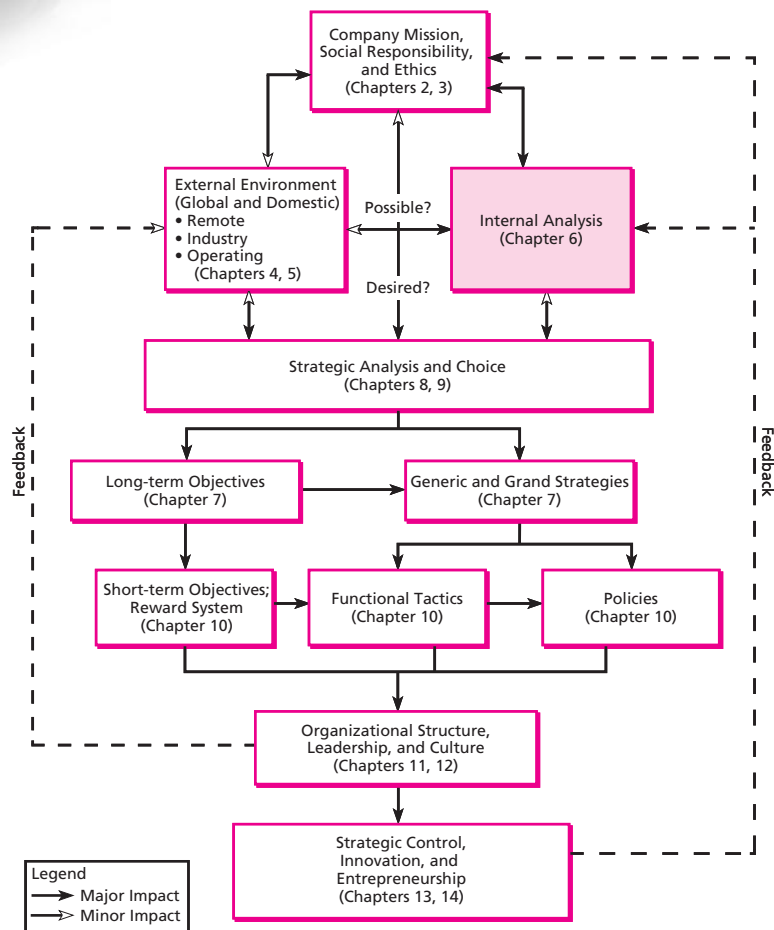


Chapter Six

Internal Analysis

After reading and studying this chapter, you should be able to

1. Understand how to conduct a SWOT analysis, and be able to summarize its limitations.
2. Understand value chain analysis and how to use it to disaggregate a firm's activities and determine which are most critical to generating competitive advantage.
3. Understand the resource-based view of a firm and how to use it to disaggregate a firm's activities and resources to determine which resources are best used to build competitive advantage.
4. Apply four different perspectives for making meaningful comparisons to assess a firm's internal strengths and weaknesses.
5. Refamiliarize yourself with ratio analysis and basic techniques of financial analysis to assist you in doing internal analysis to identify a firm's strengths and weaknesses.



The late R. David Thomas was once ridiculed by many restaurant industry veterans and analysts as he set about building “yet another” hamburger chain named after his young daughter, Wendy. While they thought the name was fine, critics argued that North America was already saturated with hamburger outlets such as McDonald’s, Burger King, Hardees, Dairy Queen, White Castle, and others. Yet, as things turned out, Wendy’s became the fastest growing restaurant chain in the history of the world, having replaced Burger King as the second largest chain. Cisco, the global leader in networking equipment and switching devices linking wired and wireless computer systems worldwide, twice entered and tried to dominate the home-networking market. It failed each time, wasting more than \$250 million in the process. Finally, just a few years ago, it acquired Link-Sys, the market leader, with the promise it would never try to bring Link-Sys into the normal Cisco company structure for fear of destroying the extraordinary success Link-Sys had achieved—not the least of which was vanquishing the much more powerful and wealthy Cisco twice in the last decade. Apple Computer was being written off in the increasingly competitive personal computer industry when it introduced, to a lukewarm reception, its new iPod device and iTunes service. Written off by many as a cute fad, that modest start pioneered a vast new global industry—much like Apple’s original personal computer did three decades earlier.

Common to each of these diverse settings were insightful managers and business leaders who based their firm’s pursuit of market opportunities not only on the existence of external opportunities but also on a very sound awareness of their firm’s competitive advantages arising from the firm’s internal resources, capabilities, and skills. A *sound, realistic awareness and appreciation of their firm’s internally generated advantages* brought Wendy’s, Apple, and Link-Sys immense success while its absence brought much the opposite to Cisco’s home-networking ventures and to the competitors and critics of R. David Thomas and Steven Jobs. This chapter, then, focuses on how managers identify the key resources and capabilities around which to build successful strategies.

Managers often do this subjectively, based on intuition and “gut feel.” Years of seasoned industry experience positions managers to make sound subjective judgments. But just as often, or more often, this may not be the case. In fast-changing environments, reliance on past experiences can cause management myopia—or a tendency to accept the status quo and disregard signals that change is needed. And with managers new to strategic decision making, subjective decisions are particularly suspect. A lack of experience is easily replaced by emotion, narrow functional expertise, and the opinions of others, thus creating the foundation on which newer managers build strategic recommendations. So it is that new managers’ subjective assessments often come back to haunt them.

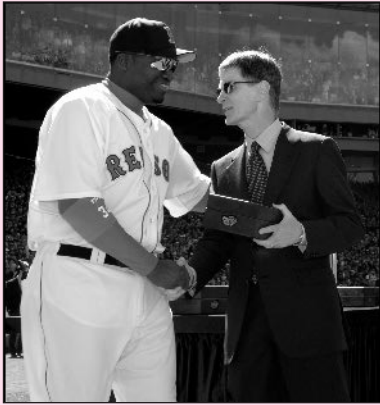
John W. Henry broke the most fabled curse in sports when his Boston Red Sox won their first World Championship since 1918. Most sports analysts, sports business managers, and regular fans (if they are honest now) would have bet a small fortune, based on their own subjective assessment, that there was no way the Boston Red Sox, having already lost three games, would win four straight games to beat the New York Yankees and then go on to win the World Series. That subjective assessment or “feel” would have led them to believe there were just too many reasons to bet the Red Sox could pull it out. At the same time, a seasoned global futures market trader, John W. Henry, relied on applying his systematic global futures market approach to baseball player selection along with selected other resources and capabilities unique to the Boston area and situation in his bet that the Red Sox could win it all. His very systematic approach to internal analysis of the Boston Red Sox sports enterprise and the leveraging of his/their strengths led to the World Series championship and perhaps many more, as described in Exhibit 6.1, Top Strategist.

Managers often start their internal analysis with questions like, How well is the current strategy working? What is our current situation? Or what are our strengths and weaknesses? The chapter begins with a review of a long-standing, traditional approach managers have

Top Strategist

John W. Henry, CEO of the Boston Red Sox

Exhibit 6.1



John W. Henry, CEO of the Boston Red Sox, and Slugger David Ortiz

John W. Henry long ago earned his fortune—and a reputation as one of the nation's premier players in the global futures markets. But in 2004 and 2007, Henry may have achieved immortality by leading the Boston Red Sox to their first two World Championships since 1918, reversing the most fabled curse in sports. This triumph was due to more than inspired play of a team that rallied from 0–3 in the American League Championship Series to beat the New York Yankees.

Henry set the stage for victory by applying the same statistical acumen that made him a fortune

in the futures market. He also boosted revenue by making the most of Fenway park, the oldest stadium in Major League Baseball, by squeezing in more seats and then charging the highest prices for home games, all of which sold out. At the same time, they started broadcasting home games in high definition on their 80 percent–owned cable sports network, New England Sports Network—helping it routinely win in regional prime-time ratings.

All of this turned the Red Sox into baseball's second-most-lucrative franchise and gave it the financial muscle to take on the Yankees, who consistently open every season with a league-leading record payroll. The Sox are now consistently second in payroll, thanks to Henry.

Henry—a numbers genius, whose proprietary futures-trading system consistently produces double-digit returns—closed the gap with sabermetrics. That's a system for mining baseball stats to find undervalued players while avoiding long contracts for aging stars—such as pitcher Pedro Martinez—whose performance is likely to decline. Henry built baseball's most effective team but won't settle for one championship. After ending an 86-year drought, he's aiming for a dynasty.

Sources: Reprinted with special permission from "Who Needs Johnny Damon," *BusinessWeek*, March 20, 2006; and "John Henry: Boston Red Sox," *BusinessWeek*, January 10, 2005, p. 61. Copyright © 2006 The McGraw-Hill Companies.

frequently used to answer these questions, SWOT analysis. This approach is a logical framework intended to help managers thoughtfully consider their company's internal capabilities and use the results to shape strategic options. Its value and continued use is found in its simplicity. At the same time, SWOT analysis has limitations that have led strategists to seek more comprehensive frameworks for conducting internal analysis.

Value chain analysis is one such framework. Value chain analysis views a firm as a "chain" or sequential process of value-creating activities. The sum of all of these activities represents the "value" the firm exists to provide its customers. So undertaking an internal analysis that breaks down the firm into these distinct value activities allows for a detailed, interrelated evaluation of a firm's internal strengths and weaknesses that improves upon what strategists can create using only SWOT analysis.

The resource-based view (RBV) of a firm is another important framework for conducting internal analysis. This approach improves upon SWOT analysis by examining a variety of different yet specific types of resources and capabilities any firm possesses and then evaluating the degree to which they become the basis for sustained competitive advantage based on industry and competitive considerations. In so doing, it provides a disciplined approach to internal analysis.

Common to all the approaches to internal analysis is the use of meaningful standards for comparison in internal analysis. We conclude this chapter by examining how managers use past performance, comparison with competitors or other “benchmarks,” industry norms, and traditional financial analysis to make meaningful comparisons.

SWOT ANALYSIS: A TRADITIONAL APPROACH TO INTERNAL ANALYSIS

SWOT analysis

SWOT is an acronym for the internal Strengths and Weaknesses of a firm, and the environmental Opportunities and Threats facing that firm. SWOT analysis is a technique through which managers create a quick overview of a company's strategic situation.

opportunity

A major favorable situation in a firm's environment.

threat

A major unfavorable situation in a firm's environment.

strength

A resource advantage relative to competitors and the needs of the markets a firm serves or expects to serve.

SWOT is an acronym for the internal Strengths and Weaknesses of a firm and the environmental Opportunities and Threats facing that firm. **SWOT analysis** is a historically popular technique through which managers create a quick overview of a company's strategic situation. It is based on the assumption that an effective strategy derives from a sound “fit” between a firm's internal resources (strengths and weaknesses) and its external situation (opportunities and threats). A good fit maximizes a firm's strengths and opportunities and minimizes its weaknesses and threats. Accurately applied, this simple assumption has sound, insightful implications for the design of a successful strategy.

Environmental and industry analysis in Chapters 3 and 4 provides the information needed to identify opportunities and threats in a firm's environment, the first fundamental focus in SWOT analysis.

Opportunities

An **opportunity** is a major favorable situation in a firm's environment. Key trends are one source of opportunities. Identification of a previously overlooked market segment, changes in competitive or regulatory circumstances, technological changes, and improved buyer or supplier relationships could represent opportunities for the firm. Sustained, growing interest in organic foods has created an opportunity that is a critical factor shaping strategic decisions at groceries and restaurants worldwide.

Threats

A **threat** is a major unfavorable situation in a firm's environment. Threats are key impediments to the firm's current or desired position. The entrance of new competitors, slow market growth, increased bargaining power of key buyers or suppliers, technological changes, and new or revised regulations could represent threats to a firm's success.

Large national residential home builders have seen rising interest rates start to slow demand for single-family housing developments nationwide. These same residential home builders have had to face an increasing threat of rapidly accelerating energy and materials costs brought on both by their collective, fast-paced development activities, further exacerbated by the exploding demand for these same building supplies in the Chinese marketplace. So these large national home builders had to craft strategies built around these major threats to survive and eventually grow.

Once managers agree on key opportunities and threats facing their firm, they have a frame of reference or context from which to evaluate their firm's ability to take advantage of opportunities and minimize the effect of key threats. And vice versa: Once managers agree on their firm's core strengths and weaknesses, they can logically move to consider opportunities that best leverage their firm's strengths while minimizing the effect certain weaknesses may present until remedied.

Strengths

A **strength** is a resource or capability controlled by or available to a firm that gives it an advantage relative to its competitors in meeting the needs of the customers it serves.

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Strengths arise from the resources and competencies available to the firm. Southland Log Homes' southeastern plant locations (Virginia, South Carolina, and Mississippi) provide both transportation and raw material cost advantages along with ideal proximity to the United States' most rapidly growing second-home markets. Southland has leveraged these strengths to take advantage of the moderate interest rates and rapidly growing baby boomer second-home demand trend to become the largest log home company in North America.

Weaknesses

weakness

A limitation or deficiency in one or more resources or competencies relative to competitors that impedes a firm's effective performance.

A **weakness** is a limitation or deficiency in one or more of a firm's resources or capabilities relative to its competitors that create a disadvantage in effectively meeting customer needs. Limited financial capacity was a weakness recognized by Southwest Airlines, which charted a selective route expansion strategy to build the best profit record in a deregulated airline industry.

