



*Win clients' trust by a systematic risk management process*

 . S A G E .

  
**BLACKSWAN**  
Financial Platform

# Context

- High volatility
- Low returns
- Cost of regulation
- Pressure on margins
- Clients' concerns



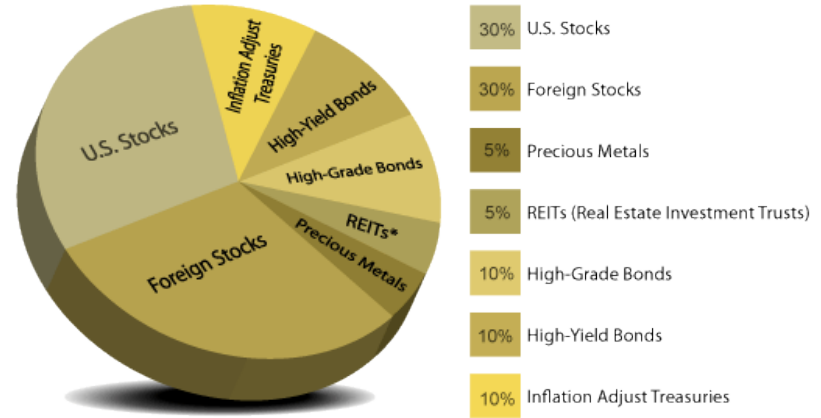
## Evolving clients

- **Cautious**
- **Informed**
- **Less loyal**
- **Demanding**
- **Taxed**



# Increasing sophistication

- **Diversification goal**
- **Need for non-correlation**
- **Entrepreneurs confidence**
- **Non bankable Assets**
  - Real estate
  - Commodities
  - Private equity



# Segmentation evolution

- Limits of the **Demographic** segmentation
- **Utility type** segmentation
- **Asset Class vs. Risk class**
- **Client profiling**
  - Risk
  - Return
  - Constraints
- **Utility curve**

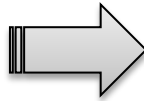
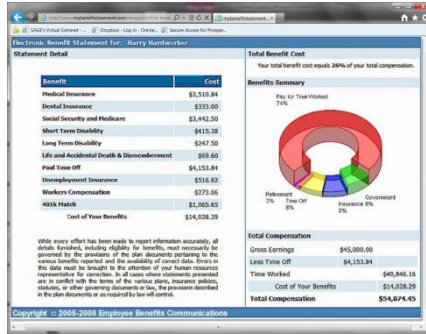
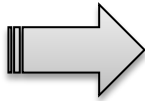


# Rethink the relationship

- **Real time information need**
- **Review basic information**
- **Freely available information**
- **Free the RMs**
- **Concentrate on value-add**
  - Impacts
  - Future evolution
  - Risk management



# Tools evolution



# Qualitative vs. Quantitative





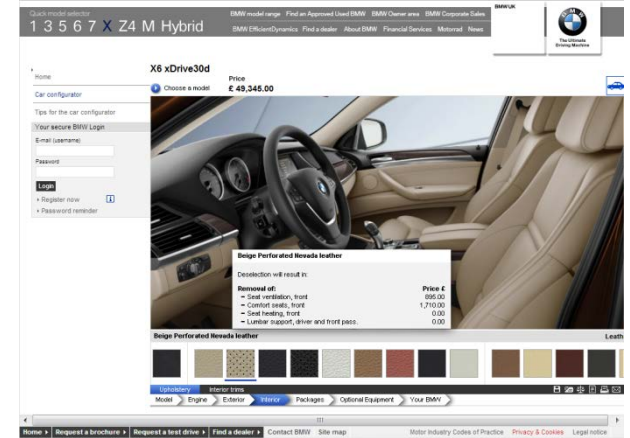
# Improve investment decisions

- **Post-tax returns objective**
- **Need to measure and mitigate risks**
- **Exploit all available information**
- **More diversified asset allocation**
- **Risk measures**
  - VAR
  - Expected shortfall
  - Factor models
  - Monte Carlo
  - ...



