



## FA Back 3.8

FA Back 3.8 provides you with various improvements for managing your portfolios in FA – as the main improvements, support for market value and exposure-based TWR calculation, minimum and maximum shares in investment plans and model portfolios, and trade order execution method based on units or trade amount provide you with powerful new tools for managing your portfolios in FA.

### Market value and exposure based TWR calculation

As one of the main improvements, version 3.8 restructures the time-weighted return (TWR) calculation logic. TWR calculation logic now provides you with better capabilities to explain how TWR figures are calculated and provides you with control over how TWR is calculated for different instrument types. Outcome and the TWR figures don't change – just the concepts under the hood.

TWR is now calculated based on daily profits and losses. TWR is either “Market value” or “Exposure” based – by default, exposure-based logic is applied on futures and market-value-based logic for other types, just as before. Calculation logic now also correctly handles both long and short positions.

To explain the figures, you can now use Analytics+ columns to see how daily TWR is calculated on a specific position on a specific date. Choose *TWR*, *Unrealized profits*, *Realized profits*, *Other costs*, *Other profits*, *Daily profit and loss*, *Market value (base)* and *Absolute exposure (base)* and apply them in:

$$dailyTwr = \frac{unrealizedProfits + realizedProfits + otherProfits - otherCosts}{marketValueBase} - 1$$

Along with restructuring, you can now control per security type whether you want to use the market-value-based or exposure-based logic. *TWR calculation* setting is available in *Security type Preferences*, and it also allows you to *Don't calculate TWR on position level* (no TWR shown on the position) or to *Carry costs/profits to portfolio level* (logic used for account positions).

Name	TWR	Unrealized Profits	Realized Profits	Other Costs	Other Profits	Daily profit and loss	Market value (base)	Absolute exposure (base)
▼ Stock	6,50 %	-103,80	114,00	-	240,00	250,20	3 851,40	3 851,40
Nordea Bank AB	6,50 %	-103,80	114,00	-	240,00	250,20	3 851,40	3 851,40
▼ Bond	1,77 %	64,12	-	-	296,13	352,99	19 957,75	19 962,34
Seadrill Ltd 10/25 6,50%	3,26 %	14,51	-	-	296,13	306,99	9 417,08	9 419,87
Wienerberger 2/22 6,5%	0,44 %	49,61	-	-	-	46,00	10 540,67	10 542,47
▼ Currency	-	-	-	-	-	-	26 597,93	26 597,93
EUR	-	-	-	-	-	-	26 597,93	26 597,93
▼ Future	-0,51 %	-180,00	-	-	-	-180,00	80,00	35 300,00
DJ EURO STOXX 50 DEC 19	-0,51 %	-180,00	-	-	-	-180,00	80,00	35 300,00
Investments	0,83 %	-219,68	114,00	-	536,13	423,19	50 487,08	85 711,67



## Minimum and maximum shares in investment plans and model portfolios

Version 3.8 provides you with new tools for model portfolios and investment plans. In addition to defining one target share, you can now define minimum and maximum “thresholds” for each position in your plan. These thresholds provide you with tools for rebalancing and limit analysis: you can rebalance a position when it’s outside thresholds, or create a limit definition based on thresholds.

You can now define *Min share %* and *Max share %* for each position in your investment plan or model. This allows you to define a plan with target 10%, min threshold 9% and max threshold 11%. Thresholds are validated, ensuring they align with your target share.

Date	Security	Share %	Min. shar	Max. shar
28.09.2020		Total: 100 %	-	-
01.09.2020	A.P. Møller - Mærsk A (DK0010244423) - DKK	10,00	8,00	12,00
	ABB Ltd (ABBN) - CHF	15,00	12,00	17,00
	Apple Inc. (AAPL) - USD	10,00	9,00	11,00
	Ericsson B (ERIC B) - SEK	10,00	9,00	11,00
	Finair (FIA1S) - EUR	10,00	5,00	10,00
	Microsoft Corp. (MSFT) - USD	15,00	10,00	20,00

Rebalancing filters out small orders if position is within thresholds. Rebalancing parameters now allow you to filter out orders if your *Position is within min/max share*. This allows you to define per position how much you allow it to fluctuate, and to rebalance the positions that are outside your thresholds.

