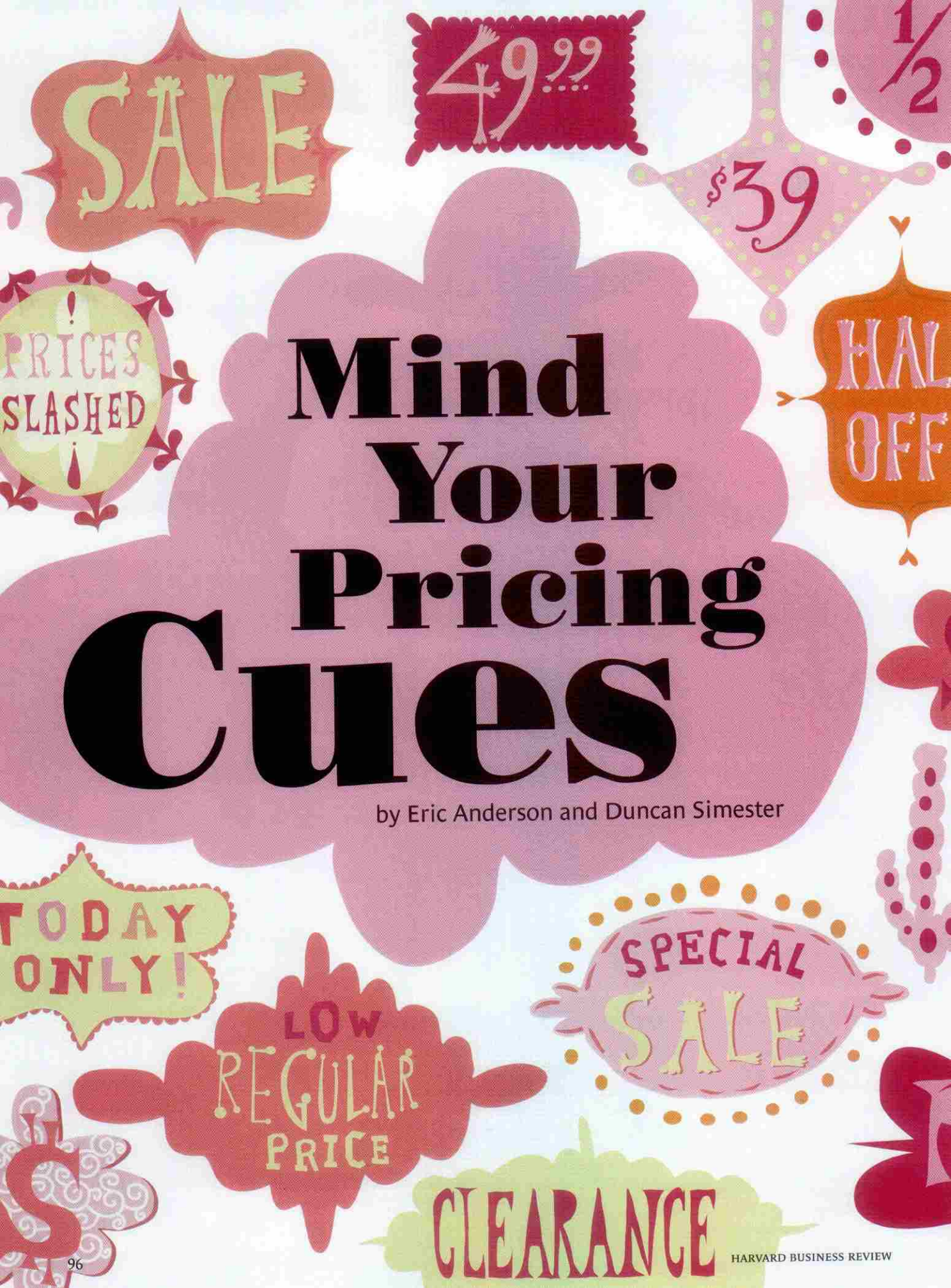




Mind Your Pricing Cues

by Eric Anderson and Duncan Simester

Quick, *what's a good price to pay for...*

*a six-ounce
container of
yogurt?*

*a four-pack of
35-mm film?*

*a combination
TV-DVD
player?*

If you aren't sure, you're not alone:

For most of the items they buy, consumers don't have an accurate sense of what the price should be. Consider the findings of a study led by Florida International University professor Peter R. Dickson and University of Florida professor Alan G. Sawyer in which researchers with clipboards stood in supermarket aisles pretending to be stock takers. Just as a shopper would place an item in a cart, a researcher would ask him or her the price. Less than half the customers gave an accurate answer. Most underestimated the price of the product, and more than 20% did not even venture a guess; they simply had no idea of the true price.

