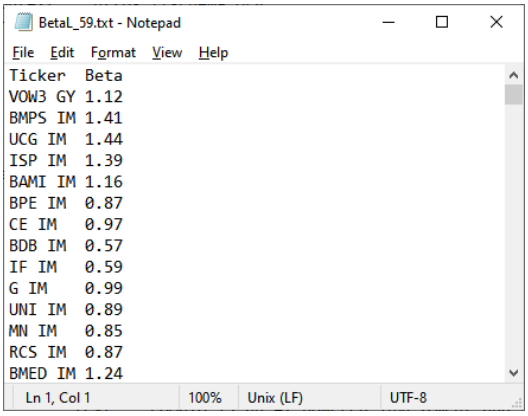
11.4.1Matrix Var Covar - Sample

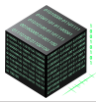
This is an extremely large file, with over billion data items.

11.4.2 Beta S - Sample



11.4.3 Beta L - Sample





12 Relative Value Equity Model in PoMaTo

The *Relative Value Equity Model* is one of **PoMaTo's** core forecasting engines.

It combines traditional fundamental equity analysis with systematic, data-driven implementation.

By eliminating human biases and applying rigorous comparative techniques, *Relative Value Equity Model* enables consistent and risk-aware portfolio construction based on peer-relative valuation.

Instead of evaluating a stock in isolation, the model compares each company to its closest peers — based on industry, sub-sector, and financial profile — to determine whether it is under- or over-valued in current macroeconomic conditions.

12.1 What is it?

The *Relative Value Equity Model* is a hybrid strategy that uses the depth of traditional bottom-up valuation - without the human biases - and supercharges it with cutting-edge quantitative analysis techniques across global equities.

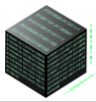
The result: more consistent, risk-aware stock selection based on peer-relative value

It is designed to evaluate stocks not in isolation, but relative to their closest peers, using **deep financial statement analysis** and **macroeconomic context**.

The goal is to identify equities that are fundamentally undervalued or overvalued compared to similar companies, supporting the construction of a more efficient portfolio.

12.2 Key Principles

- **Hybrid Philosophy**: Combines *fundamental company analysis* with *systematic quantitative techniques*.
- **No Human Bias**: Uses machine-driven methods to eliminate mental shortcuts and subjective decision-making.
- **Peer-Relative Valuation**: Analyses each security's balance sheet and performance relative to its direct competitors and industry sub-group.
- **Bottom-Up Stock Selection**: Focused on identifying fundamentally undervalued stocks — not sector bets.
- **Risk-Controlled Construction**: Optimized using a **minimum variance** approach to improve Sharpe ratios and reduce volatility.
- **Low Turnover**: Rebalanced quarterly, minimizing transaction costs while still reflecting updated financials.
- **Automated Process**: The model runs **daily**, but trades only after meaningful updates (e.g., quarterly earnings).



12.3What It Does

The *Relative Value Equity Model* evaluates each security's **valuation, financial strength, and earnings quality** by comparing it to a **defined peer group** — usually at the *sub-industry level* (e.g., European Luxury Apparel, U.S. Regional Banks, etc.).

It then layers in **macroeconomic signals** (like interest rates, GDP trends, inflation pressure) to identify stocks that are:

- Mispriced by the market
- Outperforming financially relative to peers
- Likely to revert or diverge in value under prevailing economic conditions

This model powers long, long-short strategies, relative value pair trades, and market-neutral constructions.

12.4How It Works

The *Relative Value Equity Model* is built using a **proprietary multi-factor framework**, with the following steps:

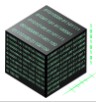
1. Data Collection

   PoMaTo starts by filtering companies from the markets using criteria like:

   - Market capitalization
   - Free float
   - Trading volume

   This defines the investment universe.

