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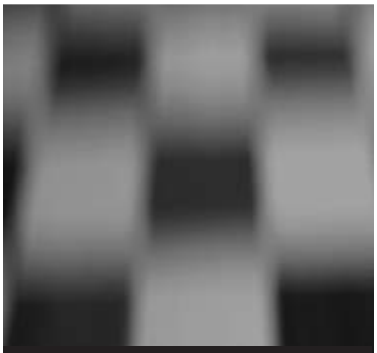
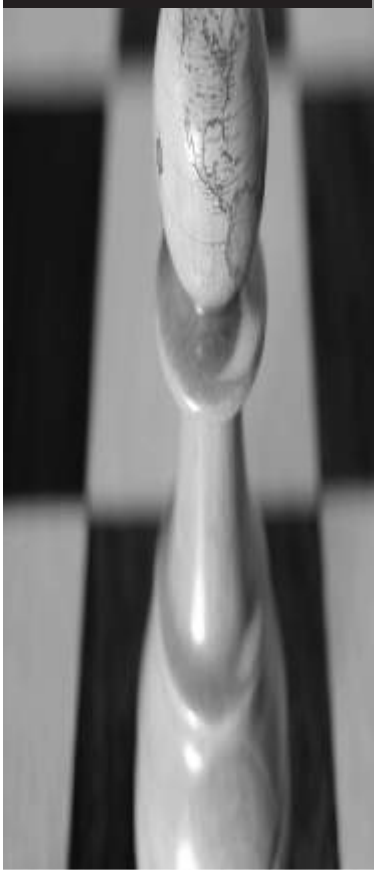


Portfolio Analysis

Induce your competitors not to invest in those products, markets, and services where you expect to invest the most. That is the most fundamental rule of strategy.

BRUCE D. HENDERSON



The previous chapters dealt with strategy development for individual SBUs. Different SBU strategies must ultimately be judged from the viewpoint of the total organization before being implemented. In today's environment, most companies operate with a variety of businesses. Even if a company is primarily involved in a single broad business area, it may actually be operating in multiple product/market segments. From a strategy angle, different products/markets may constitute different businesses of a company because they have different roles to play. This chapter is devoted to the analysis of the different businesses of an organization so that each may be assigned the unique role for which it is suited, thus maximizing long-term growth and earnings of the company.

Years ago, Peter Drucker suggested classifying products into six categories that reveal the potential for future sales growth: tomorrow's breadwinners, today's breadwinners, products capable of becoming net contributors if something drastic is done, yesterday's breadwinners, the "also rans," and the failures. Drucker's classification provides an interesting scheme for determining whether a company is developing enough new products to ensure future growth and profits.

In the past few years, the emphasis has shifted from product to business. Usually a company discovers that some of its business units are competitively well placed, whereas others are not. Because resources, particularly cash resources, are limited, not all SBUs can be treated alike. In this chapter, three different frameworks are presented to enable management to select the optimum combination of individual SBU strategies from a spectrum of possible alternatives and opportunities open to the company, still satisfying the resource limitations within which the company must operate. The frameworks may also be used at the SBU level to review the strategic perspective of its different product/market segments.

The first framework to be discussed, the **product life cycle**, is a tool many marketers have traditionally used to formulate marketing strategies for different products. The second framework was developed by the Boston Consulting Group and is commonly called the product portfolio approach. The third, the multifactor portfolio approach, owes its development to the General Electric Company. The chapter concludes with the Porter's generic strategies framework.

PRODUCT LIFE CYCLE

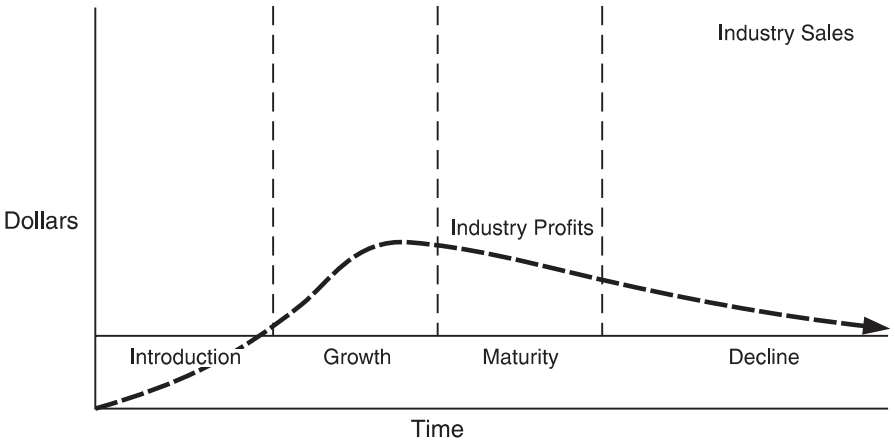
Products tend to go through different stages, each stage being affected by different competitive conditions. These stages require different marketing strategies at different times if sales and profits are to be efficiently realized. The length of a product's life cycle is in no way a fixed period of time. It can last from weeks to years, depending on the type of product. In most texts, the discussion of the product life cycle portrays the sales history of a typical product as following an S-shaped curve. The curve is divided into four stages: introduction, growth, maturity, and decline. (Some authors include a fifth stage, saturation.)

However, not all products follow an S-shaped curve. Marketing scholars have identified varying product life-cycle patterns. For example, Tellis and Crawford[1] identify 17 product life-cycle patterns, while Swan and Rink name 10.[2] Exhibit 10-1 conceptualizes a typical product life-cycle curve, which shows the relationship between profits and corresponding sales throughout a product's life.

Introduction is the period during which initial market acceptance is in doubt; thus, it is a period of slow growth. Profits are almost nonexistent because of high marketing and other expenses. Setbacks in the product's development, manufacture, and market introduction exact a heavy toll. Marketing strategy during this stage is based on different combinations of product, price, promotion, and distribution. For example, price and promotion variables may be combined to generate the following strategy alternatives: (a) high price/high promotion, (b) high price/low promotion, (c) low price/heavy promotion, and (d) low price/low promotion.

Survivors of the introduction stage enjoy a period of rapid growth. During this **growth** period, there is substantial profit improvement. Strategy in this stage

EXHIBIT 10-1
Product Life Cycle



takes the following shape: (a) product improvement, addition of new features and models; (b) development of new market segments; (c) addition of new channels; (d) selective demand stimulation; and (e) price reductions to vie for new customers.

During the next stage, **maturity**, there is intense rivalry for a mature market. Efforts may be limited to attracting a new population, leading to a proliferation of sizes, colors, attachments, and other product variants. Battling to retain the company's share, each marketer steps up persuasive advertising, opens new channels of distribution, and grants price concessions. Unless new competitors are obstructed by patents or other barriers, entry is easy. Thus, maturity is a period when sales growth slows down and profits peak and then start to decline.

Strategy in the maturity stage comprises the following steps: (a) search for new markets and new and varied uses for the product, (b) improvement of product quality through changes in features and style, and (c) new marketing mix perspectives. For the leader firm, Step c may mean introducing an innovative product, fortifying the market through multibrand strategy, or engaging in a price-promotion war against the weaker members of the industry; the nonleader may seek a differential advantage, finding a niche in the market through either product or promotional variables.

Finally, there is the **decline** period. Though sales and profits continue their downward trend, the declining product is not necessarily unprofitable. Some of the competition may have left the market by this stage. Customers who remain committed to the product may be willing to use standard models, pay higher prices, and buy at selected outlets. Promotional expenses can also be reduced.

An important consideration in strategy determination in the decline stage is exit barrier. Even when it appears appropriate to leave the industry, there may be one or more barriers to prevent easy exit. For example, there may be durable and specialized assets peculiar to the business that have little value outside the business; the cost of exit may be prohibitive because of labor settlement costs or contingent liabilities for land use; there may be managerial resistance; the business may be important in gaining access to financial markets; quitting the business may have a negative impact on other businesses in the company; or there may be government pressure to continue in the business, a situation that a multinational corporation may face, particularly in developing countries.

Overall, in the decline stage, the choice of a specific alternative strategy is based on the business's strengths and weaknesses and the attractiveness of the industry to the company. The following alternative strategies appear appropriate:

1. Increasing the firm's investment (to dominate or get a good competitive position).
2. Holding the firm's investment level until the uncertainties about the industry are resolved.
3. Decreasing the firm's investment posture selectively by sloughing off unpromising customer groups, while simultaneously strengthening the firm's investment posture within the lucrative niches of enduring customer demand.
4. Harvesting (or milking) the firm's investment to recover cash quickly, regardless of the resulting investment posture.

5. Divesting the business quickly by disposing of its assets as advantageously as possible.[3]

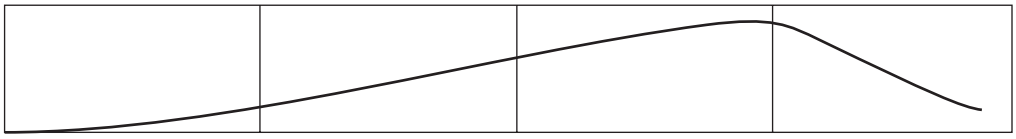
In summary, in the introduction stage, the choices are primarily with what force to enter the market and whether to target a relatively narrow segment of customers or a broader customer group. In the growth stage, the choices appear to be to fortify and consolidate previously established market positions or to develop new primary demand. Developing new primary demand may be accomplished by a variety of means, including developing new applications, extending geographic coverage, trading down to previously untapped consumer groups, or adding related products. In the late growth and early maturity stages, the choices lie among various alternatives for achieving a larger share of the existing market. This may involve product improvement, product line extension, finer positioning of the product line, a shift from breadth of offering to in-depth focus, invading the market of a competitor that has invaded one's own market, or cutting out some of the "frills" associated with the product to appeal better to certain classes of customers. In the maturity stage, market positions have become established and the primary emphasis is on nose-to-nose competition in various segments of the market. This type of close competition may take the form of price competition, minor feature competition, or promotional competition. In the decline stage, the choices are to continue current product/market perspectives as is, to continue selectively, or to divest.