Limits based on portfolio’s model portfolio, investment plan or strategy. You can now define limits that analyze your portfolio against the min and max shares in your model portfolio, investment plan or strategy. Limit is *OK* if all positions are within min and max and *Breached* if a position is outside the thresholds. In addition, you can define the thresholds manually in the limit as percentage points.

## Trade order execution method “based on units” or “based on trade amount”

Version 3.8 also introduces a unified way to differentiate unit-based and trade-amount-based trade orders. This allows you to explicitly state how your orders should be executed, providing you with better control. Before, such orders were identified differently in different parts of the application.

*Execution method* in Trade order window now allows you to track whether your trade order is unit-based or trade-amount-based. You can select from *Not defined* (default, no specific method), *Units* (i.e. amount), *Gross trade amount* (i.e. trade amount including costs) or *Net trade amount* (i.e. trade amount excluding costs).

Trade order window showing fields for Portfolio (Collin Customer - Investment Portfolio (123123)), Security (Microsoft Corporation, MSFT, NASDAQ, USD), Transaction type (Buy, B), Transaction date (6.10.2020), Amount (100), and Execution method (Units). The Execution method dropdown is open, showing options: Not defined, Units, Gross trade amount, and Net trade amount.

Rebalancing sets execution method to trade orders it generates. Rebalancing now uses the execution method to indicate orders were generated. Most orders are based on trade amount, but when for example selling an entire position, orders are based on units. Before, rebalancing tracked this in order’s internal info (type=CASH/UNITS) and used a separate transaction type in these scenarios.

Trade order execution with order’s execution method. Trade order execution now allows you to *Use execution method* to determine how to execute your orders. With this, each order is executed with the method defined for it: “Not defined” executes orders with current values, “Units” calculates trade amount, “Net trade amount” calculates amount preserving trade amount including costs, and “Gross trade amount” calculates amount preserving trade amount excluding costs.



## Improvements in accrued income management with mutual funds

Version 3.8 extends the features related to accrued income management on mutual funds, introduced in the previous version. Mutual funds and other pooled assets accumulate income over a period of time, and pay it out to shareholders at the end of the year – this version provides you with additional tools to track your positions’ purchase value without accrual and your portfolios’ paid accrual.

Purchase and market value without accrued income. Mutual fund positions in your portfolios are now shown with appropriate values when the position has accrued income. Even though your position’s *purchase* and *market unit prices* still include the “accrual” component, your position’s *purchase value* and *market value* are now shown as excluding accrued income. For consistency, if you want to see your positions market value including accrual, you can use the *Market value (d)* column. This allows you to view your positions’ values from different perspectives, allowing you to properly see the “accrual”.

Security	Amount	PP/unit	Purchase val	MPrice	Market val	Market value (d)	Accrual
SECURITIES							
Fund			28 945,08		32 115,72	32 578,84	463,12
FA Fixed Income Fund	287,4673	100,69	28 945,08	113,33	32 115,72	32 578,84	463,12
SECURITIES TOTAL			28 945,08		32 115,72	32 578,84	463,12
SECURITIES TOTAL INC. A			28 945,08		32 115,72	32 578,84	463,12

Transaction	Transaction type	Security name	Amount	Unit price	Trade amount	Accrual
05.06.2020	Fund subscription	FA Fixed Income Fund	4,412	113,33	500,00	8,66
03.06.2020	Fund subscription	FA Fixed Income Fund	44,1177	113,33	5 000,00	109,10
01.06.2020	Fund subscription	FA Fixed Income Fund	198,9376	100,53	20 000,00	437,16
05.03.2020	Fund subscription	FA Fixed Income Fund	40	100,00	4 000,00	0,00
02.03.2020	Deposit	EUR Account	50 000	1,00	50 000,00	0,00

Accrual as a column in transaction listings. Transaction’s *Accrual* allows you to record paid / received accrued income on your subscriptions and redemptions. You can now select this accrual within your transaction and trade order listings, allowing you to easily see accrual recorded on your trades.

