

# **Retail Out of Stocks: A Worldwide Examination of Extent, Causes, and Consumer Responses**

A research study conducted at Emory University, Goizueta Business School, Atlanta, GA USA; University of St. Gallen, Institute of Technology Management, Switzerland; and College of Business and Administration, University of Colorado at Colorado Springs, USA

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**Executive Summary**

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# Retail Out of Stocks: A Worldwide Examination of Extent, Causes, and Consumer Responses

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## I. Executive Summary

### Overview and Objectives

This report presents what we believe to be the largest and most current single compilation of findings regarding the extent, causes, and consumer responses to retail out-of-stock (OOS) situations in the fast moving consumer goods (FMCG) industry. To our knowledge, this is the first study that enumerates OOS on a worldwide basis.

The inputs for this report come from 51 studies that examine OOS, which includes the previously published results of 15 industry and academic studies as well as the results from an additional 36 studies proprietary to this report. To provide a sense of the extensiveness of the studies that were used to develop this report, consider the following:

- Number of retail outlets examined: 661
- Number of FMCG categories included: 32
- Number of consumers surveyed world-wide: 71,000
- Number of countries represented: 29
- Studies addressing extent of OOS: 40 (of 51 total studies)
- Studies addressing the root causes of OOS: 20 (of 51 total studies)
- Studies addressing the consumer responses to OOS: 15 (of 51 total studies)

The objective of the study has been three-fold:

1. to present an updated and accurate “map” of facts surrounding retail out-of-stocks in the FMCG industry,
2. to examine out-of-stocks worldwide, examining rationale for similarities and differences, and
3. to examine differences in findings based on different methodologies of measuring out-of-stocks.

### Key Findings

***First, the extent of has not decreased from earlier studies.***

Out-of-stocks remains a large problem for retailers, distributors, and manufacturers in the FMCG industry. The advances in supply chain management, Efficient Consumer Response (ECR) and category management initiatives, and investments in inventory tracking technology have not, by and large, reduced the overall level of out-of-stocks on store shelves from what was reported in previous studies. Out-of-stock rates vary wildly among retailers and their outlets depending on a variety of factors, but the majority tends to fall in the range of 5-10 percent. More importantly, in studies that examine faster selling and/or promoted products, the rate regularly exceeds 10 percent. Our overall average OOS rate worldwide is 8.3 percent and is illustrated on Exhibit I-1.

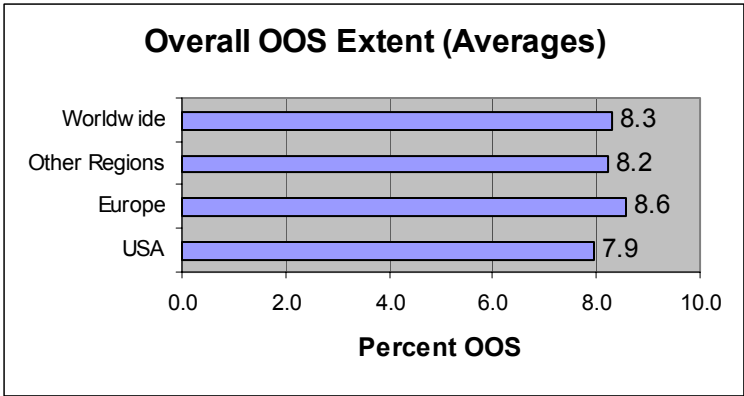


Exhibit I-1

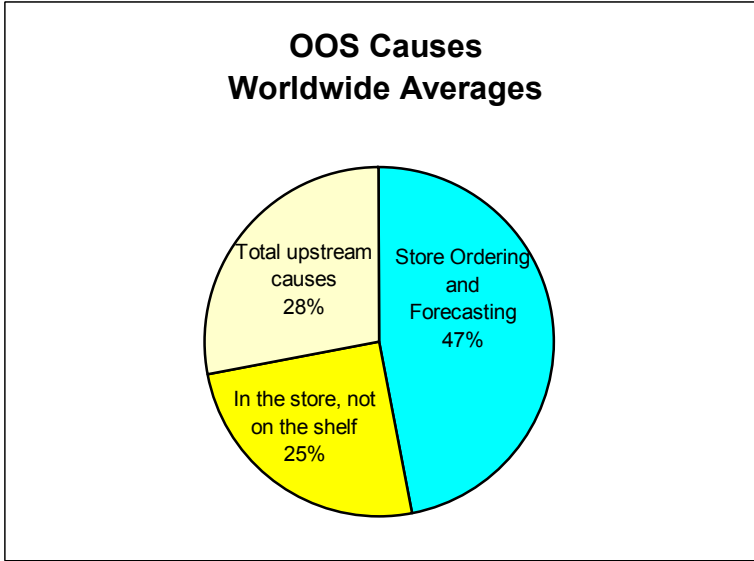
***Second, most of the direct cause of out-of-stocks occurs at—and must be remedied at—the retail store.***

Our analysis shows that 70-75 percent of out-of-stocks are a direct result of retail store practices (either underestimating demand or having ordering processes/cycles that are too lengthy) and shelf restocking practices (the product is at the store but not on the shelf). Exhibit I-2 divides the responsibility for OOS into its major components, and interestingly, the responsibility breaks out into the following approximate general groupings:

- Retail store ordering and forecasting causes (about ½ of OOS),
- Retail store shelving and replenishment practices where the product is at the store but not on the shelf (about ¼ of OOS), and
- Combined upstream causes (about ¼ of OOS).

