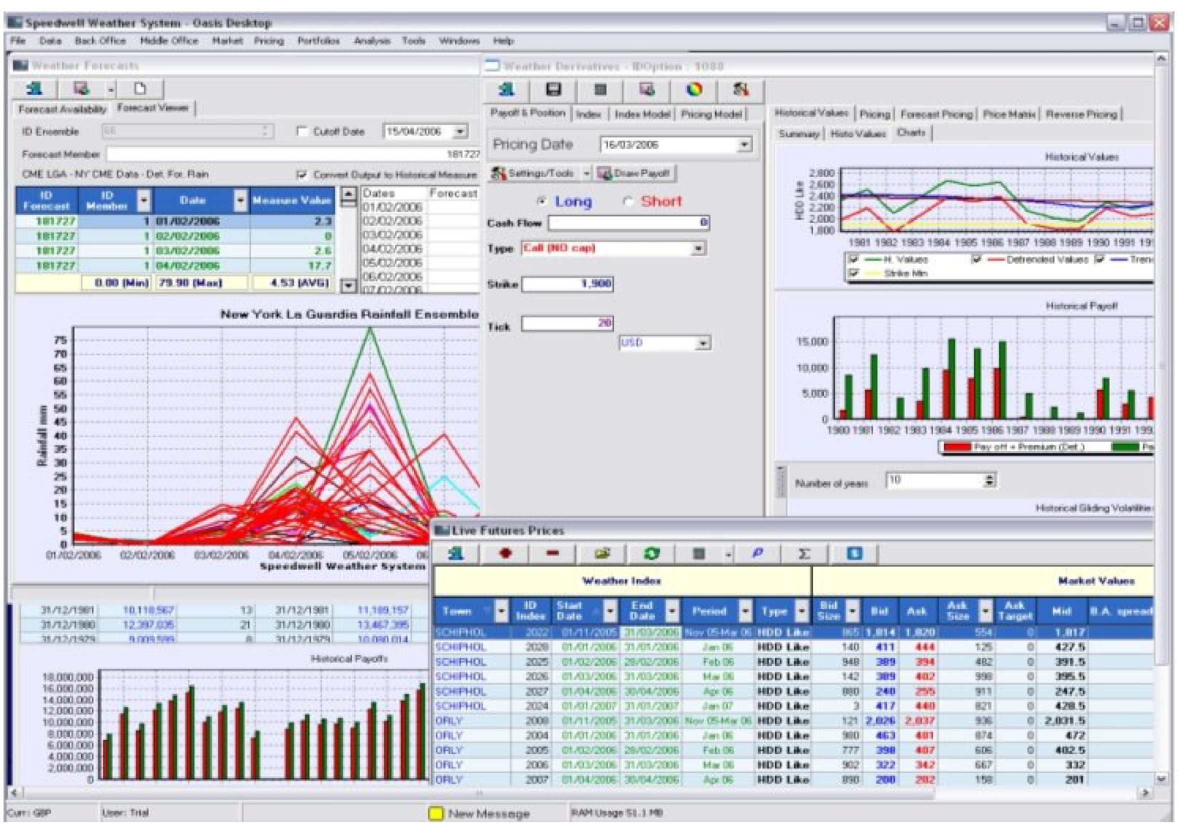
Speedwell Weather System

SWS Vs 6.5

The Open Weather Derivative Pricing and Risk Management System

Secondary Market Trading

Key Features



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Registered Office Mardall House, Vaughan Road, Harpenden, Herts AL5 4HU. Registered in England and Wales number 3790989

Introduction

The weather derivative market is sometimes divided into two areas: the trading of liquid secondary market products and the trading of tailored and often exotic structures.

SWS covers the requirements of both areas: the former requires tools to interpret and track such market prices. The latter requires an actuarial approach to derive the prices. Portfolios of such assets are normally marked to model but can also be marked to market.