Using SWOT Analysis in Strategic Analysis

The most common use of SWOT analysis is as a logical framework guiding discussion and reflection about a firm's situation and basic alternatives. This often takes place as a series of managerial group discussions. What one manager sees as an opportunity, another may see as a potential threat. Likewise, a strength to one manager may be a weakness to another. The SWOT framework provides an organized basis for insightful discussion and information sharing, which may improve the quality of choices and decisions managers subsequently make. Consider what initial discussions among Apple Computer's management team might have been that led to the decision to pursue the rapid development and introduction of the iPod. A brief SWOT analysis of their situation might have identified:

Strengths

- Sizable miniature storage expertise
- User-friendly engineering skill
- Reputation and image with youthful consumers
- Brand name
- Web-savvy organization and people
- Jobs's Pixar experience

Weaknesses

- Economies of scale versus computer rivals
- Maturing computer markets
- Limited financial resources
- Limited music industry expertise

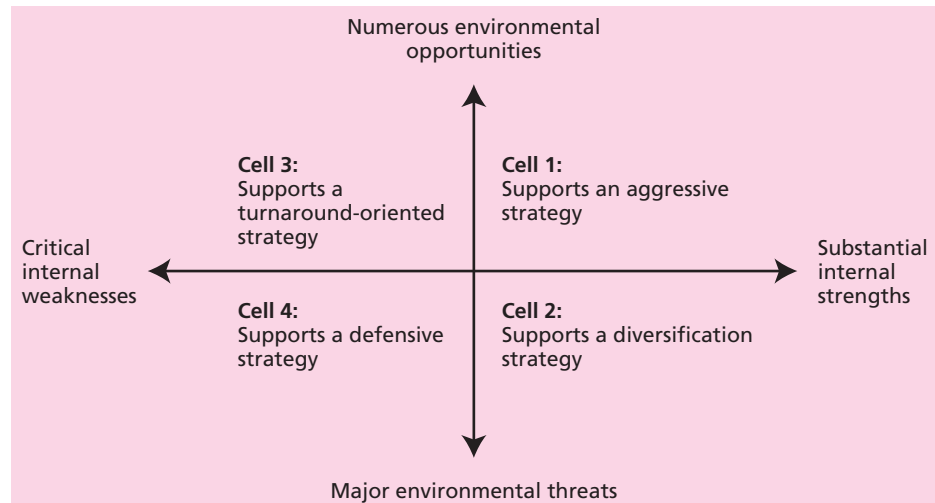
Opportunities

- Confused online music situation
- Emerging file-sharing restrictions
- Few core computer-related opportunities
- Digitalization of movies and music

Threats

- Growing global computer companies
- Major computer competitors

EXHIBIT 6.2
SWOT Analysis
Diagram



It is logical to envision Apple managers' discussions evolving to a consensus that the combination of Apple's storage and digitalization strengths along with their strong brand franchise with "hip" consumers, when combined with the opportunity potentially arising out of the need for a simple way to legally buy and download music on the Web would be the basis for a compelling strategy for Apple to become a first mover in the emerging downloadable music industry.

Exhibit 6.2 illustrates how SWOT analysis might take managerial planning discussions into a slightly more structured approach to aid strategic analysis. The objective is identification of one of four distinct patterns in the match between a firm's internal resources and external situation. Cell 1 is the most favorable situation; the firm faces several environmental opportunities and has numerous strengths that encourage pursuit of those opportunities. This situation suggests growth-oriented strategies to exploit the favorable match. Our example of Apple Computer's intensive market development strategy in the online music services and the iPod is the result of a favorable match of its strong technical expertise, early entry, and reputation resources with an opportunity for impressive market growth as millions of people sought a legally viable, convenient way to obtain, download, store, and use their own customized music choices.

Sun Microsystems applied SWOT analysis, creating an advertisement responding to the Hewlett-Packard (HP) board of directors' ongoing search for a new CEO after their dismissal of celebrity CEO Carly Fiorina. The ad shows Sun Microsystems attempting a Cell 1 strategic response pursuing a key opportunity made available by the uncertainty for HP corporate clients during this time (see Exhibit 6.3, Strategy in Action). In the ad, as you can see, Sun simply attempts to state—in very direct terms—what it believes its strengths might be for interested and frustrated HP clients (and, subtly, IBM's customers) in the face of this opportunity created for Sun by HP's strategic confusion.

Cell 4 is the least favorable situation, with the firm facing major environmental threats from a weak resource position. This situation clearly calls for strategies that reduce or redirect involvement in the products or markets examined by means of SWOT analysis. Texas Instruments offers a good example of a cell 4 firm. It was a sprawling maker of chips, calculators, laptop PCs, military electronics, and engineering software on a sickening slide toward oblivion just 10 years ago. Its young CEO, Tom Engibous, reinvigorated the ailing electronics giant and turned it into one of the hottest plays in semiconductors by betting the company on an emerging class of chips known

Strategy in Action

Exhibit 6.3

Sun Microsystems Uses a SWOT Analysis to Target Frustrated HP Customers in 2005

BusinessWeek

Hewlett-Packard celebrity CEO Carly Fiorina was dismissed by the HP board, five years after her hard-fought decision to merge Compaq and HP failed to produce the payoffs she predicted. Sun Microsystems placed the following ad in *The Wall Street Journal* and other business periodicals, aimed at disgruntled HP and Compaq business customers (a SWOT opportunity) and highlighting key strengths at Sun Microsystems:

To: HP Customers
From: Sun Microsystems Inc.
Subject: Time for one last change?
Cc: IBM

Odds are, you're an HP customer because you believed in the HP way. You believed in the DEC strategy. The Compaq strategy. The PA-RISC/HP-UX strategy. The Tru64 strategy. The Itanium strategy. But time after time, you've been disappointed.

We at Sun have taken a different tack: there's enough change in the world. Focus. Innovate. Grow customers 1 by 1. And stay consistent to your mission, even when the pundits and competitors say otherwise.

We've had a consistent vision for 24 years: The Network is the Computer™. More true today than 10 years ago.

We've had a consistent vision of how the network should be programmed: Java™. More true today than 10 years ago.

We've had a consistent vision of how operating systems should be built: to military-grade security,

carrier-grade scale, and open to the world: Solaris™ 10. More true today than 10 years ago.

We've had a consistent view that servers and storage should be: built to scale, built to last, built with best-in-class innovation. That's why SPARC® is the #1 64-bit microprocessor out there, and our AMD Opteron™ processor-based systems now claim seven new performance world records, and we've got the most compelling storage product in the industry (the Sun StorEdge™ 6920). More true today than 10 years ago.

We've had a consistent view that innovation matters—from Linux and the open source world, to Microsoft interoperability. More true today than 10 years ago.

And most of all, we've had a consistent view that simplicity is our single biggest competitive advantage. \$1/cpu-hr is a simpler grid offering than forcing customers to buy consultants "on demand." More true today than 10 years ago.

So if you'd like to experience a partner driven to focus while you try to drive change—versus the opposite—call us. (800) SUN-0404. Or go to www.sun.com/welcome_2_Sun to learn about our special HP migration programs.

Sources: Reprinted with special permission from "Sun's Rebound," *BusinessWeek Online*, September 13, 2006; and "A New Dawn for Sun Microsystems," *BusinessWeek*, May 9, 2005. Copyright © 2006 The McGraw-Hill Companies.

as digital signal processors (DSPs). The chips crunch vast streams of data for an array of digital gadgets, including modems and cellular phones. Engibous shed billions of dollars worth of assets to focus on DSPs, which he calls "the most important silicon technology of the next decade." TI now commands half of the \$8 billion global market for the most advanced DSPs, and it is the No. 1 chip supplier to the digital wireless phone market.

In cell 2, a firm that has identified several key strengths faces an unfavorable environment. In this situation, strategies would seek to redeploy those strong resources and competencies to build long-term opportunities in more opportunistic product markets. IBM, a dominant manufacturer of mainframes, servers, and PCs worldwide, has nurtured many strengths in computer-related and software-related markets for many years. Increasingly, however, it has had to address major threats that include product commoditization, pricing pressures, accelerated pace of innovation, and the like. IBM's decision to sell its PC business to the Chinese firm Lenovo and focus instead on continued development of ISSC, better known now as IBM Global Services, has allowed IBM to build a long-term opportunity in the (hopefully) more profitable, growing markets of the next decade. In the past 10 years, Global

Services has become the fastest-growing division of the company, its largest employer, and the keystone of IBM's strategic future. The group does everything from running a customer's IT (information technology) department to consulting on legacy system upgrades to building custom supply-chain management applications. As IBM's hardware divisions struggle against price wars and commoditization and its software units fight to gain share beyond mainframes, it is Global Services that drives the company's growth.

A firm in cell 3 faces impressive market opportunity but is constrained by weak internal resources. The focus of strategy for such a firm is eliminating the internal weaknesses so as to more effectively pursue the market opportunity. Microsoft has big problems with computer viruses. Alleviating such problems, or weaknesses, is driving massive changes in how Microsoft writes software—to make it more secure before it reaches the market rather than fix it later with patches. Microsoft is also shaking up the security software industry by acquiring several smaller companies to accelerate its own efforts to create specialized software that detects, finds, and removes malicious code.¹

Limitations of SWOT Analysis

SWOT analysis has been a framework of choice among many managers for a long time because of its simplicity and its portrayal of the essence of sound strategy formulation—matching a firm's opportunities and threats with its strengths and weaknesses. But SWOT analysis is a broad conceptual approach, making it susceptible to some key limitations.

1. A SWOT analysis can overemphasize internal strengths and downplay external threats. Strategists in every company have to remain vigilant against building strategies around what the firm does well now (its strengths) without due consideration of the external environment's impact on those strengths. Apple's success with the iPod and its iTunes downloadable music Web site provides a good example of strategists who placed a major emphasis on external considerations—the legal requirements for downloading and subsequently using individual songs, what music to make available, and the evolution of the use of the Web to download music—as a guide to shaping Apple's eventual strategy. What would Apple's success have been like if its strategy had been built substantially with a focus on its technology in making the iPod device and offering it in the consumer marketplace—without bothering with the development and creation of iTunes?

2. A SWOT analysis can be static and can risk ignoring changing circumstances. A frequent admonition about the downfall of planning processes says that plans are one-time events to be completed, typed, and relegated to their spot on a manager's shelf while s/he goes about the actual work of the firm. So it is not surprising that critics of SWOT analysis, with good reason, warn that it is a one-time view of a changing, or moving, situation. Major U.S. airlines pursued strategies built around strengths that were suddenly much less important when airline deregulation took place. Likewise, those airlines built huge competitive advantages around "hub and spoke" systems for bringing small-town flyers to key hubs to be redistributed to flights elsewhere and yet allow for centralized maintenance and economies of scale. The change brought about by discount airlines that "cherry-picked" key routes, and eventual outsourcing of routine maintenance to Latin America and the Caribbean, did great harm to those strategies. Bottom line: SWOT analysis, along with most planning techniques, must avoid being static and ignoring change.

3. A SWOT analysis can overemphasize a single strength or element of strategy. Dell Computer's long-dominant strength based on a highly automated, Internet, or phone-based direct sales model gave Dell, according to chairman and founder Michael Dell, "a competitive advantage [strength] as wide as the Grand Canyon." He viewed it as being

¹ "Aiming to Fix Flaws, Microsoft Buys Another Antivirus Firm," *The Wall Street Journal*, February 9, 2005, p. B1.

prohibitively expensive for any rival to copy this source of strength. Unfortunately for Dell shareholders, Dell's reliance on that "key" strength proved to be an oversimplified basis around which to sustain the company's strategy for continued dominance and growth in the global PC industry. HP's size alone, with its reemphasis on printing and technical skills, and Lenovo's home base in the fast-growing Asian market seemingly have overcome Dell's dominance in the global PC industry.

4. A strength is not necessarily a source of competitive advantage. Cisco Systems Inc. has been a dominant player in providing switching equipment and other key networking infrastructure items around which the global computer communications system has been able to proliferate. It has substantial financial, technological, and branding expertise. Cisco Systems twice attempted to use its vast strengths in these areas as the basis to enter and remain in the market for home computer networks and wireless home-networking devices. It failed both times and lost hundreds of millions of dollars in the process. It possesses several compelling strengths, but none were sources of sustainable competitive advantage in the home-computer-networking industry. After leaving that industry for several years, it recently chose to reenter it by acquiring Link-Sys, an early pioneer in that industry. Cisco management acknowledged that it was doing so precisely because it did not possess those sources of competitive advantage and that, furthermore, it would avoid any interference with that business lest it disrupt the advantage around which Link-Sys's success has been built.

In summary, SWOT analysis is a longtime, traditional approach to internal analysis among many strategists. It offers a generalized effort to examine internal capabilities in light of external factors, most notably key opportunities and threats. It has limitations that must be considered if SWOT analysis is to be the basis for any firm's strategic decision-making process. Another approach to internal analysis that emerged, in part, to add more rigor and depth in the identification of competitive advantages around which a firm might build a successful strategy is value chain analysis. We examine it next.

VALUE CHAIN ANALYSIS

value chain

A perspective in which business is seen as a chain of activities that transforms inputs into outputs that customers value.

value chain analysis

An analysis that attempts to understand how a business creates customer value by examining the contributions of different activities within the business to that value.

The term **value chain** describes a way of looking at a business as a chain of activities that transform inputs into outputs that customers value. Customer value derives from three basic sources: activities that differentiate the product, activities that lower its cost, and activities that meet the customer's need quickly. **Value chain analysis (VCA)** attempts to understand how a business creates customer value by examining the contributions of different activities within the business to that value.

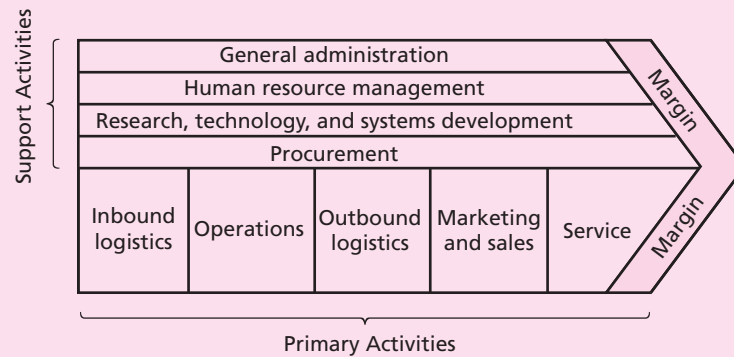
VCA takes a process point of view: It divides (sometimes called disaggregates) the business into sets of activities that occur *within the business*, starting with the inputs a firm receives and finishing with the firm's products (or services) and after-sales service to customers. VCA attempts to look at its costs across the series of activities the business performs to determine where low-cost advantages or cost disadvantages exist. It looks at the attributes of each of these different activities to determine in what ways each activity that occurs between purchasing inputs and after-sales service helps differentiate the company's products and services. Proponents of VCA believe it allows managers to better identify their firm's competitive advantages by looking at the business as a process—a chain of activities—of what actually happens in the business rather than simply looking at it based on arbitrary organizational dividing lines or historical accounting protocol.

Exhibit 6.4 shows a typical value chain framework. It divides activities within the firm into two broad categories: primary activities and support activities. **Primary activities** (sometimes called *line functions*) are those involved in the physical creation of the product, marketing and transfer to the buyer, and after-sale support. **Support activities** (sometimes

EXHIBIT 6.4 The Value Chain

Source: Based on Michael Porter. *On Competition*, 1998. Harvard Business School Press.

The Value Chain



primary activities

The activities in a firm of those involved in the physical creation of the product, marketing and transfer to the buyer, and after-sale support.

