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How optimized
are your markdowns
and merchandising plans?

Driving margin increases with markdown optimization

When it comes to deal shopping, stores have their customers well-trained. A customer knows exactly how many weeks it'll take before a particular season's golf shirts or sweaters will be marked down 50 percent. Assuming the consumer isn't looking for the latest trends, he can be fairly certain there will something in his size that won't clash with his khakis.

Although retailers have trained consumers to make a beeline for their sales racks, stores are still stuck with too much inventory taking up valuable store space. They are also unwittingly giving up profit on their marked-down items because of an addiction to a one-size-fits-all markdown strategy. Instead of looking at inventory and historic sales trends on a per-store basis, retailers simply execute price cuts across the board.

It's easy to understand why. What merchant has time to figure out how many size-12 black capris are left in the flagship New York store vs. the five mall stores in the suburbs? Merchants are consumed with the task of buying next season's clothes, not trying to figure out whether a 50 percent markdown or a 40 percent reduction will get those cargo shorts out the door at the right time. This is clearly an opportunity for decision process automation (DPA).

That's why retailers who use automated markdown optimization solutions consistently say they provide a 2 percent to 3 percent margin boost while increasing inventory sell-through by 10 percent or more. Markdown optimization uses advanced analytics – detailed forecasting capabilities and optimization routines – to determine prices down to a store/SKU level (see Figure 1).

Markdown optimization solutions build a detailed demand model using demand history and other factors (holiday dates and the traditional start of school, for example) to generate detailed forecasts that are run weekly by item. Merchants can run numerous scenarios and avoid unnecessary and unprofitable markdowns. With rules, costs and constraints built in, the data is searched automatically to determine the perfect pricing scenario. Gas stations have figured out how to price gas higher on the weekends without losing business. Markdown optimization can bring that kind of precision to thousands of SKUs across hundreds of stores.

Markdown optimization solutions are proactive. Instead of reacting to fixed business rules (school has started, so mark down the backpacks 50 percent), demand forecasts provide a more timely response (school started one week early this year, which means the shopping patterns are off, so don't mark down drastically yet). Price points are analyzed automatically and continually, and optimal pricing is selected to maximize profitability and achieve sell-
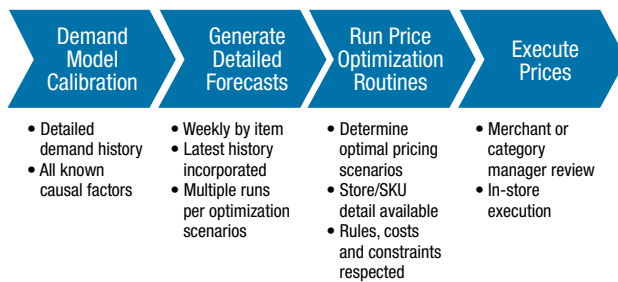
How markdown optimization works

Demand Model Calibration	Generate Detailed Forecasts	Run Price Optimization Routines	Execute Prices
• Detailed demand history • All known causal factors	• Weekly by item • Latest history incorporated • Multiple runs per optimization scenarios	• Determine optimal pricing scenarios • Store/SKU detail available • Rules, costs and constraints respected	• Merchant or category manager review • In-store execution

Figure 1: Markdown optimization combines analytics, detailed forecasting and optimizing routines to determine prices down to the store level.

through goals, making markdown optimization a great example of DPA. In practice, markdown optimization tends to trigger carefully targeted, aggressive, early markdowns that eliminate more costly late-life-cycle discounts.

Busy merchants love the automated aspect, freeing them from having to make markdown decisions. Store managers say they like the fact that their markdowns are tailored to their customers. How often have managers complained that a markdown wasn't quick or steep enough for a product that was a poor seller? Or, conversely, how often have they felt frustrated when corporate pushes a price markdown on a product that was selling out quickly at full price?

Along with size optimization, retailers who use markdown optimization say it is one of the simplest and quickest ways to get ROI – the kind of ROI that can help fund additional technology, such as performance

management, advanced assortment planning and merchandising solutions. Markdown optimization requires no more than the kind of data that most retailers already have, and implementations typically take four to six months. A solution can be implemented at any point in the year because it isn't tied to preplanning schedules. One customer SAS worked with described it as the easiest IT implementation the company had ever worked on.

Markdown optimization involves a degree of business process change that doesn't necessarily exist with other software applications. Merchants need to think differently about the timing of their markdowns, the percentage discount they will offer their customers and the measurement of the true return of each markdown cycle. Most merchants are used to strict markdown schedules that have been in place for many years. Restricting the timing and depth of

first markdowns, for instance, was not a big deal when markdown discount cadences were predetermined with little recognition of sales and inventory positions. But in the dynamic world of automated pricing, these operationally driven constraints can affect results significantly. However, if a company is willing to change, there are big rewards: reduced markdown spend and increased sell-through, and then higher revenues and stronger margins because merchants can concentrate on bringing in the next season's merchandise and free floor space from marked-down merchandise.

Retailers should keep some things in mind to get the most out of markdown optimization:

- Strong executive support is needed because markdown optimization touches several areas within a retailer. Chief merchants need to provide consistent revenue and margin goals for revenue optimization along with methods for measuring results. Store operations need to be able to carry out the optimized price changes, and merchandise planners may need the output from revenue optimization to augment in-season plans.
- Business and IT need to work together. Buy-in from IT isn't difficult for a project like this, but it requires communication. Sometimes merchants struggle more than IT. Although merchants don't

particularly like to deal with markdowns, automating the process makes them nervous. Merchants don't merchandise just to mark it down. It can be hard to accept an automated recommendation to mark down merchandise that has been on the floor only a few weeks. Everybody loves to give things a second chance, but the system takes the sentimentality out of markdown decisions. In addition, merchants are paid on sales and margin, and for many, the biggest single cost they experience is markdowns. Automated markdowns have a big effect on buyers' pocketbooks, so reluctance is natural.

