Where to Look for Incremental Sales Gains:
The Retail Problem of Out-of-Stock Merchandise

A study conducted for the Coca-Cola Retailing Research Council by Andersen Consulting
Where to Look for Incremental Sales Gains:

The Retail Problem of Out-of-Stock Merchandise
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*Council members, research projects, purpose, credits*
A few simple numbers tell the story:

- A shopper in the average supermarket will find 8.2% of items, in the categories studied, out-of-stock on a typical afternoon.
- Almost half of all the items tracked for a month were missing from the shelf at least once.
- The out-of-stock level rises to 11% on Sunday, the second-busiest shopping day of the week.
- Performance is even worse on advertised items, the items that often bring people into a store—15%.
- The absence of fast-moving items costs retailers the most, with out-of-stocks on the fastest-moving 25% of items accounting for over two-thirds of the lost sales.

The existence, magnitude, and pervasiveness of the out-of-stock problem are undeniable. So is its impact.

- Consumers refuse to buy an alternative 34% of the time. They postpone purchases, sometimes forever, or take their business elsewhere.
- The consumer response to out-of-stocks costs the retailer whose shelves are bare 46% of sales dollars on the items that are out-of-stock.

To put the out-of-stock problem in context: 25% of a retailer’s loyal customers already shop at other stores. The net result—out-of-stocks put $7 to $12 billion of sales at play in the supermarket industry. Who can afford to let out-of-stocks divert even more business to the competition?

In the fiercely competitive grocery retail industry, no one can. To help supermarket retailers get the message, the Coca-Cola Retailing Research Council commissioned this study, conducted by Andersen Consulting, to quantify the problem and explore possible solutions.

As a first step, retailers must understand and accept their own significant responsibility for the problem. Not to mince words, retailer failure to order products from the warehouse and fill shelves with inventory already sitting in the store causes the vast majority of all out-of-stocks.
Getting a Grip on the Problem

Having tracked more than 700 items per store for a month, this study ranks as the most comprehensive yet on out-of-stocks. Its conclusions and recommendations reflect extensive analysis of eight categories in the grocery, dairy, and frozen food departments, chosen to represent a broad cross-section of sales and operating characteristics—baby diapers, bottled water, carbonated beverages, chilled juice, commercial bread, frozen pizza, toilet tissue, and yogurt.

The analysis considered an item out-of-stock if a shopper did not find it in the desired form, flavor, and size; in saleable condition; or shelved in the expected location (expected aisle and category). The study included only items in a retailer’s everyday assortment of products.

The analysis combined qualitative and quantitative information from diverse sources, including:

- Interviews with senior managers, category managers/buyer merchandisers, logistics/warehouse managers, and store managers of eight grocery retail and wholesale companies, plus review of information on their internal ordering, inventory, and shipment history; promotional activity; buying, merchandising, and logistics practices; store operating procedures; and scan data.
- Daily audits of ten demographically and regionally diverse stores for a month. These on-site audits, providing over 200,000 observations, conducted between 2 and 5 p.m., recorded out-of-stocks and other relevant retail conditions.
- Daily scan data from 650 stores to focus on fast-moving and promoted items.
- Out-of-stock items tracked through the supply chain (stores, warehouses, and direct store delivery vendors) to pinpoint causes of the problem.
- Interviews with 900 consumers as they shopped in eight geographically and demographically diverse stores.
- Discussions with representatives of four major manufacturers of packaged goods, the Coca-Cola Retailing Research Council, Andersen Consulting industry experts, and such industry experts as ems, Willard Bishop Consulting, and PeaPod.

Facing the Music

To help retailers understand the scope, sources, and solutions of the out-of-stock problem, the rest of this report is divided into four chapters.

- Chapter 1 details the magnitude of the problem, especially the sales lost as consumers walk away in protest.
- Chapter 2 assigns principal blame for the problem to retailers’ own ordering, replenishment, and merchandising practices.
- Chapter 3 outlines ways to enhance those practices and overcome the out-of-stock problem.
- Chapter 4 offers a game plan for getting started.
Out-of-Stocks Are a Serious Retail Problem

It's 4 o'clock. Do you know where your customer is? For most retailers, the answer may well be walking out in anger or, worse yet, doing business with a competitor. By this time of day, out-of-stocks are prevalent, especially on advertised and fast-moving items, and the situation deteriorates through the evening. Consumers notice and very often react negatively.

8.2% of Items Are Typically Unavailable

On a typical afternoon (i.e., 2 to 5 p.m.) in the average supermarket, over 8.2% of items, in the categories studied, are not available to the consumer. Since most retailers stock shelves primarily at night, and about 50% of sales happen by mid-afternoon, out-of-stock levels are lower in the morning but much higher by the evening surge between 5 and 7 p.m.

Some retailers may not want to believe this figure, but it is consistent with reports from other recent studies. The Retail Beef Inventory Study, sponsored by the National Livestock and Meat Board, found out-of-stocks a real problem, with the missing-from-action rate in the meat department exceeding 10%. Another study, Category Management in the Dairy Case: An Industry Report on Trade Practices, sponsored by the American Dairy Association and the National Dairy Promotion and Research Board, found fluid milk out-of-stock 8 to 10% of the time. The 8.2% out-of-stock level is also consistent with the findings of home shopping services (i.e., Shoppers Express and PeaPod) and suppliers who have tracked the in-stock records of their products.

The Out-of-Stock Problem Is Broad

In the average store studied, 48% of all items across the eight categories tracked for a month were out-of-stock at least once (Exhibit 1). This suggests that the out-of-stock problem is broad and extends beyond specific items, categories, and stores. The implication for retailers: Solving the out-of-stock problem will likely require systemic solutions, not stopgap measures or narrowly focused initiatives.
Out-of-Stock Levels Vary by Category

Out-of-stock levels varied significantly across the eight categories studied, with the worst performing category about three times worse than the best performing category (Exhibit 2). The three worst performing categories—yogurt, bottled water, and chilled juice—share some relevant characteristics: high growth, proliferation of SKUs, and (except for bottled water) high promotion. But frozen pizza, the second-best performing category, has similar characteristics. Its superior in-stock performance is thanks to very low out-of-stock levels on DSD-supplied items; warehouse-supplied

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Exhibit 1
Percent of Items
Out-of-Stock at
Least Once Over a
One-Month Audit

<table>
<thead>
<tr>
<th>Best Performing Retail Store</th>
<th>Average Across Retail Stores Audited</th>
<th>Worst Performing Retail Store</th>
</tr>
</thead>
<tbody>
<tr>
<td>24</td>
<td>48</td>
<td>68</td>
</tr>
</tbody>
</table>

