



## A Letter to Readers

# It's All About Knowledge



Research is *not* just about reporting statistics, but about gaining and sharing knowledge. That knowledge comes in many forms, gets conveyed in different ways, and is presented at various levels and degrees of completion.

One form of that knowledge can come from discussions with leaders of the industry or leading researchers. In this issue of the *Research Review*, that type of shared knowledge is exemplified by the *Visions* discussion with **Charles B. Lebovitz**. Charles is a true leader of the industry and a past leader of this organization. His perspective and prospective views are always “food for thought.”

Our “*leading researchers*” series—conceived and edited by **Jim DeLisle** of the University of Washington—offers another side of research. By profiling researchers who have risen to the top of their field, this series offers all of us some knowledge about people, paths and processes that have made a difference (at least behind the scenes for most companies). In recent conversations with the former Kmart CEO **Floyd Hall** and ICSC Trustee **Jim Hale** of Target, both praised our featured researcher’s abilities, insights and contributions. Therefore, I am pleased that **Larry Carlson** accepted my offer to share his background and experience for this issue.

I am thrilled with the depth and breadth of the current issue before you. However, this means that I cannot, in this overview, do justice to all of the knowledge that is shared in these articles. So take a few moments to scan the table of contents. *It will become obvious that this issue is special.* It includes a record number of international articles, a record number of “tools of the trade” articles, a special trilogy on weather and consumer demand and much, much more. This issue also arguably publishes ICSC’s first shopping center poem, thanks to **Ben Stein**, who is better known not for his poetry, but as a political speechwriter, law professor, economist, author, columnist, actor and for his television game show.

There is truly something for almost everyone in this issue. For those interested in *underserved markets*, there is a methodology article on “mapping deprivation” by **George Smith** and **Tom Smith**. For those interested in the economic impact of the industry, there is a tool to assess that from the Federal Reserve, which is described by **Dan Gorin**. For those interested in international issues, we have seven articles covering the world, thanks to ICSC’s staff, academics and members, including **Marcelo Carvalho**, **Fabián Sánchez**, **Sascha Muensch**, **Rob Boyle**, **Suad Ghaddar** and **Cynthia Brown**, who help to give us a global perspective on the industry. For those interested in performance and strategy, there are a couple of articles (even on the international side) that address those issues, including one by **Paul Morgan**. Everyone talks about the weather, and in this issue, we do too, with the help of **Bill Kirk** and **Scott Bernhardt**. And yes, there is more.

I was fortunate to assemble such high-quality research from people in industry, government and academia. This issue is truly chock-full of knowledge.

Sincerely,

Michael P. Niemira  
Chief Economist and Director of Research

# RESEARCH REVIEW

VOLUME 12

2005

NUMBER 2

## CONTENTS

### **VISIONS**

- What's a Mall? – Learning the Lessons Well  
An Industry Perspective with Charles B. Lebovitz ..... *Michael P. Niemira* 1

### **FEATURES**

- The Time-Pressed Mall Shopper ..... *Veronica V. Soriano* 4
- The U. S. Retail Space Market ..... *Michael P. Niemira* 9
- Market Share Growth of Warehouse Clubs and Supercenters ..... *Oliver Brassard* 14
- Evaluating the Recent Impact of Wal-Mart on Shopping Center REIT Valuations. .... *Paul Morgan* 19
- Weather Matters ..... *Michael P. Niemira* 23
- Better Business in Any Weather ..... *Bill Kirk* 28
- Weather's Impact on Business ..... *Scott Bernhardt* 35
- Scope Canada ..... *Jodi Uiberall* 39
- Canada's Appeal to International Retailers ..... *Robert J. Boyle* 43
- The Cross-Border Mexican Shopper: A Profile ..... *Suad Ghaddar and Cynthia Brown* 46
- U.S. Retail Real Estate Investment Funds Look to Mexico ..... *Fabián Sánchez* 51
- The Brazilian Shopping Center Industry ..... *Marcelo Carvalho* 56
- European Shopping Center Investment – Market Review 2004 ..... *Sascha Muensch* 58
- The Shopping Center Industry in Japan ..... *Bindu Nair* 63

### **TOOLS OF THE TRADE**

- The Federal Reserve Fiscal Impact Tool ..... *Dan Gorin* 66
- Financial Attitudes of Affluent Households Impact Consumer Spending ..... *Catherine McBreen* 71
- USDA – An Unlikely Source of Market Segmentation Information ..... *Susan Pistilli* 73
- Using Company News as a Research Tool ..... *Mark Pender* 77
- Mapping Deprivation at the Local Level:  
Recent Experience from the United Kingdom ..... *George Smith and Tom Smith* 79