Primary Activities

- **Inbound logistics**—Activities, costs, and assets associated with obtaining fuel, energy, raw materials, parts components, merchandise, and consumable items from vendors; receiving, storing, and disseminating inputs from suppliers; inspection; and inventory management.
- **Operations**—Activities, costs, and assets associated with converting inputs into final product form (production, assembly, packaging, equipment maintenance, facilities, operations, quality assurance, environmental protection).
- **Outbound logistics**—Activities, costs, and assets dealing with physically distributing the product to buyers (finished goods warehousing, order processing, order picking and packing, shipping, delivery vehicle operations).
- **Marketing and sales**—Activities, costs, and assets related to sales force efforts, advertising and promotion, market research and planning, and dealer/distributor support.
- **Service**—Activities, costs, and assets associated with providing assistance to buyers, such as installation, spare parts delivery, maintenance and repair, technical assistance, buyer inquiries, and complaints.

Support Activities

- **General administration**—Activities, costs, and assets relating to general management, accounting and finance, legal and regulatory affairs, safety and security, management information systems, and other “overhead” functions.
- **Human resources management**—Activities, costs, and assets associated with the recruitment, hiring, training, development, and compensation of all types of personnel; labor relations activities; development of knowledge-based skills.
- **Research, technology, and systems development**—Activities, costs, and assets relating to product R&D, process R&D, process design improvement, equipment design, computer software development, telecommunications systems, computer-assisted design and engineering, new database capabilities, and development of computerized support systems.
- **Procurement**—Activities, costs, and assets associated with purchasing and providing raw materials, supplies, services, and outsourcing necessary to support the firm and its activities. Sometimes this activity is assigned as part of a firm’s inbound logistic purchasing activities.

support activities

The activities in a firm that assist the firm as a whole by providing infrastructure or inputs that allow the primary activities to take place on an ongoing basis.

Strategy in Action

Exhibit 6.5

Value Chain Analysis “Morphs” Federal Express into an Information Company

BusinessWeek

Founder Fred Smith and executives running companies controlled by FedEx sought a monumental shift in the FedEx mission. They accelerated plans to focus on information systems that track and coordinate packages. They sought to “morph” from being a transportation company into an information company.

FedEx had one of the most heavily used Web sites on the Internet. Company management claimed to have 1,500 in-house programmers writing more software code than almost any other nonsoftware company. To complement package delivery, FedEx designs and operates high-tech warehouses and distribution systems for big manufacturers and retailers around the world. For almost two decades, FedEx steadily invested massive amounts to develop software and create a giant digital network. FedEx has built corporate technology campuses around the world, and its electronic systems are directly linked via the Internet or otherwise to millions of customers worldwide. That system allows FedEx to track packages on an hourly basis, and it also allows FedEx to predict future flows of goods and then rapidly refigure the information and logistical network to handle those flows.

“Moving an item from point A to point B is no longer a big deal,” says James Barksdale, early architect of

FedEx’s information strategies. “Having the information about that item, and where it is, and the best way to use it . . . That is value. The companies that will be big winners will be the ones who can best maximize the value of these information systems.” Where FedEx’s value has long been built on giant airplanes and big trucks, founder Smith envisioned a time when it will be built on information, computers, and the allure of the FedEx brand name. These days FedEx is a linchpin of the just-in-time deliveries revolution—its planes and trucks serve as mobile warehouses—that has helped companies around the globe cut costs and boost their productivity. FedEx’s logistics info services now contribute the lion’s share—92 percent—of FedEx’s annual revenue. FedEx’s value chain has shrunk in areas involved with inbound and outbound operations—taking off and landing on the tarmac—and expanded in areas involved with zapping around the pristine and pilot-free world of cyberspace to manage a client’s supply chain and its distribution network.

Sources: Reprinted with special permission from “FedEx Delivers a Boost,” *BusinessWeek*, November 7, 2006; and Dean Foust, “Fred Smith on the Birth of FedEx,” *BusinessWeek*, September 20, 2004. Copyright © 2006 The McGraw-Hill Companies.

called *staff* or *overhead functions*) assist the firm as a whole by providing infrastructure or inputs that allow the primary activities to take place on an ongoing basis. The value chain includes a profit margin because a markup above the cost of providing a firm’s value-adding activities is normally part of the price paid by the buyer—creating value that exceeds cost so as to generate a return for the effort.²

Judgment is required across individual firms and different industries because what may be seen as a support activity in one firm or industry may be a primary activity in another. Computer operations might typically be seen as infrastructure support, for example, but may be seen as a primary activity in airlines, newspapers, or banks. Exhibit 6.5, Strategy in Action, describes how Federal Express reconceptualized its company using a value chain analysis that ultimately saw its information support become its primary activity and source of customer value.

Conducting a Value Chain Analysis

Identify Activities

The initial step in value chain analysis is to divide a company’s operations into specific activities or business processes, usually grouping them similarly to the primary and support activity categories shown earlier in Exhibit 6.4. Within each category, a firm typically performs a number of discrete activities that may be key to the firm’s success. Service

² Different “value chain” or value activities may become the focus of value chain analysis. For example, companies using Hammer’s *Reengineering the Corporation* might use (1) order procurement, (2) order fulfillment, (3) customer service, (4) product design, and (5) strategic planning plus support activities.

EXHIBIT 6.6 The Difference between Traditional Cost Accounting and Activity-Based Cost Accounting

Traditional Cost Accounting in a Purchasing Department		Activity-Based Cost Accounting in the Same Purchasing Department for Its “Procurement” Activities	
Wages and salaries	\$175,000	Evaluate supplier capabilities	\$ 67,875
Employee benefits	57,500	Process purchase orders	41,050
Supplies	3,250	Expedite supplier deliveries	11,750
Travel	1,200	Expedite internal processing	7,920
Depreciation	8,500	Check quality of items purchased	47,150
Other fixed charges	62,000	Check incoming deliveries against purchase orders	24,225
Miscellaneous operating expenses	12,625	Resolve problems	55,000
	<u>\$320,075</u>	Internal administration	65,105
			<u>\$320,075</u>

activities, for example, may include such discrete activities as installation, repair, parts distribution, and upgrading—any of which could be a major source of competitive advantage or disadvantage. The manager’s challenge at this point is to be very detailed attempting to “disaggregate” what actually goes on into numerous distinct, analyzable activities rather than settling for a broad, general categorization.

Allocate Costs

The next step is to attempt to attach costs to each discrete activity. Each activity in the value chain incurs costs and ties up time and assets. Value chain analysis requires managers to assign costs and assets to each activity, thereby providing a very different way of viewing costs than traditional cost accounting methods would produce. Exhibit 6.6 helps illustrate this distinction. Both approaches in Exhibit 6.6 tell us that the purchasing department (procurement activities) cost \$320,075. The traditional method lets us see that payroll expenses are 73 percent $[(\$175 + \$57.5)/\$320]$ of our costs with “other fixed charges” the second largest cost, 19 percent $[\$62/\$320]$ of the total procurement costs. VCA proponents would argue that the benefit of this information is limited. Their argument might be the following:

With this information we could compare our procurement costs to key competitors, budgets, or industry averages and conclude that we are better, worse, or equal. We could then ascertain that our “people” costs and “other fixed charges” cost are advantages, disadvantages, or “in line” with competitors. Managers could then argue to cut people, add people, or debate fixed overhead charges. However, they would get lost in what is really a budgetary debate without ever examining what it is those people do in accomplishing the procurement function, what value that provides, and how cost effective each activity is.

VCA proponents hold that the activity-based VCA approach would provide a more meaningful analysis of the procurement function’s costs and consequent value added. The activity-based side of Exhibit 6.6 shows that approximately 21 percent of the procurement cost or value added involves evaluating supplier capabilities. A rather sizable cost, 20 percent, involves internal administration, with an additional 17 percent spent resolving problems and almost 15 percent spent on quality control efforts. VCA advocates see this information as being much more useful than traditional cost accounting information, especially when compared with the cost information of key competitors or other “benchmark”

companies. VCA supporters assert the following argument that the benefit of this activity-based information is substantial:

Rather than analyzing just “people” and “other charges,” we are now looking at meaningful categorizations of the work that procurement actually does. We see, for example, that a key value-added activity (and cost) involves “evaluating supplier capabilities.” The amount spent on “internal administration” and “resolving problems” seems high and may indicate a weakness or area for improvement if the other activities’ costs are in line and outcomes favorable. The bottom line is that this approach lets us look at what we actually “do” in the business—the specific activities—to create customer value, and that in turn allows more specific internal analysis than traditional, accounting-based cost categories.

Recognizing the Difficulty in Activity-Based Cost Accounting

It is important to note that existing financial management and accounting systems in many firms are not set up to easily provide activity-based cost breakdowns. Likewise, in virtually all firms, the information requirements to support activity-based cost accounting can create redundant work because of the financial reporting requirements that may force firms to retain the traditional approach for financial statement purposes. The time and energy to change to an activity-based approach can be formidable and still typically involve arbitrary cost allocation decisions—trying to allocate selected asset or people costs across multiple activities in which they are involved. Challenges dealing with a cost-based use of VCA have not deterred use of the framework to identify sources of differentiation. Indeed, conducting a VCA to analyze competitive advantages that differentiate the firm is compatible with the resource-based view’s examination of intangible assets and capabilities as sources of distinctive competence.

Identify the Activities That Differentiate the Firm

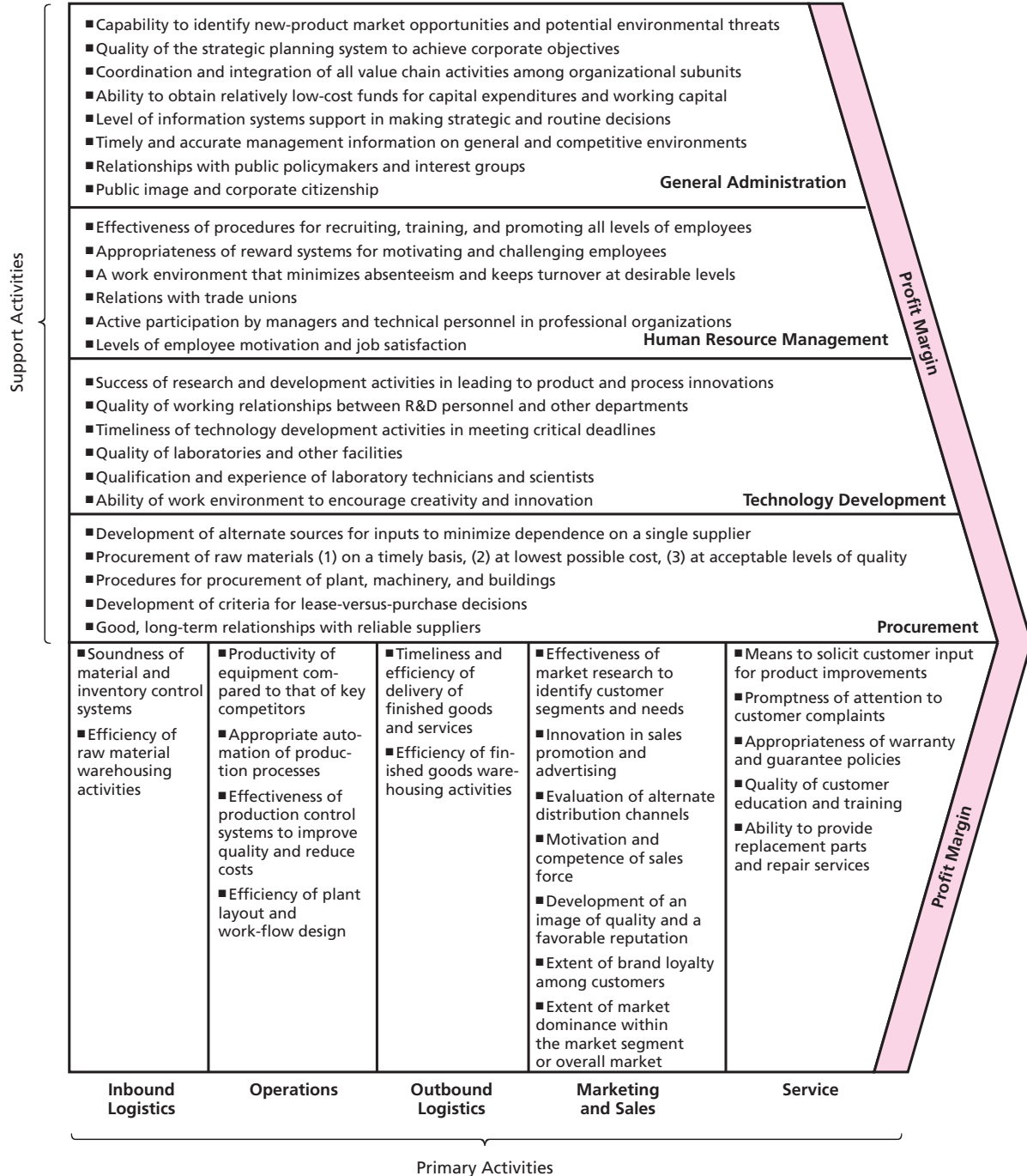
Scrutinizing a firm’s value chain may not only reveal cost advantages or disadvantages, it may also bring attention to several sources of differentiation advantage relative to competitors. Google considers its Internet-based search algorithms (activities) to be far superior to any competitor’s. Google knows it has a cost advantage because of the time and expense replicating this activity would take. But Google considers it an even more important source of value to the customer because of the importance customers place on this activity, which differentiates Google from many would-be competitors. Likewise, Federal Express, as we noted in Exhibit 6.5, considers its information management skills to have become the core competence and essence of the company because of the value these skills allow FedEx to provide its customers and the importance they in turn place on such skills. Exhibit 6.7 suggests some factors for assessing primary and support activities’ differentiation and contribution.

Examine the Value Chain

Once the value chain has been documented, managers need to identify the activities that are critical to buyer satisfaction and market success. It is those activities that deserve major scrutiny in an internal analysis. Three considerations are essential at this stage in the value chain analysis. First, the company’s basic mission needs to influence managers’ choice of activities to be examined in detail. If the company is focused on being a low-cost provider, then management attention to lower costs should be very visible, and missions built around commitment to differentiation should find managers spending more on activities that are differentiation cornerstones. Retailer Wal-Mart focuses intensely on costs related to inbound logistics, advertising, and loyalty to build its competitive advantage (see Exhibit 6.10, page 176), while Nordstrom builds its distinct position in retailing by emphasizing sales and support activities on which they spend twice the retail industry average.

