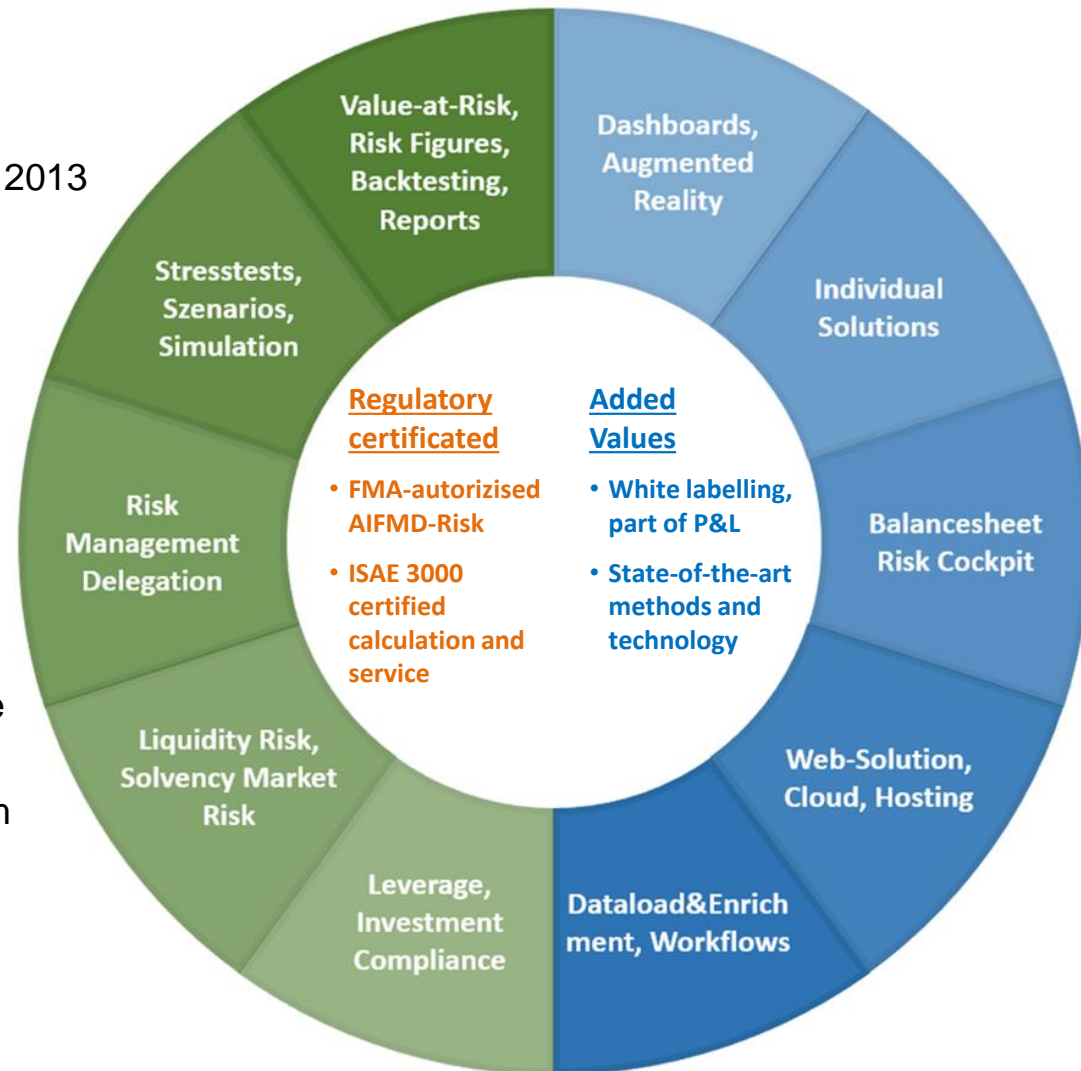


Company Profile and Service Portfolio

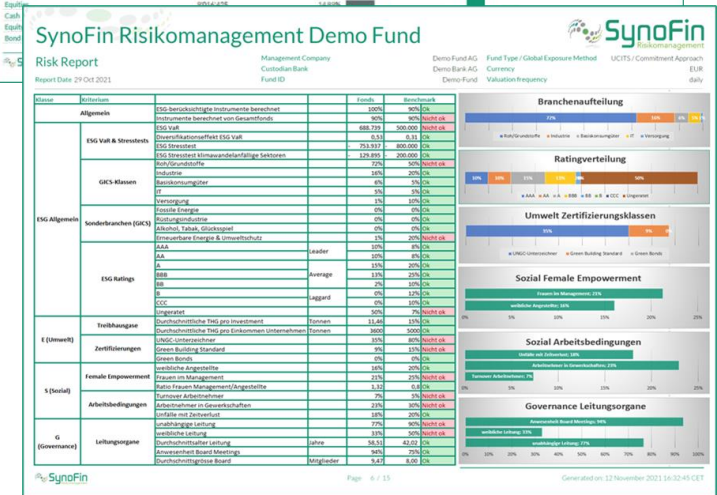
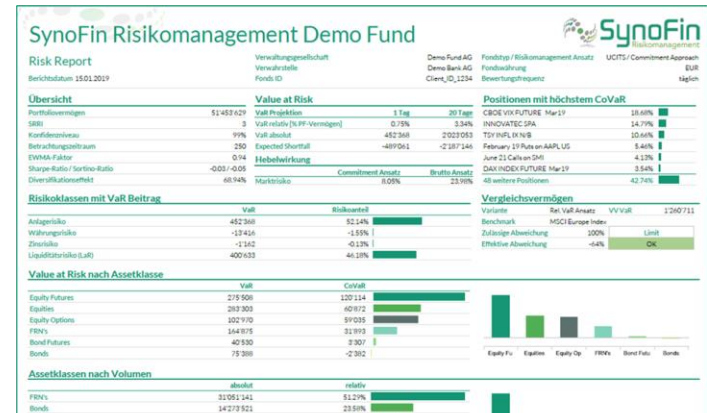
- FinTech with FMA-approved risk manager according to AIFMG, founded 2013
- Head office in Vaduz, Liechtenstein
- Independent partner in FL, CH, DE, LUX, AT
- Clients: Banks, fund companies and asset managers
- > 50 clients, > 50 billions calculated volume, > 1000 portfolios daily
- ISAE 3000/3402 certification for computation core, IT development / operation and risk management service
- Efficient team and network of risk managers, software developers, system experts, financial mathematicians and university chairs



RiskMan – Market Risk, Credit Risk, Liquidity Risk (Modules)

RiskMan — BASIC

- Prepares key figures on market, liquidity and credit risk of financial products and funds
- Automatically generates regulatory risk reports
- Is suitable for commercial banks, private banks, asset managers and funds
- Reference Clients
 - LLB Liechtensteinische Landesbank Vaduz has been using RiskMan for market, credit and liquidity risk for its more than 80 fund mandates on a daily basis since 2014.
 - Ahead Wealth Management Vaduz has been using RiskMan to prepare risk reports for its more than 50 institutional clients since 2018.