### **EYE ON THE INDUSTRY**

- Lessons Learned, Lessons Shared with Larry Carlson ..... *James P. DeLisle* 85

### **VIEWPOINT**

- U.S. Shopping Center Classifications: Challenges and Opportunities ..... *James P. DeLisle* 96
- Ode to the Shopping Center ..... *Ben Stein* 102



# Better Business in Any Weather

*A Look at How Weather Influences Consumer Shopping Patterns and Product Sales, and What Retailers and Manufacturers Can Do About It*

Bill Kirk\*

Mark Twain said, “Everybody talks about the weather, but nobody does anything about it.” This may have been true in the 1800s. But in today’s highly competitive business climate, more and more companies are taking actions to better manage the risk that unfavorable weather poses to sales and, conversely, to capitalize on periods of favorable weather to maximize sales of those seasonal products. The truth is that stockholders have grown weary of earnings reports that use the weather as a reason for poor performance. Today, the pressure to perform regardless of the weather is a reality. The fact is that weather impacts human behavior in the way we buy, when we buy and in what quantities.

There are three basic theories on weather and consumer spending<sup>1</sup>: (1) Purchase Timing Theory, (2) Permanent Impact Theory and (3) Weather/Consumption Cycle Theory. The first simply suggests that weather merely delays sales, but does not impact overall consumption. The second implies that sales are, in fact, permanently lost to a prolonged unfavorable weather event. The third theory, The Weather/Consumption Cycle, suggests that weather plays a far more significant and complicated role in our overall economy than is stated in the other two theories. It is interesting to note that the last six recessions (1971, 1974, 1980, 1982, 1990 and 2001) all occurred in very unfavorable weather years.

This makes intuitive sense, since unfavorable and favorable weather impacts consumer buying behavior. There are two primary classifications for the types of products we purchase: “*need*” or “*want*” (nice-to-have). An example of

a need product would be when your car battery fails and you need to get it replaced to get the car working again. A want product would be a satellite radio for your car.

The seasonal need items are the most weather-influenced product categories, which show the greatest volatility year after year. These product categories present the biggest challenge to both retailers and manufacturers. Consider how weather impacts the following business segments:

1. **HARDLINES:** Example products would include air conditioners, automotive batteries, pools supplies, water toys, patio furniture and grills.
2. **SOFTLINES:** Example products would include coats, shorts, sandals, t-shirts, swimsuits.
3. **CONSUMER PRODUCTS:** Example products would include suncare, anti-itch creams, bug repellents, beverages.
4. **ENERGY CONSUMPTION:** An example of how weather impacts store cooling costs.
5. **OVERALL COMPARABLE-STORE SALES:** The overall business is affected by weather, as store traffic is, in part, a function of how favorable the weather is for shopping.

