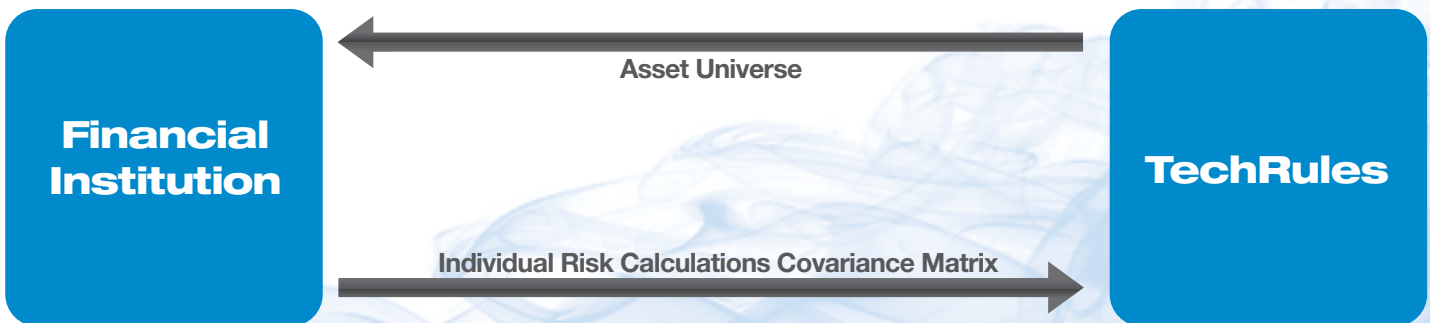


TechRules Risk Analytics

Risk Analytics is a solution that allows financial institutions to calculate the risk/return of their asset universe and/or their client's portfolios obtaining a file with all the requested calculations. It is particularly suitable for large asset universes, those assets that lack liquidity or a reference price, and for complex products.

Key Features

- Very User friendly Interface
- Resulting output can be stored in a TXT or EXCEL file
- We also offer the possibility of calculating the VaR and the volatility of clients' portfolios
- We incorporate a very powerful data quality check tool to ensure the quality of the system
- Transparency: Far from being a black box, we give access to all the calculations
- VaR backtesting functionality available (in line with Basilea's requirement to manage risk)
- Statistics that include an excel spreadsheet that resumes the results of each batch
- Possibility of including new calculations upon the client's request
- Liquidity Grade: Description



Calculations Available

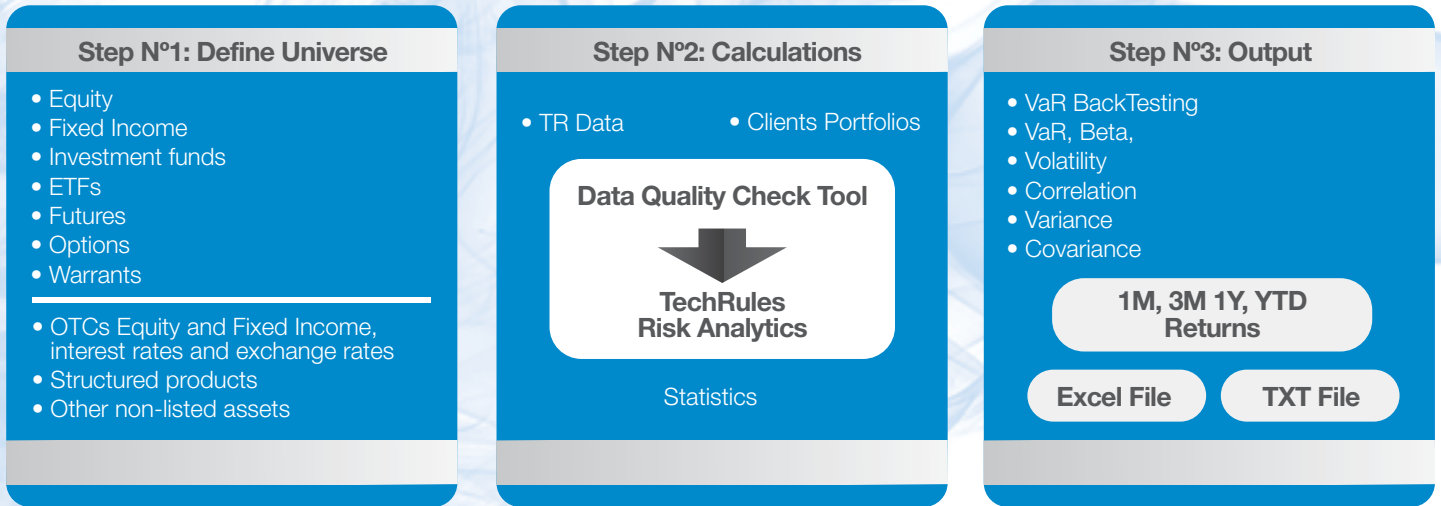
- Annual parametric VaR 95% confidence
- Benchmark assignment based on correlation
- Historical returns – Y2D, 1M, 1Y, 3Y
- Beta (asset vs. benchmark)
- Variance of the data series
- Covariance of each asset vs. benchmark
- Historical volatility
- Correlation coefficient vs. benchmark
- Correlation matrix amongst assets
- Other calculations