Second, the nature of value chains and the relative importance of the activities within them vary by industry. Lodging firms like Holiday Inn have major costs and concerns that

EXHIBIT 6.7 Possible Factors for Assessing Sources of Differentiation in Primary and Support Activities



Source: Based on Michael Porter, *On Competition*, 1998, Harvard Business School Press.

involve operational activities—it provides its service instantaneously at each location—and marketing activities, while having minimal concern for outbound logistics. Yet for a distributor, such as the food distributor PYA, inbound and outbound logistics are the most critical area. Major retailers like Wal-Mart have built value advantages focusing on purchasing and inbound logistics, while the most successful personal computer companies have built via sales, outbound logistics, and service through the mail-order process.

Third, the relative importance of value activities can vary by a company's position in a broader value system that includes the value chains of its upstream suppliers and downstream customers or partners involved in providing products or services to end users. A producer of roofing shingles depends heavily on the downstream activities of wholesale distributors and building supply retailers to reach roofing contractors and do-it-yourselfers. Maytag manufactures its own appliances, sells them through independent distributors, and provides warranty service to the buyer. Sears outsources the manufacture of its appliances while it promotes its brand name—Kenmore—and handles all sales and service.

As these examples suggest, it is important that managers take into account their level of vertical integration when comparing their cost structure for activities on their value chain to those of key competitors. Comparing a fully integrated rival with a partially integrated one requires adjusting for the scope of activities performed to achieve meaningful comparison. It also suggests the need for examining costs associated with activities provided by upstream or downstream companies; these activities ultimately determine comparable, final costs to end users. Said another way, one company's comparative cost disadvantage (or advantage) may emanate more from activities undertaken by upstream or downstream "partners" than from activities under the direct control of that company—therefore suggesting less of a relative advantage or disadvantage within the company's direct value chain.

RESOURCE-BASED VIEW OF THE FIRM

Toyota versus GM is a competitive situation virtually all of us recognize. Stock analysts look at the two and conclude that Toyota is the clear leader. They cite Toyota's superiority in tangible assets (newer factories worldwide, R&D facilities, computerization, cash, etc.) and intangible assets (reputation, brand name awareness, quality-control culture, global business system, etc.). They also mention that Toyota leads GM in several capabilities to make use of these assets effectively—managing distribution globally, influencing labor and supplier relations, managing franchise relations, marketing savvy, and speed of decision making to take quick advantage of changing global conditions are just a few that are frequently mentioned. The combination of capabilities and assets, most analysts conclude, creates several competencies that give Toyota key competitive advantages over GM that are durable and not easily imitated.

The Toyota–GM situation provides a useful illustration for understanding several concepts central to the **resource-based view** (RBV) of the firm. The RBV is a method of analyzing and identifying a firm's strategic advantages based on examining its distinct combination of assets, skills, capabilities, and intangibles as an organization. The RBV's underlying premise is that firms differ in fundamental ways because each firm possesses a unique "bundle" of resources—tangible and intangible assets and organizational capabilities to make use of those assets. Each firm develops competencies from these resources, and, when developed especially well, these become the source of the firm's competitive advantages. Toyota's decision to enter global markets locally and regularly invest in or build newer factory locations in those global markets has given Toyota a competitive advantage analysts estimate GM has lost and will take at least 20 years or longer, if ever, to match. Toyota's strategy for the last 15 years was based in part on the identification of

resource-based view

A method of analyzing and identifying a firm's strategic advantages based on examining its distinct combination of assets, skills, capabilities, and intangibles as an organization.

these resources and the development of them into a distinctive competence—a sustained competitive advantage.

Core Competencies

Executives charting the strategy of their business have more recently concentrated their thinking on the notion of a “core competence.” A **core competence** is a capability or skill that a firm emphasizes and excels in doing while in pursuit of its overall mission. Core competencies that differ from those found in competing firms would be considered *distinctive competencies*. Apple’s competencies in pulling together available technologies and others’ software and combining this with their own product design skills and new-product introduction prowess result in an innovation competence that is different and distinct from any firm against which Apple competes. Toyota’s pervasive organizationwide pursuit of quality; Wendy’s systemwide emphasis on and ability to provide fresh meat daily; and the University of Phoenix’s ability to provide comprehensive educational options for working adults worldwide are all examples of competencies that are unique to these firms and distinctive when compared to their competitors.

Distinctive competencies that are identified and nurtured throughout the firm, allowing it to execute effectively so as to provide products or services to customers that are superior to competitor’s offerings, become the basis for a lasting *competitive advantage*. Executives, enthusiastic about the notion that their job as strategists was to identify and leverage core competencies into distinctive ones that create sustainable competitive advantage, encountered difficulty applying the concept because of the generality of its level of analysis. The RBV emerged as a way to make the core competency notion and thought process more focused and measurable—creating a very important, and more meaningful, tool for internal analysis. Let’s look at the basic concepts underlying the RBV.

Three Basic Resources: Tangible Assets, Intangible Assets, and Organizational Capabilities

The RBV’s ability to create a more focused, measurable approach to internal analysis starts with its delineation of three basic types of resources, some of which may become the building blocks for distinctive competencies. These resources are defined below and illustrated in Exhibit 6.8.

Tangible assets are the easiest “resources” to identify and are often found on a firm’s balance sheet. They include production facilities, raw materials, financial resources, real estate, and computers. Tangible assets are the physical and financial means a company uses to provide value to its customers.

Intangible assets are “resources” such as brand names, company reputation, organizational morale, technical knowledge, patents and trademarks, and accumulated experience within an organization. While they are not assets that you can touch or see, they are very often critical in creating competitive advantage.

Organizational capabilities are not specific “inputs” like tangible or intangible assets; rather, they are the skills—the ability and ways of combining assets, people, and processes—that a company uses to transform inputs into outputs. Apple pioneered and has subsequently leveraged its iPod and iTunes success into a major leadership position in digitalized music, entertainment, and communication on a global basis for individual consumers. Microsoft and others have attempted to copy Dell, but remain far behind Apple’s diverse organizational capabilities. Apple has subsequently revolutionized its own iPod, using it to automate and customize a whole new level of entertainment capability that combines assets, people and processes throughout and beyond the Apple organization. Finely developed capabilities, such as Apple’s Internet-based, customer-friendly iPod/iTunes

core competence

A capability or skill that a firm emphasizes and excels in doing while in pursuit of its overall mission.

tangible assets

The most easily identified assets, often found on a firm’s balance sheet. They include production facilities, raw materials, financial resources, real estate, and computers.

intangible assets

A firm’s assets that you cannot touch or see but that are very often critical in creating competitive advantage: brand names, company reputation, organizational morale, technical knowledge, patents and trademarks, and accumulated experience within an organization.

organizational capabilities

Skills (the ability and ways of combining assets, people, and processes) that a company uses to transform inputs into outputs.

EXHIBIT 6.8 Examples of Different “Resources”

Source: From R.M. Grant,
*Contemporary Strategy
Analysis*, Blackwell Publishing,
2001, p. 140. Reprinted with
permission of Wiley-Blackwell.

Tangible Assets	Intangible Assets	Organizational Capabilities
Hampton Inn’s reservation system	Budweiser’s brand name	Travelocity’s customer service P&G’s management training program
Toyota Motor Company’s cash reserves	Apple’s reputation	Wal-Mart’s purchasing and inbound logistics
Georgia Pacific’s land holdings	Nike’s advertising with LeBron James	Google’s product-development processes
FedEx’s plane fleet	Katie Couric as CBS’s <i>Evening News</i> anchor	Coke’s global distribution coordination
Coca-Cola’s Coke formula	eBay’s management team Goldman Sach’s culture	3M’s innovation process
Classifying and Assessing the Firm’s Resources		
Resource	Relevant Characteristics	Key Indicators
Tangible Resources		
Financial resources	The firm’s borrowing capacity and its internal funds generation determine its resilience and capacity for investment.	<ul style="list-style-type: none"> • Debt/equity ratio • Operating cash flow/free cash flow • Credit rating
Physical resources	Physical resources constrain the firm’s set of production possibilities and impact its cost position. Key characteristics include <ul style="list-style-type: none"> • The size, location, technical sophistication, and flexibility of plant and equipment • Location and alternative uses for land and buildings • Reserves of raw materials 	<ul style="list-style-type: none"> • Market values of fixed assets • Vintage of capital equipment • Scale of plants • Flexibility of fixed assets
Intangible Resources		
Technological resources	Intellectual property: patent portfolio, copyright, trade secrets Resources for innovation: research facilities, technical and scientific employees	<ul style="list-style-type: none"> • Number and significance of patents • Revenue from licensing patents and copyrights • R&D staff as a percent of total employment • Number and location of research facilities
Reputation	Reputation with customers through the ownership of brands and trademarks; established relationships with customers; the reputation of the firm’s products and services for quality and reliability. The reputation of the company with suppliers (including component suppliers, banks and financiers, employees and potential employees), with government and government agencies, and with the community.	<ul style="list-style-type: none"> • Brand recognition • Brand equity • Percent of repeat buying • Objective measures of comparative product performance (e.g., Consumers’ Association ratings, J. D. Power ratings) • Surveys of corporate reputation (e.g., <i>BusinessWeek</i>)

system, can be a source of sustained competitive advantage. They enable a firm to take the same input factors as rivals (such as Microsoft, HP, or Dell) and convert them into products and services, either with greater efficiency in the process or greater quality in the output, or both.

What Makes a Resource Valuable?

Once managers identify their firm's tangible assets, intangible assets, and organizational capabilities, the RBV applies a set of guidelines to determine which of those resources represent strengths or weaknesses—which resources generate core competencies that are sources of sustained competitive advantage. These RBV guidelines derive from the idea that resources are more valuable when they

1. Are *critical* to being able to *meet a customer's need* better than other alternatives.
2. Are *scarce*—few others if any possess that resource or skill to the degree you do.
3. *Drive* a key portion of overall *profits*, in a manner controlled by your firm.
4. Are *durable* or sustainable over time.

Before proceeding to explain each basis for making resources valuable, we suggest that you keep in mind a simple, useful idea: Resources are most valuable when they meet all four of these guidelines. We will return to this point after we explain each guideline more thoroughly.

RBV Guideline 1: Is the resource or skill critical to fulfilling a customer's need better than that of the firm's competitors?

Two restaurants offer similar food, at similar prices, but one has a location much more convenient to downtown offices than the other. The tangible asset, location, helps fulfill daytime workers' lunch-eating needs better than its competitor, resulting in greater profitability and sales volume for the conveniently located restaurant. Wal-Mart redefined discount retailing and outperformed the industry in profitability by 4.5 percent of sales—a 200 percent improvement. Four resources—store locations, brand recognition, employee loyalty, and sophisticated inbound logistics—allowed Wal-Mart to fulfill customer needs much better and more cost effectively than Kmart and other discount retailers (see Exhibit 6.10, page 176). In both of these examples, *it is important to recognize that only resources that contributed to competitive superiority were valuable*. At the same time, other resources such as the restaurant's menu and specific products or parking space at Wal-Mart were essential to doing business but contributed little to competitive advantage because they did not help fulfill customer needs better than those of the firm's key competitors.

RBV Guideline 2: Is the resource scarce? Is it in short supply or not easily substituted for or imitated?

Short Supply When a resource is scarce, it is more valuable. When a firm possesses a resource and few if any others do, and it is central to fulfilling customers' needs, then it can become the basis of a competitive advantage for the firm. Literal physical scarcity is perhaps the most obvious way a resource might meet this guideline. Very limited natural resources, a unique location, skills that are truly rare—all represent obvious types of scarce resource situations.

Availability of Substitutes We discussed the threat of substitute products in Chapter 3 as part of the five forces model for examining industry profitability. This basic idea can be taken further and used to gauge the scarcity-based value of particular resources. Whole Foods has been an exciting growth company for several years, focused exclusively on selling wholesome, organic food. The basic idea was to offer food grown organically,

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without pesticides or manipulation, in a convenient grocery atmosphere. Investors were excited about this concept because of the processed, nonorganic foods offered by virtually every existing grocery chain. Unfortunately for their more recent investors, substitutes for Whole Foods's offerings are becoming easily available from several grocery chains and regional organic chains. Publix, Harris-Teeter, and even Wal-Mart are easily adapting their grocery operations to offer organic fare. With little change to their existing facilities and operational resources, these companies are quickly creating alternatives to Whole Foods's offerings if not offering some of the same items, cheaper. So some worry about the long-term impact on Whole Foods. Investors have seen the value of their Whole Foods's stock decline as substitute resources and capabilities are readily created by existing and new entrants into the organic grocery sectors.

Imitation A resource that competitors can readily copy can only generate temporary value. It is "scarce" for only a short time. It cannot generate a long-term competitive advantage. When Wendy's first emerged, it was the only major hamburger chain with a drive-through window. This unique organizational capability was part of a "bundle" of resources that allowed Wendy's to provide unique value to its target customers: young adults seeking convenient food service. But once this resource, or organizational capability, proved valuable to fast-food customers, every fast-food chain copied the feature. Then Wendy's continued success was built on other resources that generated other distinctive competencies.

The scarcity that comes with an absence of imitation seldom lasts forever, as the Wendy's example illustrates. Competitors will match or better any resource as soon as they can. It should be obvious, then, that the firm's ability to forestall this eventuality is very important. So how does a firm create resource scarcity by making resources hard to imitate? The RBV identifies four characteristics, called **isolating mechanisms**, that make resources difficult to imitate:

**isolating
mechanisms**

Characteristics that make resources difficult to imitate. In the RBV context these are physically unique resources, path-dependent resources, causal ambiguity, and economic deterrence.