2. Data Analysis
   - Over 20,000 balance sheet and P&L entries from ~32,000+ companies are ingested.
   - Focus is on historic operating performance, balance sheet strength, and cash flow quality.
3. Sub-Universe Definition
   - A Relative Value framework is applied at the sub-industry level.
   - Each security's financials are benchmarked against peers using z-scores and ranking.
   - This results in a filtered buy list of undervalued candidates.
4. Alpha Generation
   - The model quantifies how undervalued each stock is by comparing historic fundamentals and pricing behavior.
   - Stocks are scored with forecasted price targets as a core output.
5. Portfolio Construction
   - **PoMaTo's** optimizer builds a portfolio using only the sub-universe list.
   - A minimum variance algorithm is used to maximize risk-adjusted return.
   - No overfitting or brute-force optimization — only robust, explainable inputs.
6. Rebalancing
   - While prices are monitored daily, full rebalancing occurs quarterly, aligning with earnings season to reflect the most updated financials.



12.5Why It is Powerful

More robust than pure fundamentals: Instead of saying "Company A has a good P/E ratio," the *Relative Value Equity Model* asks, "Is Company A cheap **compared to** other companies in its exact niche?"

Adaptive to market cycles: The macro-overlay ensures not relying on static rules, but adjusting to market regimes.

Built for modern equity selection, the Relative Value Equity Model supports **long-only, long-short, and market-neutral strategies**—providing institutional-grade tools for both retail and professional investors.

Feature	Benefit
Systematic + Fundamental	Combines the best of both investment worlds.
Peer-Aware	Models value *relative to actual competitors*, not just against the market.
Macro-Sensitive	Adapts weights and forecasts to changing economic conditions.
Clean Alpha	Reduces noise and bias — only rigorous, comparable data are used.
Ready for Professional Use	Built to support **long-only**, **long-short**, and **market-neutral** portfolio strategies.

12.6Display Locations in PoMaTo

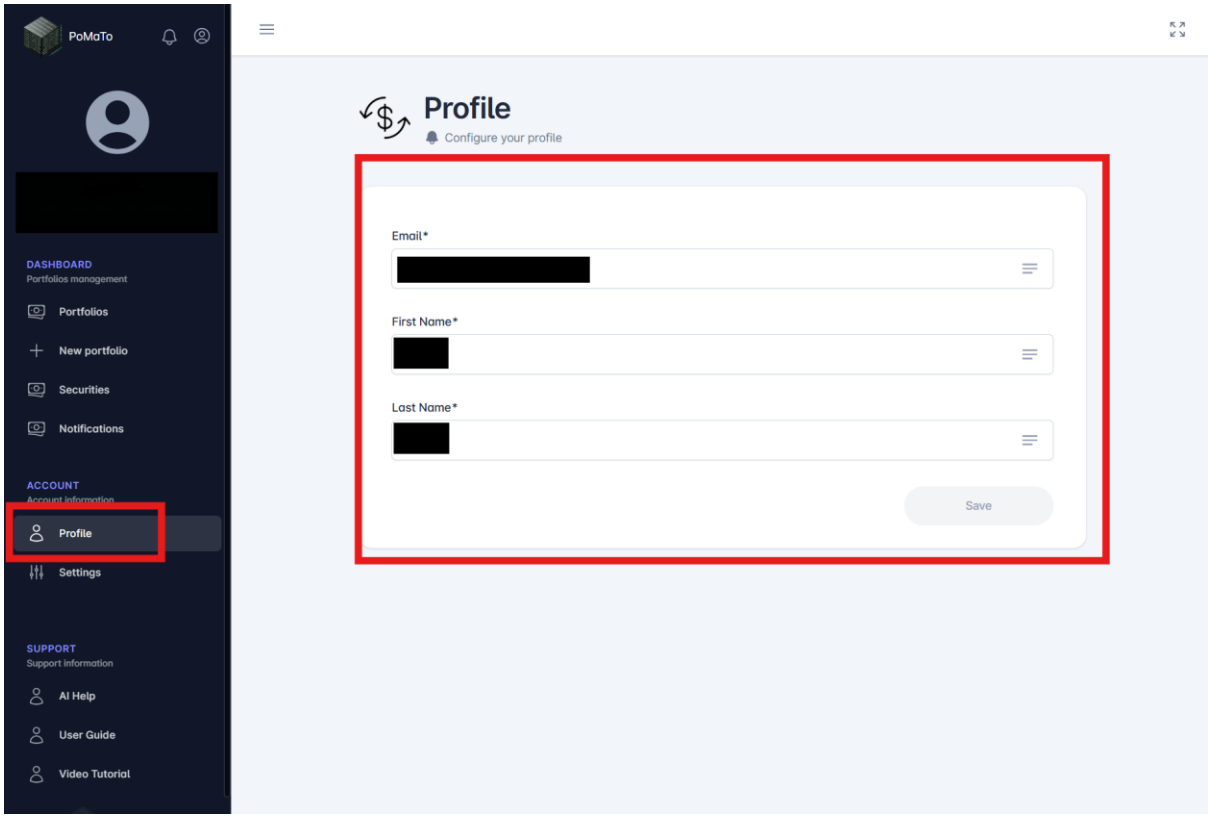
When the "Model" toggle is enabled during portfolio setup:

- The *Relative Value Equity Model* will be activated as a key factor in the optimization engine.
- Portfolio suggestions will reflect **undervalued opportunities and peer-relative strength**.
- Securities with negative The *Relative Value Equity Model* scores may be **deprioritized or flagged for shorting** (in long-short setups).

13 Appendix

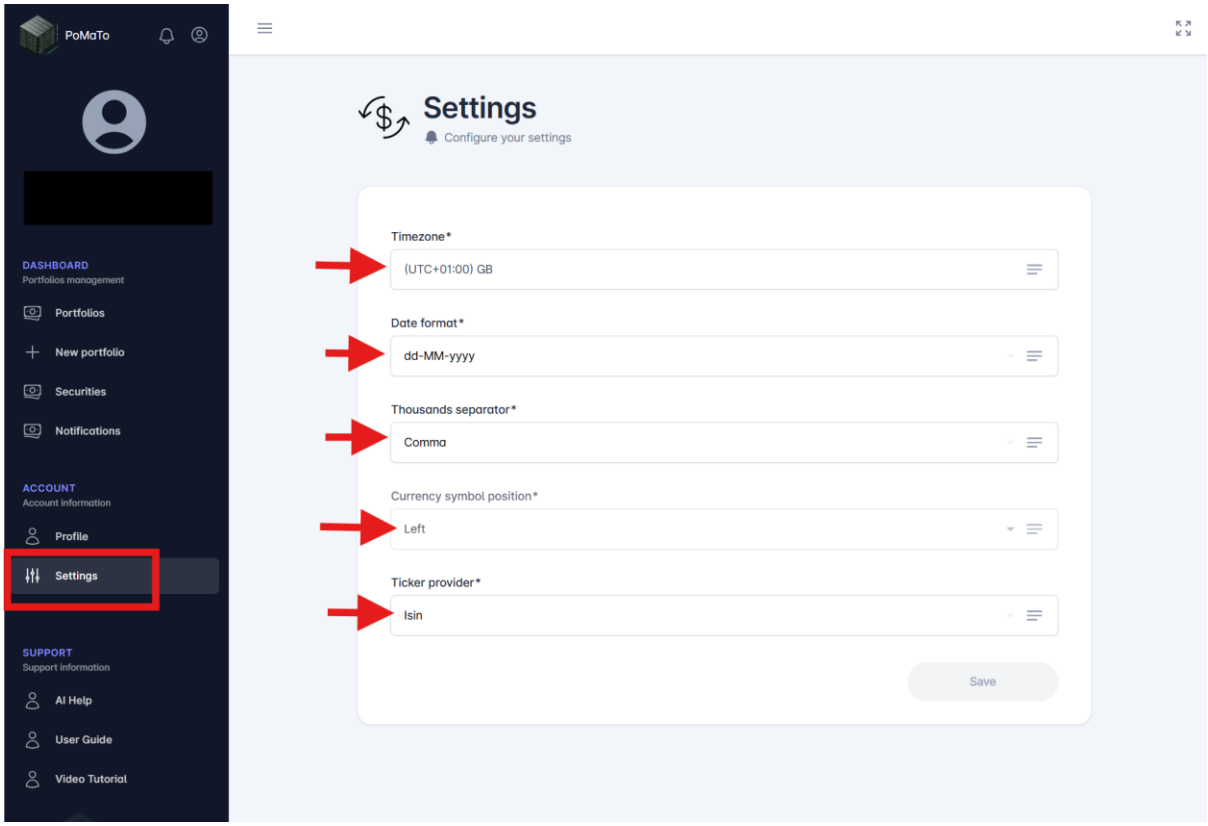
13.1 Profile

First name, last name, and email can be changed in the Profile section.



