

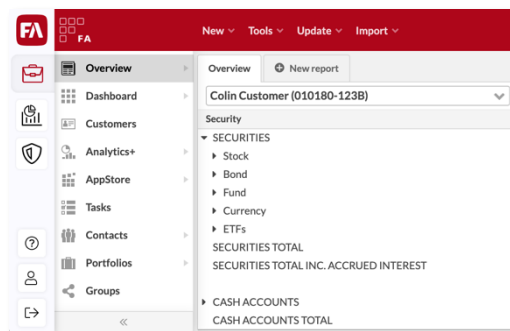
FA Back 3.7

FA Back 3.7 provides you with various improvements for portfolio management – improvements in for example managing FX contracts, tracking market exposure and managing accrued income allow you to manage different types of investments more extensively. In addition, Global App Bar allows you to easily navigate between applications and manage your user account.

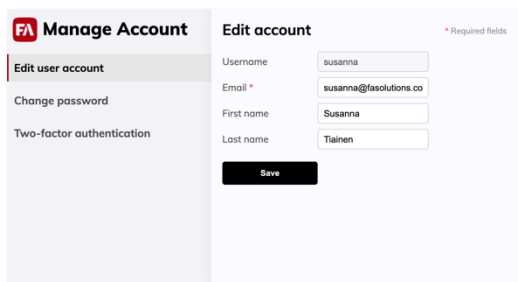
Global App Bar

As a new feature, version 3.7 introduces Global App Bar, allowing you to easily navigate between different applications and to centrally access certain actions. Global App Bar is visible throughout all FA applications, allowing you to see all the applications you can access and easily navigate between them through single sign-on. In addition, useful global actions are always conveniently available in the Global App Bar throughout all applications.

At the top, Global App Bar lists all the applications you have rights to access, allowing you to easily navigate between them – access to applications is determined based on user roles. Click an application from the bar to directly navigate to it. At the bottom, Global App Bar lists the available global actions, allowing you to easily access *FA Help Desk*, *Manage user account*, and *Log out* from the system – always from the same place.



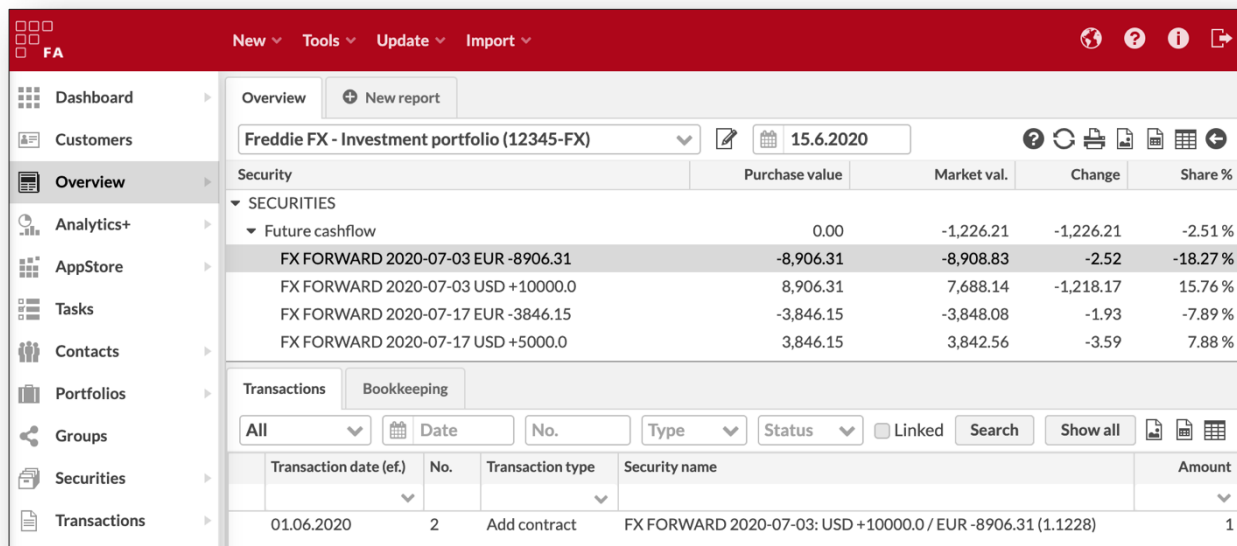
Manage user account. Once you have logged in to FA, you can easily manage your user account through the Global App Bar. This allows you to with a single login manage your basic user information, change your password, or set up your authenticator app for two-factor authentication.



Manage user account opens up as a new tab. *Edit user account* allows you to change your email address, first name and last name, while *Change password* allows you to change your password directly without having to go through the “forgot password” procedure from the login page. Finally, *Two-factor authentication* allows you to enable two-factor authentication or reset authenticator app if you are using two-factor authentication to log in.