## **HARDLINES**

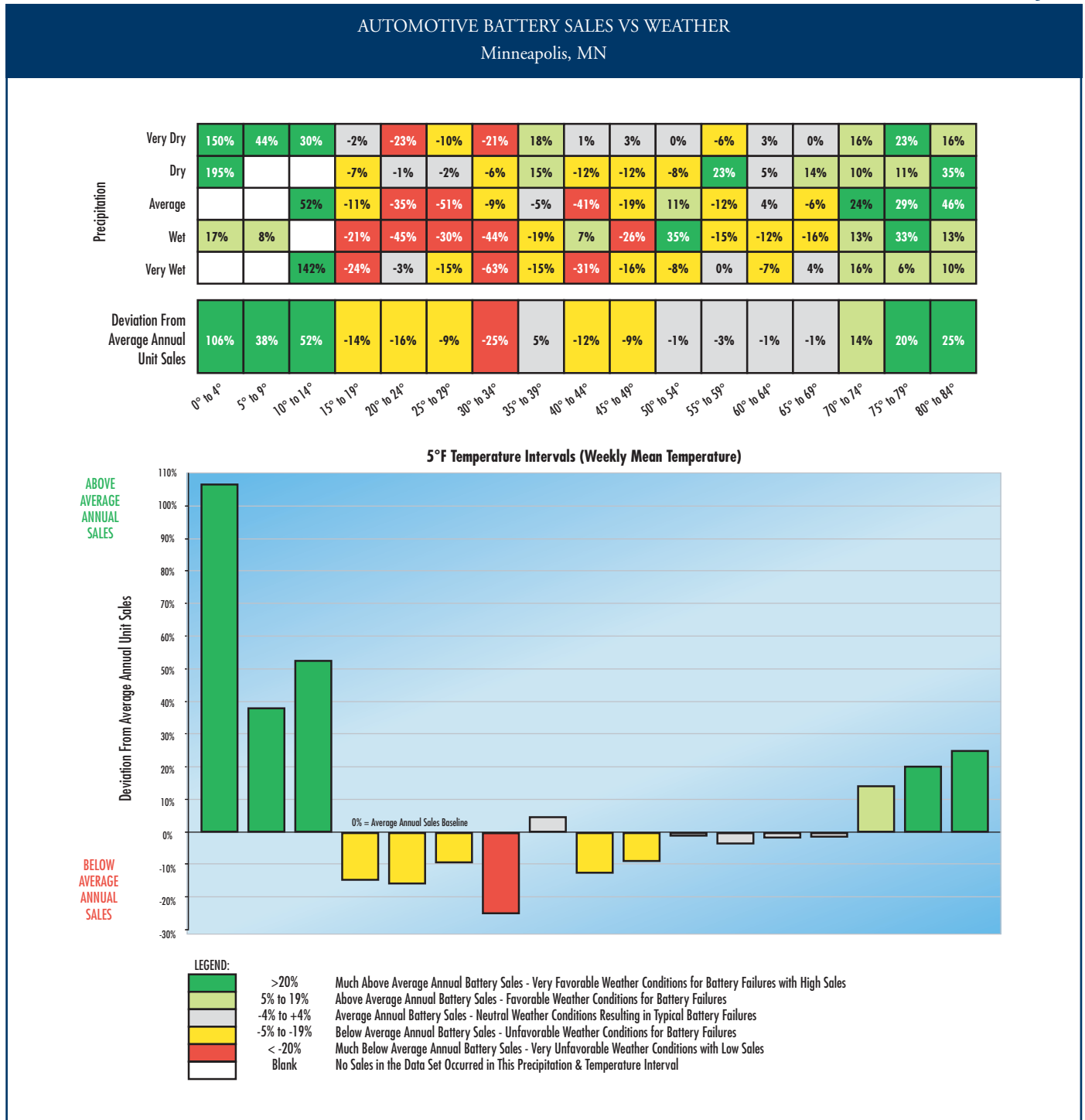
A need category example that is strongly impacted by weather is automotive batteries. Figure 7-1 depicts the sales performance of automotive batteries in different temperature and precipitation intervals.

Anyone who has lived in a northern climate knows that really cold weather can lead to an unpleasant surprise when you go to start your car on a chilly morning and

\*Vice President, SDI/Weather Trends

<sup>1</sup> Michael P. Niemira and Philip A. Klein. *Forecasting Financial and Economic Cycles*, John Wiley & Sons Inc., New York, NY, 1994.

Figure 7-1



Source: SDI/Weather Trends

nothing happens! A dead car battery is far more likely when temperatures dip in the northern regions of the country. This type of product knowledge is a “must” for retailers. It is imperative that they know the most conducive weather for a seasonal product’s sales before developing a merchandising strategy or planning a promotional event.

Figure 7-1 shows the deviation from average annual automotive battery sales in Minneapolis, Minn., in 5° temperature intervals across five precipitation categories. Temperatures are defined as a weekly mean temperature. Therefore, when it is really cold, with weekly mean temperatures below 14° (implies high temperatures in the



middle 20°s and low temperatures in the middle single digits), there is a 52% increase in battery sales due to weather-driven failures. Notice that there is a 66% swing in sales with just a 5° drop from 19° to 14°.

Imagine having a well-funded battery promotional event planned for a particular winter week in Minneapolis and temperatures rise unexpectedly to a balmy weekly mean of 32° (high temperatures well above average in the 40°s). There would be no lift in battery sales, and the spent advertising dollars would be forever lost!

Referencing our matrix in Figure 7-1, we see that, historically, a weekly mean of 32° along with very wet conditions (200% above average rain or snowfall) has yielded well below average annual sales of -63%. Conversely, if an event was timed in a colder period, 0° to 4° for example, the outcome produced a +106% increase in sales. The product-weather matrix also reflects that temperatures between 15° and 49° generally result in fewer battery failures and lower sales. Between 50° and 69°, battery sales are near average annual sales, with little impact due to weather. And, above 70° failures are again likely with +25% above average annual sales with extremely hot temperatures above 80° (high temperatures would be in the middle 90°s in Minneapolis). Precipitation has very little impact on this product category in this part of the country.

