Managing the Merchandise Planning Process

CHAPTER 12

LEVY · WEITZ
RETAILING MANAGEMENT

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Merchandise Management

Introduction to the World of Retailing → Retailing Strategy → Merchandise Management, Store Management
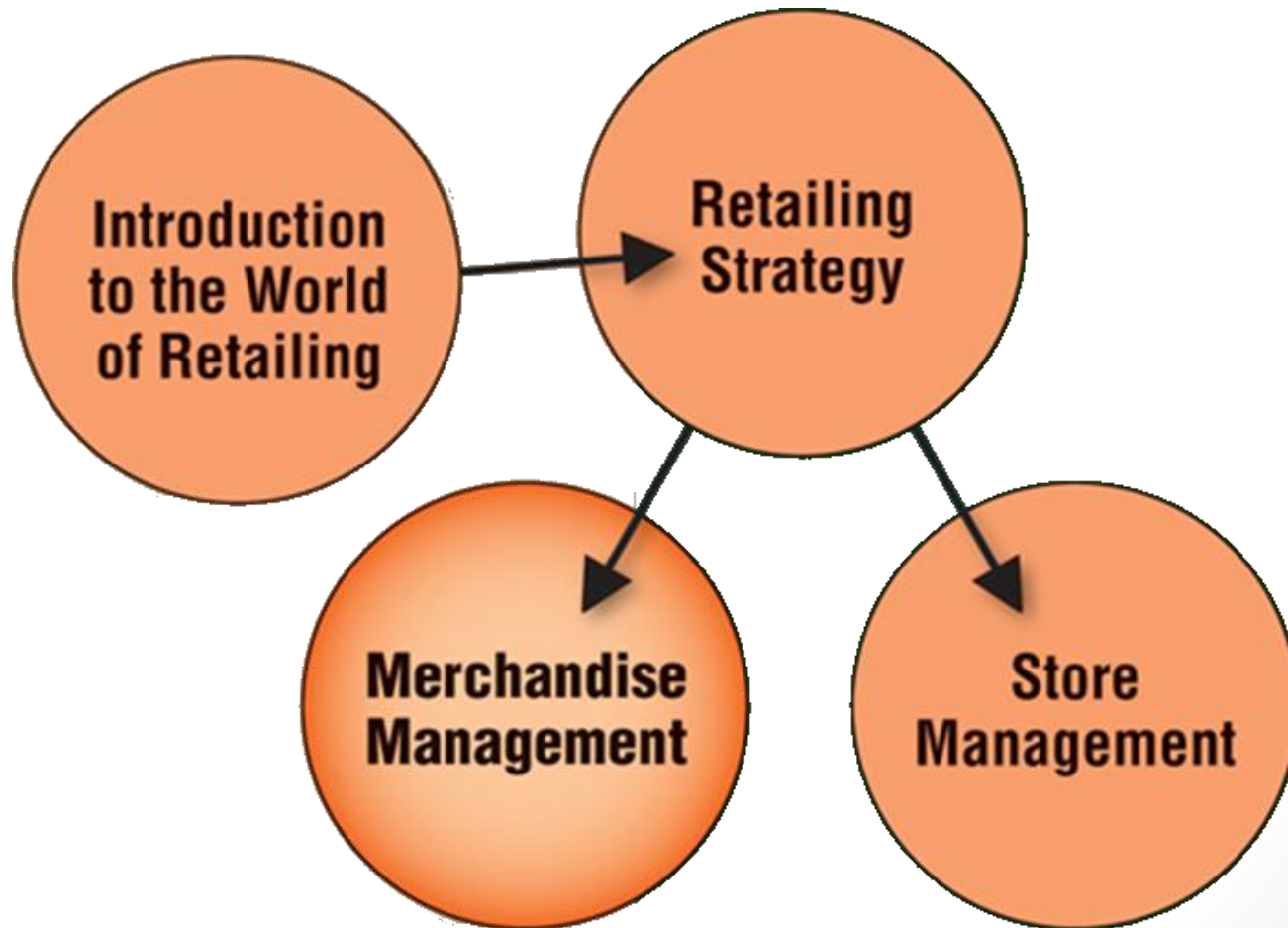
Merchandise Management

Managing the Merchandise Planning Process

Buying Merchandise

Retail Pricing

Retail Communication Mix

Questions

- What is the merchandise management process?