# Involve the client

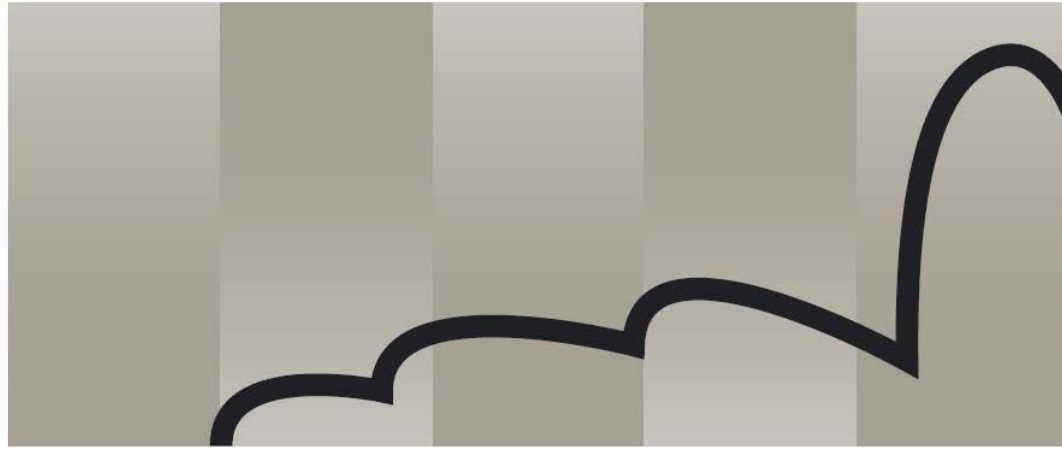
- Users are given control
- Visualize risk
- What-if scenarios
- Economic factors
  - Requested Exposure
  - Exposure to Minimize
- Set of intuitive indicators



# Main goals

- Demonstrate a **systematic and transparent risk management process**
- Build trust with the client through **increased transparency**
- Allows the **involvement of the client in crucial choices**
- Improves the **performance over traditional asset management practices**

