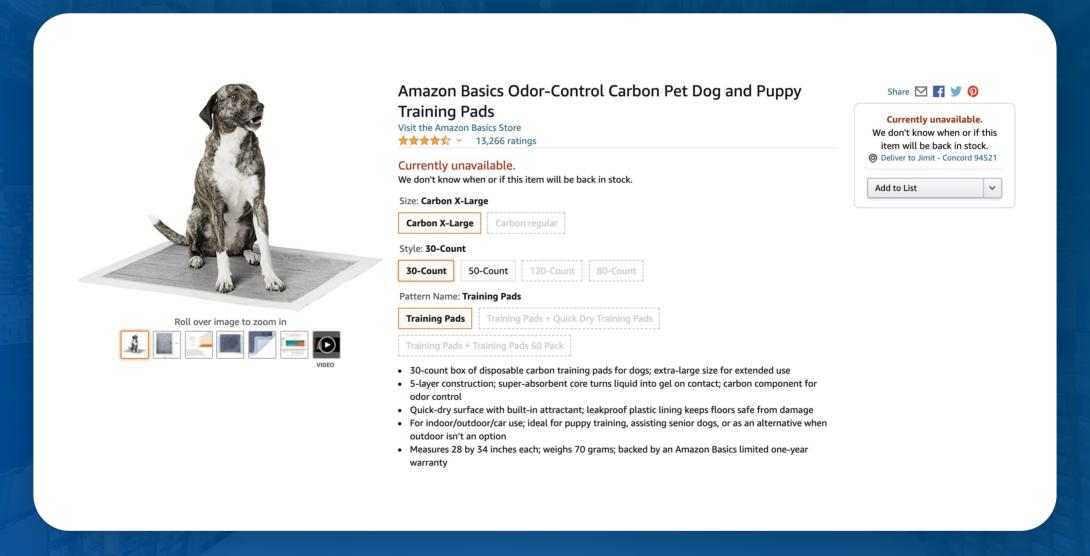
The Real Impact of "Out of Stock" on your E-commerce Business



Commerce Q
WHITE PAPER

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Executive Summary

CommercelQ is an E-commerce Channel Optimization platform that leverages machine learning, analytics and automations to optimize the e-commerce channel across supply chain, marketing and sales operations to win at the moment of purchase and drive profitable market share growth. At the core of the platform is an integrated data and analytics store that pulls together multiple data sources to form a single source of truth, which informs recommendations and automated decision-making across the entire e-commerce flywheel.

Trusted by more than 2000 leading consumer brands today, CommercelQ has tremendous visibility into key trends affecting e-commerce operations. One of the most vexing issues is how to manage Out of Stocks (OOS).

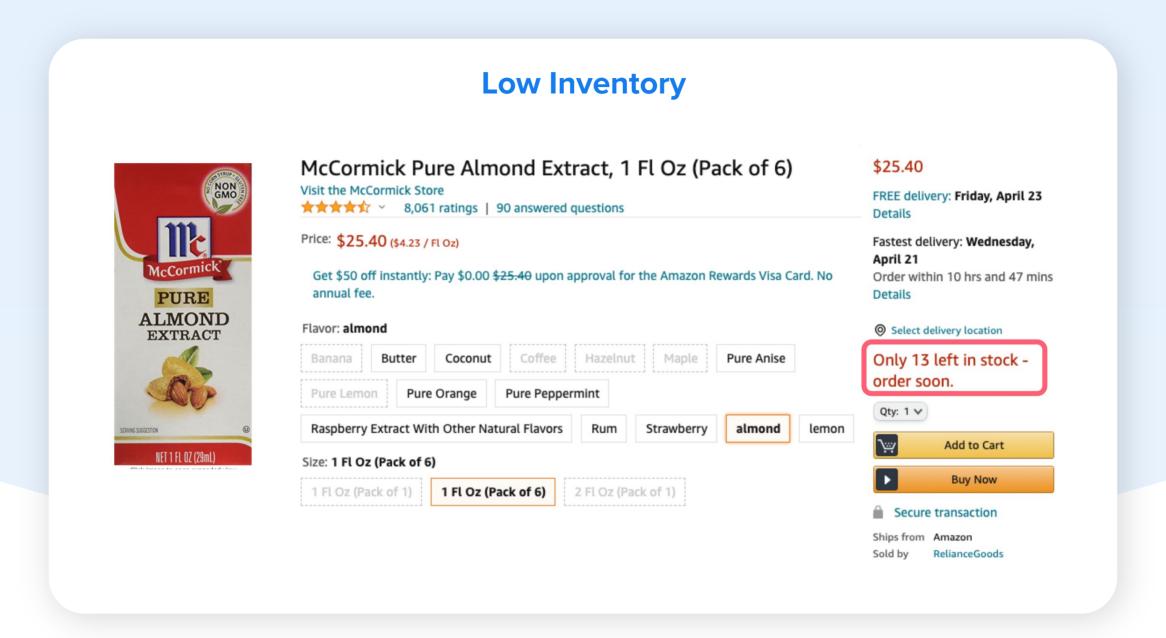
Unpacking the latest insights from the CommercelQ platform, this white paper is intended to shed light on the OOS problem by answering several key questions:

- What percentage of revenue is lost due to OOS items?
- Are there differences in the impact of OOS between CPG and hardlines?
- What are other negative impacts that OOS can cause?
- What can be done to minimize the fallout?

With more than 15%-23% of products remaining OOS on Amazon and other online retailers every day¹ at a cost of \$22 billion in online sales every year², getting ahead of these issues can make all the difference when it comes to profitability and long term market share growth.

Introduction

When it comes to OOS, there are actually three problems: (1) forecasting consumer demand accurately so allocation is correct and out of stock is minimized, (2) managing advertising and promotions on low-inventory products to optimize profit before they go out of stock, and (3) efficiently and effectively detecting and actioning products that are suppressed or erroneously listed as unavailable.



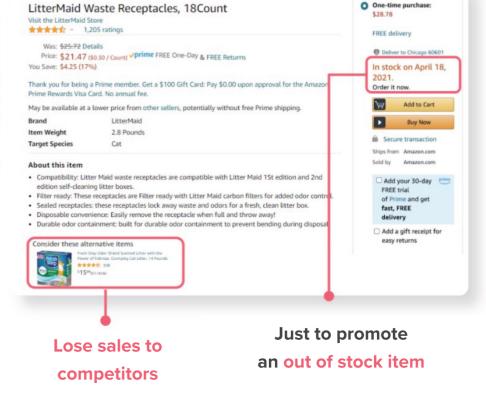
Conversely, there are other problems that can occur when a product is incorrectly delisted or shown as being out-of-stock when in fact there is inventory. This is generally due to factors like shopper complaints or algorithmic errors, but the onus is always on the brand to resolve the issue. In this case, it typically takes a decline in sales before anyone notices, potentially causing several weeks' worth of lost revenue before the issue is resolved and the product reinstated.