- How are merchandise management processes different for staple and fashion merchandise?

- How do retailers forecast sales for merchandise categories?

- What trade-offs do buyers consider in developing merchandise assortments?

- How do retailers plan their assortments and determine the appropriate inventory levels?

- How do multistore retailers allocate merchandise to stores?

- How do retailers evaluate the performance of their merchandise management process?

Merchandise Management

- Process by which a retailer offers the correct quantity of the right merchandise in the right place at the right time and meets the company's financial goals.

- Sense market trends

- Analyze sales data

- Make appropriate adjustments in prices and inventory levels

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Merchandise Management and Investment Portfolio Management

- Dollars to invest in inventory
- Invest in "hot" merchandise
- Save a little for opportunities (open to buy)
- Monitor portfolio of merchandise (stocks)
- Sell losers (markdowns)

Traders on the stock exchange floor manage a portfolio of stocks, and retail buyers manage a portfolio of merchandise inventory. Both continuously assess the risks associated with their purchase decisions.

Buying Organization

Merchandise Group	Each merchandise group is managed by a general merchandise manager (GMM),senior VP
Department	Departments are managed by a divisional merchandise manager (DMM),
Classification	A group of items targeting the same customer type, such as girls' sizes 4-6
Category	Each buyer manages several merchandise categories (e.g., sportswear, dresses, swimwear, outerwear categories for girls' sizes 4-6
SKU	The smallest unit available for inventory control Size, color, style

Merchandise Category – The Planning Unit

- A merchandise category is an assortment of items that customers see as substitutes for each other.

- Vendors might assign products to different categories based on differences in product attributes

- Retailers might assign two products to the same category based upon common consumers and buying behavior

Category Management

- The process of managing a retail business with the objective of maximizing the sales and profits of a category

- Objective is to maximize the sales and profits of the entire category, not just a particular brand

Breakfast cereal category vs. Kellogg Corn Flakes
Men's knitted shirts vs. Polo shirts
Diary product category vs. Carnation milk products

Category Captain

Selected vendor responsible for managing a category

- Vendors frequently have more information and analytical skills about the category in which they compete than retailers
- Helps retailer understand consumer behavior
- Creates assortments that satisfy the customer
- Improves profitability of category

Problems

- Vendor category captain may have different goals than retailer

Evaluating Merchandise Management Performance - GMROI

- Merchandise managers have control over
  - The merchandise they buy
  - The price at which the merchandise is sold
  - The cost of the merchandise
- Merchandise managers do not have control over
  - Operating expenses
  - Human resources
  - Real estate
  - Supply chain management
  - Information systems
- SO HOW ARE MERCHANTS EVALUATED?

GMROI
Gross Margin Return on Investment

GMROI = Gross Margin Percent x sales-to-stock ratio

$$= \frac{\text{gross margin}}{\text{net sales}} \quad x \quad \frac{\text{net sales}}{\text{avg inventory at cost}}$$

$$= \frac{\text{gross margin}}{\text{avg inventory at cost}}$$

Inventory Turnover

= (1 – Gross Margin Percent) x sales-to-stock ratio

How do buyers influence GMROI?