Exhibit 10-2 identifies the characteristics, marketing objectives, and marketing strategies of each stage of the S-shaped product life cycle. The characteristics help locate products on the curve. The objectives and strategies indicate what marketing perspective is relevant in each stage. Actual choice of strategies rests on the objective set for the product, the nature of the product, and environmental influences operating at the time. For example, in the introductory stage, if a new product is launched without any competition and the firm has spent huge amounts of money on research and development, the firm may pursue a high price/low promotion strategy (i.e., skim the cream off the top of the market). As the product becomes established and enters the growth stage, the price may be cut to bring new segments into the fold—the strategic perspective Texas Instruments used for its calculators.

On the other hand, if a product is introduced into a market where there is already a well-established brand, the firm may follow a high price/high promotion strategy. Seiko, for example, introduced its digital watch among well-to-do buyers with a high price and heavy promotion without any intention of competing against Texas Instruments head on.

Of the four stages, the maturity stage of the life cycle offers the greatest opportunity to shape the duration of a product's life cycle. These critical questions must be answered: Why have sales tapered off? Has the product approached obsolescence because of a superior substitute or because of a fundamental change in consumer needs? Can obsolescence be attributed to management's failure to identify and reach the right consumer needs or has a competitor done a better

EXHIBIT 10-2
Perspectives of the Product Life Cycle



	Introduction	*Growth*	*Maturity*	*Decline*
Characteristics				
Sales	Low sales	Rapidly rising sales	Peak sales	Declining sales
Costs	High cost per customer	Average cost per customer	Low cost per customer	Low cost per customer
Profits	Negative	Rising profits	High profits	Declining profits
Customers	Innovators	Early adopters	Middle majority	Laggards
Competitors	Few	Growing number	Stable number beginning to decline	Declining number
Marketing Objectives				
	Create a product awareness and trial	Maximize market share	Maximize profit while defending market share	Reduce expenditure and milk the brand
Strategies				
Product	Offer a basic product	Offer product extensions, service warranty	Diversify brands and models	Phase out weak items
Price	Use cost-plus	Price to penetrate market	Price to match or beat competitors	Cut price
Distribution	Build selective distribution	Build intensive distribution	Build more intensive distribution	Go selective; phase out unprofitable outlets
Advertising	Build product awareness among early adopters and dealers	Build awareness and interest in the mass market	Stress brand differences and benefits	Reduce to level needed to retain hardcore loyals
Sales Promotion	Use heavy sales promotion to entice trial	Reduce to take advantage of heavy consumer demand	Increase to encourage brand switching	Reduce to minimal level

Source: Philip Kotler, *Marketing Management: Analysis, Planning and Control,* 8th Ed., © 1994, p. 373. Reprinted by permission of Prentice-Hall, Inc., Englewood Cliffs, N.J.

marketing job? Answers to these questions are crucial if an appropriate strategy is to be employed to strengthen the product's position. For example, the product may be redirected on a growth path through repackaging, physical modification, repricing, appeals to new users, the addition of new distribution channels, or the use of some combination of marketing strategy changes. The choice of a right strategy at the maturity stage can be extremely beneficial, since a successfully revitalized product offers a higher return on management time and funds invested than does a new product.

This point may be illustrated with reference to a Du Pont product, Lycra, a superstretching polymer invented in its labs in 1959. A little more than 30 years after its humble start as an ingredient for girdles, demand for Lycra is exploding so fast that the company must allocate sales of the fiber. The product's success may be directly attributed to a shrewd marketing strategy, initiated during the maturity stage, that allowed Lycra's use to expand steadily, from bathing suits in the 1970s to cycling pants and aerobic outfits in the 1980s. Teenagers were lured to it and use it in their everyday fashion wardrobes. Avant-garde designers picked up on the trend, using Lycra in new, body-hugging designs. Now, this distinctly unnatural fiber is part of the fashion mainstream. Du Pont's marketing strategy has paid off well. A recent study showed that consumers would pay 20 percent more for a wool-Lycra skirt than for an all-wool version.[4]

Product Life-Cycle Controversy

The product life cycle is a useful concept that may be an important aid in marketing planning and strategy. A concept familiar to most marketers, it is given a prominent place in every marketing textbook. Its use in practice remains limited, however, partly because of the lack of normative models available for its application and partly because of the vast amount of data needed for and the level of subjectivity involved in its use.

One caution that is in order when using the product life cycle is to keep in mind that not all products follow the typical life-cycle pattern. The same product may be viewed in different ways: as a brand (Pepsi Light), as a product form (diet cola), and as a product category (cola drink), for example. Among these, the product life-cycle concept is most relevant for product forms.

Locating Products in Their Life-Cycle

The easiest way to locate a product in its life cycle is to study its past performance, competitive history, and current position and to match this information with the characteristics of a particular stage of the life cycle. Analysis of past performance of the product includes examination of the following:

1. Sales growth progression since introduction.
2. Any design problems and technical bugs that need to be sorted out.
3. Sales and profit history of allied products (those similar in general character or function as well as products directly competitive).
4. Number of years the product has been on the market.
5. Casualty history of similar products in the past.

The review of competition focuses on

1. Profit history.
2. Ease with which other firms can get into the business.
3. Extent of initial investment needed to enter the business.
4. Number of competitors and their strength.
5. Number of competitors that have left the industry.
6. Life cycle of the industry.
7. Critical factors for success in the business.

In addition, current perspectives may be reviewed to gauge whether sales are on the upswing, have leveled out for the last couple of years, or are heading down; whether any competitive products are moving up to replace the product under consideration; whether customers are becoming more demanding vis-à-vis price, service, or special features; whether additional sales efforts are necessary to keep the sales going up; and whether it is becoming harder to sign up dealers and distributors.

This information on the product may be related to the characteristics of different stages of the product life cycle as discussed above; the product perspectives that match the product life cycle indicate the position of the product in its life cycle. Needless to say, the whole process is highly qualitative in nature, and managerial intuition and judgment bear heavily on the final placement of the product in its life cycle. As a matter of fact, making the appropriate assumptions about the types of information described here can be used to construct a model to predict the industry volume of a newly introduced product through each stage of the product life cycle.[5]

A slightly different approach for locating a product in its life cycle is to use past accounting information for the purpose. Listed below are the steps that may be followed to position a product in its life cycle:

1. Develop historical trend information for a period of three to five years (longer for some products). Data included should be unit and dollar sales, profit margins, total profit contribution, return on invested capital, market share, and prices.
2. Check recent trends in the number and nature of competitors, number and market share rankings of competing products and their quality and performance advantages, shifts in distribution channels, and relative advantages enjoyed by products in each channel.
3. Analyze developments in short-term competitive tactics, such as competitors' recent announcements of new products or plans for expanding production capacity.
4. Obtain (or update) historical information on the life cycle of similar or related products.
5. Project sales for the product over the next three to five years, based on all information gathered, and estimate an incremental profit ratio for the product during each of these years (the ratio of total direct costs—manufacturing, advertising, product development, sales, distribution, etc.—to pretax profits). Expressed as a ratio (e.g., 4.8 to 1 or 6.3 to 1), this measure indicates the number of dollars required to generate each additional dollar of profit. The ratio typically improves (becomes lower) as the product enters its growth period, begins to deteriorate (rise) as the product approaches maturity, and climbs more sharply as it reaches decline.

6. Estimate the number of profitable years remaining in the product's life cycle and, based on all information at hand, fix the product's position on its life-cycle curve: (a) introduction, (b) early or late growth, (c) early or late maturity, or (d) early or late decline.

Developing a Product Life-Cycle Portfolio

The current positions of different products in the product life cycle may be determined by following the procedure described above, and the net results (i.e., the cash flow and profitability) of these positions may be computed. Similar analyses may be performed for a future period. The difference between current and future positions indicates what results management may expect if no strategic changes are made. These results may be compared with corporate expectations to determine the gap. The gap can be filled either by making strategic changes to extend the life cycle of a product or by bringing in new products through research and development or acquisition. This procedure may be put into operation by following these steps:

1. Determine what percentage of the company's sales and profits fall within each phase of the product life cycle. These percentages indicate the present life-cycle (sales) profile and the present profit profile of the company's current line.
2. Calculate changes in life-cycle and profit profiles over the past five years and project these profiles over the next five years.
3. Develop a target life-cycle profile for the company and measure the company's present life-cycle profile against it. The target profile, established by marketing management, specifies the desirable share of company sales that should fall within each phase of the product life cycle. It can be determined by industry obsolescence trends, the pace of new product introductions in the field, the average length of product life cycles in the company's line, and top management's objectives for growth and profitability. As a rule, the target profile for growth-minded companies whose life cycles tend to be short calls for a high proportion of sales in introductory and growth phases.

With these steps completed, management can assign priorities to such functions as new product development, acquisition, and product line pruning, based on the discrepancies between the company's target profile and its present life-cycle profile. Once corporate effort has been broadly allocated in this way among products at various stages of their life cycles, marketing plans can be detailed for individual product lines.