Name	Purchase value	Paid Accrual	Market value	Accrual
Fund	28 945,08	554,92	32 578,84	463,12
FA Fixed Income Fund	28 945,08	554,92	32 578,84	463,12

Paid accrual as a column in Analytics+. New columns *Paid accrual* and *Paid accrual (sec)* in Analytics+ allow you to view the paid / received accrued income accumulated during the analysis period. Paid accrual is the sum of accruals recorded in your transactions, and is available both in portfolio and security currency.

## Extended import formats

Version 3.8 extends the file formats for importing data into FA, allowing you to import data to the new fields introduced in this version. Check the updated import formats from FA Help Desk!

Minimum and maximum shares in portfolio’s investment plan. Portfolio import format now allows you to import investment plans to your portfolios with minimum and maximum shares.

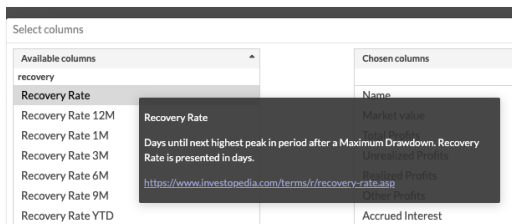
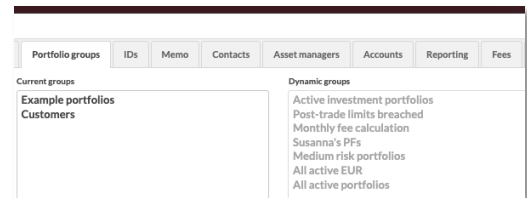
Execution method for trade orders. Trade order import format now allows you to import order’s *execution method*, allowing you to differentiate between unit-based and trade-amount-based orders.

Validate portfolio’s account’s currency. Portfolio import format now validates that the accounts you import have a valid currency defined to them. If you try to import an account to a portfolio without a currency or with an invalid currency, you get an import error “Account currency missing or invalid”.

## Other improvements on existing features

Version 3.8 also introduces other improvements on existing functionality.

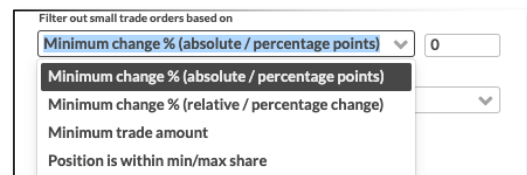
Portfolio's dynamic groups in Portfolio window. You can now conveniently see which dynamic groups a portfolio belongs to directly in the Portfolio window's Groups tab. This allows you to easily see from one place all the groups your portfolio belongs to with a single glance.



Description and link for tailored Analytics+ columns. You can now accompany your tailored Analytics+ columns with a *description* and a *link*, allowing you to explain the content of your column in more detail. Description and link are shown in Analytics+ when you select columns, allowing you to more easily select useful columns.

Auditing changes to tailored Analytics+ columns. System audit now tracks changes users make to custom Analytics+ columns in Preferences. Every time a user makes a change to a custom column, system audit contains a message "User [username] created/changed/deleted Analytics+ custom column definition [code]". This allows you to track whether the contents of your custom columns change.

Clarified texts for filtering out small trades in Rebalance window. Rebalance parameters in Rebalance window now include clearer texts for filtering out small trades, making it easier to interpret the available options.



Tracking costs in security currency for more accurate total gross profits. This version now tracks costs separately in security currency (in addition to portfolio currency), and allows you to select *Costs (sec)* as a column in Analytics+ to view the security currency component of your costs. As a result, *Total gross profits (sec)* and *Total gross profits (fx)* columns in Analytics+ now include the respective costs in "security" and "FX", ensuring that  $Total\ gross\ profits\ (sec) + Total\ gross\ profits\ (fx) = Total\ gross\ profits$ .