- Components that buyers can control:
- Gross margin component:
  - Price:
    - Prices that buyers set
    - Prices that buyers negotiate with vendors
- Sales-to-stock ratio component:
  - Popularity of the merchandise buyers buy

ROI and GMROI Asset Productivity Measures

Strategic Corporate Level

- Return on Assets = $\dfrac{\text{Net Profit}}{\text{Total Assets}}$

Merchandise Management Level

- GMROI   = $\dfrac{\text{Gross Margin}}{\text{Avg. Inventory at Cost}}$

Measuring Sales-to-Stock Ratio

- Net Sales/Average Inventory at Cost

- Retailers report on an annual basis

- If the sales-to-stock ratio for a three-month season is 2.3, the annual sales-to-stock ratio will be 9.2

- Estimation of average inventory

  - Use information system: averaging the inventory in stores and distribution centers at the end of each day

  - Divide the sum of the end-of-month (EOM) inventories for several months by the number of months
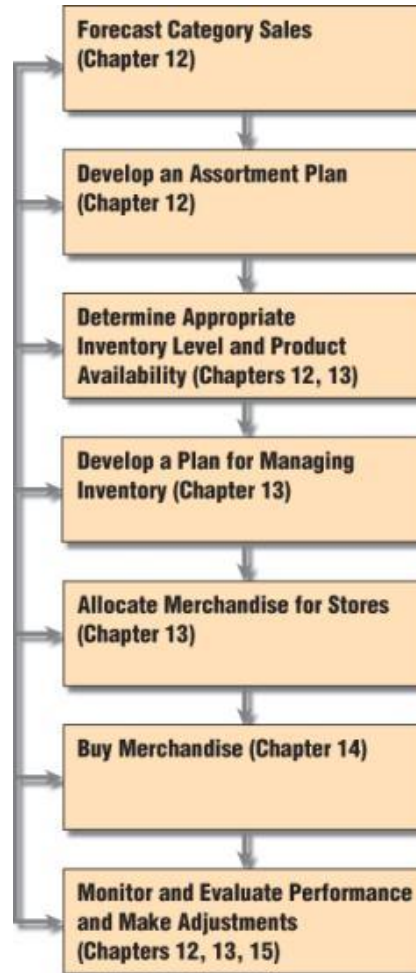
Managing Inventory Turnover

- Inventory Turnover helps assess the buyer's performance in managing asset (merchandise inventory)

- But focusing on increasing inventory turnover can actually decrease RMROI

- Buyers need to consider the trade-offs associated with managing Inventory Turnover

  - **Inventory turnover =** $\dfrac{\text{Net Sales}}{\text{Average inventory at retail}}$

  - **Inventory turnover =** $\dfrac{\text{Cost of goods sold}}{\text{Average inventory at cost}}$

  - **Average inventory =** $\dfrac{\text{Month1 + Month2 + Month 3 +...}}{\text{Number of months}}$

Merchandise Planning Process

Forecast Category Sales
(Chapter 12)

Develop an Assortment Plan
(Chapter 12)

Determine Appropriate
Inventory Level and Product
Availability (Chapters 12, 13)

Develop a Plan for Managing
Inventory (Chapter 13)

Allocate Merchandise for Stores
(Chapter 13)

Buy Merchandise (Chapter 14)

Monitor and Evaluate Performance
and Make Adjustments
(Chapters 12, 13, 15)

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Types of Merchandise Management Planning Processes

Two distinct types of merchandise management systems for managing

- Staple (Basic) Merchandise Categories
    - Continuous demand over an extended time period
    - Limited number of new product introductions
    - Hosiery, basic casual apparel
    - Easy to forecast demand
    - Continuous replenishment
- Fashion Merchandise Categories
    - In demand for a relatively short period of time
    - Continuous introductions of new products, making existing products obsolete
    - Athletic shoes, laptop computers, women's apparel
- Discussed in Chapter 13 in detail

Merchandise Management Process

1. Forecasting sales

2. Developing an assortment plan

3. Determining the appropriate inventory level

Developing a Sales Forecast

- Understanding the nature of the product life cycle

- Collecting data on sales of product and comparable products

- Using statistical techniques to project sales

- Work with vendors to coordinate manufacturing and merchandise delivery with forecasted demand (CPFR)

Types of Merchandise

Staple Merchandise

Predictable Demand

History of Past Sales

Relatively Accurate Forecasts

Fashion Merchandise

Unpredictable Demand

Limited Sales History

Difficult to Forecast Sales

The McGraw-Hill Companies Inc./Ken Cavanagh Photographer

The McGraw-Hill Companies, Inc./Lars A. Niki, photographer

Forecasting Staple Merchandise

Based on extrapolating historical sales because sales are constant from year to year