This will hardly come as a surprise to fans of *The Price Is Right*. This game show, a mainstay of CBS's daytime programming since 1972, features contestants in a variety of situations in which they must guess the price of packaged goods, appliances, cars, and other retail products. The inaccuracy of the guesses is legendary, with contestants often choosing prices that are off by more than 50%. It turns out this is reality TV at its most real. Consumers' knowledge of the market is so far from perfect that it hardly deserves to be called knowledge at all.

One would expect this information gap to be a major stumbling block for customers. A woman trying to decide whether to buy a blouse, for example, has several options: Buy the blouse, find a less expensive blouse elsewhere on the racks, visit a competing store to compare prices, or delay the purchase in the hopes that the blouse will be discounted. An informed buying decision requires more than just taking note of a price tag. Customers also need to know the prices of other items, the prices in other stores, and what prices might be in the future.

Yet people happily buy blouses every day. Is this because they don't care what kind of deal they're getting? Have they given up all hope of comparison shopping? No. Remarkably, it's because they rely on the retailer to tell them if they're getting a good price. In subtle and not-so-subtle ways, retailers send signals to customers, telling them whether a given price is relatively high or low.

In this article, we'll review the most common pricing cues retailers use, and we'll reveal some surprising facts about how—and how well—those cues work. All the cues we will discuss—things like sale signs and prices ending in 9—are common marketing techniques. If used appropriately, they can be effective tools for building trust with customers and convincing them to buy your products and services. Used inappropriately, however, these pricing cues may breach customers' trust, reduce brand equity, and give rise to lawsuits.

Sale Signs

The most straightforward of the pricing cues retailers use is the sale sign. It usually appears somewhere near the discounted item, trumpeting a bargain for customers. Our own tests with several mail-order catalogs reveal that using the word "sale" beside a price (without actually varying the price) can increase demand by more than 50%. Similar evidence has been reported in experiments conducted with university students and in retail stores.

Placing a sale sign on an item costs the retailer virtually nothing, and stores generally make no commitment to a particular level of discount when using the signs. Admittedly, retailers do not always use such signs truthfully. There have been incidents in which a store has claimed that a price has been discounted when, in fact, it hasn't—making for wonderful newspaper articles. Consultant and former Harvard Business School professor Gwen Ortmeier, in a review of promotional pricing policies, cites a 1990 *San Francisco Chronicle* article in which a reporter priced the same sofa at several Bay Area furniture stores. The sofa was on sale for \$2,170 at one store; the regular price was \$2,320. And it cost \$2,600—"35% off" the original price of \$4,000—at another store. Last year, a research team from the *Boston Globe* undertook a four-month investigation of prices charged by Kohl's department stores,



Eric Anderson is a visiting assistant professor of marketing at Northwestern University's Kellogg School of Management in Evanston, Illinois. Duncan Simester is an associate professor of management science at MIT's Sloan School of Management in Cambridge, Massachusetts.

focusing on the chain's Medford, Massachusetts, location. The team concluded that the store often exaggerated its discounts by inflating its regular prices. For instance, a Little Tikes toy truck was never sold at the regular price throughout the period of the study, according to the *Globe* article.

So why do customers trust sale signs? Because they are accurate most of the time. Our interviews with store managers, and our own observations of actual prices at department and specialty stores, confirm that when an item is discounted, it almost invariably has a sale sign posted nearby. The cases where sale signs are placed on non-discounted items are infrequent enough that the use of such signs is still valid.

And besides, customers are not that easily fooled. They learn to recognize that even a dealer of Persian rugs will eventually run out of "special holidays" and occasions to celebrate with a sale. They are quick to adjust their attitudes toward sale signs if they perceive evidence of overuse, which reduces the credibility of discount claims and makes this pricing cue far less effective.

The link between a retailer's credibility and its overuse of sale signs was the subject of a study we conducted involving purchases of frozen fruit juice at a Chicago supermarket chain. The analysis of the sales data revealed

that the more sale signs used in the category, the less effective those signs were at increasing demand. Specifically, putting sale signs on more than 30% of the items diminished the effectiveness of the pricing cue. (See the exhibit "The Diminishing Return of Sale Signs.")

