The power to do more

Managing Inventory Obsolescence For Improved Retail Performance

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Content

For retail organizations, merchandise inventory can be an asset or a liability. When it moves along at a healthy clip it is an asset, one that adds to the bottom line. If customers are slow to take to it or, worse, find it unattractive, the merchandise inventory becomes a liability, one that ties up cash and decreases in value over time.

Retailers know that preventing inventory obsolescence is a critical aspect of their operations. However, many, especially small- and medium-sized ones, do not manage it proactively; instead relying on guess work or physical stock counts to identify slow- or non-moving merchandise items.

Using an Obsolescence Mark Down (OMD) stock model to quantify stock aging accurately and appropriately, and using technology systems that incorporate such a model, retailer can measure, monitor and minimize inventory obsolescence and operate more efficiently and more profitably.

ABOUT THE AUTHOR

Ajay Gupta heads the retail solutions practice at Dell™ (South Asia and Korea). He has more than 20 years of experience in the retail and ICT sectors. Formerly Group CIO and Head of Business Systems at a regional retail group based in Singapore, Ajay has participated in many international forums pertaining to the retail and IT sectors.

Inventory Obsolescence

For retailers, having the right level of inventory requires fine balancing skills to optimize several operational challenges.

With too little inventory the business runs the risk of losing out on potential sales and potential market share. Possessing a high amount of inventory for a long period of time is not wise either as there is a risk of the goods becoming obsolete.

Inventory obsolescence happens when merchandise stocks begin to lose their saleable value. This may happen for a variety of reasons: fashion merchandise rendered out of vogue due to fashion trends or seasons, perishable goods nearing their expiry sell-dates, technological products such as mobile phones and computers will soon give way to newer models, new trends push consumers to view current offerings as oldish, weaker economic conditions downturn cause consumers to be prudent about spending.

To minimize inventory obsolescence, retailers usually have to mark down prices and offer heavy discounts. Eventually, obsolete merchandise is usually written down. While these actions may help reduce the risk of merchandise becoming obsolete, they also result in lower margins. Given that margins are already thin in most retail segments, this situation is best avoided.

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Why management of inventory obsolescence is critical