*How could retailers use this information in their businesses?*

Since an automotive battery is a need item, and is not typically a planned purchase, retailers should use in-store displays as a way to grab the attention of consumers when weather is favorable for battery failures. Favorable weather for battery failure is the key! Even a price incentive in a circular would not be an effective marketing strategy if the

weather would not produce battery failures, as consumers do not plan to replace a car battery in advance. A joint consumer survey,<sup>2</sup> commissioned by the International Council of Shopping Centers (ICSC) and SDI/Weather Trends, confirmed that 62% of households were more likely to notice in-store displays and promotional signage if the weather warranted immediate use of the product. Using a reliable year-ahead weather forecast<sup>3</sup> to determine the most likely really cold, or really hot, weeks would allow retailers to strategically plan to have more battery inventory during really cold periods and enable them to craft the right marketing message at a time when the consumer is most likely to make the purchase. Automotive battery sales varies depending on the weather and location. Southern cities do not get cold enough in winter months to result in failures, so, in those locations, hot summer weather is the primary driver of increased sales.

The product-weather matrix can be done for any category by assessing weekly unit sales against past weather conditions for several years to identify the optimal combination of temperature and precipitation for a particular product. Sales can then be grouped by temperature and precipitation intervals, and expressed as a unit value or deviation from average annual sales.

## SOFTLINES

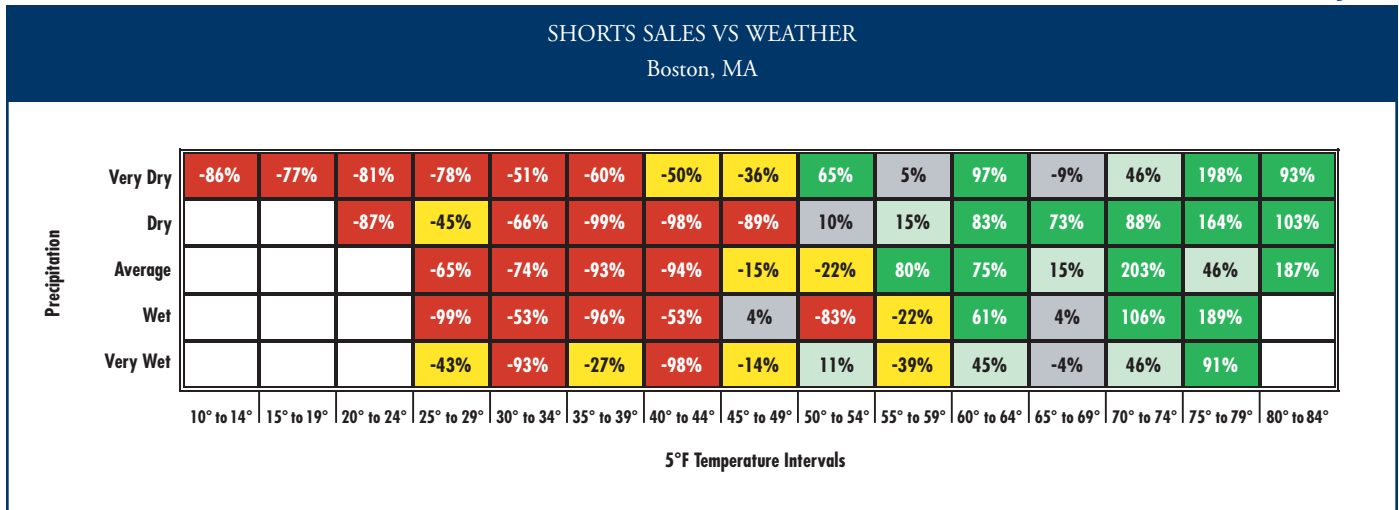
An example that shows even greater volatility due to weather is with the purchase of short pants. The shorts-weather matrix (Figure 7-2) clearly shows a strong influence of warmer temperatures. The volatility in sales swings is also very significant, as reflected in the matrix for Boston, Mass.: -99% to +203%! The optimal temperature range to sell shorts in Boston is between 75° and 79°, which implies high temperatures in the upper 80°s, along with very dry weather. Unlike automotive batteries, shorts can be both a need and a want item, so awareness-type marketing activities such as circulars, spot-radio and TV advertising or in-store displays all work well to remind consumers where to make their purchases when the weather warrants immediate wear.

<sup>2</sup> Opinion Research Corporation conducted the weather and shopping survey on behalf of ICSC and SDI/Weather Trends. Between March 17 and March 20, 2005, 1,014 households participated. The survey had an error of +/- 3%.