1 Tracked over 700 items per store across 10 stores

Source:
Prism Partners store audits,
Andersen Consulting analysis

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Exhibit 2
Average Daily Out-of-Stock Level by Category

<table>
<thead>
<tr>
<th>Category</th>
<th>Percent of SKUs Out-of-Stock</th>
</tr>
</thead>
<tbody>
<tr>
<td>Overall</td>
<td>8.2</td>
</tr>
<tr>
<td>Yogurt</td>
<td>11.1</td>
</tr>
<tr>
<td>Bottled Water</td>
<td>10.7</td>
</tr>
<tr>
<td>Chilled Juice</td>
<td>10.0</td>
</tr>
<tr>
<td>Carbonated Beverages</td>
<td>8.5</td>
</tr>
<tr>
<td>Commercial Bread</td>
<td>7.1</td>
</tr>
<tr>
<td>Toilet Tissue</td>
<td>6.1</td>
</tr>
<tr>
<td>Frozen Pizza</td>
<td>5.2</td>
</tr>
<tr>
<td>Baby Diapers</td>
<td>3.9</td>
</tr>
</tbody>
</table>

Source:
Prism Partners store audits,
Andersen Consulting analysis
pizza is more often out-of-stock. The other two of the three best performing categories, toilet tissue and baby diapers, have a very different profile—both are low/negative growth categories and therefore not as space-constrained, and both come in large sizes so order writers can more readily spot out-of-stock conditions on the shelf.

**Out-of-Stocks Soar to 11% on Sundays**

Across the eight categories studied, out-of-stocks are highest on Sunday (frequently the second-busiest day of the week) and Monday (the day after the two busiest days) (Exhibit 3). The source of the Sunday problem with warehouse-supplied items is limited weekend deliveries and limited Sunday store labor to replenish shelves. The high out-of-stocks on Mondays are probably a carryover from Sunday. The high Monday level also suggests that retailers have difficulty responding to out-of-stocks quickly.

**Exhibit 3**

**Out-of-Stock Levels by Day of Week**

<table>
<thead>
<tr>
<th>Day</th>
<th>Overall</th>
<th>Sunday</th>
<th>Monday</th>
<th>Tuesday-Saturday</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>8.2</td>
<td>10.4</td>
<td>10.0</td>
<td>8.3</td>
</tr>
</tbody>
</table>

Source: Prism Partners store audits, Andersen Consulting analysis

Although individual performance varied widely, DSD vendors seem to do marginally better than traditional warehouse distribution at keeping products available to consumers. But overall DSD vendor performance is uneven—superior Monday through Saturday, while DSD out-of-stock levels rise so significantly on Sundays that they exceed out-of-stocks on warehouse-supplied items. High DSD out-of-stocks on Sundays are attributable to:

- Lack of Sunday DSD deliveries
- Limited DSD labor available to restock shelves on Sunday
- Limited store labor availability on Sunday and unfamiliarity with handling DSD items and categories.
Out-of-Stocks on Advertised Items Are Even Higher

According to a month-long analysis by efficient market services of 650 stores in six retail chains, out-of-stocks cost retailers more than 15% of sales on advertised items in the eight categories studied (though the net impact on retailer sales is unclear since the consumer reaction, in this situation, is not understood) (Exhibit 4). These out-of-stocks soar even higher when advertised items are not supported with off-shelf merchandising, costing retailers almost 20% of their advertised volume. This lost volume varied by category and was highest for toilet tissue, commercial white bread, and yogurt. One retail chain studied lost over 40% of advertised toilet tissue sales due to chronic out-of-stocks in almost all its stores. Out-of-stocks on advertised items loom especially large since a primary objective of advertising is to woo people into the store. Not having available the product that shoppers came to buy cannot please them.

Exhibit 4
Advertised Item Sales Lost to Out-of-Stocks

Advertised Item Average

Non-Displayed Product

Displayed Product

Lost Sales as Percent of Advertised Item Sales

Source:
efficient market services, Inc.
analysis of promotions across 8 categories in 650 stores over a month

Fast-Moving Items Lose the Most Sales

Combining the results of daily audits of ten stores with a review of retailer scan data, this study finds that fast-moving items account for the lion’s share of the sales lost to out-of-stocks (Exhibit 5). The top 10% of fast-moving items in each category studied represent half the lost sales, and the top 25% account for over two-thirds of the sales lost to out-of-stocks. Exacerbating the problem is the fact that fast-moving items have low inventory levels, measured in terms of days of supply on the shelf. The 20% of items in each category with the lowest days of supply on the shelf cost almost half the sales lost to out-of-stocks.
While fast-moving items lose the most sales, the slowest-moving 50% of SKUs experience significant out-of-stocks (i.e., 13%). The higher incidence of out-of-stocks on slow-moving items is due to:

- Lack of attention by store personnel because orders are infrequent. Many items (e.g., spices and specialty foods) are ordered only every two to four weeks.
- Case minimum order quantities combined with case-and-a-half space allocation requiring shelf inventory to fall to low levels before triggering an order.

All these numbers add up to a problem much bigger than most retailers have probably realized. But this analysis also suggests where the high-payoff solutions lie—in improving in-stock performance on Sundays and, every day of the week, keeping advertised and fast-moving items on the shelf.

**Consumers Vote Against Out-of-Stocks With Their Wallets and Their Feet**

Faced with out-of-stocks in the eight categories studied, consumers only make 54% of their intended purchases (**Exhibit 6**). This significant reduction happens for several reasons:

- Consumers who look elsewhere or postpone purchase when an out-of-stock occurs tend to be more brand/item-loyal. They favor premium-priced or larger products when they do buy.
- Consumers who purchase an alternative are less brand/item-loyal. They favor lower-priced items or smaller sizes or amounts.
- Consumers who purchase an alternative tend to trade down in quantity/quality and/or price.
Consumers who purchase an alternative tend to trade down in quantity/quality and/or price.

Overall, out-of-stocks are costing retailers sales to the more attractive customer segments—consumers who are brand/item-loyal and likely to purchase large quantities or sizes or premium-priced products.

Furthermore, about half the time that a consumer refuses to purchase an alternative when an out-of-stock occurs, the retailer loses the sale completely, as the consumer goes to a competitor’s store or decides not to buy at all. The rest of the time the purchase remains at risk for the retailer, as the consumer delays action until the next shopping trip.