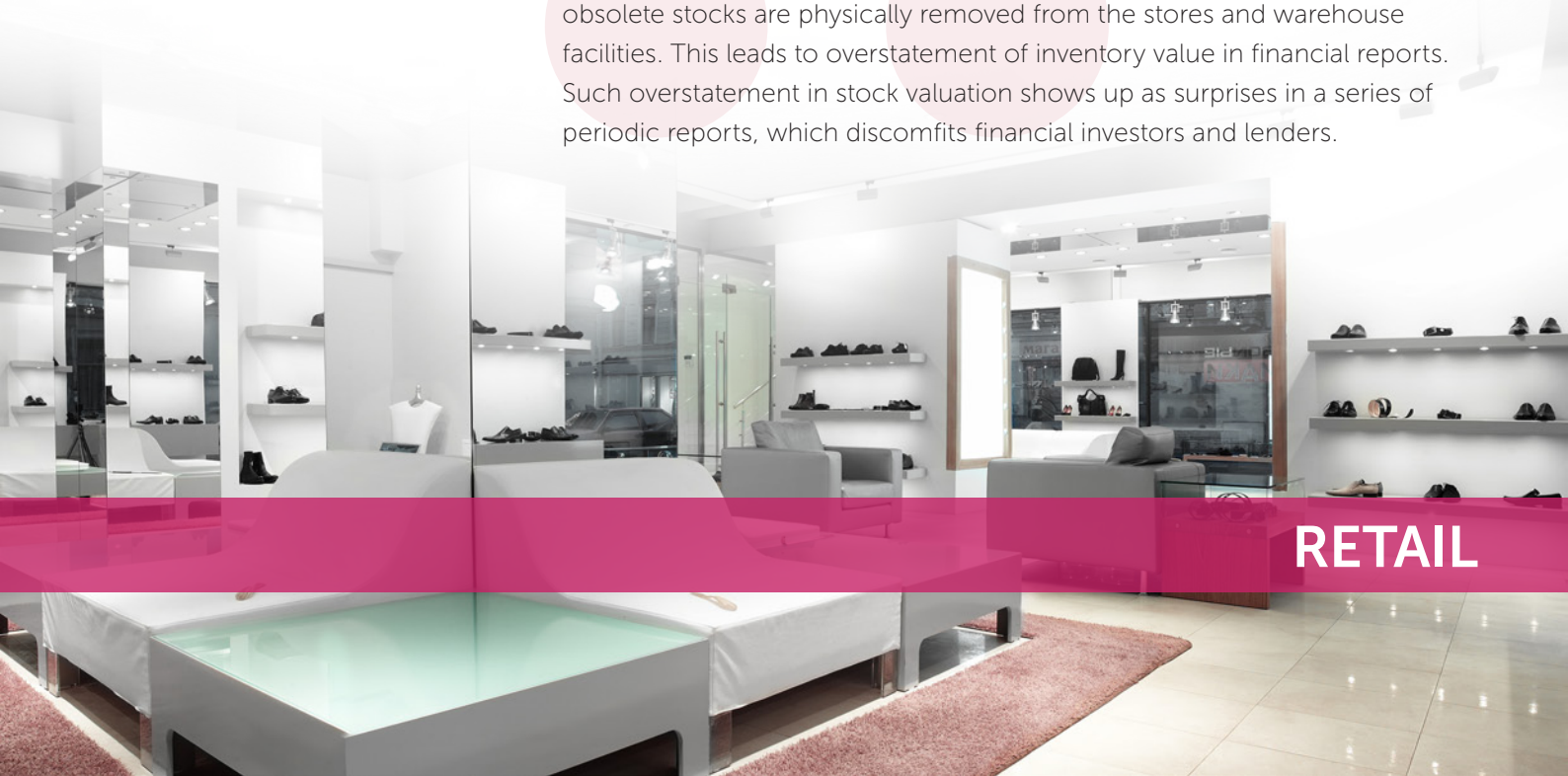
For retail organizations, merchandise inventory forms one of three major business costs, the others being space (warehouse and sales floor) and staff. Other than the direct purchasing cost of the merchandise itself, there are carrying costs to consider. These include taxes, insurance, storage, transportation, handling, depreciation, debt servicing costs, and opportunity cost. Overstocking, which is required for promotional sales events, also causes inventory obsolescence and increase carrying costs, as well as increasing the risk of losses due to damage or pilferage.

The key to successfully managing inventory is to match it as closely as possible to sales.

The faster the procured inventory can be processed and converted to sales, the better it is for the business.

Overstocking and poorer-than-expected demand, on the other hand, besides tying up funds, increases the risk of products becoming obsolete. Preventing inventory from becoming obsolete is thus critical in retail businesses, especially those dealing in fast fashion merchandise, seasonal and technology merchandise.

While markdowns and write-offs are common treatments for soon-to-be-obsolete or obsoleted merchandise, many retailers do not always account for the loss in value on their balance sheets in a timely manner until the obsolete stocks are physically removed from the stores and warehouse facilities. This leads to overstatement of inventory value in financial reports. Such overstatement in stock valuation shows up as surprises in a series of periodic reports, which discomfits financial investors and lenders.



Furthermore, lower margins on marked-down, aging goods cause pressure to get sales volume up. More often than not, additional and probably unplanned selling and advertising expenses have to be incurred in order to sell the merchandise. These further add to increased operating expenses. Having slow-moving stock items that are fading in value also means higher labour and transport costs, as employees or contractors have to be deployed to move the stocks from one location to another, perform cycle counts, do bin-to-bin moves, and so on.

Together, these factors depress operating profits. This in turn results in a smaller pool of funds available for investment to grow the business and to drive sales and marketing and other forward-looking activities. The eventual outcome is a low rate of business growth for the retailer. Given this far-from-bright prospect, there is a clear need to proactively measure and manage inventory such that the losses from the accumulation of soon-to-be-obsolete merchandise is minimized or, better still, avoided altogether by timely measurement, monitoring, tracing and timely corrective actions.

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Going Beyond Stock Count

In order to minimize inventory obsolescence, retailers need to be able to identify which of their merchandise items are slow and non-moving.

The traditional way to do this is to determine the age of the merchandise. Although definitions of age differ among retailers, it is typically defined as the length of time in weeks or months since the retailer takes ownership of the merchandise.