Year	Quarter	Sales by Quarter	Annual Sales	Annual Sales Growth Rate	% Annual Sales by Quarter
2001	1	21,074			23%
	2	24,123			26
	3	16,066			17
	4	32,145	93,408		34
2002	1	20,728			23
	2	23,656			26
	3	15,867			18
	4	30,135	90,387	−3.2%	33
2003	1	21,076			22
	2	25,259			26
	3	18,585			19
	4	33,064	97,984	8.4	34
2004	1	20,617			21
	2	26,084			26
	3	18,308			18
	4	34,921	99,931	2.0	35
2005	1	21,464			20
	2	27,568			26
	3	18,996			18
	4	38,163	106,192	6.3	36
2006	1	24,401			21
	2	28,057			25
	3	21,092			18
	4	40,843	114,394	7.7	36
2007	1	23,859			22
	2	27,441			25
	3	19,537			18
	4	39,726	110,562	−3.3	36
2008	1	24,588			21
	2	30,788			26
	3	19,869			17
	4	43,718	118,963	7.6	37

Factors Affecting Sales Projections

Controllable

- Promotions
- Store Locations
- Merchandise Placement
- Cannibalization

Uncontrollable

- Seasonality
- Weather
- Competitive Activity
- Product Availability
- Economic Conditions

Forecasting Fashion Merchandise Categories

Retailers develop fashion forecasts by relying on:

- Previous sales data

- Personal awareness

- Fashion and trend services

- Vendors

- Traditional market research

Developing an Assortment Plan

- **Assortment plan** is a list of the SKUs that a retailer will offer in a merchandise category and reflects the variety and assortment that the retailer plans to offer in a merchandise category

- **Variety** (breadth) is the number of different merchandising categories within a store or department

- **Assortment** (depth) is the number of SKUs within a category.

- **Product availability** defines the percentage of demand for a particular SKU that is satisfied.

Determining Variety and Assortment

Buyers consider

- Retail strategy
  - The number of SKUs to offer in a merchandise category is a strategic decision
- GMROI of the merchandise mix
- Trade-off between too much versus too little assortment
  - Increasing sales by offering more breadth and depth can potentially reduce inventory turnover and GMROI by stocking more SKUs
- Physical characteristics of the store
- Complementary Merchandise

PhotoLink/Getty Images

Product Availability

- The percentage of demand for a particular SKU that is satisfied

- Level of support or service level

- The backup (buffer) stock in the model stock plan determine product availability

- The higher product availability, the higher the amount of backup stock necessary to ensure that the retailer won't be out of stock on a particular SKU when consumers demand it

Importance of Backup (Buffer) Stock

Choosing an appropriate amount of backup stock is critical to successful assortment planning

