

Speedwell Settlement Services

Speedwell Settlement Services for Index-Based Weather Risk Contracts

Speedwell Settlement Services is a member of the Speedwell Weather group of companies. The Speedwell group has been providing weather data to the weather risk management industry since 1999, and is the major provider of OTC Settlement Data for index-based weather risk contracts worldwide. **We view weather data as a form of financial market data and treat it accordingly.**

The role of Speedwell Settlement Services in any weather transaction is:

- To define the process, data quality, data source, delivery cycle and methods used to address errors and missing data in a Settlement Contract. This ensures total transparency in the process.
- To provide a feed of data to the counterparties during the life cycle of the contract term. The data supplied is of the highest quality with no missing data points and gross errors removed, corrected and fully documented with notifications issued to all parties for transparency.
- At the end of the contract term, to provide the final Settlement Data (Index) to all counterparties at the same time along with an accompanying Settlement Certificate to enable any payout to be calculated, documented and actioned.

This approach can help address concerns about possible moral hazard and removes the risk of disputes arising from different datasets being used to calculate payout – this can happen when sourcing data directly from national meteorological services ('NMS'), which make un-documented revisions from time to time, or which may be unfamiliar with providing weather data used for financial transactions.

How Speedwell Settlement Services ensure that your data is right for your transaction

Whilst data from *most* G20 NMS is of a high quality, we regularly see data problems including delayed or missing reports, mis-reported data, data transmission and data entry errors, as well as site closures during the contract term. This is how we address different data issues which we often see arising:

- **Delayed Data from Source**

Speedwell will contact the NMS to try and obtain the delayed data. If this is not forthcoming, then a temporary value will be generated from other information until the official value becomes available e.g. use alternative/backup data sources, interpolate a value from hourly data, use an estimate based on surrounding proxy sites, use an algorithmically determined value from forecasts, climatology, satellite/radar data generated by our in-house software.

- **Missing Data**

Speedwell will contact the NMS to try and obtain the missing data. If this is not forthcoming a value will be generated using the methodology agreed and documented within the Settlement Data contract. Speedwell can advise on suitable methods and techniques for generating an estimated value prior to the start of each contract.

- **Data Errors**

These include keying errors, mis-coded reports, manual reading errors, instrument errors and others. Our team of meteorologists review all weather data used within weather risk contracts using both algorithmic testing and human inspection. Where an error is identified with a high degree of confidence, and always subject to the philosophy of "do no harm", an estimated value is generated using industry standard methods.

- **Non-standard reporting periods**

This is often seen with rainfall. Where rainfall has been reported for multiple days (e.g. Australia) and where those days fall over the start or end of a risk period, our team of meteorologists will thoroughly examine the synoptic situation by using proxy information including radar, satellite, forecasts and other information to provide an appropriate daily apportionment of the total precipitation.

- **Failure or closure of a site during a weather risk contract term**

Speedwell will generate a synthetic value using established and historical relationships between closed sites and surrounding weather stations, as appropriate. We normally favour a non-prescriptive method rather than a traditional fall-back method. This helps address possible moral hazard concerns arising from potential malicious “failure” of the primary site; to force the use of fall-back sites with a known bias.

Speedwell Settlement Services is the major provider of Settlement Data world-wide for OTC weather transactions

Examples of transactions where we have been Settlement Data provider include:

- Brazil/Uruguay: 2014-15 we acted as Settlement Data provider, Settlement Agent and Calculation Agent relating to bilateral margining for the largest public weather derivative transaction to date. This related to a \$450m rainfall hedge for the Uruguay national power company, UTE, as arranged by the World Bank. Speedwell’s role included installing and maintaining additional weather instruments to back up the local network.
- Chile: Settlement Data provider for a large rainfall hedge for a local hydro producer. This involved installing additional weather instruments to reduce moral hazard.
- USA: Settlement Data provider for multiple agriculture-related hedges.
- Australia: Settlement Agent for a number of hydro and mining related Australian rainfall transactions.
- UK: Settlement Data provider for a temperature hedge (sugar beet production), wind-power production multi-site basket, the weather component of a large UK temperature/gas price hedge and others.

.....and many, many others!

Settlement Data can be requested for any traditional OTC transaction based on data from any observation site around the world which meets the necessary quality considerations. We are also able to deliver Settlement Data based on gridded data sets including wind, marine and solar.

Weather Station Installation

The installation of weather stations is sometimes required in order to provide advanced quality control of pre-existing weather stations or to establish an observation point in close proximity to a risk location (minimize “basis risk”). Speedwell has many years’ of experience in the data requirements necessary for cost-effective weather risk placement. Using the latest instrumentation and communications systems weather stations can be deployed on short notice to meet the needs of the index-based weather risk market.

Settlement Data and the weatherXchange® Platform

Settlement services can also be requested through the weatherXchange® Platform. The weatherXchange Platform helps companies structure and compares prices for index-based weather risk protection. It also provides access to post-trade services. Please see

www.weatherXchange.com.