Improvements in managing FX Contracts

Version 3.7 provides you with various improvements in managing FX Contracts.



Security	Purchase value	Market val.	Change	Share %
SECURITIES				
Future cashflow	0.00	-1,226.21	-1,226.21	-2.51 %
FX FORWARD 2020-07-03 EUR -8906.31	-8,906.31	-8,908.83	-2.52	-18.27 %
FX FORWARD 2020-07-03 USD +10000.0	8,906.31	7,688.14	-1,218.17	15.76 %
FX FORWARD 2020-07-17 EUR -3846.15	-3,846.15	-3,848.08	-1.93	-7.89 %
FX FORWARD 2020-07-17 USD +5000.0	3,846.15	3,842.56	-3.59	7.88 %

Transaction date (ef.)	No.	Transaction type	Security name	Amount
01.06.2020	2	Add contract	FX FORWARD 2020-07-03: USD +10000.0 / EUR -8906.31 (1.1228)	1

Contract-specific future cashflows. When you save a contract, the system now generates contract-specific future cashflow securities instead of netting all future cashflows you have in your portfolio in the same currency towards the same date. This allows you to more easily identify the actual contracts you have made and see what kind of contracts you currently have open within your portfolio. In addition, the name of the future cashflow securities now includes the details of your contract. These improvements are especially useful for back office purposes – if you are interested in netted values or currency exposure for front office purposes, you can use Analytics+ with different groupings to view your holdings from different perspectives.

Clicking on a future cashflow position on the Overview allows you to access the contract. When you click a future cashflow position from the Overview, the transaction listing now shows you the contract the future cashflow is generated from. This allows you to easily access the related contract without having to search for it separately, and to see which contract induced the future cashflow.

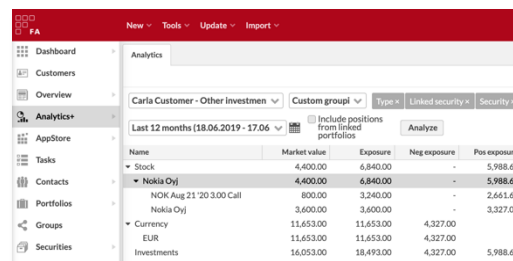
“Hidden” cashflow transactions. *Contract preferences* now allow you to Create “Future cashflow” and “Cashflow” transactions as “Hidden” – as a result, these transactions will not be shown on Overview’s transaction listing. This allows you to avoid cluttering the Overview with a lot of transactions, when showing only the contract itself is enough for your purposes.

Future cashflows valued until the settlement date of the leg. *Contract preferences* now allow you to choose between creating “Future cashflow” securities based on the *transaction date* or the *settlement date* of the leg, allowing you to decide whether you want your future cashflows to be valued until the *transaction date* or the *settlement date* of your contract. The actual cashflow occurs on the settlement date, and you can now configure the system to discount your future cashflow up until it, allowing you to achieve the most common valuation for example for reconciliation purposes.

Tracking market exposure

Version 3.7 provides you with features to track *market exposure*, or the proportion of money invested in the same sector. This version provides you with tools for *Exposure* (net exposure) and *Absolute exposure* (gross exposure) – for standard linear instruments, such as funds, bonds and stocks, exposure equals to market value, but for example for options, exposure takes into account *Delta*, underlying security's price and block size, and for futures, exposure is based on market trade amount.

Exposure is available as a column on Overview, while Analytics+ provides you with *Exposure* (exposure in the end of the analysis), *Absolute exposure* (absolute value of exposure), *Pos exposure* (increase during the analysis) and *Neg exposure* (decrease during the analysis). Also, grouping *Linked security* allows you to drill into the exposure, grouping instruments under their parent.



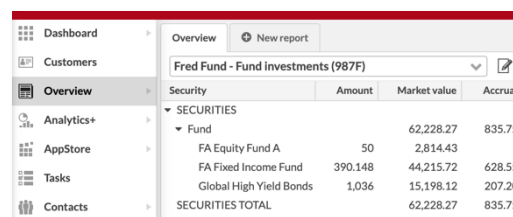
Name	Market value	Exposure	Neg exposure	Pos exposure
Stock	4,400.00	6,840.00	-	5,988.60
Nokia Oyj	4,400.00	6,840.00	-	5,988.60
NOK Aug 21 '20 3.00 Call	800.00	3,240.00	-	2,661.60
Nokia Oyj	3,600.00	3,600.00	-	3,327.00
Currency	11,653.00	11,653.00	4,327.00	-
EUR	11,653.00	11,653.00	4,327.00	-
Investments	16,053.00	18,493.00	4,327.00	5,988.60

Exposure is calculated daily as $Exposure = (amount \times market\ unit\ price + accrued\ interest) / market\ FX\ rate$. To consider more complex scenarios, if your security has *delta* (maintained in security's market data), exposure is multiplied by delta, and if your security is linked to another security, exposure is calculated as $Exposure = amount \times linked\ security's\ market\ unit\ price\ in\ pf\ currency \times block\ size$.