13.2Settings

Various settings can be changed here:



1. Timezone

- **Description:** Sets the time zone used across the platform, affecting time stamps for trades, transactions, and portfolio activity.
- **How to change:** Click on the dropdown and select your preferred time zone (e.g., Europe/Rome).

2. Date format

- **Description:** Determines how dates are displayed (e.g., day-month-year).
- **How to change:** Select your desired format from the dropdown (e.g., dd-MM-yyyy).

3. Thousands separator

- **Description:** Sets the symbol used to separate thousands in large numbers for easier reading (e.g., 10,000 or 10.000).
- **How to change:** Choose between comma, dot, or other options from the dropdown.

4. Currency symbol position

- **Description:** Controls whether the currency symbol appears before or after the amount (e.g., $100 or 100$).
- **How to change:** Select "Left" or "Right" from the dropdown.

5. Ticker provider

- **Description:** Selects the source of ticker data used for security prices and market information (e.g., Google).
- **How to change:** Pick your preferred provider from the dropdown list.
- **Default:** If no selection is made during initial setup, then Google is selected as default.

Saving Changes

Once you have made your selections, click the **Save** button at the bottom right to apply your settings. Changes will take effect immediately throughout your account.

13.3Support Functions

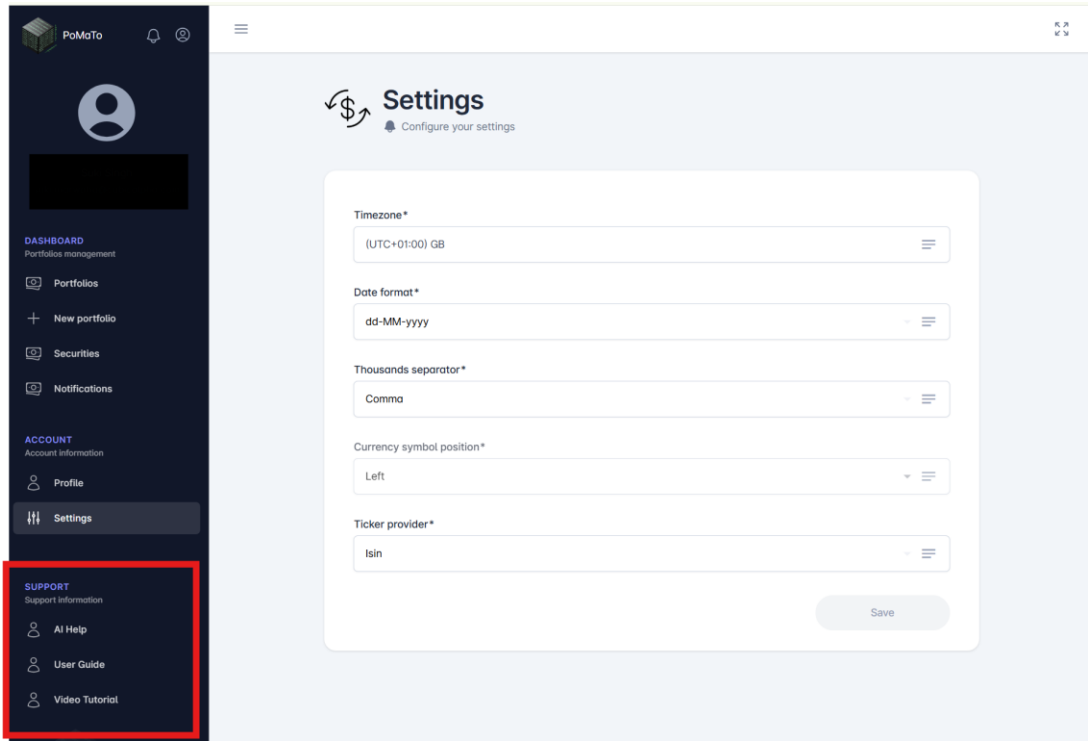
Help and Support is available from the Support Section.

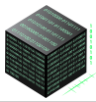
The AI-Help: is the online user guide, is powered by OpenAI. It opens in a new window so you can use it side by side, and gives you instant and accurate answers drawn directly from this User Guide, so you can follow each step with ease.