A similar test we conducted with a women's clothing catalog revealed that demand for an item with a sale sign went down by 62% when sale signs were also

added to other items. Another study we conducted with a publisher revealed a similar falloff in catalog orders when more than 25% of the items in the catalog were on sale. Retailers face a trade-off: Placing sale signs on multiple items can increase demand for those items—but it can also reduce overall demand. Total category sales are highest when some, but not all, items in the category have sale signs. Past a certain point, use of additional sale signs will cause total category sales to fall.

Misuse of sale signs can also result in prosecution. Indeed, several department stores have been targeted by state attorneys general. The cases often involve jewelry departments, where consumers are particularly in the dark about relative quality, but have also come to include a wide range of other retail categories, including furniture and men's and women's clothing. The lawsuits gen-

erally argue that the stores have breached state legislation on unfair or deceptive pricing. Many states have enacted legislation addressing this issue, much of it mirroring the Federal Trade Commission's regulations regarding deceptive pricing. Retailers have had to pay fines ranging from \$10,000 to \$200,000 and have had to agree to desist from such practices.

Prices That End in 9

Another common pricing cue is using a 9 at the end of a price to denote a bargain. In fact, this pricing tactic is so common, you'd think customers would ignore it. Think again. Response to this pricing cue is remarkable. You'd generally expect demand for an item to go down as the price goes up. Yet in our study involving the women's clothing catalog, we were able to increase demand by a third by *raising* the price of a dress from \$34 to \$39. By comparison, changing the price from \$34 to \$44 yielded no difference in demand. (See the exhibit "The Surprising Effect of a 9.")

This favorable effect extends beyond women's clothing catalogs; similar findings have also been reported for groceries. Moreover, the effect is not limited to whole-dollar figures: In their 1996 research, Rutgers University professor Robert Schindler and then-Wharton graduate student Thomas Kibarian randomly mailed customers of a women's clothing catalog different versions of the catalog. One included prices that ended in 00 cents, and the other included prices that ended in 99 cents. The professors found that customers who received the latter version were more likely to place an order. As a result, the clothing company increased its revenue by 8%.

One explanation for this surprising outcome is that the 9 at the end of the price acts the same way as the sale sign does, helping customers evaluate whether they're getting a good deal. Buyers are often more sensitive to price endings than they are to actual price changes, which raises the question: Are prices that end in 9 truly accurate as pricing cues? The answer varies. Some retailers do reserve prices that end in 9 for their discounted items. For instance, J. Crew and Ralph Lauren generally use 00-cent endings on regularly priced merchandise and 99-cent endings on discounted items. Comparisons of prices at major department stores reveal that this is common, particularly for apparel. But at some stores, prices that end in 9 are a miscue – they are used on all products regardless of whether the items are discounted.

Research also suggests that prices ending in 9 are less effective when an item already has

a sale sign. This shouldn't be a surprise. The sale sign informs customers that the item is discounted, so little information is added by the price ending.

Signpost Items

For most items, customers do not have accurate price points they can recall at a moment's notice. But each of us probably knows some benchmark prices, typically on items we buy frequently. Many customers, for instance, know the price of a 12-ounce can of Coke or the cost of admission to a movie, so they can distinguish expensive and inexpensive price levels for such "signpost" items without the help of pricing cues.

Research suggests that customers use the prices of signpost items to form an overall impression of a store's prices. That impression then guides their purchase of other items for which they have less price knowledge. While very few customers know the price of baking soda (around 70 cents for 16 ounces), they do realize that if a store charges more than \$1 for a can of Coke it is probably also charging a premium on its baking soda. Similarly, a customer looking to purchase a new tennis racket might first check the store's price on a can of tennis balls. If the balls are less than \$2, the customer will assume the tennis rackets will also be low priced. If the balls are closer to \$4, the customer will walk out of the store without

The Diminishing Return of Sale Signs

Our research indicates there is a point at which adding more sale signs yields fewer sales. In a Chicago supermarket's frozen fruit juice category, charted below, putting sale signs on more than 30% of the items reduced demand substantially.



any tennis gear – and the message that the bargains are elsewhere.