<sup>3</sup> There are several weather companies that project weekly temperature and precipitation trends by market up to one year in the future. SDI/Weather Trends is one of the leaders in the industry, with an extensive retail and manufacturing client base. SDI/Weather Trends assists clients with marketing, allocation, inventory and energy business decisions.



Figure 7-2



Source: SDI/Weather Trends

The consumer survey also found that 47% of households will wait to purchase shorts or summer apparel until the weather warrants use. The 55–64 age group was the most likely to wait, with 55% of this demographic delaying their shorts purchases until the weather got hot enough. It is not a coincidence that the 18–24 age group was most likely to purchase in advance of the season. This, in part, explains why retailers catering to younger consumers tend to be less influenced by unfavorable weather trends. When all age groups were asked in what weather they were *least* likely to go shopping, 45% said “snow,” 37% said “rain,” 35% said “excessive cold” and 30% said “scorching heat.”

An illustration of when age and weather jointly influence sales occurred during spring 2005. In May 2005, when temperatures trended the coldest in 22 years for the nation as a whole, especially in the Northeast, Abercrombie & Fitch was not negatively impacted, as comparable-store sales were up 29% from the same month of the prior year. Conversely, Charming Shoppes’ sales were down 2%, and the industry average increased by just +2.9%. When the weather turned very hot in June, Abercrombie & Fitch was up 38%, but Charming Shoppes was also up 8%! In addition, the retail industry in general was having the best June in six years, reflected by positive comp-store sales of +5.3%, due in large part to the hottest June in several years.

So, although there is some weather influence on teenagers’ shopping habits, it is much more pronounced

with the over-25 age group. There are also important gender differences, as women are more likely to purchase shorts earlier in the season than men, which explains how ladies’ shorts can be up 10% while men’s shorts are down 10% in the same weather. Many retailers would agree that women tend to plan in advance of the season, while men tend to be a bit more reactive and wait for hotter weather before making a purchase. But, 74% of all households and 82% of women surveyed agreed on one thing: A retailer’s selling season is out of sync with its buying season. An example of consumer frustration is that it is not hard to find a bathing suit in March, the snowiest winter month of the year, but almost impossible to find one in late July, the hottest time of the year. It is important to balance both the consumers’ needs that are highly influenced by weather trends while also managing business concerns such as excess inventory.

### CONSUMER PRODUCTS

The “itch” category—products for stinging insects, sunburn, allergies and poisonous rashes—offers a good example of a personal product that shows a significant correlation to the weather. Figure 7-3 depicts changes in national itch category sales for 2004 compared to 2003 and national year-over-year changes in national temperature. This product category has a correlation of 92% to temperature, with every 1° change toward warmer year-over-year weather yielding 7,222 more units sold.



The bars in Figure 7-3 depict the change in sales while the line reflects the change in year-over-year national temperature. Overall, the category was down 8% in 2004 due to the year's 16th coldest and 9th wettest summer in 110 years. Notice that from late June to late August, national temperatures trended colder for 10 straight weeks and sales followed the downward trend. This cold and wet weather also negatively impacted overall same-store sales for many retailers, with sales gains averaging just 2.3% in the summer of 2004.

An understanding of how a product behaves in different weather scenarios allows strategies to be put in place to minimize the effects of unfavorable weather. Pricing strategies are effective when the weather is not favorable for sales, especially early in the season. Giving a consumer a reason to buy now, despite the weather, can help to keep sales on plan. Conversely, when the weather is very favorable for sales, extra marketing activities or advertising may be necessary to remind consumers where to go shopping to get the products they need, regardless of price.