The Consequences **Are Significant**

Lack of coordination between data sources leads to Revenue Loss

e.g. Advertising Out of Stock





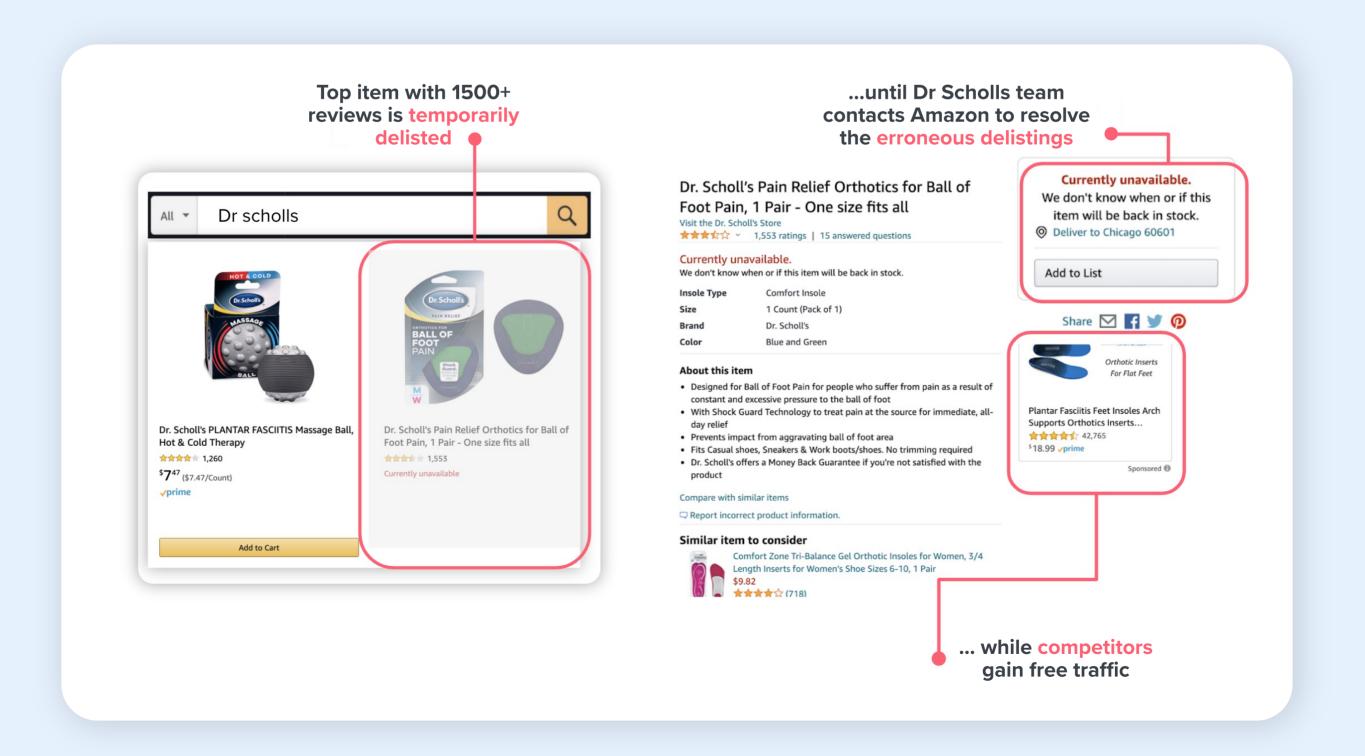
Resolving these issues could help brands and retailers recapture a whopping \$22 billion in revenue in online sales worldwide every year. Given the growth of e-commerce, it is estimated that these potential losses are likely to double in the next few years if they are not addressed.

Besides the loss of revenue, there are other significant problems that OOS causes brands, starting from the recovery time and loss of rankings, to regaining market share and the trust of consumers. Studies from the Grocery Manufacturers Association reveal that shoppers who encountered an actual out of stock item online were likely to switch brands or buy a substitute from the same retailer, diminishing not just sales but brand loyalty.

With all this in mind, this white paper sets out to answer some critical questions:

- What percentage of revenue is lost due to OOS items?
- Are there differences in the impact of OOS between CPG and hardlines?
- What are other negative impacts that OOS can cause?
- What can be done to minimize the fallout?

To help answer these questions, CommercelQ conducted an analysis of Amazon activity on 850 SKUs (680 CPG and 170 Hardline SKUs) for the period of December 2020 to March 2021. Unless mentioned otherwise, the results below are reflective of this information.



Unavailability Has A Major Impact On Topline Revenue

The first important finding (Figure 1) is that Hardlines and CPGs can lose anywhere from 20-30% of potential revenue on the days of Out- of Stock across the year. This is critical and related to the next finding which is that these losses are not only coming from the days that an item is out of stock, but also includes a "before" and "after" period.





For Sellers On E-Commerce, Revenue Loss Due To Unavailability Is Not Limited Only To Days When The Product Is Out-Of-Stock

When a top-selling SKU goes OOS, apart from the actual revenue lost during the event itself, up to 11% of the total loss occurs in the 3 days leading up to the period of unavailability. And even when the product is reinstated, SKUs lose up to 70% of revenue in the first 3 days and continue to remain lower for another 2-5 days while the product regains Detail Page Views and search ranking.

