

High Fashion, High Stakes

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[stag_intro]Haute couture or ready to wear, does a fashion collection succeed or fail, not for the rise and fall of the hemline but instead ... the mercury?[/stag_intro]

The fashion industry has recently been rocked by a pioneering new study, coming right out of the fashion capital itself. It employs the latest advancements in meteorological technology and data modelling by the engineers of Europe's leader in climate risk management, Meteo Protect, cross-referenced with the historical sales figures recorded by the French Institute of Fashion. The study has revealed startling new insights into the vulnerability of the fashion industry.

With its headquarters in Paris, and a regional office in London, it was only a matter of time before Meteo Protect turned its attention to the fashion world. Published in the *European Journal of Operational Research*, the authors of the study "Assessing and hedging the costs of unseasonal weather: case of the apparel sector" regarded as their control group what we would generally refer to as "normal weather", the historically average seasonal variations and associated expected weather linked with each season per region. This is the very weather that the fashion industry relies upon when designing its seasonal collections and advertising campaigns, stocking retail floor shelves, anticipating customers to hit the shops on cue, and projecting sales profit.

But what if the weather does not cooperate? What if the temperature rises by a degree or two outside of the expected seasonal margin? Whilst the fact that weather has an impact on apparel sales is not new to retailers, what has never before been scientifically studied is the exact causal link between "abnormal" weather and the fashion industry's corollary losses, leaving the fashion industry with a massive exposure to risk, completely uninsured and therefore an extremely poor investment choice.

However, the study has found that the risk profile of weather forecasts to the fashion industry can be objectively determined. The effect of a variation of weather on each product category, distribution channel, and region, can be pinpointed to the precision of a degree drop, and by extension so can any relevant weather variable, being that wind, precipitation, frost, snow, ice, or other adverse weather phenomenon.

Specifically, the study found that each degree below "normal" in spring costs 3% in sales revenue and each degree above normal in autumn decreases sales revenue by 2%. In fact, abnormal weather correlates with 52% of revenue in spring and 43% of revenue autumn. That translates into one very grim statistic: the weather generally accounts for half of the revenue decline in the textile and clothing sectors.

However, variations in expected weather affect various fashion distributors to varying degrees. For example, fashion chains are more vulnerable than boutiques. A total of 60% of a chain's sales losses are linked with weather variations compared to 13% for boutiques. Similarly, various categories of

clothing are not uniformly affected by weather anomalies. On average, weather anomalies account for 31% of variations in sales revenues for men's clothing sales, 42% for women's, and 53% for children's clothing sales.

Fortunately, the study's impact extends beyond being able to show the effects of weather on sales. It can be used as a valuable tool for the fashion industry to minimize risk and lessen the impact of weather.

There are two strategies that can be employed for this purpose. The first is operational. The operational strategy is to optimize the geographical distribution of sales outlets and distribution channels by diversifying the product mix. In other words, stores must hoard a large amount of diverse merchandise in order to account for all weather possibilities, for example holding on to autumn wear in the winter in case it is unusually warm, and winter wear in the spring, in case it is unusually cold. Clearly, this is an expensive way to be prepared for all weather eventualities but it is the traditional way that retailers hedge their losses in the case of unseasonal weather.

The second option is financially strategic, whereby the fashion houses are compensated for losses caused by the weather. Taking into consideration the weather that is expected and has been accounted for in all aspects of the supply chain then, index-based weather insurance is purchased for the event that weather does not arrive as expected. Specifically, compensation would be paid to the company if a predetermined threshold of adverse weather is triggered. That threshold can be any weather anomaly that may affect sales, such as a fixed amount of high or low temperatures reached (degree days), rain, frost, snow, or ice per critical day or over a fixed period, measured in days, weeks or even years. The compensation purchased is proportional to the magnitude of the expected loss.

Unlike traditional insurance, however, index-based weather insurance triggers a payment completely linked to the weather, and not to the losses. Payment is simple, transparent and automatic, without requiring a field loss assessment. Rather, compensation is triggered only to a defined weather event, pre-determined as demonstrating a causal linkage to an enterprise's revenue streams. For example, if a women's summer sales line replete with light, colourful fabrics suitable for the expected sunny and warm summer is released in region A, but region A in fact suffers an unusually cold and rainy season, the stores would not have reached necessary sales targets because no one would be hitting the shops for summer clothing while shivering on the way to work.

For a company having weather-based index insurance in place, this possible eventuality has been prepared for. Thanks to automatic compensation triggered by the weather forecast, the summer line can be discounted, product turned over, capital and liquidity preserved and cash flow stable. All of this without the increasingly archaic explanation on their annual budget blaming the company's misfortunes on the weather.

The implications of this study extend far beyond fashion. In recent years, weather and its potential impact on the economy have turned into a serious concern due to climate change exacerbating naturally occurring climate variability, and weather-sensitive economic sectors face greater uncertainty than ever. In fact, in industrialised countries, about 70% of firms are exposed to changes in everyday weather, in a wide range of economic sectors, such as agriculture, tourism, food, beverage, transportation and construction to name a few. Whereas the apparel industry exhibits the most clear consumer demand response to a change in weather of the retail industry, weather can shift the timing of purchases, generate purchases that would not otherwise occur, or cause a permanent loss of demand in all sectors. As a result, managers need to profitably use weather information and protect their firms against weather-related lost sales in almost every industry sector.

Studies have indicated that adverse weather is the most cited reason for retailers' explanations of poor performance. Having determined that one can evaluate sales at risk from unseasonable weather, however, new avenues for weather risk transfer open up. Financially hedging using weather derivatives, as index-based weather insurance does, is the most obvious and cost effective means to

protect against unmet profit targets. In the future, blaming it on the weather simply won't cut it.