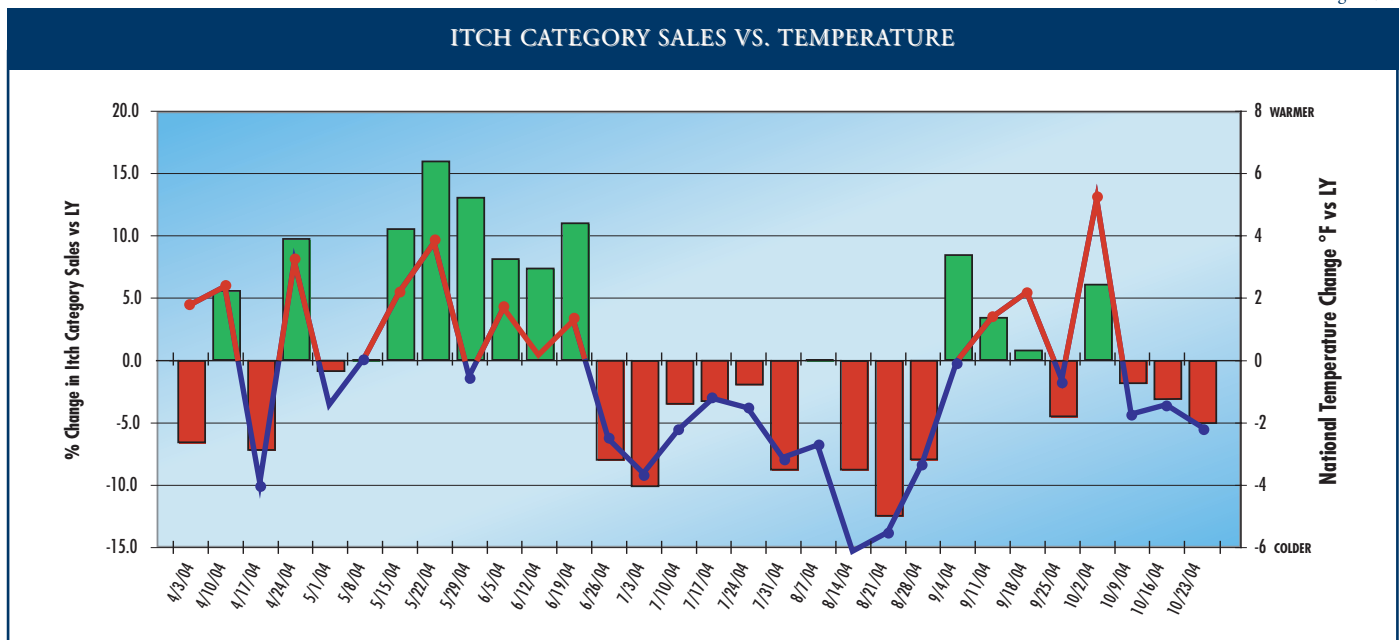
The last really good hot summer was in 2002, when the itch category peaked with 5,359,163 units sold. But the next two seasons were colder and wetter, bringing down

total sales to 4,783,323 units in 2004 (down 10.8%). So far, the 2005 summer season has been the hottest in several years, so it is not surprising that the itch category is up significantly, as are most seasonal product lines and overall industry comparable-store sales.

### ENERGY CONSUMPTION

After employee expenses, energy consumption is the second biggest expenditure, at about 10% of total operating costs for most businesses. The weather is obviously a significant factor that can make managing an energy budget a daunting task. Figure 7-4 shows the swings in kilowatt hour (KWH) energy consumption during the summer months for a retailer with stores in New York City. Over the past few summers, there has been an 8.8% volatility between the hot years and the cool years, which means that energy budgets are constantly below or above plan. It is important to note that this volatility is based on consumption from a new, highly efficient store, which means that older, less efficient stores may have even greater volatility. While a 1° change might not seem too drastic, it can result in a 1% or more increase in energy consumption. With the July 2005 average temperature 3.1° warmer than last year in New York City, the result was more than 3% higher energy consumption