User Guide: You can also download the entire user guide if you wish to flick through the pages.

Video Tutorial: And, to further assist, we even have detailed video walk-throughs that will guide you step by step.

Think of all three help styles as your personal portfolio co-pilots — always on, always available, guiding you through portfolio creation, optimization, and trading.





14 FAQs

What optimisation strategies are available on PoMaTo?

PoMaTo provides institutional-grade portfolio optimisation models including Index Replication, Long-Only, Long-Short and Market Neutral—built for efficient allocation, lower risk and better risk-adjusted returns.

Which asset classes does PoMaTo support?

PoMaTo supports multi-asset portfolios across equities (stocks), ETFs, bonds, foreign exchange (FX), cryptocurrencies and commodities to enable broad diversification.

Is PoMaTo regulated?

No. PoMaTo is not a regulated broker or financial adviser. It is an AI investing platform providing tools for investment research, portfolio analysis and optimisation. Clients execute trades themselves via a regulated broker.

Does PoMaTo execute trades for clients?

No. PoMaTo delivers AI-powered recommendations and optimisation outputs; order placement is done by the client with their chosen broker.

Can retail investors use PoMaTo?

Yes. PoMaTo is designed for beginners through professionals—retail investors, wealth managers and portfolio managers—who want AI-driven portfolio management with full control.

What makes PoMaTo different from other robo-advisors?

Unlike set-and-forget robo-advisors, PoMaTo offers customisable optimisers, multi-asset coverage and the proprietary Hybrid Relative Value Model, combining fundamental and machine-learning signals—without forced custody or AUM fees.

Does PoMaTo use Artificial Intelligence (AI)?

Yes. PoMaTo uses machine learning, factor models and scenario analysis to power AI investing—identifying opportunities, balancing risk and supporting data-driven allocation decisions.

How does PoMaTo handle risk management?

PoMaTo applies volatility targeting, correlation analysis and drawdown-aware optimisation to build diversified portfolios aimed at stronger risk-adjusted returns.

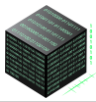
Can PoMaTo help beat the market?

While no platform can guarantee outperformance, PoMaTo's institutional-grade models aim to improve risk-adjusted returns by optimising allocation and managing downside risk.

Can PoMaTo integrate with brokers?

Not yet. PoMaTo does not have direct broker integration at this stage. However, PoMaTo can generate a trade file that contains your orders in the correct format. You can then upload this trade file into your broker's platform (please check your broker's accepted file format).

Does PoMaTo support multiple currencies?



Yes. Build and monitor multi-currency portfolios, with optimisation and reporting in your preferred base currency.

What markets does PoMaTo cover?

Coverage spans major global exchanges and instruments: equities, ETFs, FX pairs, bonds and selected commodities, sourced from institutional-grade market data.

Is my data secure on PoMaTo?

Yes. PoMaTo runs on AWS with encryption in transit and at rest, multi-layer security and strict access controls; no personal financial data is shared without consent.

What does PoMaTo cost?

Transparent subscription pricing with no AUM or performance fees—keeping more of your money invested compared with traditional managers.

Is there customer support?

Yes. Responsive support via email and in-platform chat, plus a searchable knowledge base and tutorial videos.

Can I try PoMaTo before subscribing?

Yes. Access a free demo to explore features and see optimisation results before you subscribe.

Does PoMaTo offer ESG or ethical investing options?

Yes. Apply ESG / ethical screens via custom lists and filters to align portfolios with your values.

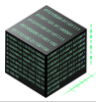
What does PoMaTo stand for
PoMaTo stands for Portfolio Management Tool. It's the 'Po' from Portfolio, the 'Ma' from Management and the 'To' from Tool.

How do I enter percentages correctly in PoMaTo?
Percentages must be entered as decimals between 0 and 1. For example, 0.075 = 7.5%, 0.5 = 50%, and 1 = 100%. Always double-check your entries: entering 0.5 instead of 0.05 changes 5% into 50%.

What's the difference between FX and FOREX in PoMaTo?
FX refers to multi-currency cash balances used to settle trades (not treated as investments). FOREX refers to deliberate investment positions in currency pairs (e.g., USD_EUR) and is treated as an asset within PoMaTo.