PORTFOLIO MATRIX

A good planning system must guide the development of strategic alternatives for each of the company's current businesses and new business possibilities. It must also provide for management's review of these strategic alternatives and for corresponding resource allocation decisions. The result is a set of approved business plans that, taken as a whole, represent the direction of the firm. This process starts with, and its success is largely determined by, the creation of sound strategic alternatives.

The top management of a multibusiness firm cannot generate these strategic alternatives. It must rely on the managers of its business ventures and on its corporate development personnel. However, top management can and should establish a conceptual framework within which these alternatives can be developed. One such framework is the portfolio matrix associated with the Boston Consulting Group (BCG). Briefly, the **portfolio matrix** is used to establish the best mix of businesses in order to maximize the long-term earnings growth of the firm. The portfolio matrix represents a real advance in strategic planning in several ways:

- It encourages top management to evaluate the prospects of each of the company's businesses individually and to set tailored objectives for each business based on the contribution it can realistically make to corporate goals.
- It stimulates the use of externally focused empirical data to supplement managerial judgment in evaluating the potential of a particular business.
- It explicitly raises the issue of cash flow balancing as management plans for expansion and growth.
- It gives managers a potent new tool for analyzing competitors and for predicting competitive responses to strategic moves.
- It provides not just a financial but a strategic context for evaluating acquisitions and divestitures.[6]

As a consequence of these benefits, the widespread application of the portfolio matrix approach to corporate planning has sounded the death knell for planning by exhortation, the kind of strategic planning that sets uniform financial performance goals across an entire company—15 percent growth in earnings or 15 percent return on equity—and then expects each business to meet those goals year in and year out. The portfolio matrix approach has given top management the tools to evaluate each business in the context of both its environment and its unique contribution to the goals of the company as a whole and to weigh the entire array of business opportunities available to the company against the financial resources required to support them.

The portfolio matrix concept addresses the issue of the potential value of a particular business for the firm. This value has two variables: first, the potential for generating attractive earnings levels now; second, the potential for growth or, in other words, for significantly increased earnings levels in the future. The portfolio matrix concept holds that these two variables can be quantified. Current earnings potential is measured by comparing the market position of the business to that of its competitors. Empirical studies have shown that profitability is directly determined by relative market share.

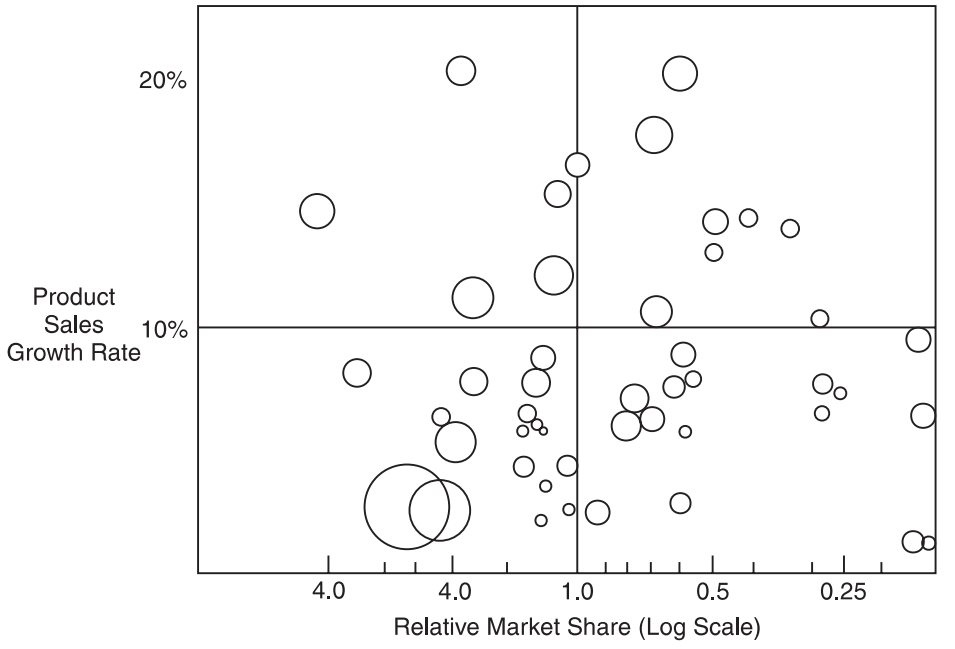
Growth potential is measured by the growth rate of the market segment in which the business competes. Clearly, if the segment is in the decline stage of its life cycle, the only way the business can increase its market share is by taking volume away from competitors. Although this is sometimes possible and economically desirable, it is usually expensive, leads to destructive pricing and erosion of profitability for all competitors, and ultimately results in a market that is ill served. On the other hand, if a market is in its rapid growth stage, the business

can gain share by preempting the incremental growth in the market. So if these two dimensions of value are arrayed in matrix form, we have the basis for a business classification scheme. This is essentially what the Boston Consulting Group portfolio matrix is. Each of the four business categories tends to have specific characteristics associated with it. The two quadrants corresponding to high market leadership have current earnings potential, and the two corresponding to high market growth have growth potential.

Exhibit 10-3 shows a matrix with its two sides labeled *product sales growth rate* and *relative market share*. The area of each circle represents dollar sales. The market share position of each circle is determined by its horizontal position. Each circle's product sales growth rate (corrected for inflation) in the market in which it competes is shown by its vertical position.

With regard to the two axes of the matrix, relative market share is plotted on a logarithmic scale in order to be consistent with the experience curve effect, which implies that profit margin or rate of cash generation differences between two competitors tends to be proportionate to the ratio of their competitive positions. A linear axis is used for growth, for which the most generally useful measure is volume growth of the business concerned; in general, rates of cash use should be directly proportional to growth.

EXHIBIT 10-3
Product Portfolio Matrix



The lines dividing the matrix into four quadrants are arbitrary. Usually, high growth is taken to include all businesses growing in excess of 10 percent annually in volume. The line separating areas of high and low relative competitive position is set at 1.0.

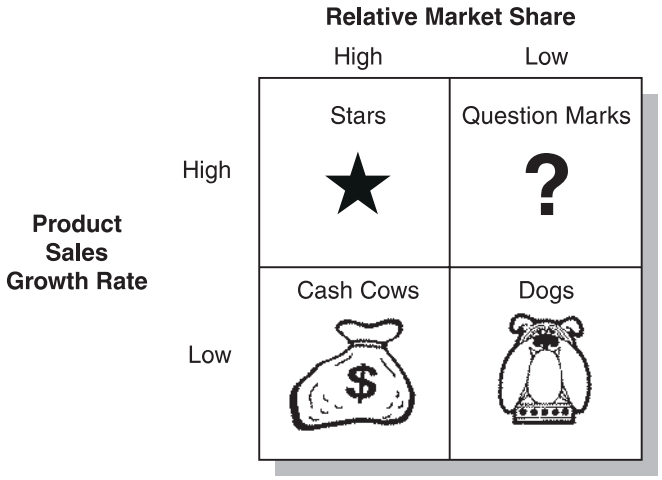
The importance of growth variables for strategy development is based on two factors. First, growth is a major influence in reducing cost because it is easier to gain experience or build market share in a growth market than in a low-growth situation. Second, growth provides opportunity for investment. The relative market share affects the rate at which a business will generate cash. The stronger the relative market share position of a product, the higher the margins it will have because of the scale effect.

Classification of Businesses

Using the two dimensions discussed here in Exhibit 10-4, one can classify businesses and products into four categories. Businesses in each category exhibit different financial characteristics and offer different strategic choices.

Stars. High-growth market leaders are called *stars*. They generate large amounts of cash, but the cash they generate from earnings and depreciation is more than offset by the cash that must be put back in the form of capital expenditures and increased working capital. Such heavy reinvestment is necessary to fund the capacity increases and inventory and receivable investment that go along with market share gains. Thus, star products represent probably the best profit opportunity available to a company, and their competitive position must be maintained. If a star's share is allowed to slip because the star has been used to provide large amounts of cash in the short run or because of cutbacks in investment and rising prices (creating an umbrella for competitors), the star will ultimately become a dog.

EXHIBIT 10-4
Matrix Quadrants



The ultimate value of any product or service is reflected in the stream of cash it generates net of its own reinvestment. For a star, this stream of cash lies in the future—sometimes in the distant future. To obtain real value, the stream of cash must be discounted back to the present at a rate equal to the return on alternative opportunities. It is the future payoff of the star that counts, not the present reported profit. For GE, the plastics business is a star in which it keeps investing. As a matter of fact, the company even acquired Thomson's plastics operations (a French company) to further strengthen its position in the business.

Cash Cows. *Cash cows* are characterized by low growth and high market share. They are net providers of cash. Their high earnings, coupled with their depreciation, represent high cash inflows, and they need very little in the way of reinvestment. Thus, these businesses generate large cash surpluses that help to pay dividends and interest, provide debt capacity, supply funds for research and development, meet overheads, and also make cash available for investment in other products. Thus, cash cows are the foundation on which everything else depends. These products must be protected. Technically speaking, a cash cow has a return on assets that exceeds its growth rate. Only if this is true will the cash cow generate more cash than it uses. For NCR Company, the mechanical cash register business is a cash cow. The company still maintains a dominant share of this business even though growth has slowed down since the introduction of electronic cash registers. The company uses the surplus cash from its mechanical cash registers to develop electronic machines with a view to creating a new star. Likewise, the tire business can be categorized as a cash cow for Goodyear Tire and Rubber Company. The tire industry is characterized by slow market growth, and Goodyear has a major share of the market.