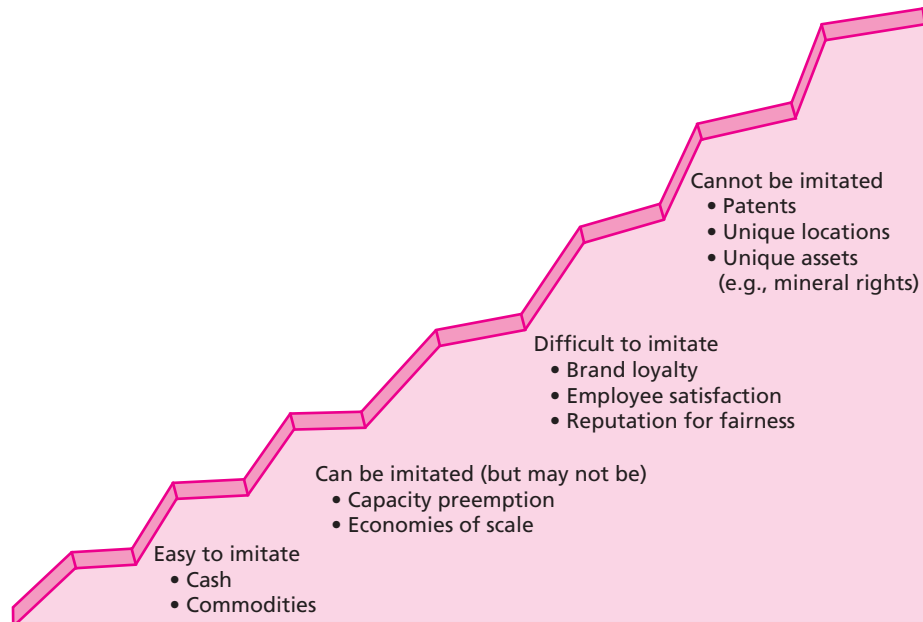
- *Physically unique resources* are virtually impossible to imitate. A one-of-a-kind real estate location, mineral rights, and patents are examples of resources that cannot be imitated. Disney's Mickey Mouse copyright or Winter Park, Colorado's Iron Horse resort possess physical uniqueness. While many strategists claim that resources are physically unique, this is seldom true. Rather, other characteristics are typically what make most resources difficult to imitate.

- *"Path-dependent" resources* are very difficult to imitate because of the difficult "path" another firm must follow to create the resource. These are resources that cannot be instantaneously acquired but rather must be created over time in a manner that is frequently very expensive and always difficult to accelerate. When Michael Dell once said that "Anyone who tries to go direct now will find it very difficult—like trying to jump over the Grand Canyon," he was asserting that Dell's system of selling customized PCs direct via the Internet and Dell's unmatched customer service is, in effect, a path-dependent organizational capability. It would take any competitor years to develop the expertise, infrastructure, reputation, and capabilities necessary to compete effectively with Dell, which HP eventually accomplished after 10 years and considerable effort. Coca-Cola's brand name, Gerber Baby Food's reputation for quality, and Steinway's expertise in piano manufacture would take competitors many years and millions of dollars to match. Consumers' many years of experience drinking Coke or using Gerber or playing a Steinway would also need to be matched.

- *Causal ambiguity* is a third way resources can be very difficult to imitate. This refers to situations in which it is difficult for competitors to understand exactly how a firm has created the advantage it enjoys. Competitors can't figure out exactly what the uniquely valuable resource is or how resources are combined to create the competitive advantage. Causally ambiguous resources are often organizational capabilities that arise from

EXHIBIT 6.9 Resource Imitation

Source: From David J. Collins and Cynthia A. Montgomery, *Corporate Strategy: A Resource-Based Approach*, McGraw-Hill/Irwin, 2005, p. 39. Copyright © 2005 The McGraw-Hill Companies, Inc. Reprinted with permission.



subtle combinations of tangible and intangible assets and culture, processes, and organizational attributes the firm possesses. Southwest Airlines has regularly faced competition from major and regional airlines, with some like United and Continental eschewing their traditional approach and attempting to compete by using their own version of the Southwest approach—same planes, routes, gate procedures, number of attendants, and so on. They have yet to succeed. The most difficult thing to replicate is Southwest’s “personality,” or culture of fun, family, and frugal yet focused services and attitude. Just how that works is hard for United and Continental to figure out.

• *Economic deterrence* is a fourth source of inimitability. This usually involves large capital investments in capacity to provide products or services in a given market that are scale sensitive. It occurs when a competitor understands the resources that provide a competitive advantage and may even have the capacity to imitate, but chooses not to because of the limited market size that realistically would not support two players the size of the first mover.

While we may be inclined to think of the ability to imitate a resource as a yes-or-no situation, imitation is more accurately measured on a continuum that reflects difficulty and time. Exhibit 6.9 illustrates such a continuum. Some resources may have multiple imitation deterrents. For example, 3M’s reputation for innovativeness may involve path dependencies and causal ambiguity.

RBV Guideline 3: Appropriability: Who actually gets the profit created by a resource?

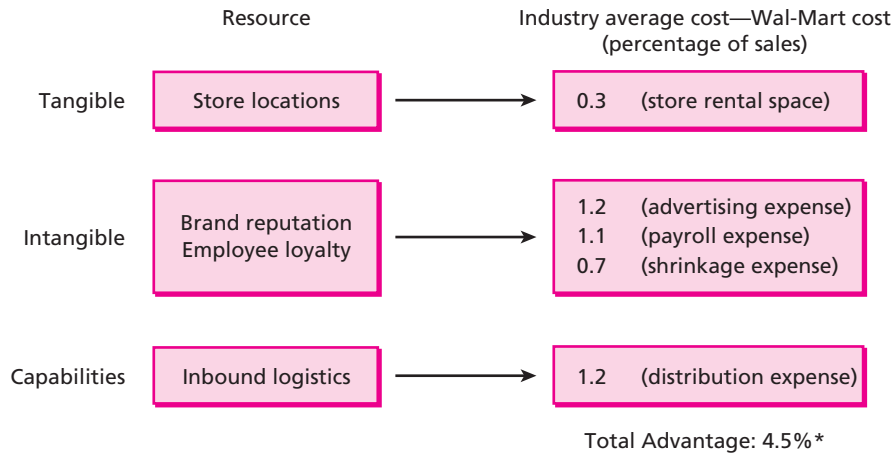
Warren Buffett is known worldwide as one of the most successful investors of the last 25 years. One of his legendary investments was the Walt Disney Company, which he once said he liked “because the Mouse does not have an agent.”³ What he was really saying was that Disney owned the Mickey Mouse copyright, and all profits from that valuable resource went directly to Disney. Other competitors in the “entertainment” industry generated similar profits from their competing offerings, for example, movies, but they often “captured” substantially less of those profits because of the amounts that had to be paid to well-known

³ *The Harbus*, March 25, 1996, p. 12.

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EXHIBIT 6.10**Wal-Mart's
Resource-Based
Competitive
Advantage**

Source: Pankaj Ghemawat,
“Wal-Mart Stores’ Discount
Operations,” Harvard
Business School Case Number
9-387-018.



* Wal-Mart's cost advantage as a percent of sales. Each percentage point advantage is worth well over \$500 million in net income to Wal-Mart.

actors or directors or other entertainment contributors seen as the real creators of the movie's value.

Disney's eventual acquisition of Pixar illustrates just the opposite situation for the home of the Mouse. Pixar's expertise in digital animation had proven key to the impressive success of several major animation films released by Disney in the past several years. While Disney apparently thought its name and distribution clout justified its sizable share of the profits this five-year joint venture generated, Steve Jobs and his Pixar team felt otherwise. Pixar's assessment was that their capabilities were key drivers of the huge profits by *Ants* and *Finding Nemo*, leading them not to renew their Disney partnership. Pixar's unmatched digitalization animation expertise quickly “appropriated” the profits generated by this key competitive advantage, and Disney Studios struggled to catch up. Disney eventually solved the dilemma by acquiring Pixar at a handsome premium. The movie *Cars* soon followed.⁴

Sports teams, investment services, and consulting businesses are other examples of companies that generate sizable profits based on resources (e.g., key people, skills, contacts) that are not inextricably linked to the company and therefore do not allow the company to easily capture the profits. Superstar sports players can move from one team to another or command excessively high salaries, and this circumstance could arise in other personal services business situations. It could also occur when one firm joint ventures with another, sharing resources and capabilities and the profits that result. Sometimes restaurants or lodging facilities that are franchisees of a national organization are frustrated by the fees they pay the franchisor each month and decide to leave the organization and go “independent.” They often find, to their dismay, that the business declines significantly. The value of the franchise name, reservation system, and brand recognition is critical in generating the profits of the business.

Wal-Mart's success in appropriating profits associated with five key resources or capabilities (see Exhibit 6.10) has, for many years, meant an additional 4.5 cents out of every sales dollar more than its average competitor accrues to Wal-Mart (Wal-Mart “appropriates it”) and that money in turn flows to its bottom line. The discount retailing industry is extremely competitive, and this historically allowed Wal-Mart's profitability to reach two to three times the industry average—a sizable competitive advantage for Wal-Mart that was durable and largely under Wal-Mart's control (for the past 20 years). Interestingly, as you will see later in Exhibit 6.13 (page 181), competitors like Target and Kroger have worked intently over the past 10 years to reduce Wal-Mart's intangible and capabilities resource

⁴ “Disney Buys Pixar,” *Money.CNN.com*, January 1, 2006.

advantages in a way that is beginning to create a new resource-based source of competitive advantage for them.

RBV Guideline 4: Durability: How rapidly will the resource depreciate?

The slower a resource depreciates, the more valuable it is. Tangible assets, such as commodities or capital, can have their depletion measured. Intangible resources, such as brand names or organizational capabilities, present a much more difficult depreciation challenge. The Coca-Cola brand has continued to appreciate, whereas technical know-how in various computer technologies depreciates rapidly. In the increasingly hypercompetitive global economy of the twenty-first century, distinctive competencies and competitive advantages can fade quickly, making the notion of durability a critical test of the value of key resources and capabilities. Some believe that this reality makes well-articulated visions and associated cultures within organizations potentially the most important contributor to long-term survival.⁵

Using the Resource-Based View in Internal Analysis

To use the RBV in internal analysis, a firm must first identify and evaluate its resources to find those that provide the basis for future competitive advantage. This process involves defining the various resources the firm possesses and examining them based on the preceding discussion to gauge which resources truly have strategic value. It is usually helpful in this undertaking to

- *Disaggregate resources*—break them down into more specific competencies—rather than stay with broad categorizations. Saying that Domino’s Pizza has better marketing skills than Pizza Hut conveys little information. But dividing that into subcategories such as advertising that, in turn, can be divided into national advertising, local promotions, and coupons allows for a more measurable assessment. Exhibit 6.11 provides a useful illustration of this at the United Kingdom’s largest full-service restaurant operator—Whitbread’s Restaurant.
- *Utilize a functional perspective*. Looking at different functional areas of the firm, disaggregating tangible and intangible assets as well as organizational capabilities that are present, can begin to uncover important value-building resources and activities that deserve further analysis. Appendix 6A lists a variety of functional area resources and activities that deserve consideration.
- *Look at organizational processes* and combinations of resources and not only at isolated assets or capabilities. While disaggregation is critical, you must also take a creative, gestalt look at what competencies the firm possesses or has the potential to possess that might generate competitive advantage.
- *Use the value chain approach* to uncover organizational capabilities, activities, and processes that are valuable potential sources of competitive advantage.

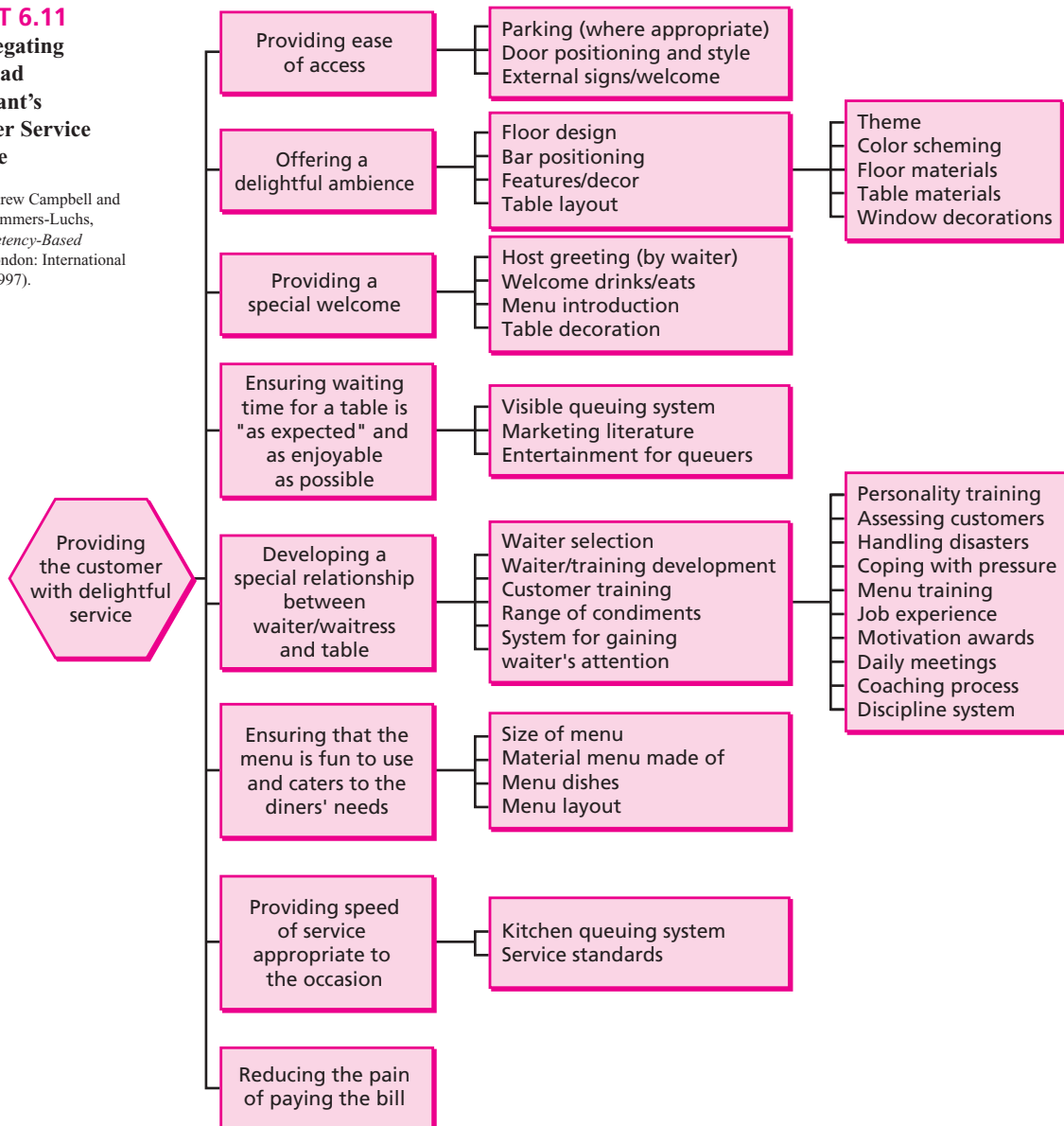
Once the resources are identified, managers apply the four RBV guidelines for uncovering “valuable” resources. The objective for managers at this point is to identify resources and capabilities that are valuable for most if not all of the reasons our guidelines suggest a resource can be valuable.