 - UI-Labs Frankfurt has been using RiskMan since 2019 with market and liquidity risk, showing fast growth with 3-5 new customers per year.



RiskMan — Risk Cockpit (Module)

- Risk analysis for individual instruments, asset categories and portfolio level
- Multi-level fund review with master/target fund structures including intermediate levels
- Risk contributions according to different categories as well as different selection and summarisation levels
- Planned portfolios with selectable interest rates, currencies and attribute structures for ex-ante risk estimation

AI	AI	Status	Name	Plantermin	Portf.-Datum	Kunden ID	Ve	Wert FC	Wert WCF	Abs. Var	VaR Skaliert	Rel. Var	Wahrung	Zinsrisiko	Equity Ris	Vol. Stres	Kor. Stres	Credit Ris	Liquidity I	Liquidität	Gen	P&L	Backtesting F	BT-Datum	In	
+	🔧	erledigt	SynoFin Risikomanagement	01.12.20 10:45	05.05.2020	Demo-Fund 1		70.349.567	61.693.315	1.084.050	1.084.050	1,54 %		62.259	122.503	652.080	2.190.071	2.215.707	918.217	678.974	97,5 %	Y			2020-05-04	
-	🔧	erledigt	SynoFin Risikomanagement	22.06.20 12:48	29.04.2020	Demo-Fund 1		69.347.335	60.150.312	1.059.281	1.059.281	1,53 %		47.355	25.125	750.130	2.036.523	2.046.138	911.323	685.833	97,5 %	Y	42.486	60.192.798	2020-04-28	