Question Marks. Products in a growth market with a low share are categorized as *question marks*. Because of growth, these products require more cash than they are able to generate on their own. If nothing is done to increase market share, a question mark will simply absorb large amounts of cash in the short run and later, as the growth slows down, become a dog. Thus, unless something is done to change its perspective, a question mark remains a cash loser throughout its existence and ultimately becomes a cash trap.

What can be done to make a question mark more viable? One alternative is to gain share increases for it. Because the business is growing, it can be funded to dominance. It may then become a star and later, when growth slows down, a cash cow. This strategy is a costly one in the short run. An abundance of cash must be poured into a question mark in order for it to win a major share of the market, but in the long run, this strategy is the only way to develop a sound business from the question mark stage. Another strategy is to divest the business. Outright sale is the most desirable alternative. But if this does not work out, a firm decision must be made not to invest further in the business. The business must simply be allowed to generate whatever cash it can while none is reinvested.

When Joseph E. Seagram and Sons bought Tropicana from Beatrice Co. in 1988, it was a question mark. The product had been trailing behind Coke's Minute Maid and was losing ground to Procter & Gamble's new entry in the field, Citrus

Hill. Since then, Seagram has invested heavily in Tropicana to develop it into a star product. After just two years, Tropicana has emerged as a leader in the not-from-concentrate orange juice market, far ahead of Minute Maid, and has been trying to make inroads into other segments.[7]

Dogs. Products with low market share positioned in low-growth situations are called *dogs*. Their poor competitive position condemns them to poor profits. Because growth is low, dogs have little potential for gaining sufficient share to achieve viable cost positions. Usually they are net users of cash. Their earnings are low, and the reinvestment required just to keep the business together eats cash inflow. The business, therefore, becomes a cash trap that is likely to regularly absorb cash unless further investment is rigorously avoided. An alternative is to convert dogs into cash, if there is an opportunity to do so. GE's consumer electronics business had been in the dog category, maintaining only a small percentage of the available market in a period of slow growth, when the company decided to unload the business (including the RCA brand acquired in late 1985) to Thomson, France's state-owned, leading electronics manufacturer.

Exhibit 10-5 summarizes the investment, earning, and cash flow characteristics of stars, cash cows, question marks, and dogs. Also shown are viable strategy alternatives for products in each category.

Strategy Implications

In a typical company, products could be scattered in all four quadrants of the portfolio matrix. The appropriate strategy for products in each cell is given briefly in Exhibit 10-5. The first goal of a company should be to secure a position with

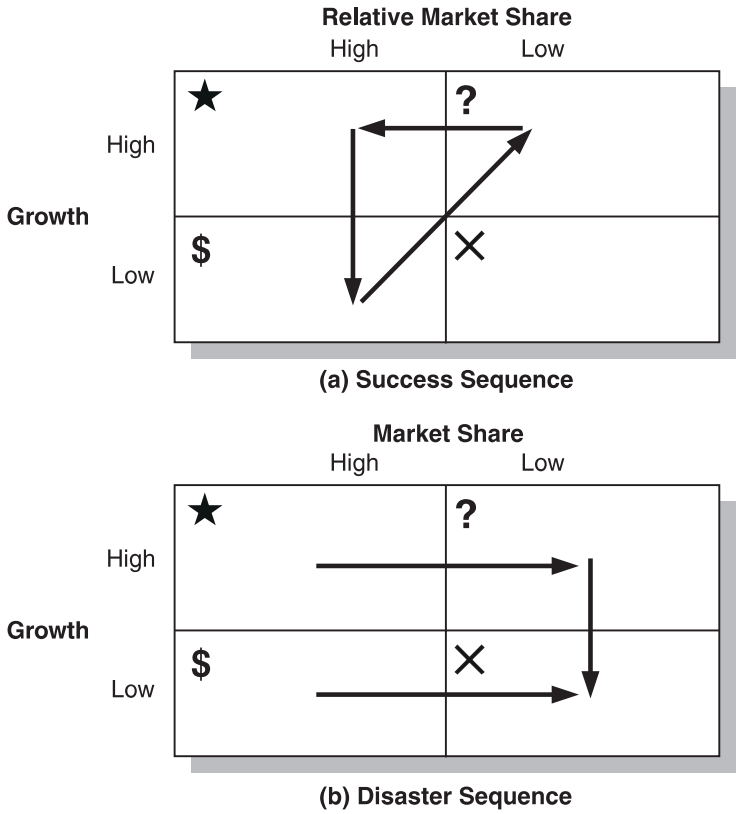
EXHIBIT 10-5
Characteristics and Strategy Implications of Products in the Strategy Quadrants

Quadrant	*Investment Characteristics*	*Earning Characteristics*	*Cash Flow Characteristics*	*Strategy Implication*
Stars	—Continual expenditures for capacity expansion —Pipeline filling with cash	Low to high	Negative cash flow (net cash user)	Continue to increase market share, if necessary at the expense of short-term earnings
Cash cows	—Capacity maintenance expenditures	High	Positive cash flow (net cash contributor)	Maintain share and leadership until further investment becomes marginal
Question marks	—Heavy initial capacity expenditures —High research and development costs	Negative to low	Negative cash flow (net cash user)	Assess chances of dominating segment: if good, go after share; if bad, redefine business or withdraw
Dogs	—Gradually deplete capacity	High to low	Positive cash flow (net cash contributor)	Plan an orderly withdrawal so as to maximize cash flow

cash cows but to guard against the frequent temptation to reinvest in them excessively. The cash generated from cash cows should first be used to support those stars that are not self-sustaining. Surplus cash may then be used to finance selected question marks to dominance. Any question mark that cannot be funded should be divested. A dog may be restored to a position of viability by shrewdly segmenting the market; that is, by rationalizing and specializing the business into a small niche that the product may dominate. If this is not practical, a firm should manage the dog for cash; it should cut off all investment in the business and liquidate it when an opportunity develops.

Exhibit 10-6 shows the consequences of a correct/incorrect strategic move. If a question mark is given adequate support, it may become a star and ultimately a cash cow (success sequence). On the other hand, if a star is not appropriately funded, it may become a question mark and finally a dog (disaster sequence).

EXHIBIT 10-6
Product Portfolio Matrix: Strategic Consequences



Source: Bruce D. Henderson, "The Product Portfolio" (Boston: The Boston Consulting Group, Inc., 1970). *Perspectives* No. 66. Reprinted by permission.

Top management needs to answer two strategic questions: (a) How promising is the current set of businesses with respect to long-term return and growth? (b) Which businesses should be developed? maintained as is? liquidated? Following the portfolio matrix approach, a company needs a cash-balanced portfolio of businesses; that is, it needs cash cows and dogs to throw off sufficient cash to fund stars and question marks. It needs an ample supply of question marks to ensure long-term growth and businesses with return levels appropriate to their matrix position. In response to the second question, capital budgeting theory requires the lining up of capital project proposals, assessment of incremental cash flows attributable to each project, computation of discounted rate of return on each, and approval of the project with the highest rate of return until available funds are exhausted. But the capital budgeting approach misses the strategic content; that is, it ignores questions of how to validate assumptions about volume, price, cost, and investment and how to eliminate natural biases. This problem is solved by the portfolio matrix approach.

Portfolio Matrix and Product Life Cycle

The product portfolio matrix approach propounded by the Boston Consulting Group may be related to the product life cycle by letting the introduction stage begin in the question mark quadrant; growth starts toward the end of this quadrant and continues well into the star quadrant. Going down from the star to the cash cow quadrant, the maturity stage begins. Decline is positioned between the cash cow and the dog quadrants (see Exhibit 10-7). Ideally, a company should enter the product/market segment in its introduction stage, gain market share in the growth stage, attain a position of dominance when the product/market segment enters its maturity stage, maintain this dominant position until the product/market segment enters its decline stage, and then determine the optimum point for liquidation.

Balanced and Unbalanced Portfolios

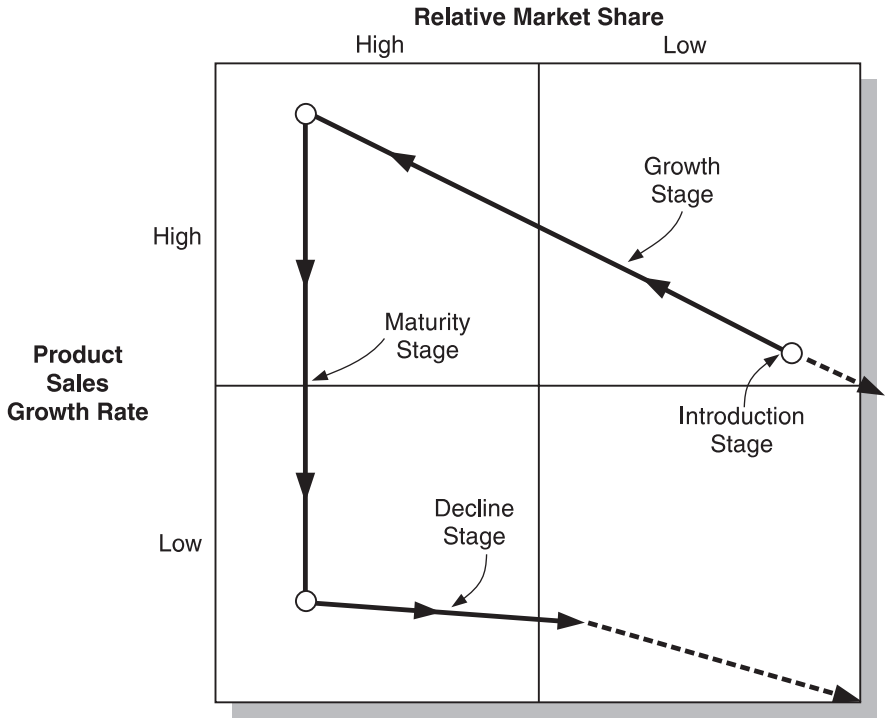
Exhibit 10-8 is an example of a balanced portfolio. With three cash cows, this company is well positioned with stars to provide growth and to yield high cash returns in the future when they mature. The company has four question marks, two of which present good opportunities to emerge as stars at an investment level that the cash cows should be able to support (based on the area of the circles). The company does have dogs, but they can be managed to avoid drain on cash resources.