- If the backup stock is too low → loose sales and customers

- If the backup stock is too high → scare financial resources will be wasted on needless inventory that could be more profitably invested in more variety or assortment
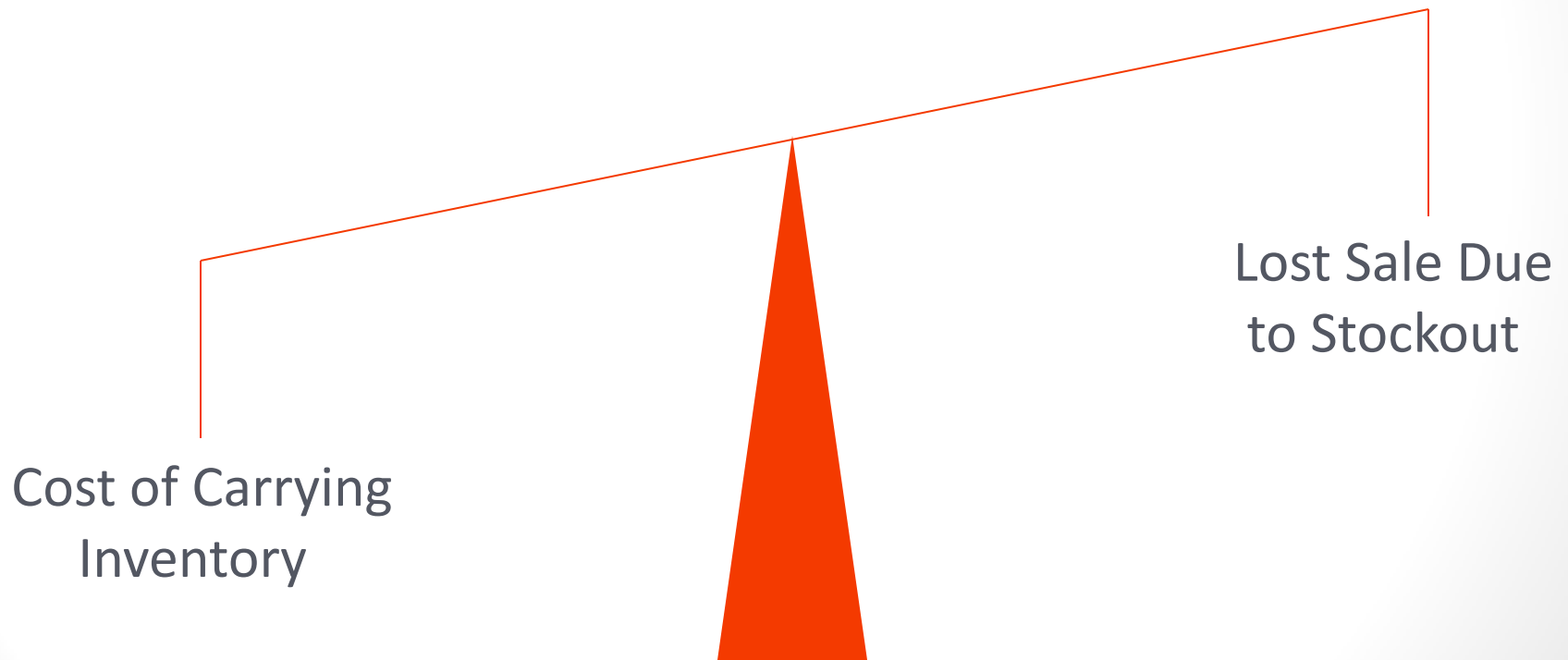
Product Availability
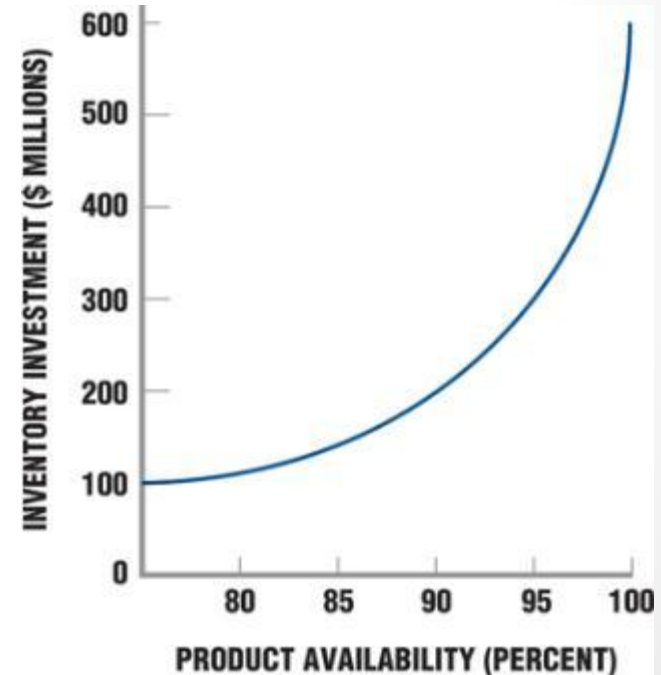
Factors considered to determine the appropriate level of buffer stock and thus the product availability for each SKU

