What is the Retail Pricing Strategy Series?

Retailers face mounting pressure to compete effectively with Amazon and eBay and their contemporaries in an environment where shoppers are more sophisticated and informed. This paper is part of a thought leadership series dedicated to addressing the most current pricing strategy concerns posed by retailers, providing honest commentary, and challenging the status quo.

Volume #3: Markdown Optimization Demands a Seasonal Facelift – Omni-Style.

In this Volume we tackle the complicated business problem of establishing the depth, timing and location for pricing seasonable or short-life cycle products; generally known as markdown optimization. Much has changed since the first science-based markdown optimization systems – some still in use today – were fashioned over 10 years ago. We are in a new season. Omni-channel shoppers demand more, have more information at their fingertips and shop differently using online and mobile online technology. See Volume #2 in our series, Omni-Channel Retailing. Online competitive options abound which make competitive pricing and assortment decisions even more difficult. Once more retailers are challenged to innovate – fortunately, new technology has answered the challenge!

In practical terms, retailers still want to "set guardrails" for margin, sell-through, markdown budget, and competitive price index and then use optimization to achieve department and category objectives. What has changed is the need for an omni-channel pricing architecture that rationalizes prices online and in-store; dynamically neutralizes Amazon's competitive incursions; and provides more flexibility and scalability for increasingly localized and granular markdown budgets and programs. We propose that the new toolset for Markdown Pricing includes lifecycle demand modeling, an omni-channel rules engine, competitive price surveillance, integrated budgeting and strategy, constrained optimization, and merchandise analytics and reporting. The focus of this paper is to elevate the primary considerations for markdown pricing strategy en route to competing more effectively.

Demand is Online & Local. Markdowns & Inventory Should Follow.

Customer demand varies for products at the store level or at the very least across store "clusters" and changes by season and assortment breadth and availability. Online, these same products may generate demand sooner online than in-store. Therefore, shifting demand patterns – driven in large part by online shopping behavior – dictate a more granular "localized" strategy for the timing and depth of markdowns. This process must also analyze online metrics such as "pageviews in relation to purchases" in order to correctly guide an omni-channel markdown strategy. This same understanding of customer demand also provides important direction on how to allocate inventory online and across stores in order to maximize sell-through and margins.

Historically, technology limitations made it difficult to apply anything other than standard markdown percentages according to some fixed schedule. This is no longer tenable in today's retail economy and no longer considered best-practice with current technology. Store-SKU elasticity changes over time holds the key to understanding customer demand online and in-store so that merchants can develop unique plans for each category, department, store, store cluster, banner or chain.

Complete Lifecycle Requires More Rules, More Rigor.

With an understanding of customer demand patterns, retailers require a single robust rules architecture which imparts the flexibility and scalability necessary to implement and manage granular markdown programs across all lifecycle phases: *Introduction*, *In-season* and *Clearance*. For example, rules are required that enforce rationalize prices across products – online and in-store. Collections of products that share the same price/discount must be grouped into product families. Collections of similar stores must be grouped into store clusters.

Other lifecycle rules include:

- Sell-through targets over time
- Inventory targets to maintain display stock
- Markdown budgets over time
- Minimum and maximum price steps
- Minimum days between markdowns
- Ending numbers for price & percent off
- Signage rules to meet minimum discounts

Integrated Budgeting and Strategy.

Current best practice in markdown pricing tightly weaves retail strategy together with rules and competitive price indices and relies on four primary elements: integrated markdown budgeting, lifecycle demand modeling, constrained optimization, and "what-if" analyses. ***Integrated Markdown Budgeting:*** apply a global markdown budget constraint that aggregates budget targets for everyday permanent markdowns, discontinued items and point-of-sale (POS) markdowns as needed daily, weekly, monthly and quarterly. ***Lifecycle Demand Modeling:*** use an integrated lifecycle view of pricing that looks at the demand profile over the entire product lifecycle and identifies products, styles, and options for changing timing on in-season markdowns and season-end clearances. ***Constrained Optimization***: once rules have been configured, use optimization to establish prices that satisfy margin and sell-through objectives. Retailers can now visualize the trade-off between profit and sell-through; select a point on the curve (shown left) which corresponds with desired profit and sell-through; and output a price file for review and manipulation. ***What-if Analyses:*** forecast profits and markdowns, run multiple "what-if" lifecycle scenarios in real-time, and re-generate plans for timing and depth as necessary.

Online Competitive Price Surveillance, Daily.

A current discussion for markdown pricing would be incomplete without some narrative on competitive pricing. Technology is available today to daily ***1)*** shop online competitive prices, ***2)*** automate the process of comparing prices against online competitors, and ***3)*** provide merchants with "exception-based" alerts that signal where existing prices deviate from competitive pricing rules. The same technology applies for in-store competitive price shops at a frequency which corresponds with those price shops. Combine this intelligence with store-SKU elasticity for these same items and retailers can begin to level the online playing field and make more informed decisions on markdown location, timing, and depth.

More Strategy, Less Data Management.

Retailers have data but they don't have sufficient "actionable" information. New breakthroughs in data science and visualization permit retailers to quickly identify and take action on profitable opportunities in their assortment. Related capabilities for analytics and reporting enable retailers to "drill-down" or "roll-up" markdown programs to whatever level necessary in order to analyze performance and drive strategy. Accordingly, technology has facilitated a critical shift towards more strategy and less data management.

About our Authors

Dr. Adam Rosenberg and Dr. Jim Sills, co-founders in Clear Demand, are committed practitioners of retail pricing and optimization technology. With more than 20 years of combined practical experience in early-generation solutions, their passion is to elevate the awareness for the ***practical*** role of innovation and science in retail technology.

About Clear Demand

Clear Demand is an innovative young software company committed to answering today's complex retail business issues with ***consumable*** technology. Not technology for the sake of technology but technology for the speed of business: where science complements the art of retailing. Clear Demand is the first to introduce a comprehensive *omni-channel* pricing solution architected on *Big Data* with a focus on three pillars; strategy, transparency, usability.