How do I handle dividends, coupons, or corporate actions?
Dividends and coupons are processed automatically on the ex-date. Other corporate actions (rights issues, stock splits, spin-offs) may require manual entry. If a dividend or coupon is missing due to data limitations, you can add it manually under "Cash Actions."

What happens if constraints conflict during optimisation?
If constraints are contradictory (for example, setting Emerging Markets minimum 10% but maximum 5%), the optimizer will fail to generate a portfolio. Review and simplify active constraints before running an optimization.



How can I upload trades from my broker into PoMaTo?
You can import trades via CSV upload using templates provided in the Trading section. Trades can also be entered manually one by one if needed.

Can I trade directly from PoMaTo?
Currently, trades can be exported in broker-compatible formats for upload. Direct broker execution is being developed and will be available through integrations with platforms.

Does PoMaTo support basket trading?
Yes. Multiple trades can be executed or registered as a batch, especially when applying optimizer results or rebalancing portfolios.

How does PoMaTo calculate Value at Risk (VaR)?
PoMaTo calculates VaR under three statistical scenarios: Normal (typical market conditions), T-Dist (fat-tailed distribution), and Cauchy (extreme events). Users can select the confidence level and compare current vs optimized portfolios.

What risk statistics are available in PoMaTo?
The platform provides Expected and Realized Volatility, Benchmark Volatility, Tracking Error, Maximum Drawdown (and recovery days), Sharpe Ratio, and Information Ratio.

What is the Relative Value Equity Model (RVEM)?
The RVEM is PoMaTo's proprietary equity model combining fundamental bottom-up stock analysis with systematic quantitative signals. It identifies mispriced equities while managing risk, giving portfolios an additional source of potential alpha.

How often are RVEM portfolios rebalanced?
RVEM portfolios are generally rebalanced quarterly in line with earnings cycles, but users may choose to rebalance more frequently if desired.

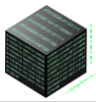
Where does PoMaTo get its data?
PoMaTo aggregates data from multiple public sources, including ISINs, Yahoo and Google Finance IDs, and synthetic Bloomberg/Reuters-like identifiers. It also provides internal CAMI and CADI benchmarks designed to closely track major indices.

Is my portfolio data private and secure?
Yes. PoMaTo is hosted on AWS and uses industry-standard encryption and strict access controls. Your portfolio data is only accessible by you.

Can AI investing really beat the market?
No platform can guarantee outperformance. AI and machine learning enhance diversification, risk control, and opportunity detection, but results depend on market conditions. PoMaTo focuses on improving risk-adjusted returns, not promising to "beat the market."

How does PoMaTo compare to Betterment or Wealthfront?
Unlike US-focused robo-advisors, PoMaTo supports multiple asset classes (equities, bonds, ETFs, FX, commodities, crypto) and institutional-grade optimizers (Long Only, Long-Short, Market Neutral, Index). It also includes the proprietary RVEM model and broker integration for trading.

Can beginners use PoMaTo or is it only for professionals?
Both. Beginners can start with simple model portfolios, while professionals can take advantage of advanced optimizers, constraints, and analytics.



What's the minimum investment size for PoMaTo?
There is no strict platform minimum. The practical minimum depends on broker trading rules and the level of diversification you wish to achieve.

Does PoMaTo work in multiple languages and currencies?
Yes. Portfolios can be denominated in different base currencies and hold multi-currency cash lines. A multilingual interface is also being expanded.

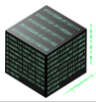
What fees should I expect besides the subscription?
Your subscription covers platform use. Additional costs may include broker commissions, bid-ask spreads, FX conversion fees, and custody charges, depending on your broker – of course this is outside of PoMaTo's usage.

Q: What coding languages and technologies are used in the PoMaTo ecosystem?
PoMaTo is built on a robust and diverse technology stack that combines tried-and-tested enterprise tools with modern machine learning libraries:

- **VBA** – used for legacy integration and quick financial modeling.
- **SQL Stored Procedures (T-SQL)** – powering structured data management and high-speed query execution.
- **Python** – the backbone of PoMaTo's AI and optimization engines, leveraging a broad set of libraries including:
    - **NumPy** – numerical and matrix computations.
    - **SciPy** – advanced scientific and statistical analysis.
    - **CVXOPT** – convex optimization for portfolio strategies.
    - **scikit-learn** – machine learning models for prediction and classification.
    - **pywin** and **ODBC** – connectivity and integration with Windows and databases.