Correlation matrix to 1 year, using daily data of the different components of the portfolio and the averages.

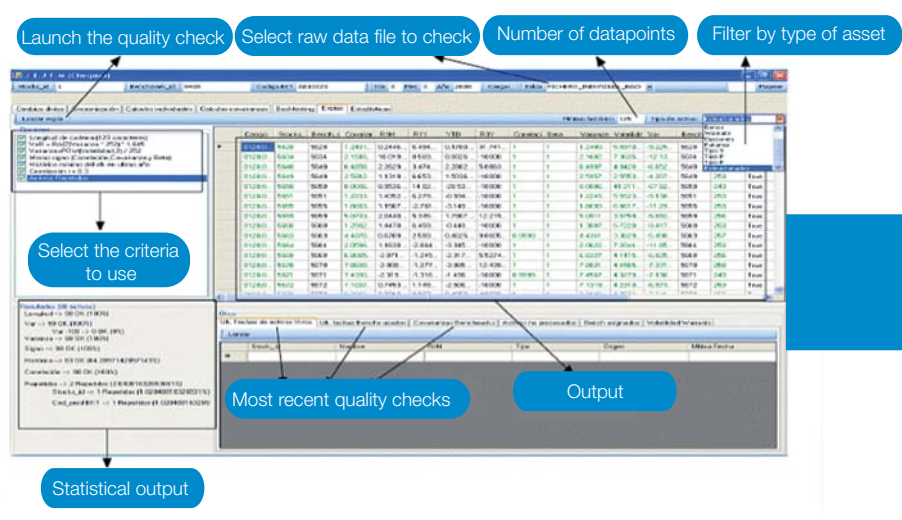
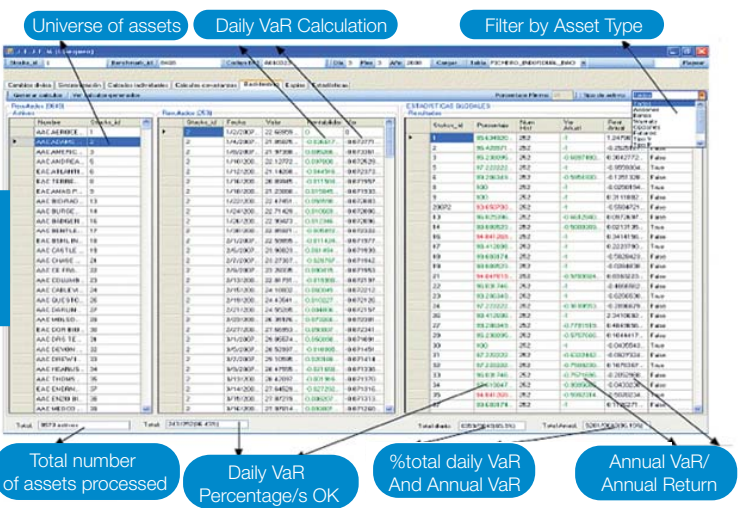
Flight Zurich	0.014	0.286	0.279	0.262	0.273	-0.013	0.262	0.232	0.231	0.265	0.282	0.322	0.172	-0.065	0.291	0.288	0.430	0.179	0.110	-0.025	-0.148	-0.299	-0.287	0.122	0.110	0.161	-0.063	0.147	-0.043	0.293	0.219	0.033	0.009	-0.206	-0.183	0.030	0.429	-0.035	0.020	-0.013	0.326	0.037	-0.013	0.182	0.029	-0.137	0.456	0.195	-0.246	0.204	0.193	0.076	0.312	-0.063	-0.004	0.071	0.297	-0.088	-0.120	-0.101	-0.195	-0.026	0.066	-0.087	0.037	-0.149	0.138	0.094	0.169	0.032	0.057	0.063	-0.131	0.030	-0.097	0.143	0.000	0.438	0.127	0.127	-0.051	0.220	-0.081	0.128	0.105	0.195	0.383	-0.083	0.080	-0.175	0.031	0.329	0.051	-0.026	-0.107	0.125	0.001	-0.268	-0.117	0.047	-0.140	0.057	0.189	0.185	-0.070	0.746	0.323	0.107	-0.061	0.458	-0.210	-0.179	0.153	0.000	0.100	0.100	-0.193	0.001	-0.193	0.001	-0.098	-0.195	-0.195	-0.137	0.498	0.205	0.438	0.078	0.026	-0.039	0.365	0.177	-0.128	0.211	7.8	Iberdrola IS	-0.191	0.037	0.016	-0.043	-0.171	-0.044	0.411	0.189	0.937	0.087	0.007	-0.007	0.499	0.158	-0.191	0.299	0.724	5.431	Telefonos 14	0.148	-0.366	0.047	0.160	0.347	0.268	-0.263	0.267	-0.204	-0.289	0.194	0.003	-0.092	-0.167	0.205	