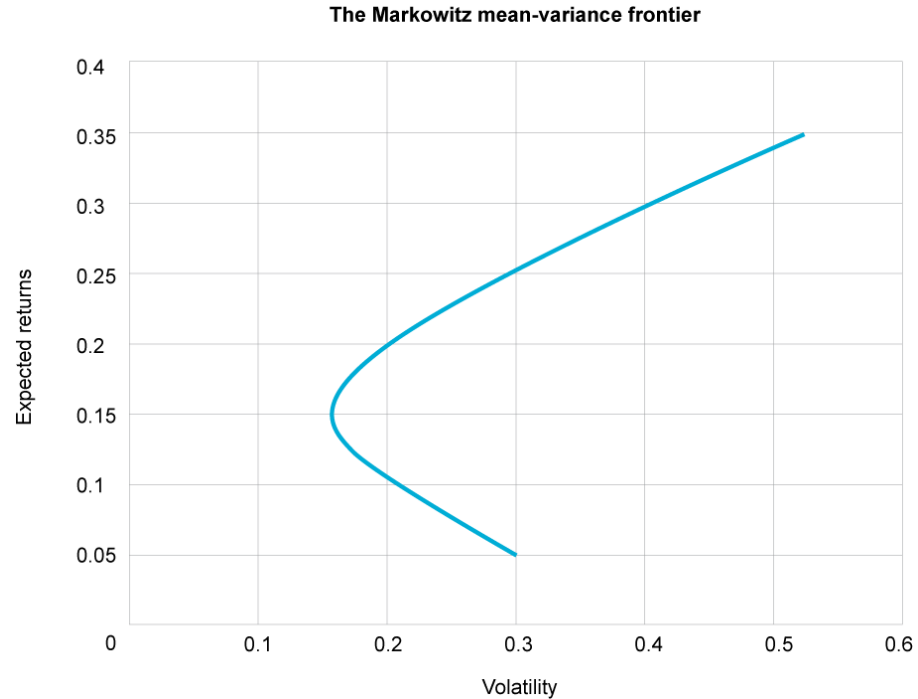




# BLACKSWAN

Financial Platform

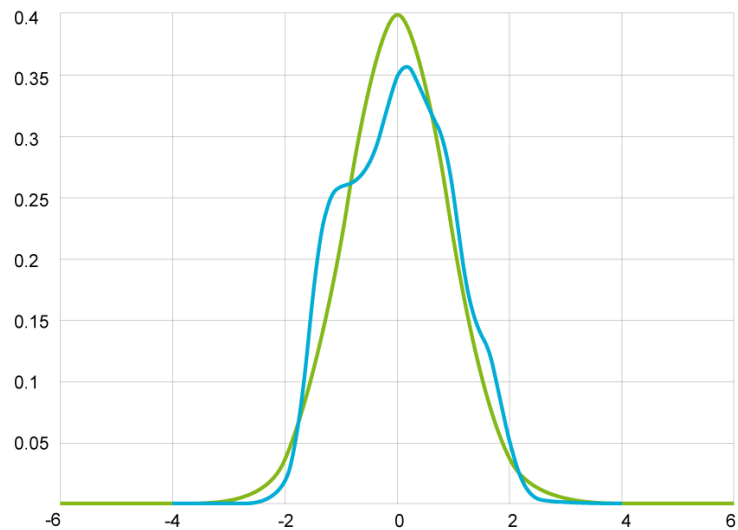
# Traditional portfolio allocation



# Real world assets behavior

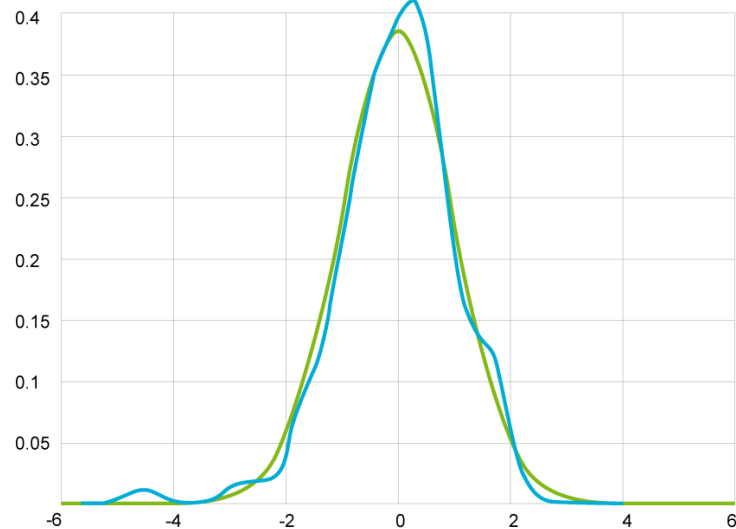
## Swiss 3 months T-bill

Density of centered and standardized returns



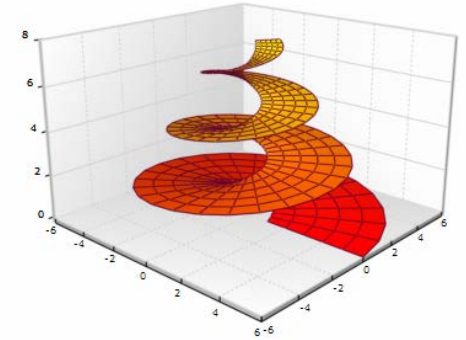
## Emerging markets returns

Density of centered and standardized returns

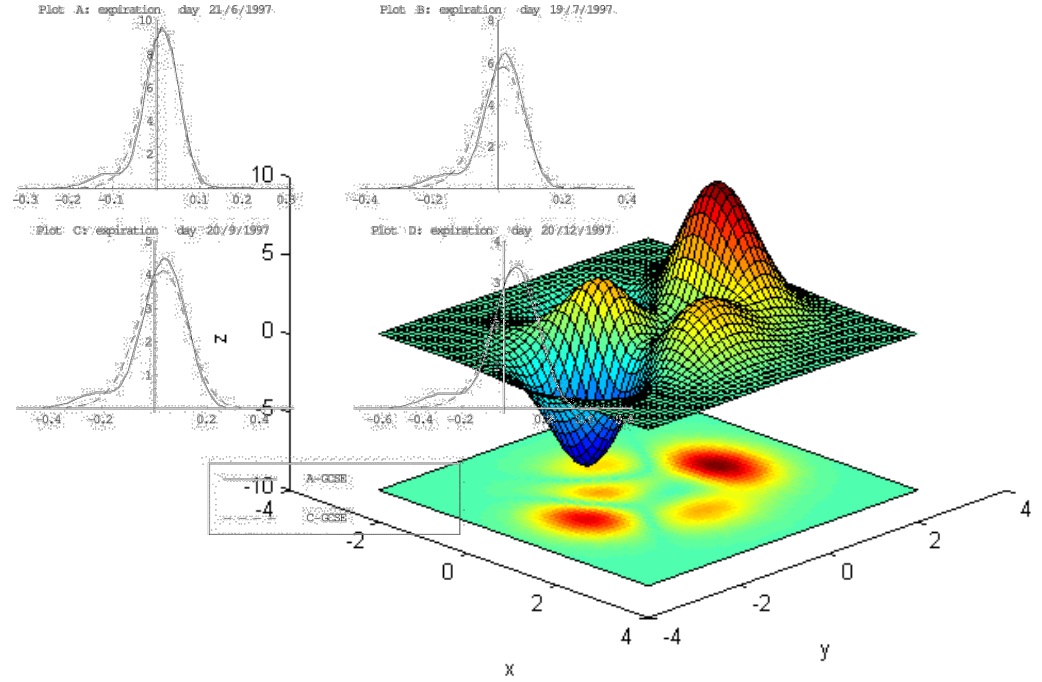
