Speedwell Weather
Speedwell Weather System

Speedwell Weather Limited

Mardall House 9-11,
Vaughan Road, Harpenden,
Hertfordshire, AL5 4HU.

Speedwell Weather System

The Open Weather Derivative Pricing and Risk Management System

SWS Version 12
Features Summary

SWS: Weather Risk Contracts Pricing Features

Feature	Included?
Pricing of vanilla contracts, baskets, spreads and exotic structures using historical burn, fitting of multiple distributions and simulation. Stand-alone and portfolio pricing. Run multiple pricing methods at a single press of a button. SWS supports user-script based definition of super-exotics and indices based on average of N lowest/highest values.	✓
Support for a wide range of structures including call, puts, swaps, digitals, strangles, collars, barrier up-and-outs, barrier down-and-outs; all capped or uncapped.	✓
Support for indexes based on daily and or hourly values.	✓
Daily rainfall and temperature simulation models.	✓
Multiple detrending methods including linear, bi-linear, Lowess and polynomial detrending. All detrending methods available for underlying weather parameters as well as indices. Seasonal based data de-trending: trends broken down into individual months.	✓
Option to exclude specific days of the week or occasional days (e.g. bank holidays) when building an index.	✓
Facility to specify user-specified index weightings to different historical years to account for the El Nino and La Nina weather effects or to eliminate certain years.	✓
Support for indices based on CDDs, HDDs, GDDs, CTDs, CATs, GTZ, cumulative values, average values, critical values and many others including user-specified indices based on user-entered formula and compound structures.	✓
Support for strips and multi year deals.	✓
Support for back-pricing: ie pricing a transaction retrospectively with then-available data	✓
Support for Weather Data Scenarios: it is possible to look at the prices under conditions like: what happens if it is 1 degree warmer or if it rains 10% more on every single day of the period. Also available at the portfolio level.	✓
Automatic leap year adjustment (six methods available).	✓
Valuation of in-period contracts	✓
Distribution Analysis tool: automatically assess best descriptive distribution, with Kolmogorov Smirnov goodness of fit tests and Maximum Likelihood Estimation Fitting engine. Helps objective assessment of optimal pricing methods.	✓
Full support and automatic integration of deterministic *and* ensemble forecasts for pricing and risk management of weather derivative structures.	✓
Power curve scripting tool: simplifies the transformation of a power curve table into an SWS-compatible index for weighting wind speeds	✓
Automation of Request for Proposal Processing: SWS 11 automates the import and export of weatherXchange Request for Proposals ("RFP"s)	✓

SWS: Portfolio Features

Feature	Included?
Portfolio VaR calculation comprising expiry and daily / or period-VaR.	✓
Ability to create an unlimited number of portfolios.	✓
Ability to create Umbrella Portfolios by assigning any chosen portfolios	✓
Ability to test what-if scenarios by booking fictitious trades to a “Working Portfolio” which does not impact back office.	✓
Ability to create “Mirrored Portfolios” to allow testing a different portfolio method	✓
Automatic counterparty credit risk report.	✓
Multi-normal and Copula simulation engines.	✓
Option to globally override option pricing parameters for marking to model.	✓
Support for super-exotic structures via "back door" entry of index values for subsequent use in portfolio.	✓
Transaction report showing daily, year to date and from-inception P&L.	✓
Summary of Greeks by portfolio and by index.	✓
Historical portfolio analysis: best, worst, averages, burn.	✓
Screens to analyse the marginal impact of forecasts on portfolio risk	✓
Middle office can apply different models for analysis of risk.	✓
Stochastic Dominance methodology applied to portfolios.	✓
Principal Component Analysis report	✓
Ability to import interest rate curves	✓
Export and import any data to / from Microsoft Excel including facility to override means and volatilities used in portfolio.	✓
Automatic update of FX rates available	✓

SWS: Back-Office and Administrative Features

Feature	Included?
Full User Permissioning module	✓
Full user auditing	✓
Ticket booking and back-office trade flow.	✓
Monitoring weather derivative trade life cycle	✓
Ability to add any additional stage to Transaction Life Cycle	✓
Transaction Report	✓
Open Position Report	✓
Payment Report	✓
Settlement processing and reporting. Settlement data values persisted for audit.	✓
Automatic calculation of settlement values	✓
Post-settlement adjustment processing and reporting and automatic alert to any requirement for post-settlement adjustment	✓
EMIR, MiFID, Dodd Frank Reporting	✓
Ability to attach documents to transactions such as invoices and confirmations	✓
Ability to schedule report run time and send by notifications by email	✓
Ability to link transactions for netting purposes	✓
Invoices and Contracts Module allowing generation of standard ISDA contracts and invoices	**Optional**

SWS: Data and Forecast Warehouse Features

Feature	Included?
weatherXchange Data Integration: Seamless Integration with the new weatherXchange cleaned database of tradeable sites	✓
Gridded Data Services integration: direct access to several gridded data catalogues supported by Speedwell	✓
Direct Access to Speedwell Forecast Archive: Archived forecasts can be viewed and imported into SWS.	✓
Automatic import of daily, hourly and sub-hourly weather observations for 100+ weather elements in sub-hourly, hourly or daily type.	✓
Automatic import of multi-member and deterministic forecasts	✓
SWS is open to receive weather data and forecasts from any source, subject to meeting SWS data and forecast specification	✓
Ability to create any new weather element (or other time series eg gas price)	✓
Ability to import other time series eg energy prices as required	✓
Support for multiple weather data quality types and conventions	✓
Support for CME weather futures and options contracts.	✓
Easy copy and paste of weather data from spreadsheets.	✓
Data viewing tools	✓

Speedwell Weather Limited
Mardall House 9-11,
Vaughan Road, Harpenden,
Hertfordshire, AL5 4HU.

Contacts

Regarding weather risk software and consultancy services:

Please see www.SpeedwellWeather.com

or contact:

Stephen Doherty (Europe)	**Stephen.Doherty@SpeedwellWeather.com**
David Whitehead (USA)	**David.Whitehead@SpeedwellWeather.com**

Telephone:

Europe:	**+44 (0) 1582 465 569**
USA:	**+ 1 843 737 4843**

-

Regarding world-wide weather data and weather forecasts:

Please see www.SpeedwellWeather.com

or contact:

Phil Hayes (Europe)	**Phil.Hayes@SpeedwellWeather.com**
David Whitehead (USA)	**David.Whitehead@SpeedwellWeather.com**

Telephone:

Europe:	**+44 (0) 1582 465 569**
USA:	**+ 1 843 737 4843**

Office Addresses:

Europe:	***Mardall House, 9-11 Vaughan Rd, Harpenden, Herts, AL5 4HU, UK***	***USA:***	***418 King St Floor 2, Charleston, SC 29403, USA***

Vs 15