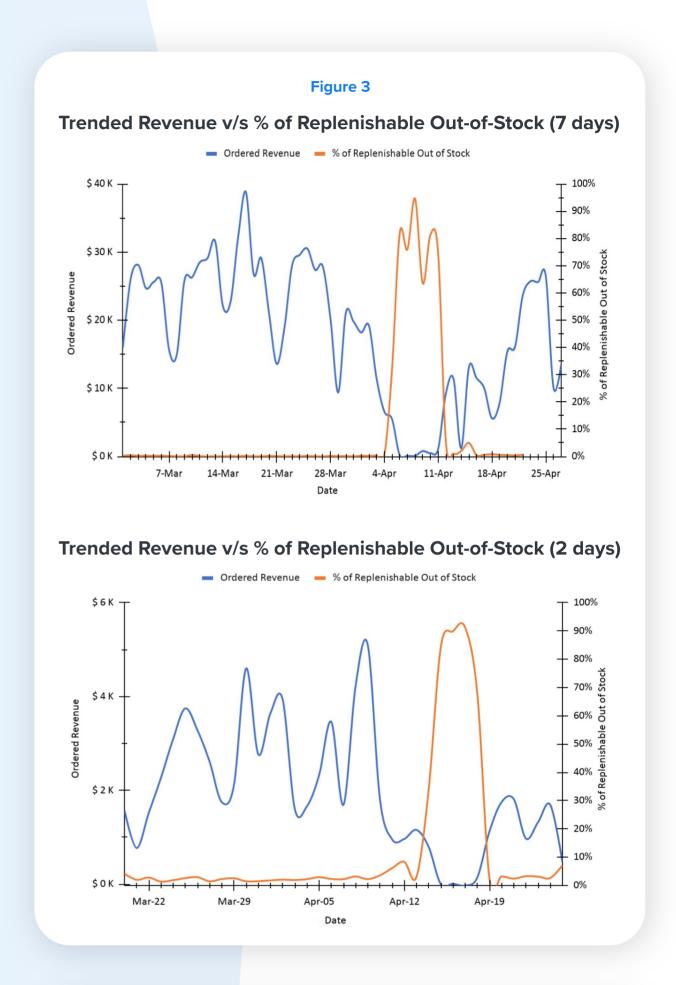
Hardlines Are More Heavily Impacted By Out-Of-Stock Events

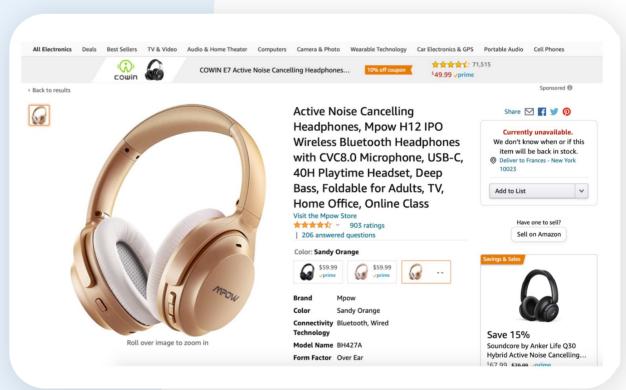
As shown in Figure 3, on the days leading up to an OOS event, top selling hardline brands can expect a 24% drop in Ordered Product Sales (OPS) and Glance Views (GV). During the first 2 days following the OOS event, hardline brands experience up to 70% decrease in OPS and Glance Views, and a drop in search rank by 9. This is in contrast to CPGs (see Figure 4), which generally will experience a 47% decrease in GV in the 3 days following the OOS event.

Furthermore, the effect for hardlines lingers. For up to 9 days from the date of the products being reinstated, OPS and GV remain 35% lower and search rankings continue to be depressed by roughly 4 places. With CPGs, ranking drops by 2 positions while GV remains 50% lower. And finally, the recovery period for Hardlines SKUs is 3x that of a CPG SKU.

There are few hypotheses explaining the observed trends:

- E-commerce retailers prioritize availability and will surface SKUs that have better inventory
- CPGs may bounce back quicker because of pent up demands, and regular purchase frequency as opposed to hardlines which are one-time purchases and can be fulfilled with a similar SKU or competing brands.
- The nature of search traffic in hardlines is also different, with customers typically viewing more Product Display Pages (PDPs) before making a purchase. This leads to larger increases in PDP views and conversion for competing SKUs, elevating them to top of results for an extended period.