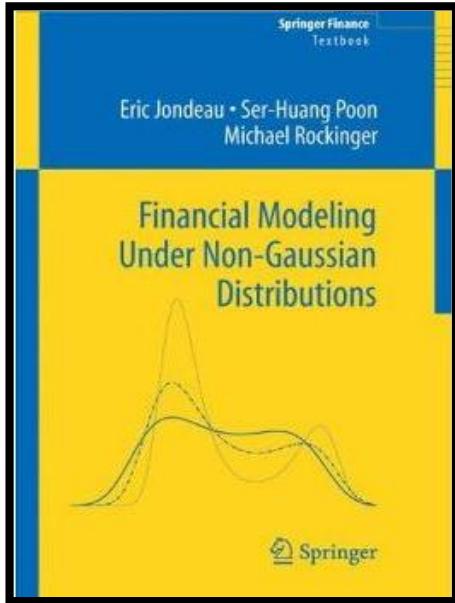


# Endogenous risk

- Major events occurrence
- Amplification due to panic
- Amplification due to protection mechanisms
- Collective action vicious circle
- Limitations of classical risk measure tools



# Academic roots





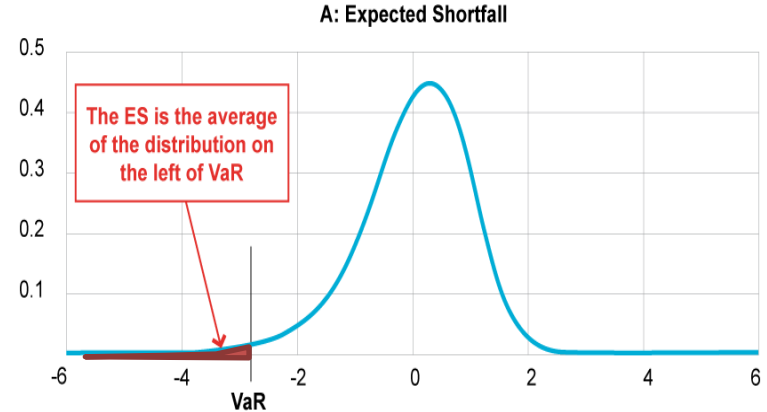
# VAR vs Expected Shortfall/Windfall

- **VAR = Max loss level during a period with a certain confidence**

“How bad can things get?”