Accrued income management with mutual funds

Version 3.7 also introduces features to manage *accrued income*. Mutual funds and other pooled assets accumulate income over a period of time, and pay it out to shareholders once a year – this version provides you with tools to track this *accrual* on transaction and position level, allowing you to easily track how much accrued income is included in your positions' total value.

Accrual is available as a column on the Overview, and *Accrual* and *Accrual change* in Analytics+. These allow you to track your positions' accrued income, which is calculated based on your security's accrual (maintained in security's market data) as $Accrual = amount \times accrual$.



Security	Amount	Market value	Accrual
Fund		62,228.27	835.75
FA Equity Fund A	50	2,814.43	
FA Fixed Income Fund	390.148	44,215.72	628.55
Global High Yield Bonds	1,036	15,198.12	207.20
SECURITIES TOTAL		62,228.27	835.75

NAV of a fund includes accrued income, but when you subscribe into a fund, you pay for the income accrued before your subscription, and when you redeem your shares, you receive the accrued income not yet paid out. Transaction's *Accrual* allows you to record paid / received accrued income – unit price already includes this, and thus accrual doesn't have an effect on trade amount.

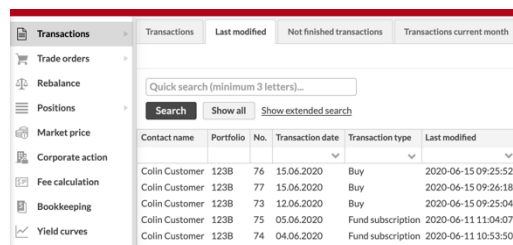
Accrual and delta within security's market data

Version 3.7 allows you to maintain *Accrual* and *Delta* within security's market data – these values are used for the calculations described above. *Accrual* indicates how much accrued income in security currency is included in that day's market price, and *Delta* is used in calculating exposure.

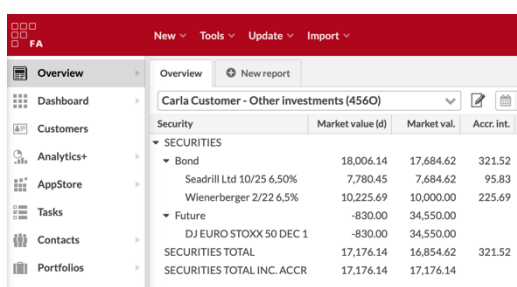
Other improvements on existing features

Version 3.7 also introduces other improvements on existing functionality.

Last modified as a column for transactions and orders. New column *Last modified* in transaction and trade order listings allows you to quickly see the date and time the trade was last modified in FA. This allows you to easily follow up your data – just as before, you can find details of the modification through versions.



Contact name	Portfolio	No.	Transaction date	Transaction type	Last modified
Colin Customer	123B	76	15.06.2020	Buy	2020-06-15 09:25:52
Colin Customer	123B	77	15.06.2020	Buy	2020-06-15 09:26:18
Colin Customer	123B	73	12.06.2020	Buy	2020-06-15 09:25:04
Colin Customer	123B	75	05.06.2020	Fund subscription	2020-06-11 11:04:07
Colin Customer	123B	74	04.06.2020	Fund subscription	2020-06-11 10:53:50

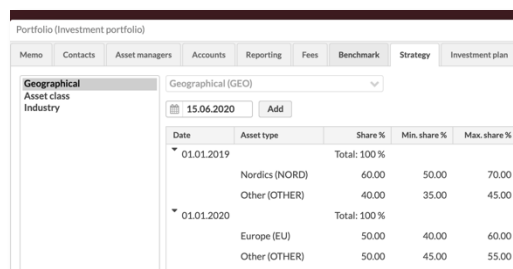


Security	Market value (d)	Market val.	Accr. int.
SECURITIES			
Bond	18,006.14	17,684.62	321.52
Seadrill Ltd 10/25 6.50%	7,780.45	7,684.62	95.83
Wienerberger 2/22 6.5%	10,225.69	10,000.00	225.69
Future	-830.00	34,550.00	
DJ EURO STOXX 50 DEC 1	-830.00	34,550.00	
SECURITIES TOTAL	17,176.14	16,854.62	321.52
SECURITIES TOTAL INC. ACCR	17,176.14	17,176.14	

Dirty market value as a column on the Overview. New column *Market value (d)* on the Overview allows you to see a proper market value for your bonds and futures: this column shows a sum of *market value + accrued interest* for your bond positions, and the P/L for your future positions. This allows you to easily see valuation without having to look for it through other columns.