If a resource creates the ability to meet a unique customer need, it has value. But if it is not scarce, or if it is easily imitated, it would be unwise to build a firm’s strategy on that resource or capability unless that strategy included plans to build scarcity or inimitability into it. If a resource provided the basis for meeting a unique need, was scarce, was not

⁵ James C. Collins, *Good to Great: Why Some Companies Make the Leap . . . and Others Don’t* (New York: HarperCollins, 2001).

EXHIBIT 6.11
Disaggregating
Whitbread
Restaurant's
Customer Service
Resource

Source: Andrew Campbell and Kathleen Sommers-Luchs, *Core Competency-Based Strategy* (London: International Thomson, 1997).



easily imitated, and was easily sustainable over time, managers would be attracted to build a strategy on it more than likely. Our example of Pixar's relationship with Disney earlier in this chapter would seem to suggest this was Pixar's position early in its joint venture with Disney. Yet even with all of those sources confirming a very high value in its digital animation expertise and intellectual property resources, Pixar was not "appropriating" the share of the animation movie profits that were attributable to those resources. Pixar was fortunate: it had the choice not to renew its five-year contract with Disney, and so it did. That eventually led Disney to pay a premium price to acquire Pixar, to regain the strategic value of Pixar's unique resources.

The key point here is that applying RBV analysis should focus on identifying resources that contain all sources of value identified in our four guidelines. Consider the diagram in

EXHIBIT 6.12
Applying the
Resource-Based
View to Identify
the Best Sources
of Competitive
Advantage

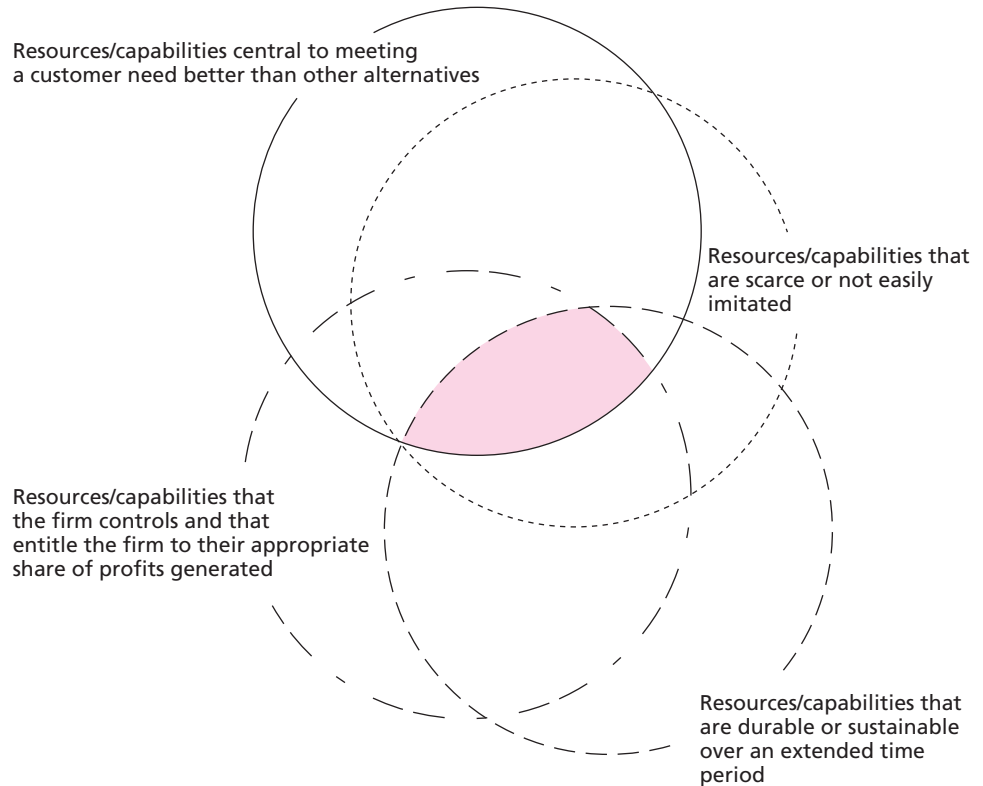


Exhibit 6.12. Each circle in that diagram represents one way resources have value. The area where all circles intersect or overlap would represent resources that derive value in all four ways. Such resources are the ones managers applying the RBV should seek to identify. They are powerful sources around which to build competitive advantage and craft successful strategies. And resources that possess some but not all sources of value become points of emphasis by a management team able to identify ways to build the missing source of value into that resource over time much like Pixar did in its relationship with Disney.

By using RBV, value chain analysis, and SWOT analysis, firms are virtually certain to improve the quality of internal analysis undertaken to help craft a company's competitive strategy. Central to the success of each technique is the strategists' ability to make meaningful comparisons. The next section examines how meaningful comparisons can be made.

INTERNAL ANALYSIS: MAKING MEANINGFUL COMPARISONS

Managers need objective standards to use when examining internal resources and value-building activities. Whether applying the SWOT approach, VCA, or the RBV, strategists rely on three basic perspectives to evaluate how their firms stack up on internal capabilities. These three perspectives are discussed in this section.

Comparison with Past Performance

Strategists use the firm's historical experience as a basis for evaluating internal factors. Managers are most familiar with the internal capabilities and problems of their firms because they have been immersed in the financial, marketing, production, and R&D activities. Not

surprisingly, a manager's assessment of whether a certain internal factor—such as production facilities, sales organization, financial capacity, control systems, or key personnel—is a strength or a weakness will be strongly influenced by his or her experience in connection with that factor. In the capital-intensive package delivery industry, for example, operating margin is a strategic internal factor affecting a firm's flexibility to add capacity. UPS managers view UPS's declining operating margins (down from 16 percent to 13.9 percent in 2007) as a potential weakness, limiting its flexibility to aggressively continue to expand its overnight air fleet. FedEx managers view its considerably lower 2007 operating margin of 9.3 percent as a growing strength because it has almost doubled from its 5.0 percent level five years earlier.

Although historical experience can provide a relevant evaluation framework, strategists must avoid tunnel vision in making use of it. NEC, Japan's IBM, initially dominated Japan's PC market with a 70 percent market share by using a proprietary hardware system, much higher screen resolution, powerful distribution channels, and a large software library from third-party vendors. Far from worried, Hajime Ikeda, manager of NEC's planning division at the time, was quoted as saying, "We don't hear complaints from our users." Soon, IBM, Apple, and HP filled the shelves in Japan's famous consumer electronics district, Akihabara. Hiroki Kamata, president of a Japanese computer research firm, reported that Japan's PC market, worth more than \$35 billion, saw Apple, Dell, IBM, and HP with more market share than NEC because of better technology, software, and the restrictions created by NEC's proprietary technology. As NEC eventually learned, using only historical experience as a basis for identifying strengths and weaknesses can prove dangerously inaccurate.

Benchmarking: Comparison with Competitors

A major focus in determining a firm's resources and competencies is comparison with existing (and potential) competitors. Firms in the same industry often have different marketing skills, financial resources, operating facilities and locations, technical know-how, brand images, levels of integration, managerial talent, and so on. These different internal resources can become relative strengths (or weaknesses) depending on the strategy a firm chooses. In choosing a strategy, managers should compare the firm's key internal capabilities with those of its rivals, thereby isolating its key strengths and weaknesses.

In the U.S. home appliance industry, for example, Sears and General Electric have been major rivals. Sears's principal strength is its retail network. For GE, distribution—through independent franchised dealers—has traditionally been a relative weakness. GE's possession of the financial resources needed to support modernized mass production has enabled it to maintain both cost and technological advantages over its rivals, particularly Sears. This major strength for GE is a relative weakness for Sears, which depends solely on subcontracting to produce its Kenmore appliances. On the other hand, maintenance and repair service are important in the appliance industry. Historically, Sears has had strength in this area because it maintains fully staffed service components and spreads the costs of components over numerous departments at each retail location. GE, on the other hand, has had to depend on regional service centers and on local contracting with independent service firms by its independent local dealers. Among the internal factors that Sears and GE must consider in developing a strategy are distribution networks, technological capabilities, operating costs, and service facilities. For example, GE's major move creating alliances with Home Depot and Lowe's to sell appliances has been a major factor in turning what has been a relative weakness into what now appears to be a major strength. Managers in both Sears and GE have built successful strategies, yet those strategies are quite different. Benchmarking each other, they have identified ways to build on relative strengths while avoiding dependence on capabilities at which the other firm excels.

Strategy in Action

Exhibit 6.13

Wal-Mart's Midlife Crisis: Falling Behind Its Rivals in Key Success Factors

BusinessWeek

For nearly five decades, Wal-Mart's signature "everyday low prices" and their enabler—low costs—defined not only its business model but also the distinctive personality of this proud, insular company that emerged from the Ozarks backwoods to dominate retailing. Over the past year and a half, though, Wal-Mart's growth formula has stopped working. In 2006 its U.S. division eked out a 1.9 percent gain in same-store sales—its worst performance ever—and this year has begun no better. By this key measure, such competitors as Target, Costco, Kroger, Safeway, Walgreen's, CVS, and Best Buy now are all growing two to five times faster than Wal-Mart.

One can argue that the deceleration of Wal-Mart's organic growth is a function of the aging of its outlets, given that same-store sales rates slow as stores mature. Outlets five years or older accounted for 17 percent of all U.S. Supercenters in 2000 and 44 percent in 2006, and will top 60 percent in 2010. Meanwhile, the underlying economics of expansion have turned against Wal-Mart, even as it relies increasingly on store-building to compensate for sagging same-store sales. On balance, the new Supercenters are just not pulling in enough sales to offset fully the sharply escalating costs of building them.

Part of the problem is that many new stores are located so close to existing ones that Wal-Mart ends up competing with itself. All in all, the retailer's pre-tax return on fixed assets, which includes things such as computers and trucks as well as stores, has plunged 40 percent since 2000. Wal-Mart disclosed a year and a half ago that same-store sales were rising 10 times, or 1,000 percent, faster at the 800 best-managed outlets than at the 800 worst-run ones. Equally shocking was its admission that 25 percent of its stores failed to meet minimum expectations of cleanliness, product availability, checkout times, and so on.

Over the past decade, top competitors in most every retailing specialty have succeeded in narrowing their cost gap with Wal-Mart by restructuring their operations. They eliminated jobs, remodeled stores, and replaced warehouses, investing heavily in new technology to tie it all together. Unionized supermarkets even managed to chip away at Wal-Mart's nonunion-labor cost advantage, signaling their resolve by taking a long strike in Southern California in 2003–2004. The end result: rival chains gradually were able to bring their prices down closer to Wal-Mart's and again make good money.

Consider the return to form of Kroger Co., the largest and oldest U.S. supermarket chain. Cincinnati-based Kroger competes against more Wal-Mart Supercenters—1,000 at last count—than any other grocer. Which is why until recently the only real interest Wall Street took in the old-line giant was measuring it for a coffin. Today, though, a rejuvenated Kroger is gaining share faster in the 32 markets where it competes with Wal-Mart than in the 12 where it does not.

A recent Bank of America survey of three such markets—Atlanta, Houston, and Nashville—found that Kroger's prices were 7.5 percent higher on average than Wal-Mart's, compared with 20 to 25 percent five years ago. This margin is thin enough to allow Kroger to again bring to bear such "core competencies" as service, quality, and convenience, says BofA's Scott A. Mushkin, who recently switched his Kroger rating to buy from sell. "We're saying the game has changed, and it looks like it has changed substantially in Kroger's favor," he says.

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benchmarking

Evaluating the sustainability of advantages against key competitors. Comparing the way a company performs a specific activity with a competitor or other company doing the same thing.

Benchmarking, or comparing the way "our" company performs a specific activity with a competitor or other company doing the same thing, has become a central concern of managers in quality commitment companies worldwide. Particularly as the value chain framework has taken hold in structuring internal analysis, managers seek to systematically benchmark the costs and results of the smallest value activities against relevant competitors or other useful standards because it has proven to be an effective way to continuously improve that activity. The ultimate objective in benchmarking is to identify the "best practices" in performing an activity and to learn how lower costs, fewer defects, or other outcomes linked to excellence are achieved. Companies committed to benchmarking attempt to isolate and identify where their costs or outcomes are out

of line with what the best practices of a particular activity experience (competitors and noncompetitors) and then attempt to change their activities to achieve the new best practices standard. General Electric sends managers to benchmark FedEx's customer service practices, seeking to compare and improve on its own practices within a diverse set of businesses none of which compete directly with FedEx. It earlier did the same thing with Motorola, leading it to embrace Motorola's Six Sigma program for quality control and continuous improvement.

Comparison with Success Factors in the Industry

Industry analysis (see Chapter 4) involves identifying the factors associated with successful participation in a given industry. As was true for the evaluation methods discussed earlier, the key determinants of success in an industry may be used to identify a firm's internal strengths and weaknesses. By scrutinizing industry competitors as well as customer needs, vertical industry structure, channels of distribution, costs, barriers to entry, availability of substitutes, and suppliers, a strategist seeks to determine whether a firm's current internal capabilities represent strengths or weaknesses in new competitive arenas. The discussion in Chapter 4 provides a useful framework—five industry forces—against which to examine a firm's potential strengths and weaknesses. General Cinema Corporation, the largest U.S. movie theater operator, determined that its internal skills in marketing, site analysis, creative financing, and management of geographically dispersed operations were key strengths relative to major success factors in the soft-drink bottling industry. This assessment proved accurate. Within 10 years after it entered the soft-drink bottling industry, General Cinema became the largest franchised bottler of soft drinks in the United States, handling Pepsi, 7UP, Dr Pepper, and Sunkist. Exhibit 6.13, *Strategy in Action*, describes the dilemma facing once-mighty Wal-Mart as it falls precipitously behind key rivals on two critical success factors in discount retailing: same-store sales growth and age/quality of 60 percent of its U.S. stores. These two critical success factors drive and indicate the relative health of large discount retail firms. Firms with solid same-store sales growth indicate wise choices in location, attractiveness of their stores, and the merchandise inside them. Likewise, aging and probably substandard store facilities are typically not as efficient as newer ones, nor are they as inviting to shoppers. So Wal-Mart, Target, and other discount retailers conduct internal analyses in part by comparing themselves on these two (and surely others) critical success factors to interpret their strength or weakness relative to factors that drive industry success.

product life cycle (PLC)

A concept that describes a product's sales, profitability, and competencies that are key drivers of the success of that product as it moves through a sequence of stages from development, introduction to growth, maturity, decline, and eventual removal from a market.