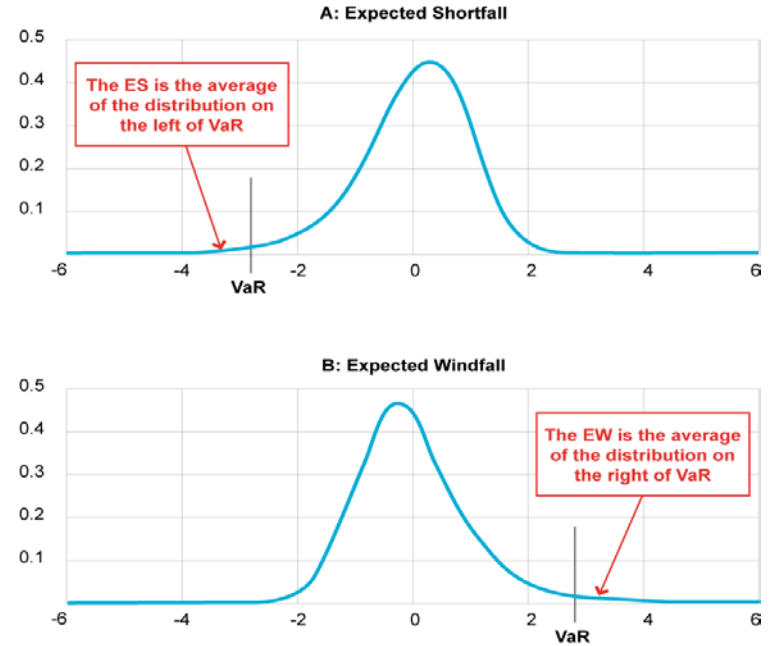
- **Expected Shortfall**

“If things do get bad, what is our expected loss?”



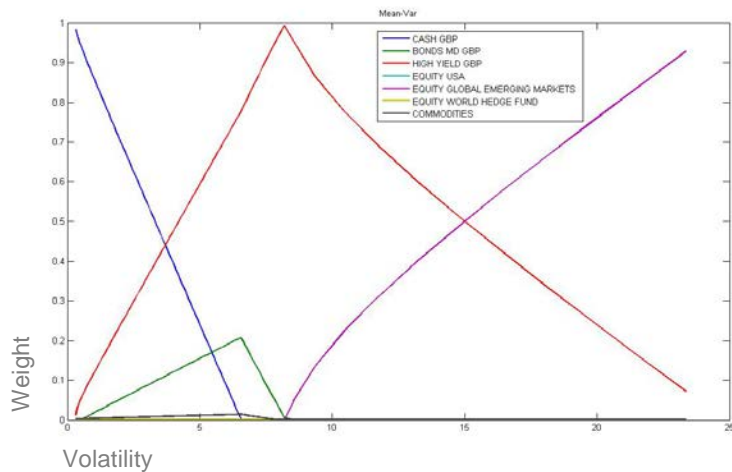
# Maximizing gains with Expected Windfall optimisation

- **Expected Shortfall**  
“If markets are up, what is our expected gain?”
- **EW uses the same calculation as ES but refers to the positive side of the distribution**
- **EW optimized portfolios can produce extreme returns**