The implications for retailers are important, and many already act accordingly. Supermarkets often take a loss on Coke or Pepsi, and many sporting-goods stores offer tennis balls at a price below cost. (Of course, they make up for this with their sales of baking soda and tennis rackets.) If you're considering sending pricing cues through signpost items, the first question is which items to select. Three words are worth keeping in mind: *accurate*, *popular*, and *complementary*. That is, unlike with sale signs and prices that end in 9, the signpost item strategy is intended to be used on products for which price knowledge is accurate. Selecting popular items to serve as pricing signposts increases the likelihood that consumers' price knowledge will be accurate – and may also allow a retailer to obtain volume discounts from suppliers and preserve some margin on the sales. Both of these benefits explain why a department store is more likely to prominently advertise a basic, white T-shirt than a seasonal, floral print. And complementary items can serve as good pricing signposts. For instance, Best Buy sold *Spiderman* DVDs at several dollars below wholesale price, on the very first weekend they were available. The retail giant lost money on every DVD sold – but its goal was to increase store traffic and generate purchases of complementary items, such as DVD players.

The Surprising Effect of a 9

Customers react favorably when they see prices that end in 9. For instance, when a national women's clothing catalog raised the price of one of its dresses from \$34 to \$39, sales jumped up. But, when the price was raised from \$34 to \$44, there was no change in demand.



Signposts can be very effective, but remember that consumers are less likely to make positive inferences about a store's pricing policies and image if they can attribute the low price they're being offered to special circumstances. For example, if everyone knows there is a glut of computer memory chips, then low prices on chip-intensive products might be attributed to the market and not to the retailer's overall pricing philosophy. Phrases such as "special purchase" should be avoided. The retailer's goal should be to convey an overarching image of low prices, which then translates into sales of other items. Two retailers we studied, GolfJoy.com and Baby's Room, include the phrase "our low regular price" in their marketing copy to create the perception that all of their prices are low. And Wal-Mart, of course, is the master of this practice.

A related issue is the magnitude of the claimed discounts. For example, a discount retailer may sell a can of tennis balls for a regular price of \$1.99 and a sale price of \$1.59, saving the consumer 40 cents. By contrast, a competing, higher-end retailer that matches the discount store's sale price of \$1.59 may offer a regular price of \$2.59, saving the consumer \$1. By using the phrase "low regular price," the low-price retailer explains to consumers why its discounts may be smaller (40 cents versus \$1 off) and creates the perception that all of its products are underpriced. For the higher-end competitor, the relative savings it offers to consumers (\$1 versus 40 cents off) may increase sales of tennis balls but may also leave consumers thinking that the store's nonsale prices are high.

Use of signpost items to cue customers' purchases and to raise a store's pricing image creates few legal concerns. The reason for this is clear: Customers' favorable responses to this cue arise without the retailer making an explicit claim or promise to support their assumptions. While a retailer may commit itself to selling tennis balls at \$2, it does not promise to offer a low price on tennis rackets. Charging low prices on the tennis balls may give the appearance of predatory pricing. But simply selling below cost is generally not sufficient to prove intent to drive competitors out of business.

Pricing Guarantees

So far, we've focused on pricing cues that consumers rely on – and that are reliable. Far less clear is the reliability of another cue, known as price matching. It's a tactic used widely in retail markets, where stores that sell, for example, electronics, hardware, and groceries promise to meet or beat any competitor's price.

Tweeter, a New England retailer of consumer electronics, takes the promise one step further: It self-enforces its price-matching policy. If a competitor advertises a lower price, Tweeter refunds the difference to any customers who paid a higher price at Tweeter in the previous 30 days. Tweeter implements the policy itself, so customers don't have to compare the competitors' prices. If a competitor advertises a lower price for a piece of audio equipment, for example, Tweeter determines which customers are entitled to a refund and sends them a check in the mail.

Do customers find these price-matching policies reassuring? There is considerable evidence that they do. For example, in a study conducted by University of Maryland marketing professors Sanjay Jain and Joydeep Srivastava, customers were presented with descriptions of a variety of stores. The researchers found that when price-matching guarantees were part of the description, customers were more confident that the store's prices were lower than its competitors'.

But is that trust justified? Do companies with price-matching policies really charge lower prices? The evidence

is mixed, and, in some cases, the reverse may be true. After a large-scale study of prices at five North Carolina supermarkets, University of Houston professor James Hess and University of California at Davis professor Eitan Gerstner concluded that the effects of price-matching policies are twofold. First, they reduce the level of price dispersion in the market, so that all retailers tend to have similar prices on items that are common across stores. Second, they appear to lead to *higher* prices overall. Indeed, some pricing experts argue that price-matching policies are not really targeted at customers; rather, they represent an explicit warning to competitors: "If you cut your prices, we will, too." Even more threatening is a policy that promises to beat the price difference: "If you cut your prices, we will undercut you." This logic has led some industry observers to interpret price-matching policies as devices to reduce competition.