- ABC Classification of merchandise (inventory)
  - A – higher product availability
  - B – medium product availability
  - C – lower product availability is acceptable
- Fluctuations in demand
- Lead time for deliver from the vendor
- Frequency of store deliveries

Staple Merchandise Planning

- Buyer Determines:

  - Basic Stock or Assortment Plan

  - Level of Backup Inventory

- System:

  - Monitors Inventory levels

  - Automatically reorders when inventory gets below a specified level

Basic Stock

- Indicates the Desired Inventory Level for Each SKU

Lost Sale Due to Stockout

Cost of Carrying Inventory

Determining the Level of Backup Stock

More Backup Stocks Needed with

- Higher product availability (service level) retailer wishes to provide to customers
- Greater the fluctuation in demand
- Longer lead time from the vendor
- More fluctuations in lead time
- Lower vendor's Fill rate (% of complete orders received from a vendor)

Order Point

the point at which inventory available should not go below or else we will run out of stock before the next order arrives

Order point = sales/day (lead time + review time) + buffer stock

- Assume Lead time = 3 weeks, review time = 1 week, demand = 100 units per week

  Order point = 100 (3+1) = 400

- Assume Buffer stock = 50 units, then

  Order point = 100 (3+1) + 50 = 450
  We will order something when order point gets below 450 units.

Fashion Merchandise Management Systems

- The system for managing fashion merchandise categories is typically called a Merchandise Budget Plan

Merchandise Budget Plan

Plan for the financial aspects of a merchandise category

- Specifies how much money can be spent each month to achieve the sales, margin, inventory turnover, and GMROI objectives

- Not a complete buying plan-- doesn't indicate what specific SKUs to buy or in what quantities

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- Inventory turnover GMROI, sales forecast are used for both planning and control

- After the selling season, the actual performance is compared with the plan

  - Why did performance exceed or fall short of the plan?

  - Was the deviation from the plan due to something under the buyer's control?

  - Did the buyer react quickly to changes in demand by either purchasing more or having a sale?

Open-to-Buy System

The OTB system is used after the merchandise is purchased

Monitors Merchandise Flow

Determines How Much Was Spent and How Much is Left to Spend

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Allocating Merchandise to Stores

Allocating merchandise to stores involves three decisions:

- how much merchandise to allocate to each store

- what type of merchandise to allocate

- when to allocate the merchandise to different stores

Type of Merchandise Allocated

Retailers classify stores according to the characteristics of the stores' trading area

Laptops and Lattes: The most eligible and unencumbered marketplace

Laptops and Lattes are affluent, single, and still renting. They are educated, professional, and ... to city life, favoring major metropolitan ... such as New York, Boston, Chicago, Los ..., and San Francisco. Median household ... is more than $87,000; median age is 38 ... Technologically savvy, the Laptops and ... segment is the top market for notebook ... PDAs. They use the Internet on a daily ... to trade stocks and make purchases and ... plans. They are health conscious and ... ally fit; they take vitamins, use organic ... ts, and exercise in the gym. They ... ce liberal philosophies and work for ... nmental causes

Rustbelt Retirees

Rustbelt Retirees can be found in older, industrial cities in the Northeast and Midwest, ... Pennsylvania and other states surrou... Great Lakes. Households are mainly ... married couples with no children and ... who live alone. The median age is 4... Although many residents are still wo... force participation is below average. ... percent of the households receive So... benefits. Most residents live in owne... family homes, with a median value o... Unlike many retirees, these residents ... inclined to move. They are proud of th... gardens and participate in communit... Some are members of veterans' club... activities include playing bingo, gam... Atlantic City, going to the horse races, working crossword puzzles, and playing golf.

SOURCE: http://www.esri.com/library/whitepapers/pdfs/community-tapestry.pdf.