The net result of consumer responses to out-of-stocks, in the categories studied, is to reduce shopping expenditures 3.1% per trip, calculated as follows: Sales lost on out-of-stock merchandise account for 6.5% of category sales volume (i.e., observed out-of-stock occurrence times the item’s average daily movement), and out-of-stocks reduce intended expenditures on those items 46%—for a loss of 3.1% of purchases that consumers wanted to make (Exhibit 7).

**Consumer Responses to Out-of-Stocks Vary by Category**

Analysis across the eight categories studied finds consumers who encounter an out-of-stock more likely to purchase an alternative in categories they buy most frequently, like commercial bread. The average household buys many loaves of bread in a year, and consumers accept an alternative a lot of the time. The same holds true for carbonated beverages and toilet tissue, also frequent-purchase categories. Willingness to accept an alternative is probably attributable to the immediacy of the need for these staples (Exhibit 8).
But consumers planning to buy a specific item are more likely to defer purchase—either going to a competitor or postponing the purchase—when that item is not on the shelf. An overwhelming majority of baby diaper and yogurt purchases fit this profile, and consumers facing out-of-stocks in these categories defer purchase 40% of the time.

In a category given to impulse buying, like frozen pizza, consumers skip purchasing anything in the category 14% of the time—much more often than the staple and planned-purchase categories.
Out-of-Stocks Reduce Customer Loyalty

Supermarket customers switch stores in response to out-of-stocks. In fact, one out of every seven consumers switched primary grocers in the past year, with in-stock position called a significant factor in some of these decisions. Each year, out-of-stocks cost the average grocery retailer .3 to .5% of the customer base. Consumers do notice out-of-stocks and respond by taking their business elsewhere.

The majority of the consumers interviewed for this study said that they would seriously consider switching grocery stores if three to four items were routinely out-of-stock per shopping trip. Not surprisingly, shoppers are even more sensitive to out-of-stocks on advertised items. Among those who came to the store primarily for an advertised item:

- 7% planned to go to another store that had the desired item or a similar item on sale and buy all their groceries there.
- 20% planned to stay and buy all their groceries at the offending store but would consider going to another store on their next shopping trip.

Clearly, consumers are less than completely satisfied with their grocers’ out-of-stock performance. All the consumers interviewed suggested specific improvements to their grocery store. The third-highest ranked was “Being In-Stock on the Merchandise the Shopper Wants.” Only “Low/Good Prices” and “Fast/Efficient Checkouts” rated higher (Exhibit 9).

Retailers must listen and respond to such comments. Disgruntled consumers have many shopping alternatives. Already, a significant number shop at more than one grocery store and through other retail channels. Fully 25% of a retailer’s loyal customers shop at competitors’ stores, so one retailer’s out-of-stocks are another’s sales and growing market share.

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**Exhibit 9**

Consumer Suggestions for Improving Their Grocery Store

<table>
<thead>
<tr>
<th>Percent of Consumers Stating Way to Improve Grocery Store</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Low/Good Prices</td>
<td>65</td>
</tr>
<tr>
<td>Fast/Efficient Checkout</td>
<td>31</td>
</tr>
<tr>
<td>In-stock on the Merchandise the Shopper Wants</td>
<td>23</td>
</tr>
<tr>
<td>Variety of Merchandise</td>
<td>20</td>
</tr>
<tr>
<td>Advertised Specials</td>
<td>20</td>
</tr>
<tr>
<td>Uncrowded</td>
<td>18</td>
</tr>
<tr>
<td>Easy to Shop</td>
<td>13</td>
</tr>
<tr>
<td>Helpful/Friendly Service</td>
<td>12</td>
</tr>
<tr>
<td>Convenient Location</td>
<td>10</td>
</tr>
</tbody>
</table>

To turn this situation around (and it can be turned around), most retailers need to realize that they may be their own worst enemy. The overwhelming majority of out-of-stocks arise from gaps in a retailer’s own business system, with the local DSD vendor’s business system contributing to the problem. A useful starting point for improvement is understanding some key differences between out-of-stocks on retailer/wholesaler warehouse-supplied items and those on DSD-supplied items.

**Retailers Bear Responsibility for 97% of Out-of-Stocks on Warehouse-Supplied Items**

Store ordering problems related to everyday volume account for over half of these out-of-stocks (Exhibit 10). In most cases, store personnel are unaware of a current or potential out-of-stock and consequently do not place an order. Filled holes and lack

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**Exhibit 10**

Root Causes of Out-of-Stocks on Warehouse-Supplied Items

1. Analysis of manufacturer coupon root causes for all retailers was not possible due to data constraints. However, for the one retailer that could be analyzed, less than 2% of OOSs were driven by manufacturer coupons.

Source: Retailer operating data, Prism Partners store audits, Andersen Consulting analysis
of order-writer diligence fuel the problem. Missing shelf tags also play a role; about one of every seven missed orders lacks a shelf tag.

Few retailers would suspect that store ordering is the overwhelming source of the out-of-stock problem because a common operating assumption among many retailers is that they deliver good service thanks to:

- High warehouse service levels
- Daily deliveries and night stocking
- The presence of two to three additional days of inventory on the shelf.

But as the study demonstrates, this assumption is often unwarranted.

Promoted item forecasting and ordering account for 19% of the out-of-stocks on warehouse-supplied items. About half of these out-of-stocks are associated with advertised items. Therefore, retailers’ major opportunity to improve in-stock performance lies in revising the ordering process to better handle both everyday and promoted demand.

To capitalize on this opportunity, retailers must understand the correlation between out-of-stocks and the timing of the last store order (Exhibit 11). Over two-thirds of out-of-stock items were not ordered in the prior order/replenishment cycle. In other words, store personnel had the chance to order the item, take delivery, and stock the shelf before the out-of-stock occurred. Even more revealing, more than a quarter of these out-of-stock items had not been ordered in the previous seven days.

Only when out-of-stock items were ordered in the last cycle does the study find causes of the problem that match most retailers’ perceptions of out-of-stocks. Many would believe that the majority of retail out-of-stocks are caused by warehouse scratches,

Exhibit 11
Root Causes
of Out-of-Stocks
on Warehouse-
Supplied Items by
Last Store Order

<table>
<thead>
<tr>
<th>Root Causes</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Shelf Capacity Inadequate</td>
<td>52%</td>
</tr>
<tr>
<td>Promotion Forecasting and Ordering</td>
<td>28%</td>
</tr>
<tr>
<td>Backroom/Display Inventory Not Restocked to Shelf Replenishment From Warehouse</td>
<td>11%</td>
</tr>
<tr>
<td>Ordered Last Opportunity</td>
<td>9%</td>
</tr>
<tr>
<td>Not Ordered Last Opportunity but Ordered in Last Week</td>
<td>40%</td>
</tr>
<tr>
<td>Not Ordered in Last Week</td>
<td>31%</td>
</tr>
</tbody>
</table>

Source: Retailer operating data, From Partners store audits, Andersen Consulting analysis.
Another 8% of out-of-stocks occur when store personnel do not restock shelves with available inventory.