Unbalanced portfolios may be classified into four types:

1. Too many losers (due to inadequate cash flow, inadequate profits, and inadequate growth).
2. Too many question marks (due to inadequate cash flow and inadequate profits).
3. Too many profit producers (due to inadequate growth and excessive cash flow).
4. Too many developing winners (due to excessive cash demands, excessive demands on management, and unstable growth and profits).

Exhibit 10-9 illustrates an unbalanced portfolio. The company has just one cash cow, three question marks, and no stars. Thus, the cash base of the com-

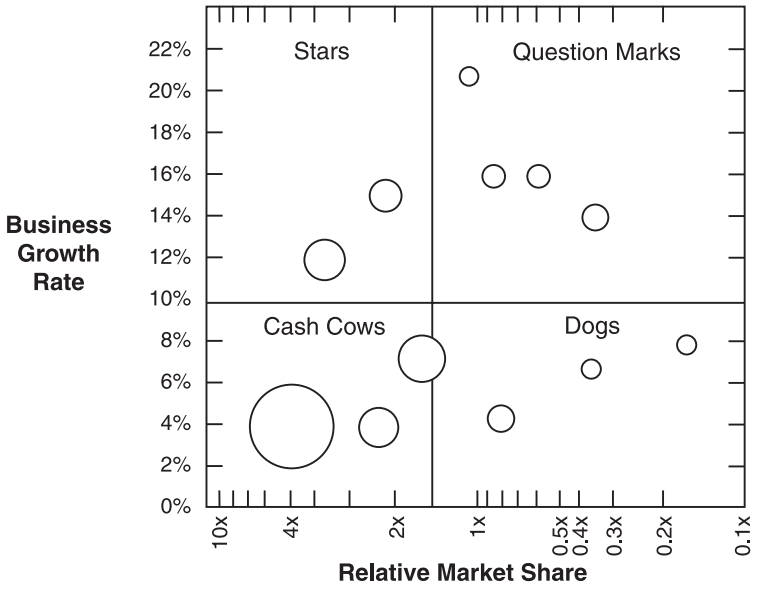
EXHIBIT 10-7
Relationship between Product Portfolio Matrix and Product Life Cycle



pany is inadequate and cannot support the question marks. The company may allocate available cash among all question marks in equal proportion. Dogs may also be given occasional cash nourishment. If the company continues its current strategy, it may find itself in a dangerous position in five years, particularly when the cash cow moves closer to becoming a dog. To take corrective action, the company must face the fact that it cannot support all its question marks. It must choose one or maybe two of its three question marks and fund them adequately to make them stars. In addition, disbursement of cash in dogs should be totally prohibited. In brief, the strategic choice for the company, considered in portfolio terms, is obvious. It cannot fund all question marks and dogs equally.

The portfolio matrix focuses on the real fundamentals of businesses and their relationships to each other within the portfolio. It is not possible to develop effective strategy in a multiproduct, multimarket company without considering the mutual relationships of different businesses.

EXHIBIT 10-8
Illustration of a Balanced Portfolio



Conclusion

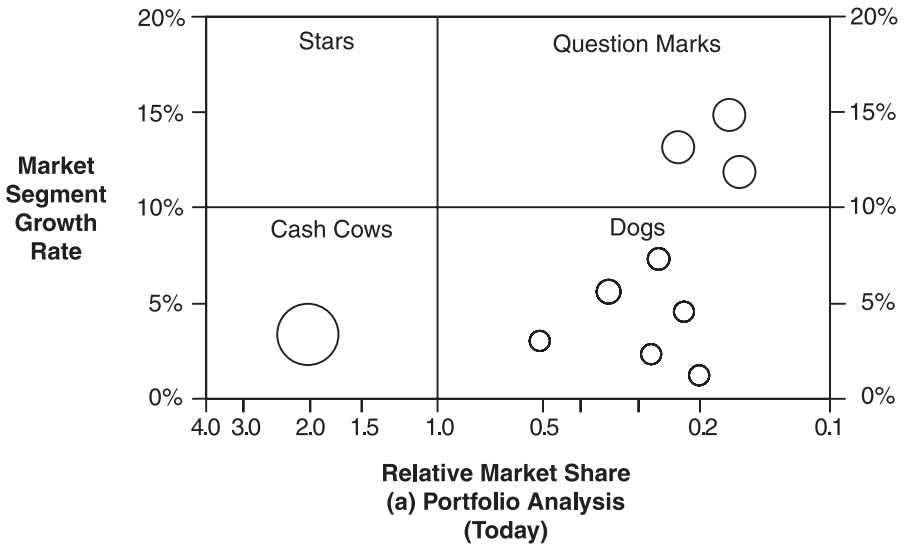
The portfolio matrix approach provides for the simultaneous comparison of different products. It also underlines the importance of cash flow as a strategic variable. Thus, when continuous long-term growth in earnings is the objective, it is necessary to identify high-growth product/market segments early, develop businesses, and preempt the growth in these segments. If necessary, short-term profitability in these segments may be forgone to ensure achievement of the dominant share. Costs must be managed to meet scale-effect standards. The appropriate point at which to shift from an earnings focus to a cash flow focus must be determined and a liquidation plan for cash flow maximization established. A cash-balanced mix of businesses should be maintained.

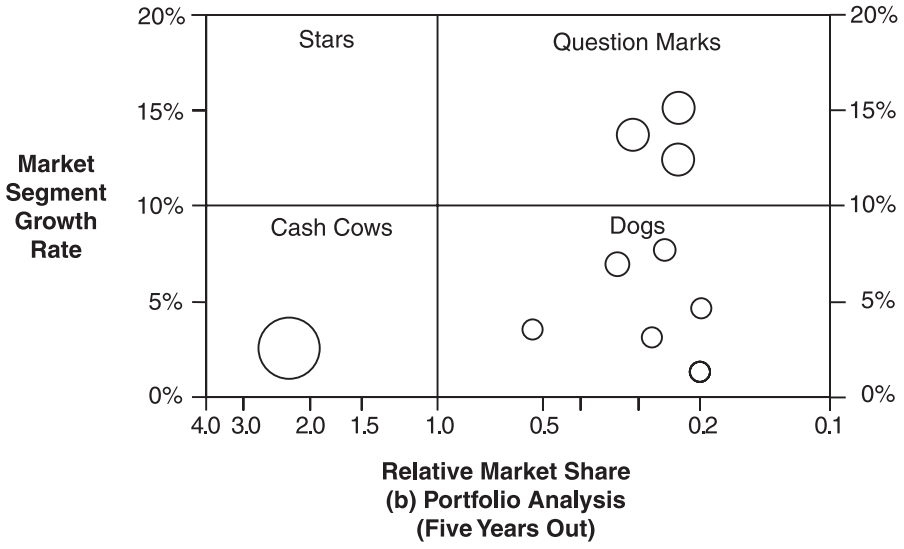
Many companies worldwide have used the portfolio matrix approach in their strategic planning. The first companies to use this approach were the Norton Company, Mead, Borg-Warner, Eaton, and Monsanto. Since then, virtually all large corporations have reported following it.

The portfolio matrix approach, however, is not a panacea for strategy development. In reality, many difficulties limit the workability of this approach. Some potential mistakes associated with the portfolio matrix concept are

1. Overinvesting in low-growth segments (lack of objectivity and "hard" analysis).
2. Underinvesting in high-growth segments (lack of guts).
3. Misjudging the segment growth rate (poor market research).

EXHIBIT 10-9
Illustration of an Unbalanced Portfolio





4. Not achieving market share (because of improper market strategy, sales capabilities, or promotion).
5. Losing cost effectiveness (lack of operating talent and control system).
6. Not uncovering emerging high-growth segments (lack of corporate development effort).
7. Unbalanced business mix (lack of planning and financial resources).

Thus, the portfolio matrix approach should be used with great care.

MULTIFACTOR PORTFOLIO MATRIX

The two-factor portfolio matrix discussed above provides a useful approach for reviewing the roles of different products in a company. However, the growth rate-relative market share matrix approach leads to many difficulties. At times, factors other than market share and growth rate bear heavily on cash flow, the mainstay of this approach. Some managers may consider return on investment a more suitable criterion than cash flow for making investment decisions. Further, the two-factor portfolio matrix approach does not address major investment decisions between dissimilar businesses. These difficulties can lead a company into too many traps and errors. For this reason, many companies (such as GE and the Shell Group) have developed the multifactor portfolio approach.