Product Life Cycle

Product life cycle (PLC) is one way to identify success factors against which executives can evaluate their firm's competencies relative to its key product or products. The **product life cycle** is a concept that describes a product's sales, profitability, and competencies that are key drivers of the success of that product as it moves through a sequence of stages from development, introduction to growth, maturity, decline, and eventual removal from a market. Exhibit 6.14 illustrates the "typical" product life cycle.

Core competencies associated with success are thought to vary across different stages of the product life cycle. Those competencies might include the following:

Introduction Stage

During this stage the firm needs competence in building product awareness and market development along with the resources to support initial losses:

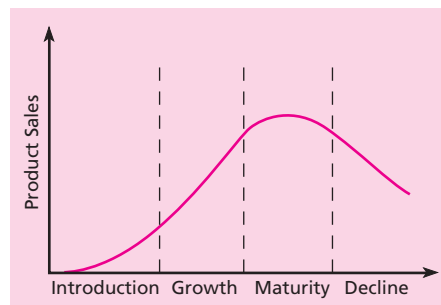


EXHIBIT 6.14
Illustration of the
Product Life Cycle

- Ability to create product awareness.
- Good channel relationships in ways to get the product introduced quickly, gaining a first-mover advantage.
- Premium pricing to “skim” profitability if few competitors exist.
- Solid relationships with and access to trend-setting early adopters.
- Financial resources to absorb an initial cash drain and lack of profitability.

Growth

During this stage market growth accelerates rapidly, with the firm seeking to build brand awareness and establish/increase market share:

- Brand awareness and ability to build brand.
- Advertising skills and resources to back them.
- Product features that differentiate versus increased competitive offerings.
- Establishing and stabilizing market shares.
- Access to multiple distribution channels.
- Ability to add additional features.

Maturity

This stage sees growth in sales slow significantly, along with increased competition and similar product offerings leading the firm to need competencies that allow it to defend its market share while maximizing profit:

- Sustained brand awareness.
- Ability to differentiate products and features.
- Resources to initiate or sustain price wars.
- Operating advantages to improve slimming margins.
- Judgment to know whether to stay in or exit saturated market segments.

Decline

At this point the product and its competitors start to experience declining sales and increased pressure on margins. Competencies needed are:

- Ability to withstand intense price-cutting.
- Brand strength to allow reduced marketing.
- Cost cutting capacity and slack to allow it.
- Good supplier relationships to gain cost concessions.
- Innovation skills to create new products or “re-create” existing ones.

The PLC is an interesting concept or framework against which executives might gauge the strength of relevant competencies. Caution is necessary in its use beyond that purpose, however. In reality, very few products follow exactly the cycle portrayed in the PLC model. The length in each stage can vary, the length and nature of the PLC for any particular product can vary dramatically, and it is not easy to tell exactly what stage a product might be in at any given time. Not all products go through each stage. Some, for example, go from introduction to decline. And movement from one stage to the next can be accelerated by strategies or tactics executives emphasize. For example, price-cutting can accelerate the movement from maturity to decline.

Product life cycles can describe a single product, a category of products, or an industry segment. Applying the basic idea to an industry segment (category of products) rather than a specific product has been a more beneficial adaptation of the PLC concept, providing executives with a conceptual tool to aid them in strategic analysis and choice in the context of the evolution of an industry segment in which their firm competes. So we will examine the concept of stages of evolution of an industry segment or category of products as a tool of strategic analysis and choice in Chapter 8.

Summary

This chapter looked at several ways managers achieve greater objectivity and rigor as they analyze their company's internal resources and capabilities. Managers often start their internal analysis with questions like, How well is the current strategy working? What is our current situation? What are our strengths and weaknesses? SWOT analysis is a traditional approach that has been in use for decades to help structure managers' pursuit of answers to these questions. A logical approach still used by many managers today, SWOT analysis has limitations linked to the depth of its analysis and the risk of overlooking key considerations.

Two techniques for internal analysis have emerged that overcome some of the limitations of SWOT analysis, offering more comprehensive approaches that can help managers identify and assess their firm's internal resources and capabilities in a more systematic, objective, and measurable manner. Value chain analysis has managers look at and disaggregate their business as a chain of activities that occur in a sequential manner to create the products or services they sell. The value chain approach breaks down the firm's activities into primary and support categories of activities, then breaks these down further into specific types of activities with the objective to disaggregate activity into as many meaningful subdivisions as possible. Once done, managers attempt to attribute costs to each. Doing this gives managers very distinct ways of isolating the things they do well and not so well, and it isolates activities that are truly key in meeting customer needs—true potential sources of competitive advantage.

The third approach covered in this chapter was the resource-based view (RBV). RBV is based on the premise that firms build competitive advantage based on the unique resources, skills, and capabilities they control or develop, which can become the basis of unique, sustainable competitive advantages that allow them to craft successful competitive strategies. The RBV provides a useful conceptual frame to first inventory a firm's potential competitive advantages among its tangible assets, intangible assets, and its organizational capabilities. Once inventoried, the RBV provides four fundamental guidelines that managers can use to "value" these resources and capabilities. Those with major value, defined as ones that are valuable for several reasons, become the bases for building strategies linked to sustainable competitive advantages.

Finally, this chapter covered three ways objectivity and realism are enhanced when managers use meaningful standards for comparison regardless of the particular analytical framework they employ in internal analysis. This chapter is followed by two appendices. The first provides a useful inventory of the types of activities in different functional areas of a firm that can be sources of competitive advantage. The second appendix covers traditional financial analysis to serve as a refresher and reminder about this basic internal analysis tool.

When matched with management's environmental analyses and mission priorities, the process of internal analysis provides the critical foundation for strategy formulation. Armed with an accurate, thorough, and timely internal analysis, managers are in a better position to formulate effective strategies. The next chapter describes basic strategy alternatives that any firm may consider.

Key Terms

benchmarking, <i>p. 181</i>	primary activities, <i>p. 165</i>	tangible assets, <i>p. 171</i>
core competence, <i>p. 171</i>	product life cycle (PLC), <i>p. 182</i>	threat, <i>p. 159</i>
intangible assets, <i>p. 171</i>	resource-based view, <i>p. 170</i>	value chain, <i>p. 164</i>
isolating mechanisms, <i>p. 174</i>	strength, <i>p. 159</i>	value chain analysis, <i>p. 164</i>
opportunity, <i>p. 159</i>	SWOT analysis, <i>p. 159</i>	weakness, <i>p. 160</i>
organizational capabilities, <i>p. 171</i>	support activities, <i>p. 165</i>	

Questions for Discussion

1. Describe SWOT analysis as a way to guide internal analysis. How does this approach reflect the basic strategic management process?
2. What are potential weaknesses of SWOT analysis?
3. Describe the difference between primary and support activities using value chain analysis.
4. How is VCA different from SWOT analysis?
5. What is the resource-based view? Give examples of three different types of resources.
6. What are three ways resources become more valuable? Provide an example of each.
7. Explain how you might use VCA, RBV, and SWOT analysis to get a better sense of what might be a firm's key building blocks for a successful strategy.
8. Attempt to apply SWOT, VCA, and RBV to yourself and your career aspirations. What are your major strengths and weaknesses? How might you use your knowledge of these strengths and weaknesses to develop your future career plans?

Chapter 6 Discussion Case

BusinessWeek

Apple's Blueprint for Genius

DESIGNED BY APPLE IN CALIFORNIA

- 1 The words are printed in such small type on the back of Apple's tiny iPod Nano MP3 player that you have to squint to read them. But they speak volumes about why Apple is standing so far out from the crowd these days. At a time when rivals are outsourcing as much design as possible to cut costs, Apple remains at its core a product company—one that would never give up control of how those products are created.
- 2 In this age of commodity tech products, design, after all, is what makes Apple Apple. This focus is apparent to anyone who has used one of its trailblazing products. While the Silicon Valley pioneer sells only a few dozen models, compared to the hundreds offered by many of its rivals, many of those "designed in California" products are startling departures from the norm—and they often set the directions for the rest of the industry. Examples abound, from the iPhone to Apple TV to the iPod, the Airport Extreme, or the simple smallness of the new Mac mini PC.
- 3 What's the secret? The precise details are almost impossible to get, because Apple treats its product-development processes like state secrets—going so far as to string black drapes around the production lines at the factories of the

contract manufacturers it hires to assemble its products. In one case, says a source who once worked on an Apple project, the outfit even insisted that its wares be built only on the mid-night shift, when fewer prying eyes might be around.

INSANELY GREAT

But the general themes are clear. Most CEOs are focused on achieving their financial and operational goals, and on executing a strategy. But Apple's Steve Jobs believes his company's ultimate advantage comes from its ability to make unique, or as he calls them, "insanely great" products. Introducing the iPhone in 2007, Jobs simply said, "We reinvented the phone."

Jobs's entire company is focused on that task. That means while rival computer, phone, and digital media product makers increasingly rely on so-called outsourced design manufacturers (ODMs) for key design decisions, Jobs keeps most of those tasks in-house. Sure, he relies on ODMs to manufacture his products, but the big decisions on Apple products are made in Silicon Valley.

Jobs himself is a crucial part of the formula. He's unique among big-time hardware CEOs for his hands-on involvement in the design process. Even product-design experts marvel at the power of the Jobs factor.

FIRST, AN IDEA

- 7 “I’ve been thinking hard about the Apple product-development process since I left,” says design guru Donald Norman, co-founder of the design consultants Nielsen Norman Group, who left Apple in 1997. “If you follow my [guidelines], it will guarantee good design. But Steve Jobs doesn’t want good design. He wants great design, and my method will never give you that. That takes a rare leader, who can bring both the cohesion and commitment and style. And Steve has it.”
- 8 Many executives believe that outsourcing design allows them to lower the salaries they must pay and lets them have engineers working on the products across all time zones. Jobs thinks that’s short-sighted. He argues that the cost-savings aren’t worth what you give up in terms of teamwork, communication, and the ability to get groups of people working together to bring a new idea to life. Indeed, with top-notch mechanical, electrical, software, and industrial designers all housed at Apple’s Infinite Loop campus in Cupertino, Calif., the company’s design capability is more vertically integrated than almost any other tech outfit.
- 9 Typically, a new Apple product starts with a big idea for an unmet customer need. For the original iPod, it was for an MP3 player that, unlike earlier models, could hold and easily manage your entire music collection. Then, Apple’s product architects and industrial designers figure out what that product should look like and what features it should have—and, importantly, not have. “Apple has a much more holistic view of product design,” says David Carey, president of design consulting firm Portelligent. “Good product design starts from the outside, and works its way inside.”

HALF MEASURE

- 10 Already, that’s different from the process by which the bulk of tech products are made. Increasingly, tech companies meet with ODMs to see what designs they have cooked up. Then, the ODMs are asked to tweak those basic blueprints to add a few features and to match the look and feel of the company’s other products.
- 11 That’s where the “design” input might end for most companies. But since it’s almost always trying to create one-of-a-kind products, Apple has to ask its own engineers to do the critical electrical and mechanical work to bring products to life.
- 12 In the iPod Shuffle, for example, designers cut a circuit card in two and stacked the pieces, bunk-bed style, to make use of the empty air space created by the height of the battery in the device. “They realized they could erase the height penalty [of the battery] to help them win the battle of the bulge,” says Carey, whose company did a detailed engineering analysis of the iPod Nano.

SCREW-FREE

- 13 Even more important, Apple’s products are designed to run a particular set of programs or services. By contrast, a Dell or

HP device must be ready for whatever new features Microsoft comes out with or whatever Windows program a customer opts to install.

But Apple makes much of its own software, from the MAS 14
OSX operating system to applications such as iPhoto and iTunes. “That’s Apple’s trump card,” says one Apple rival. “The ODMs just don’t have the world-class industrial design, the style, or the ability to make easy-to-use software—or the ability to integrate it all. They may some day, but they don’t have it now.”

Of course, Apple also sets itself apart by designing 15
machines that are also little works of art—even if it means making life difficult for manufacturers contracted to build those designs. During a trip to visit ODMs in Asia, one executive told securities analyst Jim Grossman of Thrivent Investment Management about Steve Jobs’s insistence that no screws be visible on the laptop his company was manufacturing for Apple. The executive said his company had no idea how to handle the job and had to invent a new tooling process for the job. “They had to learn new ways to do things just to meet Apple’s design,” says Grossman.

TOUGH CUSTOMER

That’s not to say Apple is completely bucking the outsourcing 16
trend. All its products are manufactured by ODMs in Asia. Just as it buys chips and disk drives from other suppliers, sources say Apple lets ODMs take some role in garden-variety engineering work—but not much. “This is an issue for Apple, because the A-team engineers [at the ODMs] don’t like working with Apple. It’s like when you were a kid, all your dad let you do was hold the flashlight, rather than let you try to fix the car yourself,” says an executive at a rival MP3 maker.

In fairness, Apple’s reliance on a smaller number of 17
products than its rivals and go-it-alone design means it’s always a dud or two from disaster. But at the moment, it’s proving that “made in Cupertino” is a trademark for success.

VOICES OF INNOVATION

An Interview with Steve Jobs, Chairman and CEO of Apple

BusinessWeek: What can we learn from Apple’s struggle to innovate during the decade before your return in 1997?

Steve Jobs: “You need a very product-oriented culture. Apple had a monopoly on the graphical user interface for almost 10 years. How are monopolies lost? Some very good product people invent some very good products, and the company achieves a monopoly. [But] what’s the point of focusing on making the product even better when the only company you can take business from is yourself? So a different group of people starts to move up. And who usually ends up running the show?”

The sales guy. Then one day the monopoly expires, for whatever reason . . . but by then, the best product people have left or they are no longer listened to. And so the company goes through this tumultuous time, and it either survives or it doesn't.

BusinessWeek: How do you systematize innovation?

Steve Jobs: You don't. You hire good people who will challenge each other every day to make the best products possible. That's why you don't see any big posters on the walls around here, stating our mission statement. Our corporate culture is simple.

BusinessWeek: So the key is to have good people with a passion for excellence.

Steve Jobs: When I got back, Apple had forgotten who we were. Remember that "Think Different" ad campaign we ran? It was certainly for customers, but it was even more for Apple. That ad was to remind us of who our heroes are and who we are. Companies sometimes do forget. Fortunately, we woke up. And Apple is doing the best work in its history.

view—as a way to explain and evaluate aspects of Apple's internal environment highlighted in the Chapter Case about Apple and the interview with Steve Jobs.