Kunden ID	Kunden Kate	Name	Asset Type	Wa	Nominale	Kurs BC	Wert BC	Zinsen	Wert FC	Exposure V	Ri	Ct	Wert WCF	Comp. Var	Var	Credit Risk	Liquidity Ri	P&L	Backtesting F	Instru		
+		demo2-30_instr_1.0.4 Equity Futures	CBOE VIX FUTURE Jun20	Equity Futures	USD	100	31,78	0,00	0,00	0,00	N	N	0,00	-300.372,97	626.749,04		0,00	267,104	267.104,47	DEMC		
+		demo2-30_instr_1.0.1 Equities	APPLE INC	Equities	USD	50.000	287,73	14.386.500,00	0,00	13.229.825,00	13.229.825,00	N	N	13.229.825,40	396.441,00	1.060.743,40	132.298,25	183.614	13.413.439,00	DEMC		
+		demo2-30_instr_1.0.2 FRN's	COOPERATIEVE RABOBANK UA	FRN's	EUR	4.000.000	99,50	3.980.120,00	0,00	3.980.120,00	3.980.120,00	N	N	4.049.550,79	-1.967,80	809,73	392.151,03	12.432,80	40.323	4.089.873,75	DEMC	
+		demo2-30_instr_1.0.3 FX Forwards	DTG Laufzeit bis 29.07.2020 Verkauf US FX Forwards	FX Forwards	AUD	-17.258.027	1,00	-59.025,00	0,00	-37.458,00	3.678.400,00	N	N	-222.990,76	-11.812,38	57.023,01		0,00	25.971	-197.019,88	DEMC	
+		demo2-30_instr_1.0.2 FRN's	SUDZUCKER INT FINANCE	FRN's	EUR	1.500.000	74,67	1.120.050,00	0,00	1.120.050,00	1.120.050,00	N	N	1.123.626,26	0	2.844,92		43.852,97	6.192	1.129.817,94	DEMC	
+		demo2-30_instr_1.0.3 FRN's	AEGON NV	FRN's	EUR	2.000.000	104,72	2.094.340,00	0,00	2.094.340,00	2.094.340,00	N	N	2.094.896,89	-2.435,59	2.962,86	52.069,39	18.236,79	3.664	2.098.560,51	DEMC	
+		demo2-30_instr_1.0.4 Equity Options	June 20 Puts on AAPL US	Equity Options	USD	800	0,12	9.600,00	0,00	8.828,00	0,00	N	N	8.828,16	-5.274,17	5.646,42		88,28	2.860	11.687,68	DEMC	
+		demo2-30_instr_1.0.4 Equity Options	June 20 Calls on FB US	Equity Options	USD	100	1,06	10.600,00	0,00	9.748,00	0,00	N	N	9.747,75	-6.124,53	8.223,04		97,48	2.853	12.600,78	DEMC	
+		demo2-30_instr_1.0.2 FRN's	VOLKSBANK WIEN AG	FRN's	EUR	4.000.000	97,37	3.894.760,00	0,00	3.894.760,00	3.894.760,00	N	N	3.951.889,65	-1.660,45	1.641,72		43.197,99	2.647	3.954.536,30	DEMC	
+		demo2-30_instr_1.0.2 FRN's	SRLV NV	FRN's	CHF	3.000.000	102,70	3.080.880,00	0,00	2.909.583,00	2.909.583,00	N	N	2.966.618,96	1	697,16	14.554,60	14.248,80	2.370	2.968.989,21	DEMC	
+		demo2-30_instr_1.0.6 Bonds	SCHAEFFLER FINANCE BV	Bonds	EUR	1.000.000	97,94	979.400,00	0,00	979.400,00	979.400,00	N	N	994.132,37	-1.749,56	2.670,98	26.589,94	12.567,41	2.300	996.432,23	DEMC	
+		demo2-30_instr_1.0.1 Equities	VON FUN II-VES GLO RK DIV-B	Equities	EUR	9.500	162,36	1.542.420,00	0,00	1.542.420,00	1.542.420,00	N	N	1.542.420,00	0	5.617,32	21.592,06	15.424,20	1.805	1.544.225,00	DEMC	
+		demo2-30_instr_1.0.2 FRN's	RAIFFEISEN SCHWEIZ	FRN's	CHF	1.000.000	99,40	994.030,00	0,00	938.762,00	938.762,00	N	N	954.937,46	1	214,84	4.638,57	2.112,55	1.698	956.635,05	DEMC	
+		demo2-30_instr_1.0.3 Bonds	TELECOM ITALIA SPA	Bonds	EUR	2.000.000	96,38	1.927.600,00	0,00	1.927.600,00	1.927.600,00	N	N	1.929.616,97	-1.830,10	1.717,70		7.864,48	1.422	1.931.039,14	DEMC	
+		demo2-30_instr_1.0.1 FRN's	VOLKSBANK WIEN AG	FRN's	EUR	2.000.000	97,37	1.947.380,00	0,00	1.947.380,00	1.947.380,00	N	N	1.975.944,82	-1	830,22	820,86	21.599,00	1.323	1.977.268,15	DEMC	
+		demo2-30_instr_1.0.3 FX Forwards	DTG Laufzeit bis 29.07.2020 Verkauf EU FX Forwards	FX Forwards	AUD	4.489.700	1,00	-59.025,00	0,00	-37.458,00	955.732,00	N	N	58.574,92	-2	226,33	4.492,83		1.105	59.680,19	DEMC	
+		demo2-30_instr_1.0.9 Cash	Laufendes Konto	Cash	GBP	284.692	1,00	284.692,00	0,00	326.513,25	326.513,25	N	N	326.513,25	0	3.019,74	4.810,72		0,00	797	327.310,39	DEMC
+		demo2-30_instr_1.0.2 FRN's	SRLV NV	FRN's	CHF	1.000.000	102,70	1.026.960,00	0,00	969.861,00	969.861,00	N	N	968.872,99	1	232,39	4.851,53	4.749,60	790	969.663,07	DEMC	
+		demo2-30_instr_1.0.1 Cash	Laufendes Konto	Cash	GBP	171.455	1,00	171.455,30	0,00	196.642,08	196.642,08	N	N	196.641,74	-0	1.818,63	2.897,24		0,00	480	197.121,81	DEMC
+		demo2-30_instr_1.0.2 FRN's	BANK OF AMERICA CORP	FRN's	EUR	2.000.000	98,76	1.975.200,00	0,00	1.975.200,00	1.975.200,00	N	N	1.978.840,88	0	-45,70	-5,18	6.520,10	322	1.979.163,03	DEMC	