Exhibit 10-10 illustrates the GE matrix. Its two dimensions, industry attractiveness and business strengths, are based on a variety of factors. It is this multifactor characteristic that differentiates this approach from the one discussed in the previous section. In its early attempts with the portfolio matrix, GE used the criteria and measures shown in Exhibit 10-11 to determine industry attractiveness and business strengths. These criteria and measures are only suggestions; another company may adopt a different list. For example, GE later added cyclicality as a criterion under industry attractiveness. The measure of relative profitability, as shown in the exhibit, was used for the first time in 1985.

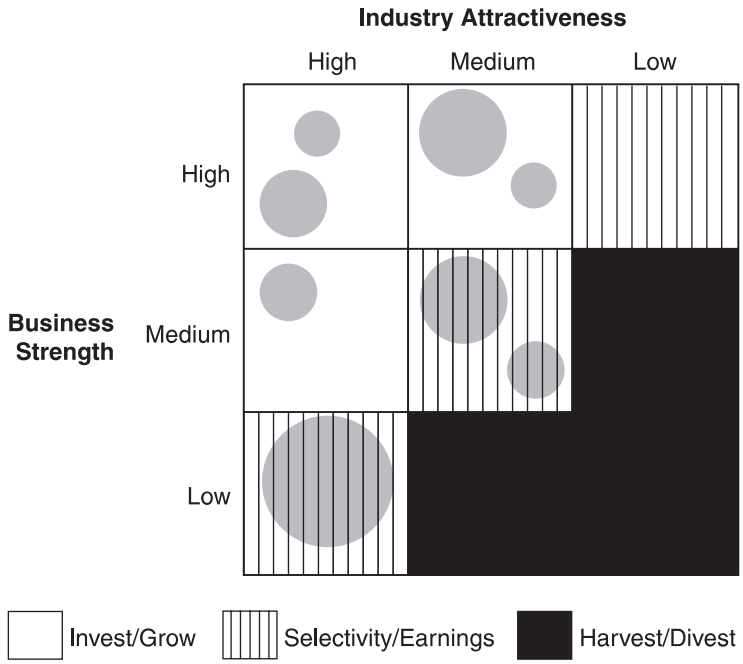
Exhibits 10-12 and 10-13 (pages 261 and 262) illustrate how the factors may be weighed and how a final industry attractiveness and business strengths score may be computed. Management may establish cutoff points for high, medium, and low industry attractiveness and competitive position scores.

It is worthwhile to mention that the development of a multifactor matrix may not be as easy as it appears. The actual analysis required may take a considerable amount of foresight and experience and many, many days of work. The major difficulties lie in identifying relevant factors, relating factors to industry attractiveness and business strengths, and weighing the factors.

Strategy Development

The overall strategy for a business in a particular position is illustrated in Exhibit 10-10. The area of the circle refers to the business's sales. Investment priority is given to products in the high area (upper left), where a stronger position is supported by the attractiveness of an industry. Along the diagonal, selectivity is desired to achieve a balanced earnings performance. The businesses in the low area (lower right) are the candidates for harvesting and divestment.

EXHIBIT 10-10
Relationship between the Strategic Planning Process and Approaches to Marketing



A company may position its products or businesses on the matrix to study its present standing. Forecasts may be made to examine the directions different businesses may go in the future, assuming no changes are made in strategy. Future perspectives may be compared to the corporate mission to identify gaps between what is desired and what may be expected if no measures are taken now. Filling the gap requires making strategic moves for different businesses. Once strategic alternatives for an individual business have been identified, the final choice of a strategy should be based on the scope of the overall corporation vis-à-vis the matrix. For example, the prospects for a business along the diagonal may appear good, but this business cannot be funded in preference to a business in the high-high cell. In devising future strategy, a company generally likes to have a few businesses on the left to provide growth and to furnish potential for investment and a few on the right to generate cash for investment in the former. The businesses along the diagonal may be selectively supported (based on resources) for relocation on the left. If this is not feasible, they may be slowly harvested or divested. Exhibit 10-14 (page 263) summarizes desired strategic perspective in different cell positions.

EXHIBIT 10-11
Portfolio Considerations and Measures Used by GE in 1980

Industry Attractiveness		Business Strengths	
Criterion	*Measure*	*Criterion*	*Measure*
1. Market size	• Three-year average served industry market dollars	1. Market position	• Three-year average market share (total dollars) • Three-year average international market share • Two-year average relative market share (SBU/Big Three competitors)
2. Market growth	• Ten-year constant dollar average market growth rate		
3. Industry profitability	• Three-year average ROS, SBU and Big Three competitors: • Nominal • Inflation adjusted	2. Competitive position	Superior, equal, or inferior to competition in 1980: • Product quality • Technological leadership • Manufacturing/cost leadership • Distribution/marketing leadership
4. Cyclicality	• Average annual percent variation of sales from trend		
5. Inflation recovery	• Five-year average ratio of combined selling price and productivity change to change in cost due to inflation	3. Relative profitability	Three-year average SBU ROS less average ROS, Big Three competitors: • Nominal • Inflation adjusted
6. Importance of non-U.S. markets	• Ten-year average ratio of international to total market		

☐ Indicates measure used for first time in 1980

Source: General Electric Co. Reprinted by permission. The measurements do not reflect current GE practice.

For an individual business, there can be four strategy options: investing to maintain, investing to grow, investing to regain, and investing to exit. The choice of a strategy depends on the current position of the business in the matrix (i.e., toward the high side, along the diagonal, or toward the low side) and its future direction, assuming the current strategic perspective continues to be followed. If the future appears unpromising, a new strategy for the business is called for.

Analysis of present position on the matrix may not pose any problem. At GE, for example, there was little disagreement on the position of the business.[8] The mapping of future direction, however, may not be easy. A rigorous analysis must be performed, taking into account environmental shifts, competitors' perspectives, and internal strengths and weaknesses.

The four strategy options are shown in Exhibit 10-15 (page 264). Strategy to maintain the current position (Strategy 1 in the exhibit) may be adopted if, in the absence of a new strategy, erosion is expected in the future. Investment will be sought to hold the position; hence, the name invest-to-maintain strategy. The

EXHIBIT 10-12
Assessing Industry Attractiveness

Criteria	*Weights*×Ratings** = Values*		
Market size	.15	4	.60
Growth rate	.12	3	.36
Profit margin	.05	3	.15
Market diversity	.05	2	.10
Demand cyclicality	.05	2	.10
Expert opportunities	.05	5	.25
Competitive structure	.05	3	.15
Industry profitability	.20	3	.60
Inflation vulnerability	.05	2	.10
Value added	.10	5	.50
Capital intensity	GO	4	—
Raw material availability	GO	4	—
Technological role	.05	4	.20
Energy impact	.08	4	.32
Social	GO	4	—
Environmental impact	GO	4	—
Legal	GO	4	—
Human	GO	4	—
	1.00	1 to 5	3.43

*Some criteria may be of a GO/NO GO type. For example, many *Fortune* 500 firms would probably not invest in industries viewed negatively by society even if it were legal and profitable to do so.
** "1" denotes very unattractive; "5" denotes very attractive.

second option is the invest-to-grow strategy. Here, the product's current position is perceived as less than optimum vis-à-vis industry attractiveness and business strengths. In other words, considering the opportunities furnished by the industry and the strengths exhibited by the business, the current position is considered inadequate. A growth strategy is adopted with the aim of shifting the product position upward or toward the left. Movement in both directions is an expensive option with high risk.

The invest-to-regain strategy (Strategy 3 in Exhibit 10-15) is an attempt to rebuild the product or business to its previous position. Usually, when the environment (i.e., industry) continues to be relatively attractive but the business position has slipped because of some strategic past mistake (e.g., premature harvesting), the company may decide to revitalize the business through new investments. The fourth and final option, the invest-to-exit strategy, is directed

EXHIBIT 10-13
Assessing Business Strengths

Criteria	*Weights*×Ratings** = Values*		
Market share	.10	5	.50
SBU growth rate	X	3	—
Breadth of product line	.05	4	.20
Sales/distribution effectiveness	.20	4	.80
Proprietary and key account effectiveness	X	3	—
Price competitiveness	X	4	—
Advertising and promotion effectiveness	.05	4	.20
Facilities location and newness	.05	5	—
Capacity and productivity	X	3	.10
Experience curve effects	.15	4	.60
Value added	X	4	—
Investment utilization	.05	5	.25
Raw materials cost	.05	4	.20
Relative product quality	.15	4	.60
R&D advantage/position	.05	4	.20
Cash throwoff	.10	5	.50
Organizational synergies	X	5	—
General image	X	5	—
	1.00	1 to 5	4.30

*For any particular industry, there will be some factors that, while important in general, will have little or no effect on the relative competitive position of firms within that industry.
** "1" denotes very weak competitive position; "5" denotes a very strong competitive position.

toward leaving the market through harvesting or divesting. Harvesting amounts to making very low investments in the business so that in the short run the business will secure positive cash flow and in a few years die out. (With no new investments, the position will continue to deteriorate.) Alternatively, the whole business may be divested, that is, sold to another party in a one-time deal. Sometimes small investments may be made to maintain the viability of business if divestment is desired but there is no immediate suitor. In this way the business can eventually be sold at a higher price than would have been possible right away.