Inadequate shelf capacity, and promotions. These perceptions are fairly accurate, except for too much emphasis on warehouse scratches. Most out-of-stocks on items ordered in the last cycle are attributable to shelf capacity that is inadequate to meet everyday demand given the existing order/replenishment cycle and inaccurate promotion forecasting and ordering. Failure of store personnel to stock the shelf with available backroom/display inventory and warehouse replenishment issues complete the list of causes (responsible for 11% and 9% of these out-of-stocks, respectively).

Shelf capacity that cannot handle everyday volume within the existing store order/replenishment cycle accounts for 16% of out-of-stocks on warehouse-supplied items. These out-of-stocks probably arise from one or more of the following problems:

- Inadequate delivery frequency—for example, bottled water delivered only four times a week to a store
- Insufficient shelf space allocation—for example, bottled water not assigned enough shelf space to meet consumer demand between deliveries
- Failure to order enough product to meet consumer demand (i.e., not ordering more than shelf capacity and not storing inventory on backroom/overhead racking)—for example, infrequent deliveries and order-writer failure to recognize the need to order more bottled water than the limited shelf space can hold, coupled with failure to restock shelves between deliveries.

Another 8% of out-of-stocks occur when store personnel do not restock shelves with available backroom/display inventory. This problem should be easy to correct by making staff more alert to low-inventory conditions and out-of-stocks that emerge during the day.

Surprisingly, warehouse-to-store replenishment issues (i.e., warehouse scratches and incomplete order fill) account for less than 3% of retail out-of-stocks on warehouse-supplied items. Responsibility for 90% of these warehouse-to-store issues belongs to manufacturers who short the warehouse. The conclusion to draw: Good warehouse service is important to keeping items on store shelves, but further improvements in warehouse service will not enhance retail in-stock performance significantly. Furthermore, warehouse service levels are a meaningless indicator of retail in-stock position.

It is also noteworthy that items in Continuous Replenishment Programs (CRP) owe less than 1% of their out-of-stocks to warehouse replenishment issues. CRP has clearly had a very positive effect on warehouse service levels, as well as inventory productivity.
Replenishment Issues Account for a Significant Portion of DSD Out-of-Stocks

In contrast to warehouse-supplied items, DSD-supplied items go out-of-stock due to replenishment issues almost 25% of the time (Exhibit 12). Most of these out-of-stocks occur when actual consumer demand exceeds the DSD warehouse forecast or when DSD vendors deliver less than the quantity ordered.

On the other hand, DSD vendors are more effective than store personnel at ordering everyday turn items (i.e., 30% miss rate versus 54%), even when half of these out-of-stocks lack shelf tags. The DSD miss rate is still surprising, since DSD vendors typically concentrate on a single category. DSD vendors furthermore seem to struggle with promotion forecasting and ordering issues and space management issues just as much as store personnel ordering warehouse-supplied items. This too is surprising since DSD vendors generally manage their own shelf space. These vendors need to improve not only ordering and shelf management practices, but also their warehouse-to-store replenishment systems.
In the intensely competitive grocery retail industry, the sales and customer loyalty put at risk by out-of-stocks mean that grocers ignore this problem at their peril. With all the challenges that retailers face, they can ill afford to have something as basic as out-of-stocks causing their customers to shop at competing stores. Retailers and DSD vendors fool no one by plugging holes on the shelf—except themselves and their order clerks. This study establishes clearly that consumers notice out-of-stocks and award their business and their loyalty to retailers who maintain superior in-stock levels.

One wide-awake retailer provides a clear example of the value of good in-stock performance. This retailer’s average daily out-of-stock level is half that of most retailers (4.5% versus 9.1%). Consumers notice, and appreciate, the difference. Few customers in this retailer’s stores find items on their shopping lists frequently out-of-stock. When they do, they are much more forgiving—buying an alternative most of the time. Not surprisingly, this retailer sells more than competitors (2% per shopping trip in the categories studied) simply by having more product available.

While the out-of-stock problem is not new, forces buffeting the grocery industry today (e.g., more product variety and fragmentation of consumer needs and preferences) increase the difficulty of maintaining high in-stock performance. This greater complexity calls for more refined and diligent execution of key retail practices. Simply stated, nothing takes the place of getting back to the basics of superior store-level execution of ordering, promotion forecasting, stocking, and replenishing the shelf.

Retailers and suppliers should focus particular attention on the items, categories, and stores that promise the greatest reward for improving in-stock position. Accounting for the lion’s share of sales lost to out-of-stocks, advertised and fast-moving items offer the highest payback. In addition, consumers are more likely to defer purchase in certain categories. (See Chapter 4 for an approach to prioritizing items, categories, and stores.)
Case Study: The “Wide-Awake Retailer”

Winning the Battle...

One wide-awake retailer is winning the battle against out-of-stocks—with an average daily out-of-stock level half that of other retailers studied (4.5% versus 9.1%). Consumers notice and appreciate the difference. Few find desired items frequently out-of-stock and, when they do, most will buy an alternative.

<table>
<thead>
<tr>
<th>Percent of Consumers Frequently Finding OOSs</th>
<th>Percent of Consumers Willing to Purchase Alternatives</th>
</tr>
</thead>
<tbody>
<tr>
<td>7</td>
<td>83</td>
</tr>
<tr>
<td>35</td>
<td>60</td>
</tr>
</tbody>
</table>

Wide-Awake Retailer  All Other Retailers

...With Superior Practices...

How does this retailer keep shelves stocked and customers happy? By focusing on superior execution of such key operations as ordering, replenishing, and space planning to ensure high in-stock levels. This approach combines several winning practices:

- Leave the hole open
- Check high-volume, advertised/promoted, and chronically out-of-stock items three times a day, restocking and reordering as necessary
- Aggressively maintain the planogram and shelf tags to ensure desired assortment and inventory
- Reactively move inventory between stores or from warehouse to stores to keep advertised items in-stock
- Energize store employees around minimizing out-of-stock conditions.

...And Enjoying the Spoils

Not surprisingly, this retailer sells more than competitors and wins superior marks from consumers—receiving an overall store rating of 8.3 (out of 9) compared with other retailers’ 7.5.