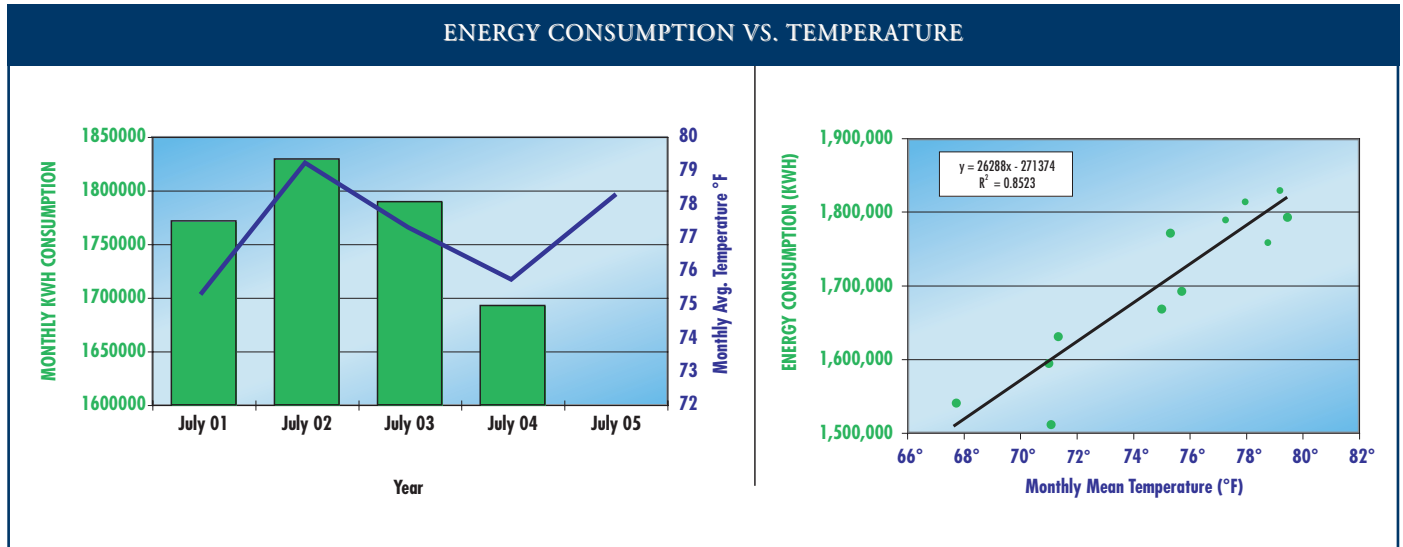
Figure 7-3



Source: SDI/Weather Trends



Figure 7-4



Source: SDI/Weather Trends

(over the prior year), which directly impacted the bottom line. With energy costs per KWH up too, that compounded the total expense.

Over the past four years, the correlation is a very high 92% (R2 = 85%) between KWH consumption and monthly mean temperatures in New York City for this particular retailer. More generally, retailers would benefit from understanding how weather affects store-level energy consumption (and expenses), and then utilizing a more accurate future monthly projection of temperatures to better estimate energy budgets. Additionally, the type of facility can affect the degree of impact weather has on energy usage. As an example, a freestanding store would have greater energy consumption compared with a store located within a conventional mall.

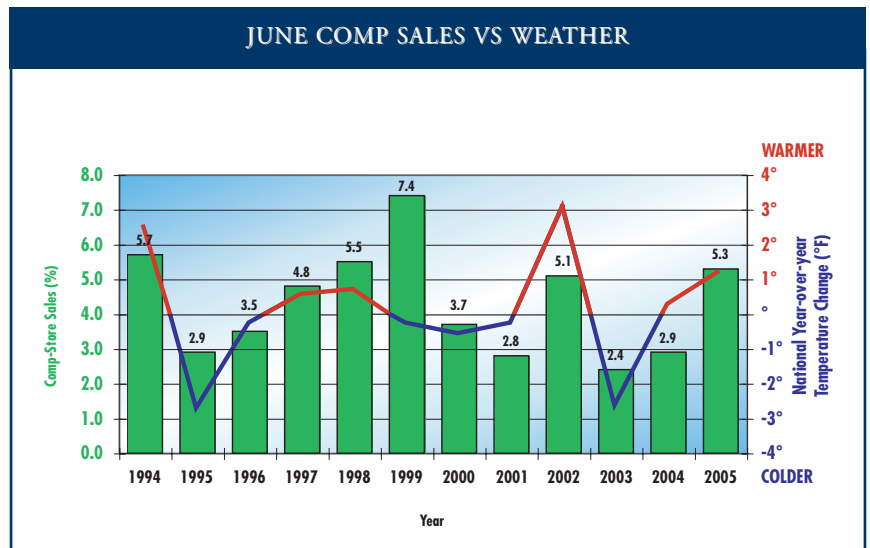
**OVERALL COMP-STORE SALES**

If we look at overall retail comparable-store sales trends and weather trends for spring-summer 2005 compared with the same period of the prior year, there is strong anecdotal and empirical evidence that weather played a big role in determining the overall performance of the industry.

Correlation studies between overall comp-store sales and year-over-year changes in temperature show a definite trend between the up-and-down movement of sales gains and the year-over-year change in the weather.

The experience during June 2005 provides a simple example of how most businesses benefited from the hottest June in three years, with many retailers commenting that comp-store sales were higher than expected. The retail industry posted a 5.3% gain in sales during June, according to ICSC, reflecting the best June since 1999.

Figure 7-5



Source: SDI/Weather Trends



Figure 7-5 shows industry comp-store sales gains (bars) compared to a national year-over-year change in temperature. The correlation over the past 12 years is 81.9% between comp-store sales and national changes in temperatures. Ideally, this type of analysis would be done at a smaller geographic area rather than at the national level, which would likely yield even better statistical relationships.

But even at a broad national level, if we know with some degree of confidence that June 2006 will trend 1.5° colder than average for the nation, it is a safe bet (83% likelihood) that year-over-year retail comp-store sales will tend to be one-to-two percentage points lower than otherwise, just due to colder weather.