Unit of Analysis

The framework discussed here may be applied to either a product/market or an SBU. As a matter of fact, it may be equally applicable to a much higher level of aggregation in the organization, such as a division or a group. Of course,

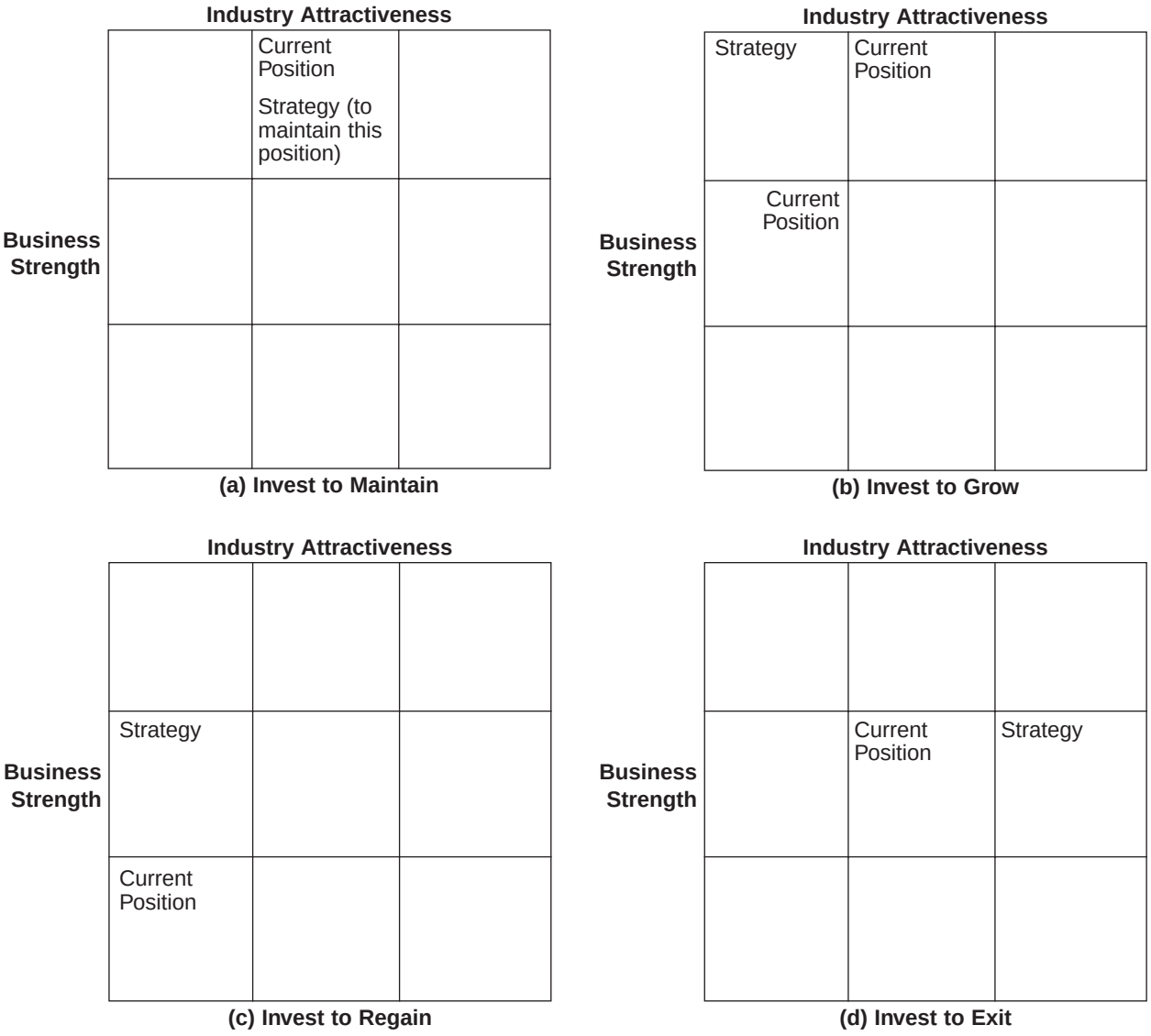
EXHIBIT 10-14
Prescriptive Strategies for Businesses in Different Cells

		Competitive Position		
		Strong	Medium	Weak
Market Attractiveness	High	**Protect Position** • Invest to grow at maximum digestible rate • Concentrate effort on maintaining strength	**Invest to Build** • Challenge for leadership • Build selectively on strengths • Reinforce vulnerable areas	**Build Selectively** • Specialize around limited strengths • Seek ways to overcome weaknesses • Withdraw if indications of sustainable growth are lacking
	Medium	**Build Selectively** • Invest heavily in most attractive segments • Build up ability to counter competition • Emphasize profitability by raising productivity	**Selectivity/Manage for Earnings** • Protect existing program • Concentrate investments in segments where profitability is good and risk is relatively low	**Limited Expansion or Harvest** • Look for ways to expand without high risk; otherwise, minimize investment and rationalize investment
	Low	**Protect and Refocus** • Manage for current earnings • Concentrate on attractive strengths • Defend strengths	**Manage for Earnings** • Protect position in most profitable segments • Upgrade product line • Minimize investment	**Divest** • Sell at time that will maximize cash value • Cut fixed costs and avoid investment meanwhile

at the group or division level, it may be very difficult to measure industry attractiveness and business strengths unless the group or division happens to be in one business.

In the scheme followed in this book, the analysis may be performed first at the SBU level to determine the strategic perspective of different products/markets. Finally, all SBUs may be simultaneously positioned on the matrix to determine a corporate-wide portfolio.

EXHIBIT 10-15
Strategy Options



Directional Policy Matrix

A slightly different technique, the directional policy matrix, is popularly used in Europe. It was initially worked out at the Shell Group but later caught the fancy of many businesses across the Atlantic. Exhibit 10-16 illustrates a directional policy matrix. The two sides of the matrix are labeled business sector prospects (industry attractiveness) and company's competitive capabilities (business

EXHIBIT 10-16
Directional Policy Matrix

Company's Competitive Capabilities	Business Sector Prospects: Unattractive	Average	Attractive
Weak	Disinvest	Phased withdrawal Proceed with care	Double or quit
Average	Phased withdrawal	Proceed with care	Try
Strong	Cash generator	Growth Leader	Leader

strengths). *Business sector prospects* are categorized as unattractive, average, and attractive; and the *company's competitive capabilities* are categorized as weak, average, and strong. Within each cell is the overall strategy direction for a business depicted by the cell. The consideration of factors used to measure business sector prospects and a company's competitive capabilities follows the same logic and analyses discussed above.

PORTFOLIO MATRIX: CRITICAL ANALYSIS

In recent years, a variety of criticisms have been leveled at the portfolio framework. Most of the criticism has centered on the Boston Consulting Group matrix.

1. A question has been raised about the use of market share as the most important influence on marketing strategy. The BCG matrix is derived from an application of the learning curve to manufacturing and other costs. It was observed that, as a firm's product output (and thus market share) increases, total cost declines by a fixed percentage. This may be true for commodities; however, in most product/market situations, products are differentiated, new products and brands are continually introduced, and the pace of technological changes keeps increasing. As a result, one may move from learning curve to learning curve or encounter a discontinuity. More concrete evidence is needed before the validity of market share as a dimension in strategy formulation is established or rejected.
2. Another criticism, closely related to the first, is how product/market boundaries are defined. Market share varies depending on the definition of the corresponding

product/market. Hence, a product may be classified in different cells, depending on the market boundaries used.

3. The stability of product life cycles is implicitly assumed in some portfolio models. However, as in the case of the learning curve, it is possible for the product life cycle to change during the life of the product. For example, recycling can extend the life cycle of a product, sparking a second growth stage after maturity. A related subissue concerns the assumption that investment is more desirable in high-growth markets than in low-growth ones. There is insufficient evidence to support this proposition.[9] This overall issue becomes more problematic for international firms because a given product may be in different stages of its life cycle in different countries.
4. The BCG portfolio framework was developed for balancing cash flows. It ignores the existence of capital markets. Cash balancing is not always an important consideration.
5. The portfolio framework assumes that investments in all products/markets are equally risky, but this is not the case. In fact, financial portfolio management theory does take risk into account. The more risky an investment, the higher the return expected of it. The portfolio matrix does not consider the risk factor.
6. The BCG portfolio model assumes that there is no interdependency between products/markets. This assumption can be questioned on various grounds. For instance, different products/markets might share technology or costs.[10] These interdependencies should be accounted for in a portfolio framework.
7. There is no consensus on the level at which portfolio models are appropriately used. Five levels can be identified: product, product line, market segment, SBU, and business sector. The most frequent application has been at the SBU level; however, it has been suggested that the framework is equally applicable at other levels. Because it is unlikely that any one model could have such wide application, the suggestion that it does casts doubt on the model itself.
8. Most portfolio approaches are retrospective and overly dependent on conventional wisdom in the way in which they treat both market attractiveness and business strengths.[11] For example, despite evidence to the contrary, conventional wisdom suggests the following:

   a. Dominant market share endows companies with sufficient power to maintain price above a competitive level or to obtain massive cost advantages through economies of scale and the experience curve. However, the returns for such companies as Goodyear and Maytag show that this is not always the case.

Market Situation	Conventional Wisdom	Examples	Return on Total Capital Employed 1975–79
Dominant market	Market leader gains — Premium prices — Cost advantages due to scale and experience curve	Goodyear: 40% of U.S. tire market; market leader	7.0%
		Maytag: 5% of U.S. appliance industry; niche competitor	26.7%

b. High market growth means that rivals can expand output and show profits without having to take demand out of each other's plants and provoking price warfare. But the experience of industries as different as the European tungsten carbide industry and the U.S. airline industry suggests that it is not always true.

