

# Strategic Inventory Management: Exploring the Interplay of Holidays, Market Demand, and Financial Factors

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**Abstract.** This study aims to explore the relationship between inventory and business operations as businesses increasingly focus on the strategic management of inventory. Inventory, or stock, refers to a catalog of items, components, and raw materials that a firm regularly uses or sells. The study starts by highlighting the significance of inventory in measuring a firm's financial position, profitability, and liquidity. It then focuses on raw materials, work-in-process, finished goods, pending inventories, demand fluctuations, festive influences, and financial constraints. The paper begins with a detailed literature review of inventory types and factors that affect them. The study proposes the hypothesis that inventory changes are closely related to holidays, demand, and the firm's financial position. This paper examines the impact of holidays, market demand, and a firm's financial position on inventories. It concludes that inventory management significantly affects firms' operations and calls for further research on the relationship between inventory levels, cost of capital, and profitability to optimize inventory management for sustainable development.

**Keywords:** Inventory Management, Holiday Impact, Market Demand, Financial Factors.

## 1. Introduction

Inventory, also known as inventory, is a catalog containing items, components, and raw materials that a business uses or sells regularly. Inventory is an important representation of a company's performance so that investment can be better evaluated. Empirical studies based on analysis show that inventory information in forex can indeed predict discount factors, both in the short and long term. The direct impact of inventory information shocks on prices is large, about 50% of that of public information shocks [1]. Inventory has a direct bearing on a company's earnings and liquidity, making it a crucial metric for assessing its financial standing. Determining what to stock, when to stock it, and how much to order in inventory are all part of inventory planning and control. Other operational decisions, such as receiving, storing, issuing, and keeping inventory records, coexist with these significant choices.

Additional data is needed for broader management control, including Pareto analysis, stock turnover, and the location and value of retained shares [2]. Adequate and timely inventory flows are essential to the success and success of any company's growth. Inventory can be used to check any company's liquidity and operating efficiency. Inventory applications can use inventory turnover to measure the number of times per year to test inventory or inventory that has been replaced. So, inventory information can give investors a better idea of a company's growth prospects. Inventory also has a direct impact on a company's profit. The cost of inventory determines the selling price of the product. As the selling price increases, the company's profit may also decrease. When a company decides to raise a product's price, the product's sales volume will be affected along with the price increase. In many companies, demand ranges are classified as seasonal or non-seasonal at the discretion of management, often without information from statistical tests. Other companies do not bother categorizing the demand series and assume that all demand is seasonal [3]. In investment activities, inventory is also used as an important criterion for investors' investment decisions, so this research takes inventory as this study's core content. The safety inventory of seasonal goods is affected by the service level, lead time, and other factors, seasonal characteristics, and average daily sales volume. Therefore, when formulating the safety inventory strategy of seasonal commodities,

this study should comprehensively consider these factors and make corresponding adjustments at any time according to market and seasonal changes to achieve good inventory management results [4]. Effective inventory control lowers the cost of buying medications and associated running costs, which raises gross and net profit. Additionally, by reducing the cost of items with lower purchasing and storage expenses, cash flow will be increased. This cash flow can cover operating expenses and invest in other services [5]. This article analyzes what causes changes in inventory through research.

## 2. Literature Review

Inventory management is an important part of a company's operation, and managing inventory reasonably will greatly impact the company's operation. Inventory control problems often lead to discrepancies between recorded and actual counts that may eventually result in higher than preferred inventory levels. On the contrary, accurate inventory recording leads to lower inventory investment and is the basis for forecasting, sequencing, tracking, supplier evaluation, and slow-selling inventory management models [6]. When this study begins to understand inventory, it should first understand inventory types.

### 2.1. Inventory Type

**Raw material inventory.** The parts and raw materials required by a business to manufacture its goods are referred to as raw material inventory. Properly managing raw material inventory can ensure that production lines are not interrupted, and production efficiency is maintained.

**Work-in-process inventory.** Work-in-process inventory includes products that are in the process of being manufactured. These products require inventory management in different manufacturing stages to avoid excessive scrap and production lag.

**Finished goods inventory.** Finished goods inventory is products that have been manufactured but have yet to sell. They tie up a company's funds and can be subject to the risk of obsolescence or price reductions.

**Pending inventory.** Pending inventory includes items in need of repair, processing, or disposal. Properly managing this inventory can reduce the cost of repairs and disposal.