RiskMan — Overview

▪ RiskMan Product Family

- Connection to customer systems via standard interfaces
- Data quality: Plausibility checks in the loading process as well as automatic supplementation procedures
- Module variants: Basic, Advanced and Premium

▪ Individual parameters for each fund

- Confidence level and holding period
- Risk measurement method (MC, QMC, HistSim, ..)
- Comparative assets and leverage
- Limits on results

▪ Key risk figures

- VaR, CoVaR, eSF and 40 other key figures as well as selected performance indicators
- Results on instrument and fund level: Fund of fund structure with multi-level look through
- Output grouped by asset types, risk classes and client-specific structuring features

▪ Stress tests

- Share prices, yield curves, exchange rates, spreads, correlations, volatilities et cetera
- Combination of individual stress tests into macroeconomic scenarios

▪ Clean Backtesting

- VaR validation by outlier count

▪ Risk report/output

- Immediately available as PDF report after calculation
- Specialised .csv output file sets for reporting and dashboards

▪ ISAE 3000/3402 audit on annual basis

- Risk report, risk calculation, methods and models, risk indicators, developments, operations, service processes

RiskMan — Calculation Methods

Method	Approach	Recommended
Variance/covariance (delta-normal approach)	Normally distributed volatility in covariance matrix without correlations	Stable markets, calm portfolios, linear/non-structured products
Historical Simulation	Linear valuation of historical prices (correlations and volatility indirectly)	Stable markets and portfolios, non-structured products, long time series available
Monte Carlo Simulation (MC)	Weighted simulation of individual risk factors	Volatile markets and portfolios, structured products
Quasi Monte Carlo Simulation (QMC)	Similar to MC, but with a mathematical series instead of random number generation	Volatile markets, complex products and strategies