0.000	0.100	-0.087	0.180	-0.353	0.055	0.202	0.342	0.238	-0.287	0.266	-0.280	-0.298	0.156	-0.010	-0.131	-0.046	0.153	-0.071	0.080	-0.077	0.976	0.114	0.237	0.239	0.237	0.142	0.156	0.403	0.244	0.274	0.118	0.165	-0.306	0.291	0.069	0.072	0.090	0.497	0.309	-0.022	-0.019	7.75	VI	0.183	-0.348	0.081	0.340	0.320	0.250	-0.388	0.178	-0.343	-0.331	0.192	-0.048	-0.236	-0.099	0.200	-0.135	0.061	-0.101	0.843	0.844	-0.020	0.005	0.078	0.083	-0.012	-0.005	-0.016	0.623	0.480	0.446	0.036	0.031	-0.017	0.491	0.185	-0.105	0.245	0.732	0.780	0.177	0.168	0.921	0.137	-0.114	0.103	0.108	0.060	0.283	0.061	-0.239	-0.143	0.063	0.149	-0.105	-0.113	0.051	0.270	-0.037	-0.044	-0.090	0.057	0.099
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Why TechRules

- Market Data management: we integrate multiple information sources and make a constant effort monitoring the quality of the data received
- Independence: TechRules is not related, nor maintains interests in any financial group, so our service is absolutely independent
- TechRules is not just a software provider but an expert in financial advice with long experience in asset allocation and portfolio optimization
- Flexibility for the customization of the specific requirements given by the financial institution



Backtesting



Data Quality Check Tool