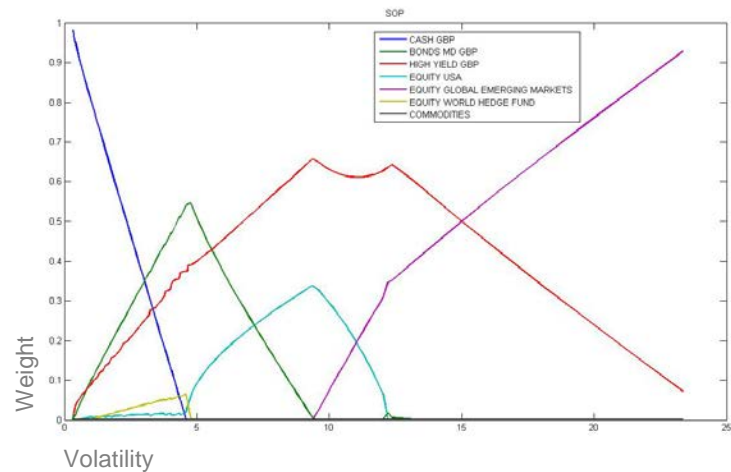


# The mean variance / the swop allocation

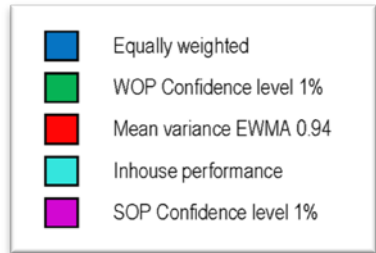
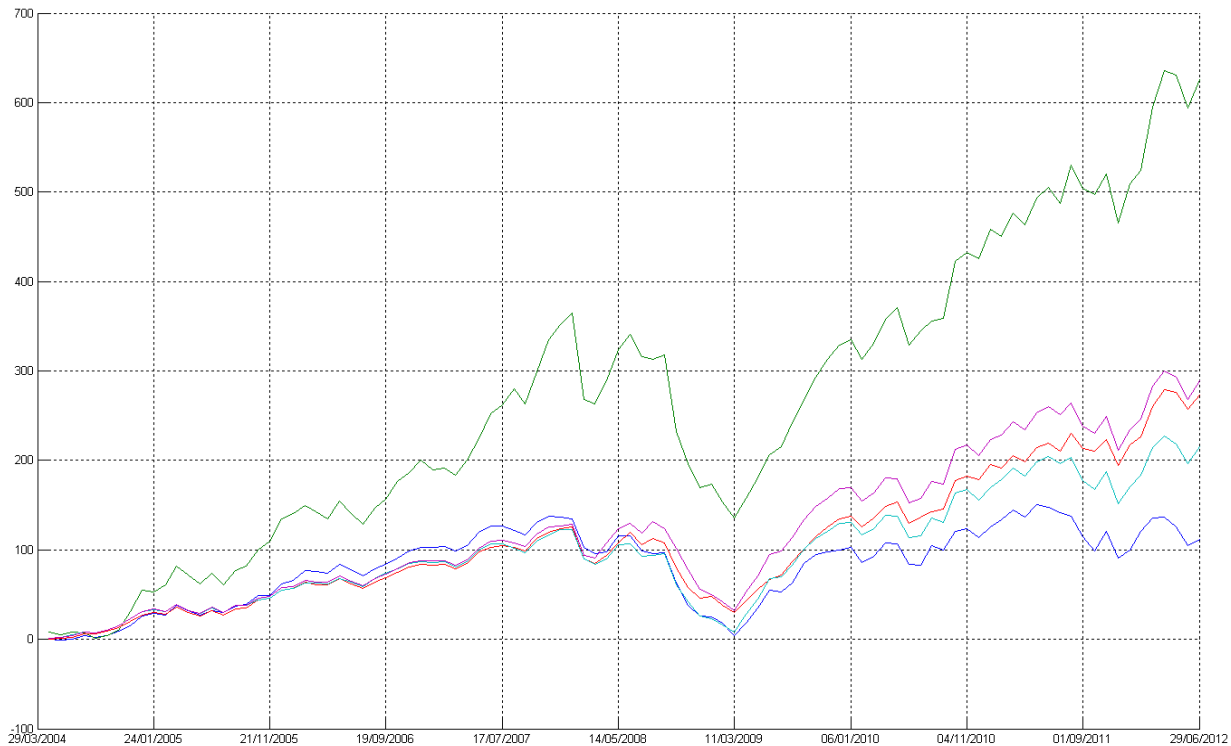
## The Mean-Variance Allocation