Key Risk Figures

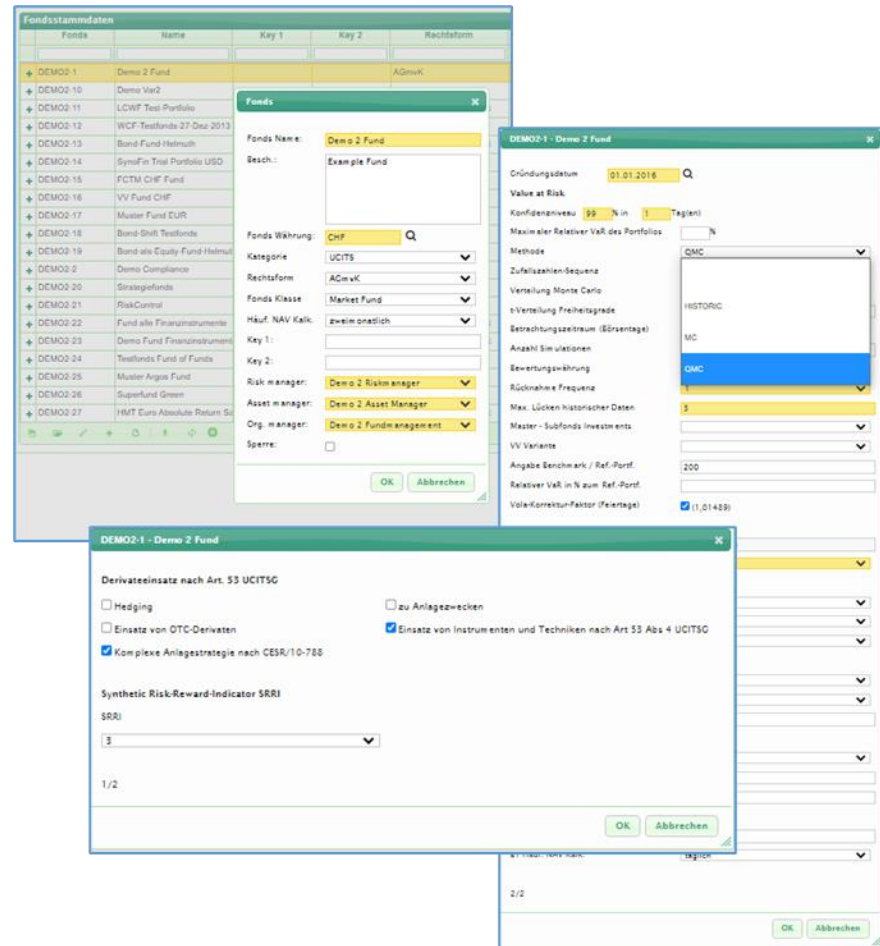
- Available immediately after calculation
- .csv-based export file set for reporting software customer
- Individually customizable RiskMan reports
- Freely designable dashboards
- Limit observation

Kennzahl	Portfolioebene	Assetklassenebene	Instrumentenebene
Portfoliowert	X	X	X
Value at Risk	X	X	X
Value at Risk Unter Volatilitätsstress Unter Korrelationsstress	X		
Component Value at Risk	X	X	X
Component Value at Risk Risikogruppen: Zinsänderungsrisiko Kursänderungsrisiko Wechselkursrisiko	X	X	X
Expected Shortfall	X		
Sharpe Ratio	X		
Sortino Ratio	X		
Mahalonobis-Distanz	X		
Worst-Case-Verlust (Mahalonobis-Verlust)	X		
Marktwert bei 110% Volatilität	X (Underlying Derivate betroffen)		
Implizite Volatilität			X
Korrelation			X
Volatilität			X
Mittelwert (Renditen)	X		X
Duration: Macaulay	X		X
Duration: Modifiziert	X		X
Yield to Maturity			X
Konvexität	X		X
Delta			Optionen
Gamma			Optionen
Vega			Optionen
Theta			Optionen
Rho			Optionen
Leverage			Optionen
Gearing			Optionen
Intrinsischer Wert			Optionen
DV01 Zinssensitivität (nach ISDA-Definition) in Fondswährung bei Veränderung des Zinssatzes um 1 Basispunkt	X (Laufzeitbänder: 0-5 Jahre, 5-15 Jahre, ab 15 Jahre)		X
CS01 Credit Spread Sensitivität (nach ISDA-Definition) in Fondswährung bei Veränderung um 1 Basispunkt	X (Laufzeitbänder: 0-5 Jahre, 5-15 Jahre, ab 15 Jahre)		X
OAS - Option Adjusted Spread			X
Effective Duration	X		X

RiskMan — Demo RiskCockpit

- **Individual parametrisation**
On fund level in the master data interface
 - Legal form
 - Simulation type
 - Number of simulations
 - Confidence level
 - Stress factors
 - Time series weighting
 - Number of historical data
 - Distribution assumptions
 - Use of derivatives
- **Risk Analysis ***
 - Risk Cockpit
- **Output**
 - Risk Report* available as PDF report immediately after calculation
 - Detailed .csv-based output file sets for reporting and dashboards

* ISAE 3000/3402 certified



The screenshot displays the 'Fondsstammdaten' (Fund Master Data) interface. It features a table of funds and several configuration windows for 'DEMO2-1 - Demo 2 Fund'.