The assortment offered in a ready-to-eat cereal aisle should match the demands of the demographics of shoppers in a local area

Seasonality differences and consumer demand differences
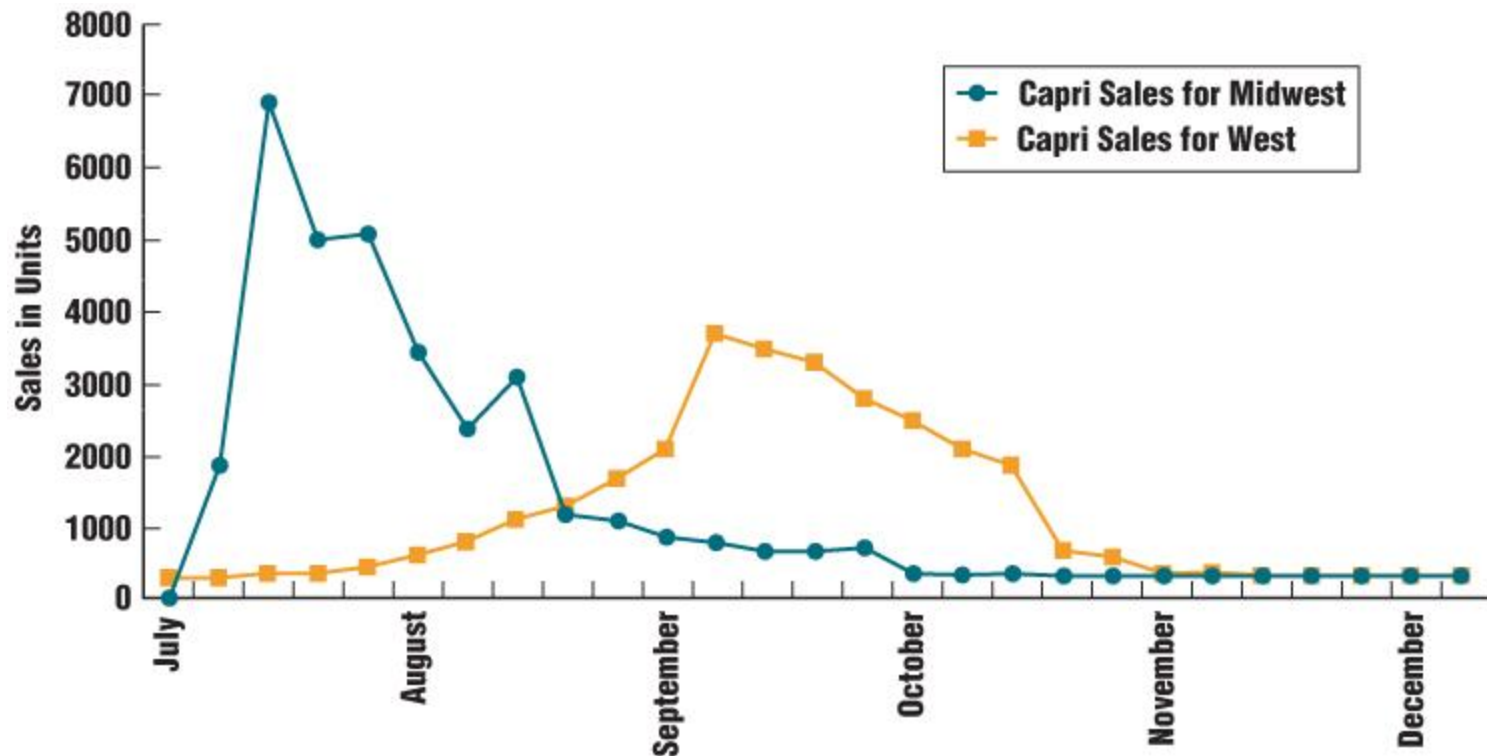
Analyzing Merchandise Management Performance

Three types of analyses related to the monitoring and adjustment step are:

- Sell through analysis

- ABC analysis of assortments

- Multiattribute analysis of vendors

Sell Through Analysis
Evaluating Merchandise Plan

- A sell-through analysis compares actual and planned sales to determine whether more merchandise is needed to satisfy demand or whether price reductions are required.