Market Situation	Conventional Wisdom	Examples	Return on Total Capital Employed 1975–79
High market growth	High market growth allows companies to expand output without provoking price competition and leads to higher profits	European tungsten carbide industry: 1% annual growth	15.0%
		U.S. airline industry: 13.6% annual growth	5.7%

c. High barriers to entry allow existing competitors to keep prices high and earn high profits. But the experience of the U.S. brewing industry seems to refute conventional wisdom.

Market Situation	Conventional Wisdom	Examples	Return on Total Capital Employed 1975–79
High barriers to entry	High barriers prevent new entrants from competing away previously excess profits	U.S. brewing industry is highly concentrated with very high barriers to entry	8.6%

9. There are also issues of measurement and weighting. Different measures have been proposed and used for the dimensions of portfolio models; however, a product's position on a matrix may vary depending on the measures used.[12] In addition, the weights used for models having composite dimensions may impact the results, and the position of a business on the matrix may change with the weighting scheme used.
10. Portfolio models ignore the impact of both the external and internal environments of a company. Because a firm's strategic decisions are made within its environments, their potential impact must be taken into account. Day highlights a few situational factors that might affect a firm's strategic plan. As examples of internal factors, he cites rate of capacity utilization, union pressures, barriers to entry, and extent of captive business. GNP, interest rates, and social, legal, and regulatory environment are cited as examples of external factors.[13] No systematic treatment has been accorded to such environmental influences in the portfolio models. These influences are always unique to a company, so the importance of customizing a portfolio approach becomes clear.
11. The relevance of a particular strategy for a business depends on its correct categorization on the matrix. If a mistake is made in locating a business in a particular cell of the matrix, the failure of the prescribed strategy cannot be blamed on the framework. In other words, superficial and uncritical application of the portfolio framework can misdirect a business's strategy. As Gluck has observed:

> Portfolio approaches have their limitations, of course. First, it's just not all that easy to define the businesses or product/market units appropriately before you begin to analyze them. Second, some attractive strategic opportunities can be overlooked if management treats its businesses as independent entities when there may be real advantages in their sharing resources at the research or manufacturing or distribution level. And third, like more sophisticated models, when it's used uncritically the portfolio can give its users the illusion that they're being rigorous and scientific when in fact they've fallen prey to the old garbage-in, garbage-out syndrome.[14]

12. Most portfolio approaches suggest standard or generic strategies based on the portfolio position of individual SBUs. But these kinds of responses can often result in lost opportunities, turn out to be impractical or unrealistic, and stifle creativity. For example, the standard strategy for managing dogs (SBUs that have a low share of a mature market) is to treat them as candidates for divestment or liquidation. New evidence demonstrates, however, that, with proper management, dogs can be assets to a diversified corporation. One recent study of the performance of more than a thousand industrial-product businesses slotted into the four cells of the BCG matrix found that the average dog had a positive cash flow even greater than the cash needs of the average question mark. Moreover, in a slow-growth economy, more than half of a company's businesses might qualify as dogs. Disposing of them all would be neither feasible nor desirable. Yet the portfolio approach provides no help in suggesting how to improve the performance of such businesses.[15]
13. Portfolio models fail to answer such questions as (a) how a company may determine whether its strategic goals are consistent with its financial objectives, (b) how a company may relate strategic goals to its affordable growth, and (c) how relevant the designated strategies are vis-à-vis competition from overseas companies. In addition, many marketers have raised other questions about the viability of portfolio approaches as a strategy development tool. For example, it has been claimed that the BCG matrix approach is relevant only for positioning existing businesses and fails to prescribe how a question mark may be reared to emerge as a star, how new stars can be located, and so on. Empirical support for the limitations of portfolio planning methods come from the work of Armstrong and Brodie. According to them, the limitations are so serious that portfolio matrices are detrimental since they produce poorer decisions.[16]

    In response to these criticisms, it should be pointed out that the BCG portfolio framework was developed as an aid in formulating business strategies in complex environments. Its aim was not to prescribe strategy, though many executives and academicians have misused it in this way. As one writer has noted:

> No simple, monolithic set of rules or strategy imperatives will point automatically to the right course. No planning system guarantees the development of successful strategies. Nor does any technique. The Business Portfolio (the growth/share matrix) made a major contribution to strategic thought. Today it is misused and overexposed. It can be a helpful tool, but it can also be misleading or, worse, a straitjacket.[17]

A NEW PRODUCT PORTFOLIO APPROACH: PORTER'S GENERIC STRATEGIES FRAMEWORK

Porter has identified three generic strategies: (a) overall cost leadership (i.e., making units of a fairly standardized product and underpricing everybody else); (b) differentiation (i.e., turning out something customers perceive as unique—an item whose quality, design, brand name, or reputation for service commands higher-than-average prices); and (c) focus (i.e., concentrating on a particular group of customers, geographic market, channel of distribution, or distinct segment of the product line).[18]

Porter's choice of strategy is based on two factors: the **strategic target** at which the business aims and the **strategic advantage** that the business has in aiming at that target. According to Porter, forging successful strategy begins with understanding of what is happening in one's industry and deciding which of the available competitive niches one should attempt to dominate. For example, a firm may discover that the largest competitor in an industry is aggressively pursuing cost leadership, that others are trying the differentiation route, and that no one is attempting to focus on some small specialty market. On the basis of this information, the firm might sharpen its efforts to distinguish its product from others or switch to a focus game plan. As Porter says, the idea is to position the firm "so it won't be slugging it out with everybody else in the industry; if it does it right, it won't be directly toe-to-toe with anyone." The objective is to mark out a defensible competitive position—defensible not just against rival companies but also against the forces driving industry competition (discussed in Chapter 4).

What it means is that the give-and-take between firms already in the business represents only one such force. Others are the bargaining power of suppliers, the bargaining power of buyers, the threat of substitute products or services, and the threat of new entrants. In conclusion, Porter's framework emphasizes not only that certain characteristics of the industry must be considered in choosing a generic strategy, but that they in fact dictate the proper choice.

PORTFOLIO ANALYSIS CONCLUSION

Portfolio approaches provide a useful tool for strategists. Granted, these approaches have limitations, but all these limitations can be overcome with a little imagination and foresight. The real concern about the portfolio approach is that its elegant simplicity often tempts managers to believe that it can solve all problems of corporate choices and resource allocation. The truth is that it addresses only half of the problem: the back half. The portfolio approach is a powerful tool for helping the strategist select from a menu of available opportunities, but it does not put the menu into his or her hands. That is the front half of the problem. The other critical dimension in making strategic choices is the need to generate a rich array of business options from which to choose. No simple tool is available that

can provide this option-generating capability. Here only creative thinking about one's environment, one's business, one's customers, and one's competitors can help.

For a successful introduction of the portfolio framework, the strategist should heed the following advice:

1. Once introduced, move quickly to establish the legitimacy of portfolio analysis.
2. Educate line managers in its relevance and use.
3. Redefine SBUs explicitly because their definition is the "genesis and nemesis" of adequately using the portfolio framework.
4. Use the portfolio framework to seek the strategic direction for different businesses without haggling over the fancy labels by which to call them.
5. Make top management acknowledge SBUs as portfolios to be managed.
6. Seek top management time for reviewing different businesses using the portfolio framework.
7. Rely on a flexible, informal management process to differentiate influence patterns at the SBU level.
8. Tie resource allocation to the business plan.
9. Consider strategic expenses and human resources as explicitly as capital investment.
10. Plan explicitly for new business development.
11. Make a clear strategic commitment to a few selected technologies or markets early.

SUMMARY

A diversified organization needs to examine its widely different businesses at the corporate level to see how each business fits within the overall corporate purpose and to come to grips with the resource allocation problem. The portfolio approaches described in this chapter help management determine the role that each business plays in the corporation and allocate resources accordingly.

Three portfolio approaches were introduced: product life cycle, growth rate-relative market share matrix, and multifactor portfolio matrix. The product life-cycle approach determines the life status of different products and whether the company has enough viable products to provide desired growth in the future. If the company lacks new products with which to generate growth in coming years, investments may be made in new products. If growth is hurt by the early maturity of promising products, the strategic effort may be directed toward extension of their life cycles.

The second approach, the growth rate-relative market share matrix, suggests locating products or businesses on a matrix with relative market share and growth rate as its dimensions. The four cells in the matrix, whose positions are based on whether growth is high or low and whether relative market share is high or low, are labeled stars, cash cows, question marks, and dogs. The strategy for a product or business in each cell, which is primarily based on the business's cash flow implications, was outlined.

The third approach, the multifactor portfolio matrix, again uses two variables (industry attractiveness and business strengths), but these two variables are

based on a variety of factors. Here, again, a desired strategy for a product/business in each cell was recommended. The focus of the multifactor matrix approach is on the return-on-investment implications of strategy alternatives rather than on cash flow, as in the growth rate-relative market share matrix approach.

Various portfolio approaches were critically examined. The criticisms relate mainly to operational definitions of dimensions used, weighting of variables, and product/market boundary determination. The chapter concluded with a discussion of Porter's generic strategies framework.

DISCUSSION QUESTIONS

1. What purpose may a product portfolio serve in the context of marketing strategy?
2. How can the position of a product in its life cycle be located?
3. What is the strategic significance of products in the maturity stage of the product life cycle?
4. What is the meaning of relative market share?
5. What sequence should products follow for success? What may management do to ensure this sequence?
6. What factors may a company consider when measuring industry attractiveness and business strengths? Should these factors vary from one business to another in a company?
7. What is the basic difference between the growth rate-relative market share matrix approach and the multifactor portfolio matrix approach?
8. What major problems with portfolio approaches have critics identified?
9. What generic strategies does Porter recommend? Discuss.

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