Fonds	Name	Key 1	Key 2	Rechtsform
DEMO2-1	Demo 2 Fund			AGmV
DEMO2-10	Demo Var2			
DEMO2-11	LCWF Test Portfolio			
DEMO2-12	WCF Testfonds 27.02.2013			
DEMO2-13	Bond Fund Helmsch			
DEMO2-14	SynoFin Trial Portfolio USD			
DEMO2-15	FCTM CHF Fund			
DEMO2-16	VV Fund CHF			
DEMO2-17	Muster Fund EUR			
DEMO2-18	Bond Shift Testfonds			
DEMO2-19	Bond als Equity Fund Helmsch			
DEMO2-2	Demo Compliance			
DEMO2-20	Strategiefonds			
DEMO2-21	RiskControl			
DEMO2-22	Fund alle Finanzinstrumente			
DEMO2-23	Demo Fund Finanzinstrument			
DEMO2-24	Testfonds Fund of Funds			
DEMO2-25	Muster Argus Fund			
DEMO2-26	Superfund Green			
DEMO2-27	HMT Euro Absolute Return Si			

The configuration windows for 'DEMO2-1 - Demo 2 Fund' include:

- Fonds Details:**
 - Fonds Name: Demo 2 Fund
 - Besch.: Example Fund
 - Fonds Währung: CHF
 - Kategorie: UCITS
 - Rechtsform: AGmV
 - Fonds Klasse: Markt Fund
 - Häuf. NAV Kalk: zweimonatlich
 - Risk manager: Demo 2 Risk manager
 - Asset manager: Demo 2 Asset Manager
 - Org. manager: Demo 2 Fundmanagement
- DEMO2-1 - Demo 2 Fund (Parameters):**
 - Gründungsdatum: 01.01.2016
 - Value at Risk
 - Konfidenzniveau: 99 % in 1 Tag(en)
 - Maximaler Relativer VaR des Portfolios
 - Methode: QMC
 - Zufallszahlen-Sequenz
 - Verteilung Monte Carlo
 - Verteilung Freiheitsgrade
 - Betrachtungzeitraum (Börsestage)
 - Anzahl Simulationen
 - Bewertungswährung
 - Rücknahmefrequenz
 - Max. Lücken historischer Daten
 - Master - Subfonds Investments
 - VV Variante
 - Angabe Benchmark / Ref.-Portf.: 200
 - Relativer VaR in % zum Ref.-Portf.
 - Vollkorrekturfaktor (Fehltage): (1,01489)
- DEMO2-1 - Demo 2 Fund (Derivatives):**
 - Derivateinsatz nach Art. 53 UCITSG
 - Hedging
 - Einsatz von OTC-Derivaten
 - Komplexer Anlagestrategie nach CESR/10-788
 - zu Anlagezwecken
 - Einsatz von Instrumenten und Techniken nach Art 53 Abs 4 UCITSG
 - Synthetic Risk/Reward-Indicator SRRi
 - SRRi: 3

RiskMan — Sample Report

Portfolio overview

- Assets, SRRI/SRI
- Calculation methods
- Diversification effects

VaR, CoVaR and Expected Shortfall

- Absolute and relative
- Holding period 1 and 20 days
- Simulation of correlation and volatility stress

Leverage market risk

- Commitment and Gross

VaR contribution

- Investment risk
- Currency risk
- Interest rate risk
- Commodity risk

Asset classes

- Over 40 classes, market standard and structured
- VaR & CoVaR
- Volume absolute and relative

Clean Backtesting

- Based on 1-day Value at Risk
- Overview of backtesting outliers

Stresstests

- Individual configuration of large-scale scenarios via stresstests (for example „Flight in Safe Havens“, „Credit Crisis“ et cetera).