<table>
<thead>
<tr>
<th>Percent of Sales Lost Due to OOSs</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.1</td>
</tr>
<tr>
<td>3.1</td>
</tr>
</tbody>
</table>

Wide-Awake Retailer  Average of All Retailers

Survival of the Fullest

17
This study suggests that concentrated attention to improving performance in four fundamental areas can work wonders:

1. Enhancing store order quality
2. Strengthening merchandise planning and execution
3. Aligning store replenishment cycle with consumer demand
4. Improving delivery effectiveness of DSD suppliers.

Best of all, none of these areas is foreign territory to retailers or their DSD suppliers. Retailers and their DSD suppliers just need to transform less-than-OK practices in areas where they already operate into best practices. Of course, retailers must tailor their efforts to their particular strategy, competitors’ operating strengths and weaknesses, and current in-stock performance. The following pages outline possible initiatives in all four areas, varying widely in cost and complexity, to help grocers begin to explore their options.

1. Enhancing Store Order Quality

The greatest improvement opportunities lie here. Building the skills of the store order writer and providing tools to help store personnel order items can shift the in-stock/out-of-stock balance radically. Personnel in too many stores are unaware of current and impending out-of-stocks so they fail to reorder before out-of-stock disaster strikes. Retailers can take several steps today to improve order writing.

Leave the Hole Open

During the store audits conducted for this study, “the shelves looked can tight,” in the words of one council member, “but in reality out-of-stocks were pervasive.” Many retailers need to rethink or reverse the all-too-common practice of filling holes on the shelf. This policy to keep the shelf looking good makes it easy for management to ignore out-of-stocks and hard for staff to reorder properly (i.e., visualizing the proper shelf inventory is hard so people order inappropriate quantities).

Focus Store Personnel on High-Sales-Risk Areas

Retailers should identify the items most likely to go out-of-stock and trigger the greatest sales loss. Leading candidates are promoted items, fast-moving items, items in traffic-generating categories, and items chronically out-of-stock. Several tools can facilitate efficient ordering of these critical items:

- An exception report, distributed to store ordering personnel, that lists advertised, fast-moving, and chronically out-of-stock items to draw staff attention to them for restocking and ordering.
- Color-coded shelf tags that identify high-velocity items so staff monitors them closely and reorders appropriately. These shelf tags can include vital information for the store order writer (e.g., everyday and promoted sales quantities, target shelf inventory levels).
**Aggressively Maintain Desired Assortment and Inventory**

Store personnel (e.g., the pricing coordinator) can monitor shelves to ensure that the layout and content match the desired assortment and inventory (e.g., match planograms) and that shelf tags are in place. Consumer demand in most categories is fairly dynamic so the shelf planogram needs frequent adjustment to match shifts in consumer tastes (e.g., in flavor, form, or size), new product introductions, seasonality, and shifts in brand strength.

Store management could, for example, direct the pricing coordinator to review and update one category each day—reviewing the past three months’ average daily movement for each item, discussing problem items with order writers and daytime stockers, and inspecting the shelf. The pricing coordinator could then adjust the shelf allocation and develop shelf tags detailing revised target inventory holding capacity for each item.

This is an important improvement opportunity. The study found that the actual shelf seldom mirrors (in any way, shape, or form) headquarters planograms, specifying desired assortment and inventory. A planogram updated once a year cannot keep pace with changes in consumer demand.

**Consider Getting Consumers Involved**

Consumers should be encouraged to bring out-of-stocks to the attention of store management. Store coupons/discounts can reward consumers for providing this important information and, in the process, get store management focused on the problem.

**Train and Implement Performance Measures for the Store Order Writer**

Having assessed their current order-writing processes, many retailers will realize the need to make changes, as well as the need to implement training programs to improve the quality of orders. For most, this training will emphasize ordering based on sales velocity (e.g., order what the store expects to sell, not just what will fill the shelf), close monitoring of promotional orders and reorders, and communication of restocking requirements. Performance measures should then reflect the expectations of staff activity established by the training, especially the out-of-stock improvement expected.

Not surprisingly, the one retailer in the audit with the vastly superior in-stock performance has implemented many of these practices—leaving the hole open, monitoring high-sales-risk items several times a day, aggressively maintaining the shelf, and training and motivating order writers.

These basic steps will reduce any retailer’s out-of-stocks substantially—eliminating at least a third of them—and increase sales and profits that can fund investment in new technology to solve most of the rest of the problem (Exhibit 13).
Solution: Implement Near-Term Store Operation Improvement Opportunities

<table>
<thead>
<tr>
<th>Gross Margin Lost due to OOSs</th>
<th>$26,000</th>
</tr>
</thead>
<tbody>
<tr>
<td>Average Annual Store Revenue</td>
<td></td>
</tr>
<tr>
<td>Annual Sales Lost due to OOSs (Assumes 3% of Sales)</td>
<td>780</td>
</tr>
<tr>
<td>Annual Gross Margin Lost due to OOSs (Assumes 20% Gross Margin)</td>
<td>156</td>
</tr>
</tbody>
</table>

Solution Benefit

| Gross Margin Benefit Expected if OOSs Reduced by 50% | 78 |

Solution Costs

| Ongoing Training and New Performance Measures     | 10  |
| Exception Reports/Color-Coded Shelf Tags          | 7   |
| Increased Labor to Maintain Desired Assortment and Inventory | 15 |
| Increased Shelf Audits and Restocking             |     |
| Frequency on High-Sales-Risk Areas                | 20  |

Total Cost

| Total Cost | 52 |

Net Benefit

| Net Benefit | $26 |

Strengthen Promotion Forecasting, Ordering, and Communication

Various tools that use historical scan data and capture key promotion characteristics can help retailers develop store/SKU-specific promotion forecasts. One retailer in the study has built a database on promotion performance. The database houses two years of store-specific promotion POS data; classifies each promotion price point as hot, medium, or cool; and includes feature, display, and seasonality information on each promotion. The database also contains each store’s available off-shelf merchandising capacity (i.e., number of end caps, size of end caps, in-aisle display capability, and checkout space) to help determine the best use of this off-shelf space.

For each promotion, data flows from the database into a forecasting tool that creates store-specific promotion forecasts, by SKU, for advertised items and major promotions. The tool then compares the promotion forecasts with available shelf merchandising space to optimize assignment of promotional space. Category managers/buyer merchandisers and store managers review the forecasts and space allocations and adjust them to accommodate additional market or store-level factors. Comparison of forecasts with current store inventory ensures accurate store orders.