Minimizing The Fallout

Even with the best systems in place, out of stocks are bound to occur, so the question becomes how to manage and avoid the fallout.

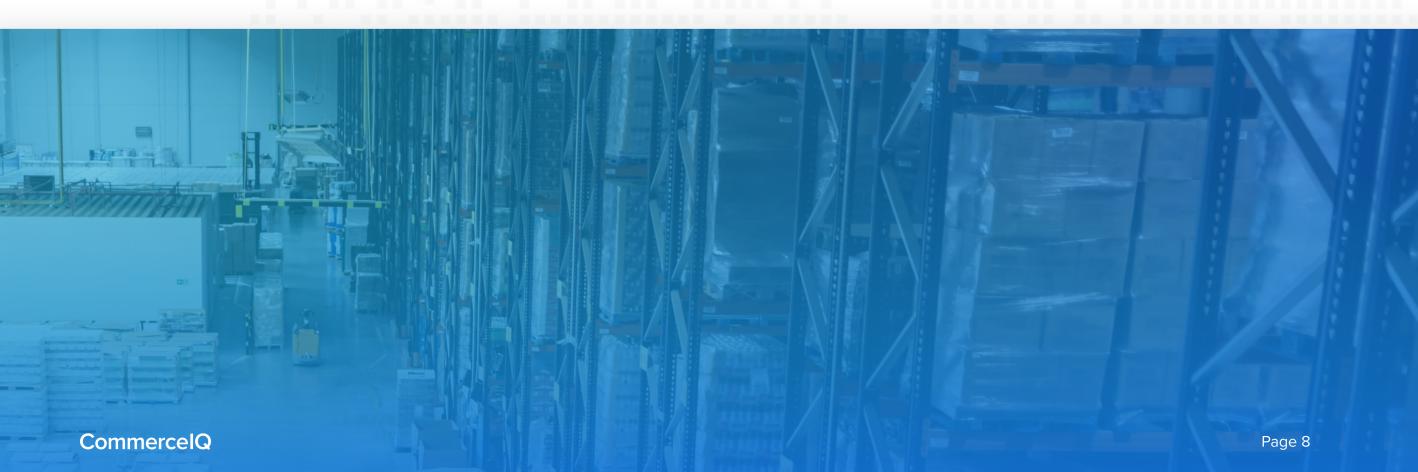
To start, it is important to highlight the main causes of products not being available for sale

- Underestimating demand
- Shipment delays
- No visibility to low stock levels
- Retailer fails to order
- Purchase Orders are rejected
- Retailer does not actively report suppressed products or products listed erroneously as unavailable

Most companies will try to solve the problem by investing in demand planning, sales forecasting and inventory management systems that don't necessarily talk to each other nor do the people operating these systems have the capacity to react at the speed of e-commerce.

Enter E-commerce Channel Optimization, where multiple data sources are integrated into a single source of truth and insights and recommendations are surfaced in real-time. Working at algorithmic scale, these systems automate the decision-making process and minimize the fallout of OOS. For example, they can detect low inventory levels and automatically put a pause on advertising that may drive traffic to those pages, manage discrepancies with Purchase Orders, alert shipment delays, optimize assortment based on validated demand, pricing and SKU availability and organize and fill digital shelves accordingly.

Not many brands have a dedicated function for managing online availability, and the ones that do are focused on the physical supply chain. To get ahead of OOS issues on retail media, it is necessary to have a holistic view and be able to manage accordingly. Brands that do this properly will experience less OOS overall, higher profitability and long-term market share.



About CommercelQ

CommercelQ™, the leading **e-commerce management platform** provider, leverages machine learning, analytics and automation holistically across supply chain, marketing and sales operations to accelerate brand growth with online retailers. With worldwide retail e-commerce growth hitting nearly **\$4.3T** in 2020, online sales are becoming core to business operations, requiring high velocity and high volume decision-making to win at the moment of purchase and drive profitable market share growth. Using CommercelQ as a single source of truth, customers like Georgia-Pacific, Spectrum Brands and a host of other top-tier Fast-Moving Consumer Goods companies have realized on average a 40% increase in incremental sales, 20% improvement in profitability and 20% increase in Share of Voice across omnichannel retailers online.