Q: What are the main data sources used in PoMaTo?
PoMaTo aggregates and processes data from multiple reliable sources across asset classes to ensure accuracy and breadth of coverage:

- **Equities** – multiple free Python APIs and stock exchanges.
- **Foreign Exchange (FX)** – several free Python APIs for real-time currency data.
- **Bonds** – multiple global exchange feeds.
- **Cryptocurrencies** – CoinGecko API for comprehensive crypto pricing and metadata.
- **Commodities** – exchange-based data sources for key markets.
- **ETFs** – coverage across multiple exchanges.



15 Compare PoMaTo

This guide compares leading robo-advisors using publicly available information. It explains why PoMaTo suits investors seeking AI-driven, multi-asset portfolio optimisation across **Equity, Bonds, FX, Commodities, ETF, and Crypto**.

PoMaTo.

Website: thepomato.com

- Asset classes: **Equity, Bonds, FX, Commodities, ETF, Crypto**.
- AI optimisers: Long Only, Long-Short, Market Neutral, and the Hybrid Relative Value Model (RVEM).
- Execution: **exports trade files**.
- Transparency: clear optimisation rationale and portfolio data.
- Infrastructure: cloud-native on AWS for speed, reliability, and scale.

Vanguard Digital Advisor

- Focus: low-cost, goal-based planning using Vanguard index funds.
- Typical holdings: diversified ETF portfolios (see: Vanguard Digital Advisor).
- Features: automated rebalancing; retirement & cash-flow tools.

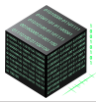
Wealthfront

- Features: automated investing, tax-loss harvesting; optional direct indexing on certain tiers (see: Wealthfront).
- Typical holdings: diversified ETFs; some customisation options.
- Planning: automated goal setting and recommendations.

Betterment

- Focus: diversified ETF portfolios with goal-based tools (see: Betterment).
- Features: automated rebalancing and tax-loss harvesting on eligible accounts.
- Banking: cash/checking options.

Schwab Intelligent Portfolios



- Digital tier advisory fee: $0; portfolios may include a cash allocation (see: Schwab Intelligent Portfolios).
- Typical holdings: diversified ETFs across several asset categories.
- Features: automatic rebalancing; goal planning.

Fidelity Go

- Pricing: tiered advisory fees by balance (see: Fidelity Go).
- Typical holdings: Fidelity mutual funds/ETFs depending on programme design.
- Features: automated portfolios within the Fidelity ecosystem.

Feature Comparison (2025)

Feature	PoMaTo	Vanguard Digital Advisor	Wealthfront	Betterment	Schwab Intelligent Portfolios	Fidelity Go
Primary approach	AI-driven optimisation; institutional-style strategies	Goal-based planning with index funds source	Automated portfolios; tax tools; optional direct indexing source	Automated ETF portfolios; planning tools source	Automated ETF portfolios; includes cash allocation source	Automated portfolios in Fidelity ecosystem source
Asset classes	**Equity, Bonds, FX, Commodities, ETF, Crypto**	Primarily ETFs	Primarily ETFs	Primarily ETFs	Primarily ETFs	Programme-dependent (funds/ETFs)
Advanced strategies	Long Only, Long-Short, Market Neutral, RVEM	Not advertised	Direct indexing (certain tiers)	Not advertised	Not advertised	Not advertised
Trade execution	Exports broker-ready trade files; direct API integrations planned	Within Vanguard programme	Within Wealthfront programme	Within Betterment programme	Within Schwab programme	Within Fidelity programme
Audience	Retail to professional (incl. wealth managers / funds)	Retail	Retail	Retail	Retail	Retail

Compliance & Comparative Advertising Notice: This page presents a feature-based comparison using publicly available information from each provider's website, correct as of August 2025. Trademarks and brand names belong to their respective owners and are used here solely for identification and comparison. No endorsement is implied. Offerings may change — please verify details directly with each provider. This is not personal financial advice.