Most small and medium-sized retailers, however, do not systematically track merchandise stocks from receipt from supplier to sale to final customer in a correct and timely manner. Some would get a sense of how old their stocks are during annual physical stock counts using initial item purchase date. There is usually no distinction made between earlier lots of a particular item and more recent ones of the same item. Without detailed examination of use-by dates or manufacturing lot details, there is little to distinguish, say, a can of tuna that will expire in a fortnight from an identical looking one that is good for a dozen more months. On the other hand, the stock count exercise would take much longer time if receipt dates from supplier are to be recorded for all physical merchandise items during stock counts.

Stock count exercises are often inflexible process-wise as there is pressure to perform them with minimal frequency and also take minimal time performing them.

This also makes it difficult to identify, track and take corrective action for operational complexities such as extent of spoilage, internal leakage and documentation irregularities. An annual stock count is required to be performed to satisfy statutory purpose. Many retailers would perform stock counts infrequently as they are deemed as disruptive to business operations and can consume considerable staff time. This makes it difficult to identify merchandise items that are starting to decrease in value due to obsolescence and gives the retailer less time to take corrective action such as timely markdowns and promotions to reduce the heavy discounts and eventual write-down.

Modelling Retail Inventory Obsolescence

To be better able to identify slow and non-moving merchandise items, retailers would need to develop a practical yet effective model for merchandise aging with a view to quantifying and taking the appropriate steps to minimize inventory obsolescence. The model must be capable of aging items and map obsolescence as per merchandise category in an objective and timely manner with minimum human intervention. One such practical model is presented here in order to quantify stock aging and obsolescence without the need for human intervention or additional process such as physical stock count.

The model uses supplier receipt date of merchandise as the basis for its stock aging. The model may be simplified to use last receipt date for respective merchandise from the inventory system at item levels, considering that merchandise would be released for sale from stock in FIFO (First-in-First-out) sequence and would be replenished by vendors only when earlier stock inventory level run low. This way, as depicted in Table 1, slow- and non-moving merchandise items can be identified based on basic information available in the inventory system in an objective and timely manner.

The model further enables the retailer to create a different aging profile for each merchandise category. Not all merchandise categories age at the same pace in terms of loss of saleable value.

Obsolescence value in monetary terms for one category does not mean the same for other categories procured at the same time.

For example, whereas ladies' fashion wear in stock after one season of three months may be considered old – and would diminish in saleable value much faster than, say, bed linen, that was received at the store at the same time and would still be saleable at the same original price.

Therefore, the model would be able to allow the retailers to make provision for different aging profiles and obsolescence price markdowns for different merchandise categories.

Table 2 illustrates this concept by defining the OMD (Obsolescence Mark Down) profile for two merchandise categories. The OMD profile for fashion wear is defined as – 30% obsolescence for stocks 4-6 months old, 60% for stock 7-9 months old, and so on. Similarly, OMD profile for bed linen items may be defined independently – 10% obsolescence for stocks 7-12 months old, 20% for stock 13-18 months old, and so on. Besides making it possible for the retailer to have a high-level view and manage slow-moving obsolete items as a category, the model would also allow it to drill down to detailed items in a category, leading to more timely and actionable corrective action at SKU level. Table 3 illustrates the OMD computation results for individual SKUs and summing it at merchandise category level. It highlights the absolute quantum of stock OMD in monetary terms and priority to take corrective action (price reduction, discount, stock reallocation and promotional mechanics, etc.) to sell the inventory for aged stock.

TABLE 1.
Stock Aging for SKU Items based on Respective Last Receipt Dates

NO.	MERCHANDISE CATEGORY	SKU	LAST RECEIPT DATE (DD/MM/YYYY)	STOCK QUANTITY (PC)	UNIT COST ($)	STOCK VALUE ($)	AGE ON 31ST DEC 2011 (MONTHS)
1	Fashion	LFY1104T	15/11/2011	100	$90	$9,000	1
2	Fashion	LFY1103X	05/10/2011	70	$100	$7,000	2
3	Fashion	LF1103N	15/08/2011	2000	$50	$10,000	4
4	Fashion	LF1101D	15/03/2011	100	$80	$8,000	9
5	Bed Linen	ECPH56Z	20/08/2011	50	$120	$6,000	4
6	Bed Linen	ECPH56P	21/05/2011	90	$50	$4,500	7
7	Bed Linen	ECPH56B	10/10/2010	20	$80	$1,600	14