Clicking a position on the Overview shows all related transactions. When clicking a position on the Overview, the transaction listing shows transactions that have the clicked security as *transaction's security* or *transaction's second security*, and now also transactions for *clicked security's linked security*. This allows you to see all transactions related to a position – you can see an exchange when clicking either of the involved securities, and now also a contract when clicking a related future cashflow.

Multiple strategies per portfolio. You can now define multiple strategies based on allocation groups within the Portfolio window's Strategy tab. This allows you to easily define different strategies, for example for asset allocation, geographical allocation and industrial allocation. Each strategy consists of asset types from one allocation group, allowing you to maintain separate strategies from different points-of-views.



Date	Asset type	Share %	Min. share %	Max. share %
01.01.2019	Total: 100 %			
	Nordics (NORD)	60.00	50.00	70.00
	Other (OTHER)	40.00	35.00	45.00
01.01.2020	Total: 100 %			
	Europe (EU)	50.00	40.00	60.00
	Other (OTHER)	50.00	45.00	55.00

Duration calculation for FRNs. For floating rate notes, *Duration* (Macaulay duration), *Modified duration* and *Convexity* are now calculated up until the next coupon date instead of until the bond's maturity. In addition, the texts within the Security window's Extra info tab are clarified to indicate that a bond is considered a FRN when you manually define fixings to a bond.

Bond redemptions with more decimals. *Redemptions* within the Security window's Extra info tab now allow you to define bond redemptions with multiple decimals, instead of limiting it to two decimals.

Scripting not available in production. For added security, all scripting features are by default disabled from all production environments, ensuring that users cannot do harm by writing malicious scripts in the system. Due to this, certain features allowing you to write scripts within the Administration and Preferences views are now disabled and read-only.

Improvements in recent Analytics+ features

Version 3.7 provides you with improvements related to features recently introduced in Analytics+.

Limits based on Analytics+ tailored columns. You can now use your *Analytics+ columns* to build *Limit definitions* for pre- and post-trade limit analysis. This allows you to use key figures and your own formulas to construct your limits, providing you with tools for more extensive limit analysis. Once you add a new *Analytics+ column* in *Preferences*, you can directly start using it in your *Limit definitions*.

Drill down in Analytics+ with sub-portfolio structures. Drill down into a position's linked portfolio now allows you to maintain the underlying investments in a sub-portfolio structure. If your position's linked portfolio has sub-portfolios, the sub-portfolios' contents are included in the drill down.

Analytics+ columns for TWR calculation. New columns in Analytics+ now provide you with the data used in TWR calculation, allowing you to track which underlying values are used to calculate TWR. New columns include *Absolute exposure (base)*, *Market value (base)*, *Daily profit and loss*, *Daily profit and loss (sec)* and *Daily costs*. Daily TWR % is calculated as "*Daily profit and loss / (Market value start + Pos net cashflow)*" (for futures as "*Daily profit and loss / Absolute exposure (base)*"). "*Daily profit and loss (sec)*" is used to calculate *TWR (sec)*, and *Daily costs* are used to adjust TWR for *TWR Gross* values.

Extended import formats

Version 3.7 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!

Extended market price import. You can now import a price directly to a specific field through specific columns: you can now import a price as *Manual*, *Close 1* through *Close 5*, or as *Accrual* and *Delta* introduced in this version. This allows you to explicitly import a price to a specific field and to import multiple prices to different fields with only one import row. In addition, when importing prices programmatically for example through an API, you can now define the "import mode" and "update column number", which were previously available only when importing prices manually with a file.

Possibility to handle rounding errors in trade amount in transaction importer. Transaction and trade order import formats now allow you to handle rounding errors in trade amount, or scenarios when the values you provide for *amount * unit price* don't add up to *trade amount* by the decimal. Before, this was considered as an import error, but now you can instead direct the difference into one of the tax fields to make the calculations match and the import to go through. You can do this with word *ROUND* in the tax field you want to use for the rounding error- the difference (trade amount provided vs. trade amount calculated by the system) is stored into the selected field when importing the trade. Make sure to define a tax type for rounding errors and a transaction type with proper tax effect!

New field "accrual" in transaction importer. Transaction and trade order import formats now allow you to import *accrual* on your fund transactions for accrued income management. Accrual is the paid or received accrued income that is included in the unit price, and has no effect of the trade amount.