Both retailers and DSD vendors may profit from determining a percentage of promoted inventory to hold at the distribution center (instead of distributing the entire forecast at the start of the promotion) and then revisiting initial forecasts of promoted item volume, on the basis of one or two days of movement, and adjusting inventory accordingly. This recalculation can significantly boost forecasting accuracy and sales—a worthwhile endeavor, as the study found that out-of-stocks cost stores 15% of promoted item volume. Working with store-level POS scan data for the first
day or two of a promotion, retailers and DSD vendors can reforecast total promotion volume and stand ready to deliver a second promotion shipment to stores later and identify any need to support the promotion with off-shelf displays. The results: fewer out-of-stocks and less inventory left in stores when the promotion ends.

Such forecasting has found favor among some manufacturers and their retail customers. One manufacturer, for example, uses daily POS scan data from its largest customers to reforecast the sales volume of promoted items by store and refill shelves in a timely manner. This tight inventory management keeps promoted items in-stock for the duration.

Besides improving promotion forecasting, retailers benefit from enhancing communication of promotions to store personnel and DSD vendors. Intensification of promotional activity, the propensity of promotions to change, and ineffective communication vehicles make it difficult to keep stores up-to-the-minute on promotions. Handed a promotion forecast, category managers/buyer merchandisers can develop a user-friendly promotion “hot sheet” to highlight out-of-stock problems a promotion may trigger and offer suggestions on such issues as whether to build in-aisle displays for promoted items or when to order backroom inventory and check/restock shelves.

DSD vendors have difficulty supplying the ordered quantities without adequate lead time. Many major promotions (e.g., $3.99 for a case of cola) are communicated only a week in advance, leaving the DSD vendor working the weekend and paying double-time or facing substantial out-of-stocks during the promotion. To make life easier and more profitable for everyone, retailers should set a communication schedule with their DSD vendors and provide promotion information two to three weeks before the event so the vendors have enough time to respond effectively. Such collaboration means that DSD vendors need to build more trusting relationships with their retailers—ensuring that promotion plans do not leak to competing retailers. Changes to a promotion likewise require prompt communication to stores and DSD vendors to ensure successful mid-course corrections.

**Apply Computer-Assisted Ordering Techniques**

The ECR Efficient Replenishment implementation initiatives have awakened retailers to the need to strengthen supplier-to-wholesaler/chain warehouse replenishment. Most retailers have embraced EDI transactions and accepted the concept of continuous replenishment. As a result, inventories have dropped across the supply chain, and warehouse service has improved. But this study found little correlation between warehouse service levels and good in-stock performance at retail, and efforts to enhance replenishment from the warehouse to the shelf have so far been limited. Retailers should begin the order/replenishment cycle by ordering enough product
to keep the shelf stocked until the next replenishment opportunity. Technology provides cost-effective ways to accurately predict consumer demand in a given store, notably computer-assisted ordering (CAO), but such tools as store-level inventory management and consumer-responsive replenishment cycles remain a mystery to most retailers.

A recent CAO test (reported in *Efficient Consumer Response, Computer-Assisted Ordering, Practice and Benefits*, 1994) suggests that retailers should strive to unravel this mystery. In this test, CAO cut out-of-stocks 81%—from 7.1% of items to 1.4%. To begin achieving such results, retailers should consider two CAO paths:

- **Forecast consumer demand via POS data.** A forecasting tool can use POS scan data to predict target inventory levels by store, based on seasonal factors, day of week, time between deliveries, and basic price promotion (i.e., no ad, no display, basic price discount). This forecast can be downloaded into a hand-held ordering device so the order writer can compare forecasted inventory requirements with current shelf and backroom inventory and then place an appropriate order.

- **Implement dynamic CAO.** Combining forecasted consumer demand with a store-level perpetual inventory system will allow the computer to generate the recommended order. This approach poses significant challenges for retailers since it requires a perpetual inventory system that integrates data on inventory received with accurate POS data. The challenge is worth confronting, however, as CAO delivers benefits beyond reducing out-of-stocks, including improving inventory and labor productivity (Exhibit 14).

---

**Exhibit 14**

Computer-Assisted Ordering Cost/ Benefit Analysis

<table>
<thead>
<tr>
<th>Hypothetical Economic Model for 100-Store Chain ($000s)</th>
</tr>
</thead>
</table>

**Solution: Implement Dynamic CAO System**

<table>
<thead>
<tr>
<th>Gross Margin Lost due to OOSs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Average Annual Store Revenue ($500,000 per-week store)</td>
</tr>
<tr>
<td>Annual Sales Lost per Store due to OOSs (Assumes 3% of Sales)</td>
</tr>
<tr>
<td>Annual Gross Margin Lost per Store due to OOSs (Assumes 20% Gross Margin)</td>
</tr>
</tbody>
</table>

**Solution Benefit**

<table>
<thead>
<tr>
<th>Per-Store Annual Gross Margin Benefit Expected</th>
</tr>
</thead>
<tbody>
<tr>
<td>if OOSs Reduced by 75%</td>
</tr>
<tr>
<td>Total Chain Gross Margin Benefit (Store Benefit × 100)</td>
</tr>
</tbody>
</table>

**Solution Investment Across 100 Stores (per year)**

| Accurate POS Data (Training) | 500 |
| Dynamic CAO | 5,000 |
| Promotion Forecasting | 1,000 |
| POS Data-Sharing With DSD Vendors | 1,600 |
| **Total Investment** | 8,100 |

| **Net Benefit** | $3,600 |

Source:
Andersen Consulting analysis, Progressive Grocer Annual Survey (1994); Efficient Consumer Response Study (1993)
Ordering to expected demand means that in-store inventory will often exceed shelf space. Grocers must manage this additional inventory by providing easy access, with clearly marked backroom or overhead racking that facilitates shelf restocking—a case of canned peas buried under 12 other cases of canned vegetables in the backroom is unlikely to reach the shelf when needed. Retailers with limited backroom space should consider SKU rationalization, space management, and/or more frequent store deliveries to brighten the in-stock picture.

2. Strengthening Merchandise Planning and Execution

In recent years a number of factors—including many more new product introductions, fragmentation of consumer needs and service demands, and steady increases in trade promotion spending—have greatly complicated the buying and merchandising functions. Category managers/buyer merchandisers should strengthen their merchandise planning and execution to improve in-stock performance on and off the shelf. Several tactics look especially promising.

Strengthen Variety Management

The proliferation of new products to meet the needs of an ever more diverse customer base obviously creates a variety management nightmare. Broad variety contributes to out-of-stocks in two ways.