- Some retailers create or add to a team of pricing specialists whose job is to use this software and generate prices, which are then approved by the merchants. These teams include individuals with core skills in analytics, business and technical expertise. Pricing specialists free merchants to concentrate on product management and category goals and to focus less on day-to-day pricing activities – plus, they are able to make these decisions more objectively.

- To maximize ROI, merchants need to pay attention to consistently and attractively positioning their marked-down products. Retailers who get the highest possible margin improvements take extra time to consider where and how discounted stock is displayed and how easy

it is for the customer to determine the true marked-down price. If a customer cannot quickly and easily understand merchandise price displays, markdowns become ineffective and expensive.

When implementing a system, retailers really need to think about what their markdowns are designed to accomplish and let their markdown optimization software help achieve that. For some businesses, the speed of clearing out older merchandise is key. In these cases, the system should be tuned to maximize clearance sell-through and speed through the clearance goods, opening up floor space and open-to-buy for new full-margin goods. Other parts of the business have less liability in holding onto clearance inventory and need to look at maximizing the revenue of the clearance they have. Automated markdown software doesn't need to apply one strategy across the whole retailer. Instead, it should enable merchants to deal with clearance strategically in alignment with their needs.

What about retailers whose markdown strategy is less about moving goods and more about giving them a marketing tool to drive consumers into their stores? Many customers, after all, have developed a perverse loyalty to retailers that seem to have most of their goods at some stage of markdown. There are consumers who visit stores strictly to see what will go on sale in three

weeks. Will markdown optimization break that loyal bond, however disadvantageous to the retailer?

Not necessarily. With merchants free from working on markdowns – and their bosses seeing a profit boost – more effort, investment and creativity can be applied to the product, giving customers the fresh styles and products that drive them to choose a retailer in the first place. ◉

BIO **Alex Dietz** is 20-year veteran of pricing, pricing analytics and price optimization solutions development. Dietz is the Product Manager for SAS Markdown Optimization, a position he has held at SAS for five years. Before joining SAS, Dietz was the Vice President of Revenue Management and Marketing for Raleigh-Durham-based Midway Airlines. He began his career with American Airlines, where he managed the development of American's industry-leading yield management system (DYNAMO) before joining SABRE, where he acted as Product Manager for the airline revenue management solution (AIRMAX), and led SABRE's pricing and revenue management global consulting practice. Dietz earned his MBA and BS (in industrial engineering) degrees from Syracuse University in New York. Alex can be reached at Alex.Dietz@sas.com.

Fast, accurate merchandising

Sport Chalet customizes store inventories

Sport Chalet is a growing specialty chain that wanted to do a better job with assortments, pricing, promotions, space plans and allocations. SAS Merchandise Intelligence Solutions makes that happen by churning through volumes of data quickly to create information the company's buyers and merchandisers need to drive revenue.

Need scuba gear, rental skis, a package of golf lessons or mountain climbing gear? For 45 years, Sport Chalet has been Southern California's premier retailer of specialty sports equipment. In the past decade, the chain's growth has taken off as it has branched out to other parts of California, Nevada and Arizona. To accommodate growth and stave off competition from bigger sporting goods chains and niche sports retailers, Sport Chalet sought better ways to select and manage inventory.

In the past, Sport Chalet cobbled together numerous "best of breed" software packages to do everything from gauge customer demand to control inventory. Often, different people used different formulas to calculate results. There was no one version of the truth, it took too long to run reports, and there was no fast, accurate way to customize product by store.

For Jason Gautereaux, Vice President of Merchandise Planning and Inventory Management, SAS' key advantages were its strategic vision and sound financial footing coupled with its ability to deliver all the products in an integrated database.

"SAS was the only company that shared with us their vision of how we could grow together. SAS gives us a real partnership," he says.

Like many retailers, Sport Chalet tended to send each store the same amount of goods in most merchandise categories and restocked with little view toward per-store sales trends. "If a store sold item A, they would get another item A sent to them," Gautereaux says. Now, the company looks at which stores sell what types of product in the greatest quantities and allocates that demand. Not only are customers more likely to find what they want in the right size or color, but the presentations are also more appealing. Stores receive more of their best-selling products and can create a more visually dynamic display.

This has also freed the buyers to focus on finding the best and most desirable products. This is particularly critical for Sport Chalet because some of its specialty sports gear has very long lead times for placing orders. SAS allows buyers to make strategic and product lifecycle plans. The company has also been able to make better decisions about what items to put on sale or put on clearance and when to do that. Gautereaux says it is now much easier to spot trends in sales, especially as they relate to regional differences.

Another critical need for Sport Chalet was software that worked with legacy systems to achieve one version of the truth. "Historically, our data was available on canned reports or downloaded

to spreadsheets," says Ted Jackson, Sport Chalet's Chief Information Officer. "But it is much better to have the data loaded and available on demand. We're getting better quality plans."

The standard data doesn't cramp what Jackson terms the "arty" side of a merchandiser's job. "It still leaves room for merchandisers to do different types of analysis and approach problems differently based on their business experience. It is the best of both worlds," he says.

It is also an experience that saves a tremendous amount of time. One report that Gautereaux ran involved gathering detailed information from every store. It typically took a day or more to process. With SAS, Gautereaux built the query and had the answer in eight minutes. ◉

Business issue:
Sport Chalet needed to better allocate merchandise and track sales by category as it increased its store counts.

Solution:
Reports that typically took a day or more to produce now take only minutes, saving time and money.

- ONLINE:
- Sport Chalet execs on how technology has impacted their business: **www.sas.com/retail-sportchalet**

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