TABLE 2.
Age Profile by Merchandise Category

NO.	MERCHANDISE CATEGORY	AGE (MONTHS)	OBSOLESCENCE MARK DOWN (OMD %)
1	Fashion	Less than 3	0%
2	Fashion	4–6	30%
3	Fashion	7–9	60%
4	Fashion	10–12	80%
5	Fashion	More than 12	100%
6	Bed Linen	Less than 6	0%
7	Bed Linen	7–12	10%
8	Bed Linen	13–18	20%
9	Bed Linen	19–24	30%
10	Bed Linen	More than 24	40%

TABLE 3.
Stock Obsolescence Value Quantification (OMD $)

NO.	MERCHANDISE CATEGORY	SKU	STOCK VALUE ($)	AGE ON 31ST DEC 2011 (MONTHS)	OMD (%)	OMD ($)
1	Fashion	LFY1104T	$9,000	1	0	0
2	Fashion	LFY1103X	$7,000	2	0	0
3	Fashion	LF1103N	$10,000	4	30	3,000
4	Fashion	LF1101D	$8,000	9	60	4,800
	Fashion	**Category Total**	**$34,000**		**23**	**7,800**
5	Bed Linen	ECPH56Z	$6,000	4	0	0
6	Bed Linen	ECPH56P	$4,500	7	10	450
7	Bed Linen	ECPH56B	$1,600	14	20	320
	Bed Linen	**Category Total**	**$12,100**		**6**	**770**

The simple and yet practical OMD model presented above was developed, enhanced and used effectively at a regional retail group in Asia Pacific to quantify, measure, monitor and manage stock obsolescence in an objective, timely and progressive manner. Retailers can make use of the model to plan and execute timely discounts, price adjustments and marketing events aimed at moving merchandise off the shelves, thus converting soon-to-be-obsolete goods into cash at decent margins. In addition, they can now make provisions for inventory obsolescence before the next planned stock count and be able to more accurately reflect the value of their merchandise in financial statements. The model can also be extended to measure, compare and track the business performance of different merchandise categories and their respective buyers, and as a tool to trigger auto-price markdown. The model thus provides the retailer with a competitive edge in managing retail merchandising inventory and operations.

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Dell™ Retail Solutions

To help small and medium-sized retail enterprises run their operations efficiently, Dell™ offers comprehensive retail solutions including Retail POS Solutions.

Dell™ Retail POS Solutions for the retail businesses include Dell™ OptiPlex™ Series and a variety of POS peripherals, such as cash drawers, touch-screen monitors, receipt printers, barcode scanners, customer display poles and magnetic strip readers. Powered by the latest 2nd Generation Intel® Core™ i3 processor, Dell™ OptiPlex™ systems are engineered for high durability and easy manageability and fit into a variety of store environments: under the counter, vertically or horizontally. Dell™ OptiPlex™ Series are industrial-grade CPU systems that are designed to withstand the needs of harsh retail environments such as long operating hours, high temperature, humidity, vibrations. They are supported by Dell™ Support Services, which include advanced-level phone support, remote diagnosis, and next business day on-site service.

The application software component of the Dell™ Retail Solutions features Microsoft Retail Management System (Microsoft RMS), a fully scalable and modular retail software solution designed to help small- and mid-sized retailers manage their business from POS through to sales transactions, inventory control, reporting, purchasing and pricing. Besides automating POS processes and store operations, Microsoft RMS provides centralized control for multi-store retailers, and integrates with Microsoft Office programs and other popular applications.

Easy to use and configure, Dell™ Retail Solutions embody elements of the OMD model described above to measure, monitor, and manage merchandise inventory obsolescence. Using it, retailers can age their merchandise items correctly, track inventory obsolescence automatically across one or multiple store locations, identify slow-moving items, manage inactive items as a category and get details on individual SKU items. Using this information, they can then take necessary corrective actions and assign new price levels or plan marketing activities quickly in a timely manner before the value of stock reduces further. The OMD model can also be used to measure the effectiveness of corrective actions to deplete aged inventory and reduce stock obsolescence risks.

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www.dell.com.my/retail
1800-88-0724

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