- First, broad variety crowds the space available for fast-moving items and lowers their retail shelf life. The study found that the 20% of items with the fewest days of supply on the shelf account for 48% of lost sales.
- Second, broad variety spawns slow-moving SKUs that generally occupy a case and a half of shelf space. Out-of-stocks occur because store inventory of these items must sink low before triggering an order (e.g., minimum case order quantity), and the order writer easily forgets infrequently ordered items.

Therefore, as earlier studies (e.g., Willard Bishop Consulting Variety/Duplication Study for FMI and ECR Efficient Assortment) pointed out, retailers should scrutinize variety carefully. Variety is a key component of overall strategy and a major means of attracting and retaining target consumers. But many retailers may have gone too far—adding so much variety in their zeal to win customers that out-of-stocks increase and sales decrease. A retailer who decides to reduce variety (by eliminating duplication) must proceed strategically—taking into account the target consumer, target shopping occasion(s), and competition when determining the variety to offer within a category. This analysis might indicate adding selected SKUs for categories important to the target consumer and certain target shopping occasions while significantly reducing SKUs for other categories. But retailers should avoid the perilous course of arbitrarily cutting SKUs broadly across all categories.
Align Category and Item Space Allocation With Consumer Demand

Effective allocation of store space to match assortment needs can reduce the likelihood of out-of-stocks. In their rush to manage variety within the context of overall strategy and attention to the target consumer, retailers often fail to adjust category space allocations accordingly. For example, a retailer deciding to focus products and services on a target consumer who is upscale, in a dual-income household, and 25 to 44 years old will probably expand the offering of ready-to-eat, healthy, fresh, and prepared foods and reduce variety in staple cooking items (e.g., flour, sugar, and baking soda) because this segment spends little time cooking at home. Unless this retailer adjusts the store space allocation to match, out-of-stocks will increase in ready-to-eat, healthy foods and the target consumer may well walk.

None of the retailers participating in the study made out-of-stocks a key performance measure for space management. Most use a combination of sales, gross margin, and gross margin return on inventory as their primary measures. Retailers should realize that the space management tool can predict in-stock performance and should use this prediction in evaluating shelf space allocation and variety.

Retailers should also update planograms more frequently. Many planograms today are at least one year old, so they do not reflect new items or actual space allocation. As a result, store personnel generally add new items, delete old items, and determine space allocation and inventory without reference to a space management tool.

Tailor Assortment and Space to Individual Stores

Different strokes for different folks—within the same chain/retail concept. Retailers can use demographic data, competitive information, and store-specific scanner data to tailor approaches to maximize sales in each store or cluster of stores. Store-specific data (e.g., POS data, market share data, and data on consumer purchase behavior and consumer loyalty) can facilitate category management decisions on assortment and space. Tailoring complicates category management but pays off in reduced out-of-stocks and assortment better matched with the local market.

3. Aligning Store Replenishment Cycle With Consumer Demand

Few retailers have fully adapted their ways of doing business to changing consumer shopping patterns. “While most of us are relaxing on Sundays and holidays, the supermarket customer is getting poor service and is probably frustrated by rampant out-of-stocks,” admits one council member. With over 70% of working-age women employed outside the home, Sunday has become the second-busiest grocery shopping day of the week; together Saturday and Sunday account for 35% of weekly sales volume.
Retailers need to rethink delivery frequency, delivery days, and labor schedules to improve in-stock performance on high-sales-volume days (i.e., Saturday and Sunday plus holidays)—days plagued by significant out-of-stocks and lost sales. For many retailers this will probably mean Saturday evening/Sunday morning deliveries to high-priority stores and/or more people working weekends to restock the shelves. Retailers will have to collaborate with their unions and DSD vendors to make work schedules more flexible and ensure the cost-effectiveness of weekend and holiday store replenishment.

Retailers can further profit from emulating the wide-awake retailer with superior in-stock performance—complementing night stocking and order writing with day-shift replenishment efforts (i.e., midday ordering and restocking or reactively moving inventory from store to store). Limited shelf space creates the need to restock many items in the store more than once a day. The study found items ordered or restocked only once a day out-of-stock more frequently than those ordered or stocked two or three times a day. Retailers can effect significant improvement by assigning eagle-eyed monitors to focus their restocking efforts on promoted items, fast-moving items, items in traffic-building categories, and chronically out-of-stock items. Retailers might begin these replenishment programs on weekends, measure their effectiveness, and expand them to other days, as warranted.

4. Improving DSD Warehouse Inventory Availability and Store Replenishment

DSD warehouses trail wholesaler/chain warehouses in inventory availability (i.e., 25% of DSD out-of-stocks occur because inventory is unavailable, versus 3% for wholesaler/chain warehouses). Better store-level forecasts could alleviate the problem. One cure lies in working with retailers to acquire POS scan data and using it to develop better forecasts and more accurate store-specific orders—essentially implementing CAO. DSD vendors could also use the POS data to improve production scheduling and focus delivery scheduling on critical stores. Today, third-party providers of daily scan information represent an avenue to implementing a consumer-responsive replenishment program.

The value of sharing daily scan data is clear from the experience of one retailer and one DSD vendor who have cut out-of-stocks more than 50% and increased vendor sales at this retailer 3 to 5%. How? By working with a third-party provider of scan information to pinpoint out-of-stock conditions by day, by store, and by item. The scan data analysis identifies ongoing turn problems and likely causes that are then addressed through systemic changes in order size, shelf space, delivery frequency, or stocking frequency on peak selling days, as the problem warrants. The system also highlights promotional and seasonal problems that the DSD vendor can work to correct by stocking, building off-shelf merchandising, or ordering.
Involv Suppliers in In-Stock Improvement Programs

No participant in the grocery supply chain is an island. Supplier trading partners can make valuable contributions to retailer efforts in all four areas outlined above. Potential supplier roles include:

- Proactively communicating major consumer promotion/advertising events (e.g., coupon drops, sampling, heavy advertising) and helping retailers forecast expected consumer demand.
- Providing promotion data on price, display, and feature elasticity that can support developing store-specific promotional forecasts.
- Utilizing their substantial direct sales or broker organization resources to communicate promotion forecasts, promotion ordering, and promotion stocking to store personnel. The manufacturer can likewise support store-level execution—determining out-of-stock levels, identifying chronically out-of-stock items, building in-aisle displays/wings, and providing weekend labor to monitor and stock shelves.
- Delivering data to the retailer needed to develop an efficient assortment—data on SKU market share, category market structure/segmentation, and consumer purchase behavior (e.g., consumer loyalty data, worth of consumer data, and consumer substitutability data).
- Furnishing space management tools and resources to develop planograms that effectively balance revenues, gross margin, gross margin return on inventory, and in-stock position.
No two retailers will address these issues the same way, but the responses which fit each retailer will chart a common course toward solving a problem that this study concludes few can afford to ignore. To begin responding to the alarm sounded in this report, retailers should ask themselves a series of five questions.