Front Office Secondary Market Features

- Integration of real time market prices via YellowJacket® in a configurable grid showing live futures and options prices as well as trader's own prices, historicals and forecast information (optional component).
- Integration of real time CME futures and options prices (optional component).
- Spread Calculator for comparing the value of two or more options as a spread or basket trade. Simply click on contracts from the real-time grid, press button.
- Ability to price structures with multiple simultaneous pricing methods and different detrending methods.
- Futures Trade Board for the visualisation of futures statistics and trading positions. Trader-configurable to show desired contracts.
- Options Trade Board for the display of pricing statistics including Forecast Impact values and burns. Trader-configurable to show desired contracts.
- Analysis of fair value of futures and options using a variety of detrending and pricing methods on any secondary market index (eg HDD, CDD, Frost Days, etc).
- Incorporation of deterministic and **ensemble** weather forecasts and probabilistic weather index forecasts into pricing models.
- Price options using market swap level and market implied volatility.
- Option volatility smile extraction.
- Matrix generator for any pair of variables. This is especially useful for pricing options as function of swap level and volatility, and strike and vol for given future prices, etc.
- Detailed pricing summary including Greeks, marginal VaR, profit margin, return on standard deviation when pricing.
- Market views: record OTC swap and options prices and graph over time.
- Climate and market swap spread curve.
- Black model Option Pricer and reverse pricer (ie back-out implied volatility).
- Support for capped, uncapped, digital and barrier structures.
- Time value of money taken into consideration.
- Ticket booking with full auditing.
- See portfolio of weather risk represented as delta-equivalent swap amount.
- Index correlation generator.
- Index publisher.
- Cone and term structure of index mean and volatility.
- Index summary position screen to analyse the current sum of trades on any single index.
- Analysis of a number of structures at once.
- Site correlation tool.
- Forecast viewer to see multiple forecasts for multiple reference sites

Middle Office Secondary Market Features

- Incorporation of deterministic weather forecasts in all portfolio calculations.
- Incorporation of ensemble weather forecasts in all portfolio calculations.
- Highly detailed and fully configurable expiry and daily Value at Risk reports.
- Markowitz analysis including the difference of portfolio mean for each marginal structure.
- Credit risk to individual counterparties for any period.
- Complete P&L report from trade inception, turn of year, last valuation.
- Automated mark to model and mark to market reporting.
- Automated mark to market using CME closing prices.
- New trade(s) marginal impact analysis and implied pricing.
- Ability for independent middle office analysis of portfolio using different pricing models to those used in front office.
- Automatic generation of discount rates from a rate curve for use in NPV calculations

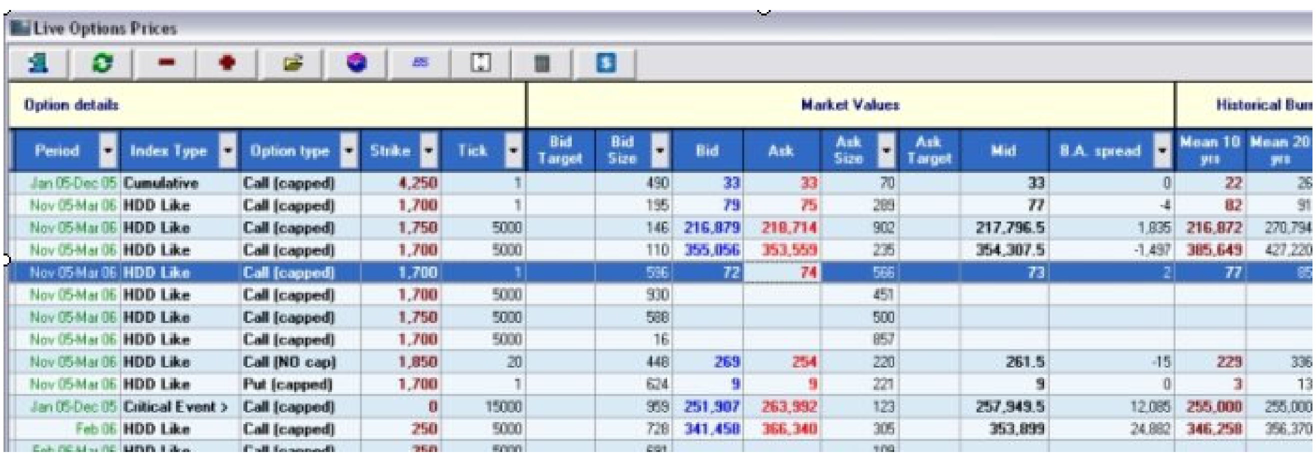
Futures Price comparator Screen: View multiple prices from user-specified models

