IBM – Naalaiya Thiran - Retail Store Stock Inventory Analytics

Approaches for creating a Retail Store Stock Inventory Analytics

Inventory management methods for retailers

1. First-in, first-out (FIFO)

The FIFO stock control method is when a retailer fulfills an order with the item that has been sitting on the shelf the longest. Basically, the products that were acquired first will also be the first products that you sell.

Generally, FIFO leads to higher profits. The value of inventory at the point at which it was acquired may be less than when it is sold. That's because over time, inventory-related expenses generally increase. Older inventory is typically purchased at a lower price point.

2. Last-in, first-out (LIFO)

LIFO inventory management is the opposite of FIFO: It is the inventory management method that assumes the most recently acquired product is also the first to be sold. This means that the most recent pricing is used to determine the value of the stock that has been sold.

3. Just-in-time (JIT)

The JIT inventory management method takes more of an as-needed approach to stock control. Inventory is ordered according to sales. The benefits of this

method include reducing risk, expenses and waste. On the other hand, this can also adversely affect fulfillment times and product availability.

Best for:

- **Retailers who have mastered accurate forecasting**
- **Larger retailers, as small businesses may end up paying premiums and reducing profits for low stock levels**
- **Retailers that want to reduce holding costs**

4. Economic order quantity (EOQ)

The EOQ inventory management method uses *customer demand, ordering cost, and holding cost* to determine what the sweet spot is for inventory levels. Also referred to as the optimum lot size, EOQ is calculated as follows:

A represents the total customer demand over the course of the year, Cp is your ordering cost, and Ch is the carrying cost.

Let's break down what each of these components means…

Customer demand depends on a variety of factors, both external (seasonality, trends) and internal (marketing and promotions, pricing strategies). Ordering costs are typically stable, however, they can decrease as you order inventory in bulk.