The report provides extensive detail behind these general summary numbers in the section on Causes of OOS (refer to Section III C for detailed information).

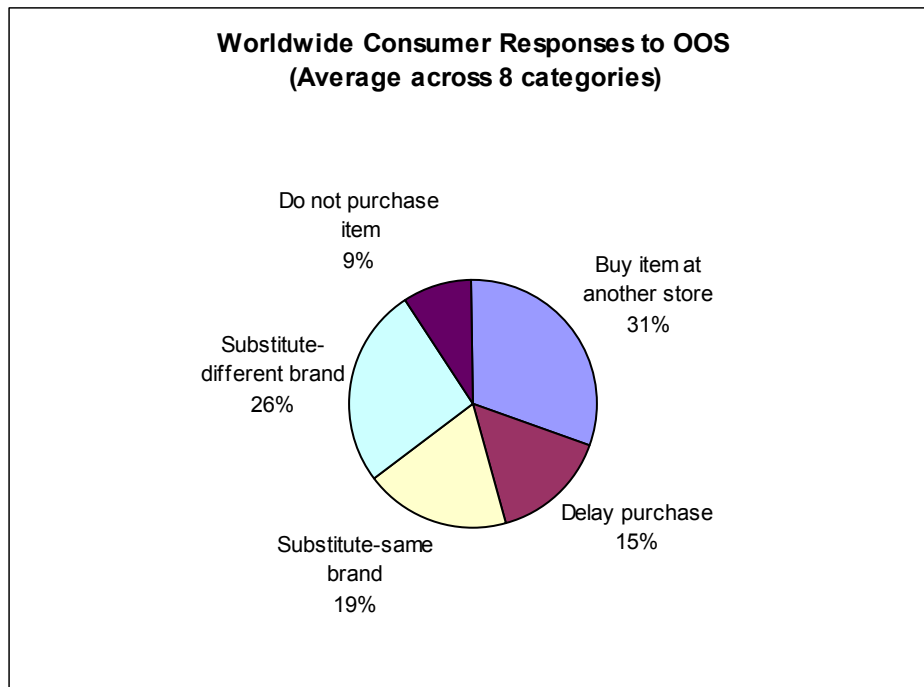
Exhibit I-2



***Third, our findings present new evidence that changes our understanding of the ways consumers respond to out of stocks:***

Relative to previous reports, our consumer data (of more than 71,000 consumers surveyed) show an increasing willingness of consumers—when confronted with an out-of-stock situation—to seek those items at an alternative outlet. Our consumer studies show—depending on the product category—that when confronted with an out-of-stock situation, 21-43% of consumers will make that purchase at another store, while another 7-25% will not buy the item at all. The consumer studies show that ***retailers are likely to lose almost one-half of the intended purchases*** when a consumer confronts an out-of-stock. This loss does not include the impact of substituting which is generally towards a cheaper substitute. The worldwide averages across 8 major categories are shown in Exhibit I-3. The report provides extensive detail behind these general summary numbers in the section on consumer response to OOS (Section III B).

Exhibit I-3



***Fourth, the implication of the above finding suggests that the cost of out-of-stocks to retailers is greater than what has been reported in previous studies.***

Our findings show that ***a typical retailer loses about 4 percent of sales*** due to having items out-of-stock. A loss of sales of 4 percent translates into a ***earnings per share loss of about \$0.012 (1.2 cents)*** for the average firm in the grocery retailing sector where the average earnings per share is about \$0.25 (25 cents) per year. The report provides extensive detail behind these general summary numbers in the section on implications of retail OOS (Section III D).

***Fifth, our examination of out-of-stocks shows some striking similarities worldwide as well as clear differences by region.***

We found that the aggregate root cause attributed to retail stores varies little across regions. However, while the causes attributed to the retail store were consistent in the aggregate, there were clear differences among the regions when it came to the amount of store ordering vs. forecasting vs. replenishment. When examining consumer reactions to OOS, consumer brand substitution varies greatly across regions. We also found differences in the variance of the extent of OOS in developing countries (greater variance). Our study sheds considerable light on both the worldwide differences and similarities in terms of extent, causes, and consumer responses to OOS.

***Sixth, our study introduces OOS comparison measurements using a new method.***

Our study examined several measurements of out-of-stocks by a new method that uses scanner data and product movement to predict and identify out-of-stock situations. Most OOS studies (including most of the ones examined for this report) have relied on physical store audits that provide measures of out-of stocks at specific periods of time. However, identifying an out-of-stock through a physical audit does not necessarily identify the true effect of that out-of-stock, nor does it provide a precise measure of the duration of the out-of-stock. The latter consideration, the *duration*, is managerially relevant since the length an item is out-of-stock indicates the true damage to the store's sales. The findings using the new method of measurement were reasonably consistent with the store audits, and this suggests that the new method provides reliable measures.