Closely related to price-matching policies are the most-favored-nation policies used in business-to-business relationships, under which suppliers promise customers that they will not sell to any other customers at a lower price. These policies are attractive to business customers because

Cue, Please

Pricing cues like sale signs and prices that end in 9 become less effective the more they are employed, so it's important to use them only where they pack the most punch. That is, use pricing cues on the items for which customers' price knowledge is poor. Consider employing cues on items when one or more of the following conditions apply:

Customers purchase infrequently.

The difference in consumers' knowledge of the price of a can of Coke versus a box of baking soda can be explained by the relative infrequency with which most customers purchase baking soda.

Customers are new. Loyal customers generally have better price knowledge than new customers, so it makes sense to make heavier use of sale signs and prices that end in 9 for items targeted at newer customers. This is particularly true if your products are exclusive. If, on the other hand, competitors sell identical products, new customers may have already acquired price knowledge from them.

Product designs vary over time.

Because tennis racket manufacturers tend to update their models frequently, customers who are looking to replace their old rackets will always find different models in the stores or on-line, which makes it difficult for them to compare prices from one year to the next. By contrast, the design of tennis balls rarely changes, and the price remains relatively static over time.

Prices vary seasonally. The prices of flowers, fruits, and vegetables vary when supply fluctuates. Because customers cannot directly observe these fluctuations, they cannot judge whether the price of apples is high because there is a shortage or because the store is charging a premium.

Quality or sizes vary across stores.

How much should a chocolate cake cost? It all depends on the size and the quality of the cake. Because there is no such thing as a standard-size cake, and because quality is hard to determine with-

out tasting the cake, customers may find it difficult to make price comparisons.

These criteria can help you target the right items for pricing cues. But you can also use them to distinguish among different types of customers. Those who are least informed about price levels will be the most responsive to your pricing cues, and—particularly in an on-line or direct mail setting—you can vary your use of the cues accordingly.

How do you know which customers are least informed? Again, those who are new to a category or a retailer and who purchase only occasionally tend to be most in the dark.

Of course, the most reliable way to identify which customers' price knowledge is poor (and which items they're unsure about) is simply to poll them. Play your own version of *The Price Is Right*—show a sample of customers your products, and ask them to predict the prices. Different types of customers will have different answers.

they can relax knowing that they are getting the best price. These policies have also been associated with higher prices. A most-favored-nation policy effectively says to your competitors: "I am committing not to cut my prices, because if I did, I would have to rebate the discount to all of my former customers."

Price-matching guarantees are effective when consumers have poor knowledge of the prices of many products in a retailer's mix. But these guarantees are certainly not for every store. For instance, they don't make sense if your prices tend to be higher than your competitors'. The British supermarket chain Tesco learned this when a small competitor, Essential Sports, discounted Nike socks to 10p a pair, undercutting Tesco by £7.90. Tesco had promised to refund twice the difference and had to refund so much money to customers that one man walked away with 12 new pairs of socks plus more than £90 in his wallet.

To avoid such exposure, some retailers impose restrictions that make the price-matching guarantee difficult to enforce. Don't try it: Customers, again, are not so easily fooled. If the terms of the deal are too onerous, they will recognize that the guarantee lacks substance. Their reaction will be the same if it proves impossible to compare prices across competing stores. (Clearly, the strategy

makes no sense for retailers selling private-label or otherwise exclusive brands.) How much of the merchandise needs to be directly comparable for consumers to get a favorable impression of the company? Surprisingly little.

When Tweeter introduced its highly effective automatic price-matching policy, only 6% of its transactions were actually eligible for refunds.

Interestingly, some manufacturers are making it harder for consumers to enforce price-matching policies by introducing small differences in the items they supply to different retailers. Such use of branded variants is common in the home-electronics market, where many manufacturers use different model numbers for products shipped to different retailers. The same is true in the mattress market – it is often difficult to find an identical mat-

tress at competing retailers. If customers come to recognize and anticipate these strategies, price-matching policies will become less effective.

Antitrust concerns have been raised with regard to price-matching policies and most-favored-nation clauses. In one pending case, coffin retailer Direct Casket is suing funeral homes in New York for allegedly conspiring to implement price-matching policies. The defendants in this case have adopted a standard defense, arguing that price-matching policies are evidence of vigorous compe-



Quality Has Its Own Cues

Retailers must balance their efforts to cultivate a favorable price image with their efforts to protect the company's quality image. Customers often interpret discounts as a signal of weak demand, which may raise doubts about quality.