## The SWOP Allocation

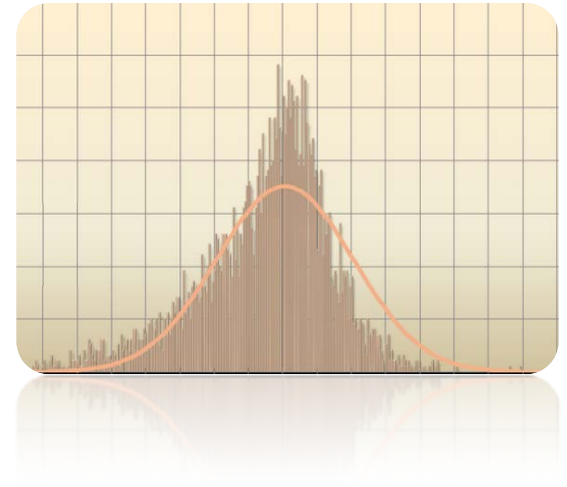


# Back testing



# Main benefits

- Improves on the classical Mean-Variance
- Takes into consideration extreme events
- Provides greater diversification capabilities
- Performs an optimization under all sorts of constraints
- Can be used interactively with the clients



# Live demo

The screenshot displays the Blackswan Financial Platform interface, which is a web-based simulation tool. The main window shows an 'Efficient Frontier' plot with 'Annualized Expected Return (%)' on the y-axis (ranging from 2.5 to 7) and 'Annualized Expected Shortfall (%)' on the x-axis (ranging from 60 to 140). A red dot represents the 'SOP' (Scenario Portfolio) and a blue dot represents the 'Mean Variance' portfolio. The plot shows a curve of possible portfolios, with the SOP and Mean Variance points highlighted.

Key components of the interface include:

- Navigation:** Simulations, Portfolios, Setup, Reports, Utilities, Logout.
- Asset Allocation:** A pie chart showing 100% allocation to 'GBP PARIBAS'.
- Currency Exposure:** A donut chart showing 99.99% exposure to 'EUR'.
- Distribution:** A normal distribution curve for 'Val N'.
- Energy Statistics:**
  - Period Expected Return: -3.0001%
  - Period Volatility: 42.6501%
  - Kurtosis: 5.3028%
  - Skewness: 0.5611%
  - MTD: -0.5374%
  - QTD: 16.5758%
  - YTD: 34.1363%
  - 1Y Rolling Return: 47.4676%
  - Total Annualized Return: 7.8912%
  - Percentage Of Positive Returns: 0.5877%
  - Positive Average Return: 2.7236%
  - Percentage Of Negative Returns: 0.4123%
  - Negative Average Return: -0.8156%
- Drawdown Statistics:**
  - Maximum Return: 27.8915%
  - Maximum Return Date: 05-05-2011
  - Minimum Return: -35.5332%
  - Minimum Return Date: 02-05-2010
  - Maximum DrawDown Initial Date: 01-05-2005
  - Maximum DrawDown Final Date: 01-05-2005
  - Maximum DrawDown: 0%
  - Distance To HighWatermark: 0.0054%
- Financial Ratios:**
  - Maximum DrawDown Ratio: 0%
  - Sharp Ratio: 0.1843%
  - Sortino Ratio: 0.2524%
- Risk Management Measures:**
  - Downside Volatility: 31.1419%
  - ValN Normal: 99.219%
  - Expected Shortfall Normal: 113.6717%
  - ValN Historical: 140.26%
  - Expected Shortfall Historical: 162.8335%
  - ValN SWOP: 111.0872%
  - Expected Shortfall SWOP: 137.6751%
  - Expected Winfall SWOP: 111.4976%
- Rolling Correlations:**
  - 35.5332% < Rolling 1 Month < 27.8915%
  - 35.7924% < Rolling 2 Month < 73.8999%
  - 25.9528% < Rolling 6 Month < 31.2364%
  - 33.5638% < Rolling 1 Year < 49.9234%
  - 33.5239% < Rolling 2 Year < -0.9923%
  - 31.7963% < Rolling 3 Year < -31.7963%
  - 0.0002% < Rolling 5 Year < 0.0002%
- Scenario Portfolio:** A section for 'Free Portfolios' with 'Save' and 'Load' buttons.
- Parameter Sliders:**
  - Oil price: 67
  - USD/CHF exchange rate: 1.48
  - Commodity: 13
  - CHF interest rate: 2.5