Compare Futures Models

Drag a column header here to group by that column

Weather Index				Model 1: LOESS Temp - Forecast WXC 10 AVG				Model 2: IM5 Trial - LOWESS - Autofill				Model 3: IM13 Trial -	
Town	Index Type	Period Start	Period End	10 Yr Mean	All Yr Mean	10 Yr Vol	All Yr Vol	10 Yr Mean	All Yr Mean	10 Yr Vol	All Yr Vol	10 Yr Mean	All Yr Mean
CME ATL Atlanta Hartsfield Internat	HDD Like	01/03/2006	31/03/2006	1,518.24	1,515.36	14.5	16.14	1,519.05	1,519.7	14.45	15.95	1,519.05	1,519.7
CME ATL Atlanta Hartsfield Internat	HDD Like	01/11/2006	31/03/2007	2,340.37	2,299.21	351.81	289.75	2,388.35	2,330.71	351.96	286.08	2,388.35	2,330.71
CME ATL Atlanta Hartsfield Internat	HDD Like	01/11/2006	30/11/2006	312.82	314.98	107.14	88.65	313.25	315.94	107.53	88.14	313.25	315.94
CME BOS Boston, Logan Internation	CDD Like	01/05/2006	31/05/2006	17.68	19.54	17.42	16.87	15.71	15.81	16.74	16.19	15.33	15.3
CME ORD Chicago, Chicago-O'Hare	HDD Like	01/03/2006	31/03/2006	798.34	805.02	26.25	28.1	793.38	796.26	26.21	27.64	793.38	796.26
CME TUS Tucson International Airp	HDD Like	01/03/2006	31/03/2006	138.97	139.32	45.2	58.58	142.72	141.97	44.67	58.09	142.72	141.97
Dallas / Fort Worth, Dallas / Fort W	HDD Like	01/03/2006	31/03/2006	287.03	278.55	88.67	70.63	274.57	265.39	87.58	70.43	274.57	265.39
HEATHROW	Cumulative	17/02/2007	18/03/2007	204.87	204.98	55.07	47.98	187.37	178.26	47.58	46.45	187.37	178.26
HEATHROW	HDD Like	01/11/2005	31/03/2006	1,904.52	1,906.81	7.46	6.45	1,902.99	1,902.64	7.23	6.22	1,902.99	1,902.64
HEATHROW	Cumulative	01/03/2006	31/03/2006	157.18	155.04	7.46	6.46	158.71	159.02	7.23	6.23	158.71	159.02
New York, La Guardia Airport	HDD Like	01/03/2006	31/03/2006	632.96	637.4	23.07	22.02	634.34	637.73	22.85	21.7	634.34	637.73
Philadelphia, Philadelphia Internatio	HDD Like	01/03/2006	31/03/2006	632.34	635.07	85.93	92.13	628.89	630.57	85.05	92.37	628.89	630.57
Portland, Portland International Airp	HDD Like	01/03/2006	31/03/2006	546.35	535.14	60.19	59.32	550.47	542.34	60.83	59.28	550.47	542.34
SCHIPHOL	Cumulative	01/03/2006	31/03/2006	96.5	95.46	8.85	8.9	99.26	100.28	7.99	7.91	99.26	100.28

Market View Grid: View live OTC prices, forecasts, risk and modeled prices



Live Options Prices

Option details					Market Values								Historical Burn	
Period	Index Type	Option type	Strike	Tick	Bid Target	Bid Size	Bid	Ask	Ask Size	Ask Target	Mid	B.A. spread	Mean 10 yrs	Mean 20 yrs
Jan 05-Dec 05	Cumulative	Call (capped)	4,250	1		490	33	33	70		33	0	22	26
Nov 05-Mar 06	HDD Like	Call (capped)	1,700	1		195	79	75	289		77	-4	82	91
Nov 05-Mar 06	HDD Like	Call (capped)	1,750	5000		146	216,879	218,714	902		217,796.5	1,835	216,872	270,794
Nov 05-Mar 06	HDD Like	Call (capped)	1,700	5000		110	355,056	353,559	235		354,307.5	-1,497	385,649	427,220
Nov 05-Mar 06	HDD Like	Call (capped)	1,700	1		536	72	74	566		73	2	77	85
Nov 05-Mar 06	HDD Like	Call (capped)	1,700	5000		930			451					
Nov 05-Mar 06	HDD Like	Call (capped)	1,750	5000		588			500					
Nov 05-Mar 06	HDD Like	Call (capped)	1,700	5000		16			857					
Nov 05-Mar 06	HDD Like	Call (NO cap)	1,850	20		448	269	254	220		261.5	-15	229	336
Nov 05-Mar 06	HDD Like	Put (capped)	1,700	1		624	9	9	221		9	0	3	13
Jan 05-Dec 05	Critical Event >	Call (capped)	0	15000		959	251,907	263,992	123		257,949.5	12,085	255,000	255,000
Feb 06	HDD Like	Call (capped)	250	5000		728	341,458	366,340	305		353,899	24,882	346,258	356,370

Back Office Secondary Market Features

- Full reports of all transactions to be settled viewable by counterparty, date, period, trader (etc).
- Automatic data download from multiple data and forecast providers.
- Automatic calculation of settlement values.
- Automatic alerts and calculation of post-settlement adjustment.
- Forecast cashflows to help manage bank account balancing.
- Transaction report showing daily, year to date and other period p&ls.
- An optional component now allows automatic generation of trade confirms and invoices integrating with existing SWS back office functionality.

Contact Us

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