### 2.2. Factors Affecting Inventory

**Demand fluctuations.** Fluctuations in market demand have a direct impact on inventory levels. With more accurate information on demand, suppliers can reduce inventory, improve customer delivery reliability, or both. If suppliers are more reliable, customers can reduce inventory [7]. When the demand in the market goes up, the inventory will also go down. Different products will have different seasonal changes. In winter, the demand for ice cream will drop rapidly. Still, the inventory of hand warmers will rise rapidly so that the inventory will fluctuate with the different demands in different periods. On different festivals, the inventory of products will also be different, as we all know, on Christmas Eve Christmas, the demand for apples will rise a lot, and the inventory will be reduced on Teachers' Day, Mother's Day, Valentine's Day and other holidays, the demand for flowers will also rise a lot. The inventory will also decrease. At the same time, inventory increases and decreases are closely related to consumer demand.

**Festival impact.** Different festivals require different products, and merchants bind different products to festivals, leading to many inventory purchases before festivals. For American retailers, the Thanksgiving–Christmas holiday season is a key sales time. Tasks like restocking and processing client orders must be finished as store traffic grows. Over the holidays, there is an increase in the urgency of questions and queries, cash register operating, cleaning, and bagging. As a result, the opportunity cost of holiday price adjustments in retail stores can increase substantially [8]. According to the data, consumers spent \$58.8 billion on retail sales between Thanksgiving and Cyber Monday. That's up 19.9 percent from a year ago. Retailers from Walmart to Target ordered heavily ahead of Black Friday this year, partly because Toys "R" Us was absent, as each retailer looked to win some

toy market share. Retailers said they were pleased with their sales over the weekend and reported generally good store traffic and online travel. Making a sale starts with having items in stock that consumers want.

Financial constraints. A company's financial position can affect its inventory levels. Financial constraints may result in a company needing more inventory to deal with uncertainty. The purchase of inventory is closely related to the company's financial position, and if the company has sufficient financial preparation, it will increase the inventory stock. More focus is being placed on working capital management and financial supply chain management as crucial strategies for raising supply chain profitability. Managers may significantly reduce costs and impact financial performance by aggressively controlling working capital requirements and payment periods [9]. The effects of excessively high inventory levels include lengthening inventory turnaround cycles, reducing rapid liquidity levels, and significantly reducing operating cash flow. While seeking additional sources of financing for business activities, enterprises also have to bear indirect inventory costs and lose the possibility of substituting the use of financial resources frozen in inventory [10].

There is a close relationship between enterprises' inventory and companies' operations. Reasonable inventory management can help enterprises reduce costs, improve efficiency and meet customer needs, thus promoting the sustainable operation of the company. Inventory management needs to be customized according to different business needs and market conditions and is an important link in business operations that must be addressed. Through effective inventory management strategies, enterprises can better cope with market changes, improve competitiveness and achieve long-term success.

### 3. Proposition Development

Therefore, this study assumes that inventory changes are related to holidays, demand, and the company's financial situation. Inventory increases before the holidays due to the holiday shopping wave and is restocked during the holidays. As demand increases, inventory decreases after demand increases and increases over some time. The financial condition of a business can affect the amount of inventory.

#### 3.1. Inventory and Holidays

Holidays are of great significance to businesses and stores. Many holidays are a high point for sales throughout the year. In the US, holidays like Thanksgiving, Easter, and Christmas have a significant impact on seasonal inventory. This implies, for instance, that some products, like turkeys, Christmas decorations, and Easter eggs, may see a spike in demand during this period in shops. Retailers usually enhance their offerings of clothes, decorations, and other related things around Halloween, which adds to their seasonal inventory.

Similar to this, supply generally rises during the weeks preceding the start of school when there is an increase in demand for particular items. Retailers are anticipated to stock more technology, including laptops and software, as well as school supplies at this time. Therefore, the holiday is one of the important factors for the increase of inventory; retailers will predict in advance the holiday inventory demand for a large number of products to purchase, and during the holiday, inventory will be a large number of clearance to achieve the purpose of the holiday inventory. Take Amazon as an example. During the holidays, Amazon's inventory sales spread increased by nearly 20 percentage points year-on-year. The company is pushing holiday shopping, offering some promotions earlier than usual. The goal is to avoid a late-quarter surge in demand from already tight fulfillment and delivery capabilities. In retail, demand fluctuates throughout the week, the year, and especially during the holidays. Public holidays are associated with increased revenue and play an important role in annual performance. As a result, retailers offer many promotional articles to boost sales during the holiday season [11].

### 3.2. Inventory and Demand

The market's demand directly affects inventory, which changes with market fluctuations. The inventory cycle can be divided into 4 stages: passive destocking when the demand picks up, but the production of the supply side does not keep up with the demand, resulting in the inventory gradually declining with the increase in sales. Active restocking: the demand remains strong, and the supply side expects to improve and take the initiative to expand production; while the sales are high, the inventory level increases. Passive restocking: Demand falls, the supply side is too late to shrink production, and sales decline causes inventory to rise passively. Active destocking: weak demand, supply side aware of the economic downturn, taking the initiative to reduce inventory four stages cycle, the cycle appears, thus forming an economic cycle.