1. **How am I doing?**
   The pervasiveness and magnitude of the out-of-stock problem revealed by this study suggest that every retailer should answer this question. By auditing stock on (or not on) store shelves, daily scan data, or the perpetual inventory system, a retailer can determine how big the out-of-stock problem is and how many sales are at risk. Root cause analysis can determine what is causing the problem, and the retailer can conduct research to develop specific understanding of consumer attitudes and behaviors toward out-of-stocks or extrapolate this study’s findings to the entire store to understand the magnitude of lost sales and lost customers.

2. **Where can I do better?**
   Then the retailer can identify the stores and categories where improving in-stock performance will have the greatest impact on sales. Stores needing immediate attention are those that suffer the most from out-of-stocks; those that generate high sales per square foot, where out-of-stocks are especially expensive; and those that face intense competition, so consumers can easily take their business elsewhere.

Retailers should likewise pay particular attention to two types of categories:

- Categories that build traffic or image because target consumers value these categories highly and are very unforgiving of out-of-stocks there.
- Categories that involve high brand loyalty and high purchase frequency; cigarettes are the ultimate example. Consumers are most likely to notice and react negatively to out-of-stocks in these categories. A matrix like that in Exhibit 15 can help determine the highest-risk categories.
3. Is it worth it?

The task of improving in-stock performance is complicated by such aspects of the retailer’s strategy as target consumers, promotion strategy, customer service level, and merchandising practices. For example, staffing to provide only minimal customer service or offering a broad product assortment may make better in-stock performance difficult. Retailers must consider improvement initiatives within the context of their particular strategies.

Each potential initiative must, of course, address the root causes of the problem and be feasible, given the strengths and weaknesses of the retailer’s business system. Each initiative will involve implementation costs that need careful consideration. Each should also deliver quantifiable financial benefits to the retailer, plus such bonus benefits as inventory reductions or labor savings. Before deciding on a course of action, the retailer should conduct a detailed cost/benefit analysis to ensure that the chosen initiatives will generate an adequate return on investment.

4. How will I know if I’m doing better?

Current approaches to measuring in-stock performance focus on how well the distribution center is performing and therefore ignore what is important to consumers—stock on the retail shelf. Retailers know they have a problem there but have difficulty measuring out-of-stocks and the resulting lost sales. Retailers need new ways to measure performance from the consumer’s perspective. Possibilities include:
Frequent (e.g., weekly) phantom shoppers or store audits by the pricing coordinator and/or supplier retail sales organization. This approach looks in the right place, the shelf, but can be weakened by auditor bias about day of week, time of day, or definition of out-of-stock (e.g., without a shelf tag, is an item out-of-stock?)

Comparison of daily POS scan data with sales projections to determine out-of-stock levels (e.g., no sales of a high-velocity item for two days may signal an out-of-stock). This approach is most effective for promoted items and multi-day out-of-stocks on fast-moving items.

Analysis of out-of-stock information from the perpetual inventory system. This approach is rich in information but expensive to implement.

Application of any or all of these performance measures must become standard operating procedure, not a one-time event. As promotions, seasons, and consumer preferences change, retailers will want to be sure their in-stock success continues.

5. How do I make it happen?

Many retailers will need to make fundamental changes in the way they do business in order to improve in-stock performance. Many will have to build or buy new skills in store operations, logistics, category management, and merchandising and will have to implement new performance management systems to measure and reward successful application of those skills. Many will need to enhance the discipline of their processes in these key areas. The magnitude of change involved argues for piloting programs before launching them broadly.

Many retailers will have to significantly strengthen their information systems in order to capture the accurate and timely information required to make fact-based decisions. Such information fuels the promotional forecasting, computer-assisted ordering, and category management tools that can help retailers improve in-stock performance.

These are just the first steps, albeit critical steps, toward addressing a problem that is costing retailers dearly in dollars and in customer loyalty. This study concludes that few retailers can afford to postpone action on a problem that puts at play $7 to $12 billion in industry sales per year. Retailers will want to capture their share of these dollars, and the good news is that substantial in-stock improvements are within the reach of most retailers.
The Coca-Cola Retailing Research Council

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Where to Look for Incremental Sales Gains:
The Retail Problem of Out-of-Stock Merchandise
Andersen Consulting

Measured Marketing:
A Tool to Shape Food Store Strategy
Brian P. Woolf, Retail Strategy Center, Inc.

New Ways to Take Costs Out of the
Retail Food Pipeline
Mercer Management Consulting

Strengthening Your Relationships with Store Employees
Robert M. Tomasko, Washington, DC-based consultant to
Arthur D. Little, Inc.

Supermarket Merchandising for the 1990s
Booz, Allen & Hamilton

Assessing and Capturing the Soft Benefits of Scanning
Professor Robert Blattburg, Graduate School of Business,
University of Chicago

Improving Store Manager Effectiveness
Human Synergistics, Inc.

Managing the Large Food Store of the Future
Arthur D. Little Co.

Lessons From Japan
Michael O'Connor
Planning Your Financial Growth in the 1980s:
A Financial Planning Model for Food Retailers .................. 1982
Robert D. Buzzell, William E. Fruhan, Walter Salmon

Product Improvement Techniques & Strategy
for the Supermarket Industry ........................................... 1981
Professor Bobby Calder, Graduate School of Management,
Northwestern University

The Impact of Energy on Food Distribution in the 1980s ........ 1980
John Morrissey, Senior Vice President, Super Valu Stores, Inc.

An Economic Analysis of the Distribution Industry
in the United States ..................................................... 1980
Arthur Andersen & Company

Social Trends and Food Retailing ................................. 1980
SRI-International
Purpose

The purpose of the Coca-Cola Retailing Research Council is to identify major research needs in the food distribution business and conduct studies designed to bring wholesalers and retailers, both large and small, practical guidance on how to address these issues. The council has operated since 1978 and in that time has produced 14 major reports, including this study, on a broad range of topics.

Credits

The Coca-Cola Retailing Research Council teamed with Andersen Consulting to conduct this study. Council members provided tremendous support in guiding analysis; providing access to stores, logistics systems, and buying systems; and developing specific industry responses.

Many thanks to those who contributed significantly to the study:

- A.C. Nielsen
- efficient market services
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- Prism Partners.

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