This trade-off was illustrated in a recent study we conducted with a company that sells premium-quality gifts and jewelry. The merchant was considering offering a plan by which customers could pay for a product in installments without incurring finance charges. Evidence elsewhere suggested that offering such a plan could increase demand. To test the effectiveness of this strategy, the mer-

chant conducted a test mailing in which a random sample of 1,000 customers received a catalog that contained the installment-billing offer, while another 1,000 customers received a version of the catalog without any such offer. The company received 13% fewer orders from the installment-billing version, and follow-up surveys revealed that the offer had damaged the overall quality image of the catalog. As one customer cogently put it: "People must be cutting back, or maybe they aren't as rich as [the company] thought, because suddenly everything is installment plan. It makes [the company] look tacky to have installment plans."

Sale signs may also raise concerns about quality. It is for this reason that we see few sale signs in industries where perceptions of high quality are essential. For instance, an eye surgeon in the intensely competitive market for LASIK procedures commented: "Good medicine never goes on sale."

The owner of a specialty women's clothing store in Atlanta offered a similar rationale for why she does not use sale signs to promote new items. Her customers interpret sale items as leftovers from previous seasons, or mistakes, for which demand is disappointing because the item is unfashionable.

tition rather than an attempt to thwart it. An older, but perhaps even more notorious, example involved price-matching policies introduced by General Electric and Westinghouse in 1963 in the market for electric generators. The practice lasted for many years, but ultimately the U.S. Justice Department, in the early 1980s, concluded that the policies restrained price competition and were a breach of the Sherman Antitrust Act. GE and Westinghouse submitted to a consent decree under which they agreed to abandon the business practice.

Tracking Effectiveness

To maximize the effectiveness of pricing cues, retailers should implement them systematically. Ongoing measurement should be an essential part of any retailer's use of pricing cues. In fact, measurements should begin even before a pricing cue strategy is implemented to help determine which items should receive the cues and how many should be used. Following implementation, testing should focus on monitoring the cues' effectiveness. We've found that three important concerns tend to be overlooked.

First, marketers often fail to consider the long-run impact of the cues. According to some studies, pricing policies that are designed to maximize short-run profits often lead to suboptimal profits in the long run. For example, a study we conducted with a publisher's catalog from 1999 to 2001 investigated how customers respond to price promotions. Do customers return in the future and purchase more often, or do they stock up on the promoted items and come back less frequently in subsequent months? The answer was different for first-time versus established customers. Shoppers who saw deep discounts on their first purchase returned more often and purchased more items when they came back. By contrast, established customers would stock up, returning less often and purchasing fewer items. If the publisher were to overlook these long-run effects, it would set prices too low for established patrons and too high for first-time buyers.

Second, retail marketers tend to focus more on customers' perceptions of price than on their perceptions of quality. (See the sidebar "Quality Has Its Own Cues.") But companies can just as easily monitor quality perceptions by varying their use of pricing cues and by asking customers for feedback.

Finally, even when marketers have such data under their noses, they too often fail to act. They need to both disseminate what is learned and change business policies. For example, to prevent overuse of promotions, May Department Stores explicitly limits the percentage of items on sale in any one department. It's not an obvious move; one might expect that the department managers would be best positioned to determine how many sale signs to use. But a given department manager is focused on his

or her own department and may not consider the impact on other departments. Using additional sale signs may increase demand within one department but harm demand elsewhere. To correct this, a corporatewide policy limits the discretion of the department managers. Profitability depends both on maintaining an effective testing program and institutionalizing the findings.

...

Consumers implicitly trust retailers' pricing cues and, in doing so, place themselves in a vulnerable position. Some retailers might be tempted to breach this trust and behave deceptively. That would be a grave mistake. In addition to legal concerns, retailers should recognize that consumers need price information, just as they need products. And they look to retailers to provide both.

Retailers must manage pricing cues in the same way that they manage quality. That is, no store or catalog interested in collecting large profits in the long run would purposely offer a defective product; similarly, no retailer interested in cultivating a long-term relationship with customers would deceive them with inaccurate pricing cues. By reliably signaling which prices are low, companies can retain customers' trust—and overcome their suspicions that they could find a better deal elsewhere. ▢

Reprint R0309G

To order, see page 135.



"Congratulations, Todd. I'm making you one of our innumerable vice presidents."