Improved TWR contribution calculation in Analytics. Contribution to TWR (*TWR Contr*) in Analytics+ is now calculated with more solid logic, and calculation is based on "value added return" (daily return on top of cumulative return). *TWR Contr* is interpreted as how much a single factor is contributing to a total – for example, positions contribute to the total TWR of a group, which in turn contributes to the total TWR of the portfolio. This figure is also known as absolute return attribution.

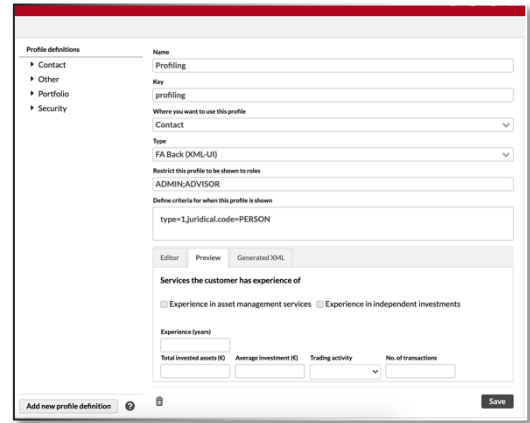
Parameterized risk-free rate in Analytics+ API. Analytics+ API now allows you define the risk-free rate you want to use through parameters *riskFreeRate* (fixed rate), *riskFreeRateBenchmark* (rate fetched from a general benchmark) or *riskFreeRateSecurity* (rate fetched from a security). This allows you make Analytics+ API calls with a risk-free rate of your choice. Note that this feature is only available through the API – Analytics features within the applications still assume 0% risk-free rate as before.



## Improvements in managing custom fields for contacts, portfolios and securities

Defining custom fields for contacts, portfolios and securities in Profile definition Preferences has been cumbersome – in addition to needing to know the technical syntax, the UI has been difficult to use. Version 3.8 introduces various improvements in managing custom fields, clarifying the user interface and providing new options to control when custom fields are visible.

*Profile definition* Preferences now allow you to easily see all profiles (i.e. custom tabs) you have available in the system. You can manage profiles through a single form, and even though the syntax is still technical, the main controls are available separately, and your most crucial inputs are validated on saving. Also, you can now flexibly control your profile's visibility based on various criteria, including which users can see the profiles and which contacts, portfolios or securities the profiles are visible to. This provides you with tools to ensure only relevant custom tabs are visible for your users.

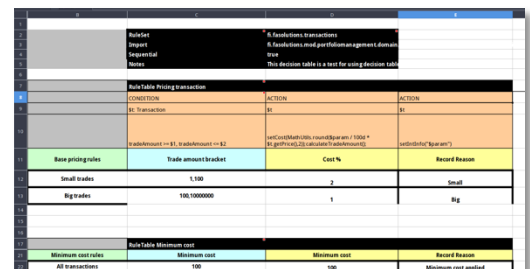


New fields in Profile definitions allow you to decide *Where you want to use this profile* (easily select whether you want to show the fields for Contact, Portfolio or Security), to select the *Type* (old XML syntax or modern Vaadin design), to *Restrict this profile to be shown to roles* (control a profile's visibility with user roles), or to *Define criteria for when this profile is shown* (control profile's visibility based on characteristics of your contacts, portfolios or securities). For example, your KYC profile might be shown to your “customer” contacts with juridical form “private person”, or your reporting details might be shown to your “middle office” users for portfolios part of your “monthly reporting” group.

## Managing business rules via decision tables in Excel

“Rules” are a powerful tool in FA to adjust the system to function according to client's business requirements. However, maintaining these rules requires a programmer, which makes the concept to adapt poorly to the changing business environment. Version 3.8 introduces a possibility to manage these business rules via Excel, which makes managing rules more approachable and transparent. For example, this approach would allow you more easily maintain transaction fees based on a price list.

FA's rule engine now supports Decision tables, allowing developers to create business rules in Excel instead of programming. Creating a rule still requires programming knowledge, but majority of the rule can be defined using Excel tables. This also makes rules more understandable – just open the Excel and read through the rule.



Excel-based rules are uploaded into /Rules folder in Administration view's Document management. *Reload rules from document bank* in the Update menu takes the uploaded Excel-based rules into use.