It can be found that the change in inventory needs to catch up to the change in demand. When the demand rises, inventory increases the supply passively due to the market's fluctuations, so the demand rises. When the inventory begins to rise, the demand will break the short-supply situation due to the increase in the quantity of products. The subsequent inventory will also decrease due to the decrease in demand.

### 3.3. Business Financials

The financial indicators of a company can reflect the operating efficiency of the company, that is, the speed of turnover. In simple terms, it is the same as a small store. The owner buys goods and sells them. However, suppose the company's inventory is overstocked for a long time. In that case, it will affect the company's turnover rate and not get enough cash flow, leading to poor management and other consequences. If an enterprise has a good financial situation, it is easier to buy or produce more inventory to meet the market demand.

On the contrary, the company's inventory will be limited if the cash flow is tight. Inventory turnover is a ratio that shows how often a company's inventory has been sold and replaced in a given period. The inventory turnover ratio indicates how efficiently a business produces and sells its products. Inventory turnover is important in showing how quickly inventory is converted into accounts receivable through sales. In general, a high turnover rate indicates good inventory management. Low inventory turnover means that inventory levels are too high and exceed requirements for sales activity, slow turnover, or outdated inventory. However, a relatively high inventory turnover rate may be due to the low inventory level, resulting in very few out-of-stock items; the company may be living hand-to-mouth. Turnover can also be high if the company restocks in small batches.

In summary, this study has summarized inventory with holidays, market demand, and company financials into the following picture:

## 4. Conclusion

Inventory has a significant impact on business operations. Inventory management is considered one of the most important factors influencing competitiveness. It is also regarded as the operational performance measurement standard for small, medium, and micro enterprises (SMME) in key inventories-intensive industries [12]. Therefore, inventory is of great value in terms of business operations. Inventory is often influenced by demand. Therefore, the correct inventory forecast will be the key to the money management of enterprises. Reasonable improvement in inventory management will have a positive impact on the cost and revenue of the enterprise. The relationship between inventory levels, cost of capital and profitability should be thoroughly studied so enterprises can optimize inventory levels to the greatest extent. The inventory level will directly affect the cost and profit of the enterprise. When the inventory accumulation cannot be cleared, the enterprise will destock by reducing the price, which will greatly affect the profit of the enterprise and lead to the weakening of its capital liquidity. Therefore, reasonable inventory management is an indispensable and important link in the operation of an enterprise. Inventory management is the cornerstone of the

sustainable development of an enterprise. It should improve the level of information prediction in inventory management and the inventory increase and decrease scale to ensure the company's health.

## References

- [1] Cao H H, Lyons R K, Evans M. Inventory information. 2003.
- [2] Bonney M C, Head M A, Tien C C, et al. Inventory and enterprise integration. *International Journal of Production Economics*, 1996, 45 (1-3): 91-99.
- [3] Gardner Jr E S, Diaz-Saiz J. Seasonal adjustment of inventory demand series: a case study. *International Journal of Forecasting*, 2002, 18 (1): 117-123.
- [4] Yin Yanhai. Analysis on Optimization Model of seasonal commodity safety inventory in Logistics Center. *China Market*, 2010 (36): 16-18.
- [5] Hidayat R, Saleh I. The importance of inventory management in pharmaceutical practice. *Open Access Indonesia Journal of Social Sciences*, 2020, 3 (1): 80-84.
- [6] Harrington T C, Lambert D M, Vance M P. Implementing an effective inventory management system. *International Journal of Physical Distribution & Logistics Management*, 1990, 20 (9): 17-23.
- [7] Bourland K E, Powell S G, Pyke D F. Exploiting timely demand information to reduce inventories. *European journal of operational research*, 1996, 92 (2): 239-253.
- [8] Levy D, Chen H, Muller G, et al. Holiday price rigidity and cost of price adjustment. *Economica*, 2010, 77 (305): 172-198.
- [9] Protopappa-Sieke M, Seifert R W. Interrelating operational and financial performance measurements in inventory control. *European Journal of Operational Research*, 2010, 204 (3): 439-448.
- [10] Jonek-Kowalska I. Financial aspects of changes in the level of finished goods inventory in a mining enterprise. *Gospodarka Surowcami Mineralnymi*, 2014, 30.
- [11] Obermair E, Holzapfel A, Kuhn H. Operational planning for public holidays in grocery retailing-managing the grocery retail rush. *Operations Management Research*, 2023: 1-18.
- [12] Ngubane N, Mayekiso S, Sikota S, et al. Inventory management systems used by manufacturing small medium and micro enterprises in Cape Town. 2015.