## CONCLUSION

Just about every phase of a retailer or manufacturer's business is influenced by the inherent volatility in weather. Be it a specific product category, energy consumption or overall comp-store sales, the weather is always helping or hurting the bottom line.

Those retailers and manufacturers who acknowledge the influence of weather on sales can take actions to maximize sales for their seasonal categories by capitalizing on the opportunities presented by favorable weather and by managing the risk presented by unfavorable weather. It is possible to achieve *better business in any weather* by developing and executing a strategic plan that factors in

future weather. Planning on the basis of last year's weather alone is a recipe for failure, as weather patterns repeat with the prior year less than 20% of the time. A wiser strategy is to *understand how weather impacts your business and incorporate weather forecast information into your marketing so as to improve sales and increase profits.*

Bill Kirk, Vice President of SDI/Weather Trends, Inc., can be reached at 610-238-5223 or e-mail [bkirk@survdata.com](mailto:bkirk@survdata.com). Karen Baker, Senior Business Analyst and Jack Grum, Vice President for Business Development, both contributed to this report. SDI/Weather Trends Inc. ([www.wxtrends.com](http://www.wxtrends.com)) is a leader of actionable business-weather intelligence for retailers, manufacturers, pharmaceutical companies and agricultural firms whose product's sales are impacted by frequent changes in year-over-year weather conditions. Its weather solutions and understanding of how consumers respond to the weather are used throughout organizations to help *manage the weather risk* by timing and planning key marketing, advertising, markdowns and inventory allocation decisions around the weather. Utilizing technology first developed in the early 1990s, SDI/Weather Trends' unique statistical forecasting methodology projects temperature, precipitation and snowfall trends by week, 11-months into the future, for 284 locations across the United States and United Kingdom and, soon, in China, Japan and Canada.



International Council of Shopping Centers  
1221 Avenue of the Americas, 41st Floor  
New York, N.Y. 10020-1099 • 646-728-3670  
<http://www.icsc.org>

---

## EDITORIAL REVIEW BOARD

**Michael P. Niemira**  
Editor

**Jean Lambert**  
Associate Editor

**Susan A. Pistilli**  
Managing Editor

## ASSISTANT EDITORS

**Norris R. Eber, SCSM, CLS**, Joseph Freed & Associates, LLC  
*Case Studies*

**Paul Morgan**, FBR Group, Inc.  
*Financial Research*

## EDITORIAL BOARD MEMBERS

**Michael Baker**, Independent Research

**Robert J. Boyle**, Ivanhoe Cambridge

**Michel Choukroun**, Université de Paris

**John Cirillo**, New York & Company

**Dr. Yvonne Court**, Cushman & Wakefield Healey & Baker

**Dr. James DeLisle**, University of Washington

**Dr. Mark Eppli**, Marquette University

**John Kriz**, Moody's Investor Service

**Dr. Hayley Myers**, University of Surrey

**Ann Natunewicz**, The Mills Corporation

**Cynthia Ray Walker**, Federated Department Stores, Inc.

**Gary T. Weber**, J.C. Penney Company, Inc.

## RESEARCH STAFF

**Michael Niemira**, Staff Vice-President,  
Chief Economist and Director of Research

**Oliver Brassard**, Research Assistant

**Jean Lambert**, Manager of Global Research

**Bindu Nair**, Research Analyst

**Susan A. Pistilli**, Manager of Library Services

**Veronica Soriano**, Senior Research Analyst

**Michael Tubridy**, Librarian

**Jodi Uiberall**, Research Associate

## EUROPEAN RESEARCH GROUP

Chair: **Arno Ruigrok**, AM Development

Vice Chair: **Rafael Gomes Pelote**, Sonai Imobiliária

## LATIN AMERICAN RESEARCH GROUP

Chair: **Fabián Sánchez**, Commercial Real Estate  
Advisors (CREA)

Vice Chair: **Marcelo Carvalho**, Ancar Gestão  
Intergrada de Shopping Centers.

## NORTH AMERICAN RESEARCH ADVISORY TASK FORCE

Chair: **John B. Chapman**, Chapman Consulting

Vice Chair: **James K. Brand**, Limitedbrands

ISSN: 1043-5395

---

Copyright ©2005 by **International Council of Shopping Centers**. All rights reserved. Protected under Universal Copyright Convention and international copyright conventions. This publication may not be reproduced in whole or in part in any form without written permission from the International Council of Shopping Centers.

This publication is based on information ICSC believes is reliable. However, ICSC cannot guarantee its accuracy and is not liable for any damages arising out of reliance on the information contained herein.