Stock Number	Description		WEEK 1			WEEK 2		
			Plan	Actual-to-Plan Actual	Percentage	Plan	Actual-to-Plan Actual	Percentage
1011	Small	White silk V-neck	20	15	−25%	20	10	−50%
1011	Medium	White silk V-neck	30	25	−16.6	30	20	−33
1011	Large	White silk V-neck	20	16	−20	20	16	−20
1012	Small	Blue silk V-neck	25	26	4	25	27	8
1012	Medium	Blue silk V-neck	35	45	29	35	40	14
1012	Large	Blue silk V-neck	25	25	0	25	30	20

ABC Analysis

- An ABC analysis identifies the performance of individual SKUs in the assortment plan.

- Rank - orders merchandise by some performance measure determine which items:
  - should never be out of stock
  - should be allowed to be out of stock occasionally
  - should be deleted from the stock selection.

- A items: 5% of SKUs, represent 70% of sales

- B items: 10% of SKUs, represent 20% of sales

- C items: 65% of SKUs, represent 10% of sales

- D items: 20% of SKUs, represent 10% of sales

Multiattribute Method for Evaluating Vendors

The multiattribute method for evaluating vendors uses a weighted average score for each vendor. The score is based on the importance of various issues and the vendor's performance on those issues.

C Squared Studios/Getty Images

Multiattribute Method for Evaluating Vendors
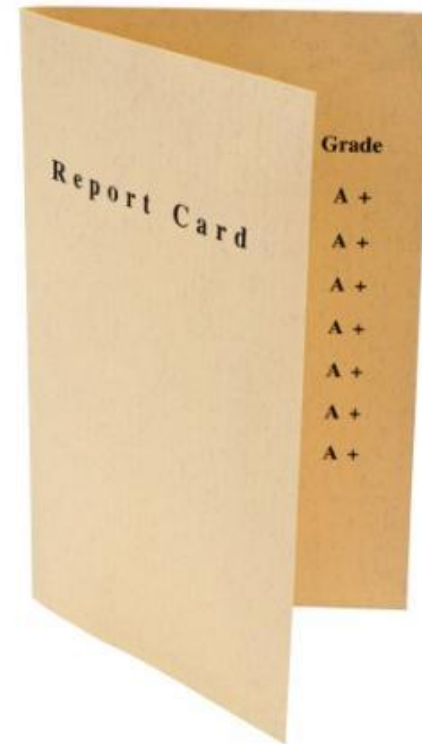
Issues (1)	Importance Evaluation of Issues (I) (2)	PERFORMANCE EVALUATIONS OF INDIVIDUAL BRANDS ACROSS ISSUES			
		Brand A (P_a) (3)	Brand B (P_b) (4)	Brand C (P_c) (5)	Brand D (P_d) (6)
Vendor reputation	9	5	9	4	8
Service	8	6	6	4	6
Meets delivery dates	6	5	7	4	4
Merchandise quality	5	5	4	6	5
Markup opportunity	5	5	4	4	5
Country of origin	6	5	3	3	8
Product fashionability	7	6	6	3	8
Selling history	3	5	5	5	5
Promotional assistance	4	5	3	4	7
Overall evaluation a $\sum_{i=1}^{n} I_j \times P_{ij}$		280	298	212	341

$\sum_{i=1}^{n}$ = Sum of the expression.

I_j = Importance weight assigned to the ith dimension.

P_{ij} = Performance evaluation for jth brand alternative on the ith issue.

1 = Not important.

10 = Very important.

Evaluating Vendors

- A buyer can evaluate vendors by using the following five steps:

  1. Develop a list of issues to consider in the evaluation (column 1)
  2. Importance weights for each issue in column 1 are determined by the buyer/planner in conjunction with the GMM (column 2)
  3. Make judgments about each individual brand's performance on each issue (the remaining columns)
  4. Develop an overall score by multiplying the importance of each issue by the performance of each brand or its vendor
  5. Determine a vendor's overall rating, add the products for each brand for all issues