- a. What are Apple's strengths and weaknesses, opportunities and threats?
 - b. Roughly what would Apple's value chain look like, and how might it differ from other companies mentioned in this case?
 - c. What are Apple's key resources and capabilities? Which are most valuable? Why?
2. Which is the most meaningful type of comparison you make use of in conducting each approach to internal analysis at Apple?
 3. Which approach to internal analysis works best in your internal analysis of the aspects about Apple covered in this case? Why?
 4. In your opinion, would it be best to use that approach (your answer to question 3) alone or to use it along with the other two approaches if you were a manager responsible for conducting an internal analysis of your company as part of its strategic management process?

DISCUSSION QUESTIONS

1. Apply the three internal analysis frameworks—SWOT analysis, value chain analysis, and the resource-based

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Chapter 6 Appendix A

Key Resources across Functional Areas

MARKETING

Firm's products-services: breadth of product line
Concentration of sales in a few products or to a few customers
Ability to gather needed information about markets
Market share or submarket shares
Product-service mix and expansion potential: life cycle of key products; profit-sales balance in product-service
Channels of distribution: number, coverage, and control
Effective sales organization: knowledge of customer needs
Internet usage; Web presence
Product-service image, reputation, and quality
Imaginativeness, efficiency, and effectiveness of sales promotion and advertising
Pricing strategy and pricing flexibility
Procedures for digesting market feedback and developing new products, services, or markets
After-sale service and follow-up
Goodwill—brand loyalty

FINANCIAL AND ACCOUNTING

Ability to raise short-term capital
Ability to raise long-term capital; debt-equity
Corporate-level resources (multibusiness firm)
Cost of capital relative to that of industry and competitors
Tax considerations
Relations with owners, investors, and stockholders
Leverage position; capacity to utilize alternative financial strategies, such as lease or sale and leaseback
Cost of entry and barriers to entry
Price-earnings ratio
Working capital; flexibility of capital structure
Effective cost control; ability to reduce cost
Financial size
Efficiency and effectiveness of accounting system for cost, budget, and profit planning

PRODUCTION, OPERATIONS, TECHNICAL

Raw materials' cost and availability, supplier relationships
Inventory control systems; inventory turnover
Location of facilities; layout and utilization of facilities
Economies of scale
Technical efficiency of facilities and utilization of capacity
Effectiveness of subcontracting use
Degree of vertical integration; value added and profit margin
Efficiency and cost-benefit of equipment

Effectiveness of operation control procedures: design, scheduling, purchasing, quality control, and efficiency
Costs and technological competencies relative to those of industry and competitors
Research and development—technology—innovation
Patents, trademarks, and similar legal protection

PERSONNEL

Management personnel
Employees' skill and morale
Labor relations costs compared with those of industry and competitors
Efficiency and effectiveness of personnel policies
Effectiveness of incentives used to motivate performance
Ability to level peaks and valleys of employment
Employee turnover and absenteeism
Specialized skills
Experience

QUALITY MANAGEMENT

Relationship with suppliers, customers
Internal practices to enhance quality of products and services
Procedures for monitoring quality

INFORMATION SYSTEMS

Timeliness and accuracy of information about sales, operations, cash, and suppliers
Relevance of information for tactical decisions
Information to manage quality issues: customer service
Ability of people to use the information that is provided
Linkages to suppliers and customers

ORGANIZATION AND GENERAL MANAGEMENT

Organizational structure
Firm's image and prestige
Firm's record in achieving objectives
Organization of communication system
Overall organizational control system (effectiveness and utilization)
Organizational climate; organizational culture
Use of systematic procedures and techniques in decision making
Top-management skill, capabilities, and interest
Strategic planning system
Intraorganizational synergy (multibusiness firms)

Chapter 6 Appendix B

Using Financial Analysis

One of the most important tools for assessing the strength of an organization within its industry is financial analysis. Managers, investors, and creditors all employ some form of this analysis as the beginning point for their financial decision making. Investors use financial analyses in making decisions about whether to buy or sell stock, and creditors use them in deciding whether or not to lend. They provide managers with a measurement of how the company is doing in comparison with its performance in past years and with the performance of competitors in the industry.

Although financial analysis is useful for decision making, some weaknesses should be noted. Any picture that it provides of the company is based on past data. Although trends may be noteworthy, this picture should not automatically be assumed to be applicable to the future. In addition, the analysis is only as good as the accounting procedures that have provided the information. When making comparisons between companies, one should keep in mind the variability of accounting procedures from firm to firm.

There are four basic groups of financial ratios: liquidity, leverage, activity, and profitability.

Depicted in Exhibit 6.B1 are the specific ratios calculated for each of the basic groups. Liquidity and leverage ratios represent an assessment of the risk of the firm. Activity and profitability ratios are measures of the return generated by the assets of the firm. The interaction between certain groups of ratios is indicated by arrows.

Typically, two common financial statements are used in financial analyses: the balance sheet and the income statement. Exhibit 6.B2 is a balance sheet and Exhibit 6.B3 an income statement for the ABC Company. These statements will be used to illustrate the financial analyses.

LIQUIDITY RATIOS

Liquidity ratios are used as indicators of a firm's ability to meet its short-term obligations. These obligations include any current liabilities, including currently maturing long-term debt. Current assets move through a normal cash cycle of inventories—sales—accounts receivable—cash. The firm then uses cash to pay off or reduce its current liabilities. The best-known liquidity ratio is the current ratio: current assets divided by current liabilities. For the ABC Company, the current ratio is calculated as follows:

$$\begin{aligned}\frac{\text{Current assets}}{\text{Current liabilities}} &= \frac{\$4,125,000}{\$2,512,500} = 1.64 \text{ (2011)} \\ &= \frac{\$3,618,000}{\$2,242,250} = 1.161 \text{ (2010)}\end{aligned}$$

Most analysts suggest a current ratio of 2 to 3. A large current ratio is not necessarily a good sign; it may mean that an organization is not making the most efficient use of its assets. The optimum current ratio will vary from industry to industry, with the more volatile industries requiring higher ratios.

Because slow-moving or obsolescent inventories could overstate a firm's ability to meet short-term demands, the quick ratio is sometimes preferred to assess a firm's liquidity. The quick ratio is current assets minus inventories, divided by current liabilities. The quick ratio for the ABC Company is calculated as follows:

$$\begin{aligned}\frac{\text{Current assets} - \text{Inventories}}{\text{Current liabilities}} &= \frac{\$1,950,000}{\$2,512,500} = 0.78 \text{ (2011)} \\ &= \frac{\$1,618,000}{\$2,242,250} = 0.72 \text{ (2010)}\end{aligned}$$

A quick ratio of approximately 1 would be typical for American industries. Although there is less variability in the quick ratio than in the current ratio, stable industries would be able to operate safely with a lower ratio.

LEVERAGE RATIOS

Leverage ratios identify the source of a firm's capital—owners or outside creditors. The term *leverage* refers to the fact that using capital with a fixed interest charge will “amplify” either profits or losses in relation to the equity of holders of common stock. The most commonly used ratio is total debt divided by total assets. Total debt includes current liabilities and long-term liabilities. This ratio is a measure of the percentage of total funds provided by debt. A total debt–total assets ratio higher than 0.5 is usually considered safe only for firms in stable industries.

$$\begin{aligned}\frac{\text{Total debt}}{\text{Total assets}} &= \frac{\$3,862,500}{\$7,105,000} = 0.54 \text{ (2011)} \\ &= \frac{\$3,667,250}{\$6,393,000} = 0.57 \text{ (2010)}\end{aligned}$$

The ratio of long-term debt to equity is a measure of the extent to which sources of long-term financing are provided by creditors. It is computed by dividing long-term debt by the stockholders' equity:

$$\begin{aligned}\frac{\text{Long-term debt}}{\text{Equity}} &= \frac{\$1,350,000}{\$3,242,500} = 0.42 \text{ (2011)} \\ &= \frac{\$1,425,000}{\$2,725,750} = 0.52 \text{ (2010)}\end{aligned}$$

EXHIBIT 6.B1 Financial Ratios

	Liquidity	Leverage	Activity	Profitability
Return measures	<div>Current assets</div> <div>Current liabilities</div>			
	<div>Current assets— inventory</div> <div>Current liabilities</div>			
		<div>Total debt</div> <div>Total assets</div>		
		<div>Long-term debt</div> <div>Equity</div>		
			<div>Net sales</div> <div>Assets</div>	
			<div>Net sales</div> <div>Fixed assets</div>	
			<div>Net sales</div> <div>Inventory</div>	
			<div>Net sales</div> <div>Accounts receivable</div>	
				<div>Net income</div> <div>Sales</div>
				<div>Net income</div> <div>Total assets</div>
				<div>Net income</div> <div>Net worth</div>

EXHIBIT 6.B2 ABC Company Balance Sheet as of December 31, 2010, and 2011

	2011		2010	
Assets				
Current assets:				
Cash	\$	140,000		\$ 115,000
Accounts receivable		1,760,000		1,440,000
Inventory		2,175,000		2,000,000
Prepaid expenses		50,000		63,000
Total current assets		4,125,000		3,618,000
Fixed assets:				
Long-term receivable		1,255,000		1,090,000
Property and plant	\$2,037,000		\$2,015,000	
Less: Accumulated depreciation	<u>862,000</u>		<u>860,000</u>	
Net property and plant		1,175,000		1,155,000
Other fixed assets		550,000		530,000
Total fixed assets		2,980,000		2,775,000
Total assets		<u><u>\$7,105,000</u></u>		<u><u>\$6,393,000</u></u>
Liabilities and Stockholders' Equity				
Current liabilities:				
Accounts payable		\$1,325,000		\$1,225,000
Bank loans payable		475,000		550,000
Accrued federal taxes		675,000		425,000
Current maturities (long-term debt)		17,500		26,000
Dividends payable		20,000		16,250
Total current liabilities		2,512,500		2,242,250
Long-term liabilities		1,350,000		1,425,000
Total liabilities		3,862,000		3,667,250
Stockholders' equity:				
Common stock				
(104,046 shares outstanding in 2005;				
101,204 shares outstanding in 2004)		44,500		43,300
Additional paid-in-capital		568,000		372,450
Retained earnings		2,630,000		2,310,000
Total stockholders' equity		3,242,500		2,725,750
Total liabilities and stockholders' equity		<u><u>\$7,105,000</u></u>		<u><u>\$6,393,000</u></u>

EXHIBIT 6.B3 ABC Company Income Statement for the years ending December 31, 2010, and 2011

	2011		2010	
Net sales		\$8,250,000		\$8,000,000
Cost of goods sold	\$5,100,000		\$5,000,000	
Administrative expenses	1,750,000		1,680,000	
Other expenses	<u>420,000</u>		<u>390,000</u>	
Total		<u>7,270,000</u>		<u>7,070,000</u>
Earnings before interest and taxes		980,000		930,000
Less: Interest expense		210,000		210,000
Earnings before taxes		<u>770,000</u>		<u>720,000</u>
Less: Federal income taxes		360,000		325,000
Earnings after taxes (net income)		<u>\$ 410,000</u>		<u>\$ 395,000</u>
Common stock cash dividends		\$ 90,000		\$ 84,000
Addition to retained earnings		\$ 320,000		\$ 311,000
Earnings per common share		\$ 3.940		\$ 3.90
Dividends per common share		\$ 0.865		\$ 0.83

ACTIVITY RATIOS

Activity ratios indicate how effectively a firm is using its resources. By comparing revenues with the resources used to generate them, it is possible to establish an efficiency of operation. The asset turnover ratio indicates how efficiently management is employing total assets. Asset turnover is calculated by dividing sales by total assets. For the ABC Company, asset turnover is calculated as follows:

$$\begin{aligned}\text{Asset turnover} &= \frac{\text{Sales}}{\text{Total assets}} = \frac{\$8,250,000}{\$7,105,000} = 1.16 \text{ (2011)} \\ &= \frac{\$8,000,000}{\$6,393,000} = 1.25 \text{ (2010)}\end{aligned}$$

The ratio of sales to fixed assets is a measure of the turnover on plant and equipment. It is calculated by dividing sales by net fixed assets.

$$\begin{aligned}\text{Fixed asset turnover} &= \frac{\text{Sales}}{\text{Net fixed assets}} = \frac{\$8,250,000}{\$2,980,000} = 2.77 \text{ (2011)} \\ &= \frac{\$8,000,000}{\$2,775,000} = 2.88 \text{ (2010)}\end{aligned}$$

Industry figures for asset turnover will vary with capital-intensive industries, and those requiring large inventories will have much smaller ratios.

Another activity ratio is inventory turnover, estimated by dividing sales by average inventory. The norm for U.S. industries is 9, but whether the ratio for a particular firm is higher or lower normally depends on the product sold. Small, inexpensive items usually turn over at a much higher rate than larger, expensive ones. Because inventories normally are carried at cost, it would be more accurate to use the cost of goods sold in place of sales in the numerator of this ratio. Established compilers of industry ratios, such as Dun & Bradstreet, however, use the ratio of sales to inventory.

$$\begin{aligned}\text{Inventory turnover} &= \frac{\text{Sales}}{\text{Inventory}} = \frac{\$8,250,000}{\$2,175,000} = 3.79 \text{ (2011)} \\ &= \frac{\$8,000,000}{\$2,000,000} = 4.00 \text{ (2010)}\end{aligned}$$

The accounts receivable turnover is a measure of the average collection period on sales. If the average number of days varies widely from the industry norm, it may be an indication of poor management. A too-low ratio could indicate the loss of sales because of a too-restrictive credit policy. If the ratio is too high, too much capital is being tied up in accounts receivable, and management may be increasing the chance of bad debts. Because of varying industry credit policies, a comparison for the firm over time or within an industry is the only useful analysis. Because information on credit sales for other firms generally is unavailable, total sales must be used. Because not all firms have the same percentage of credit sales, there is only approximate comparability among firms:

$$\begin{aligned}\text{Accounts receivable turnover} &= \frac{\text{Sales}}{\text{Accounts receivable}} = \frac{\$8,250,000}{\$1,760,000} = 4.69 \text{ (2011)} \\ &= \frac{\$8,000,000}{\$1,440,000} = 5.56 \text{ (2010)}\end{aligned}$$

$$\begin{aligned}\text{Average collection period} &= \frac{360}{\text{Accounts receivable turnover}} \\ &= \frac{360}{4.69} = 77 \text{ days (2011)} \\ &= \frac{360}{5.56} = 65 \text{ days (2010)}\end{aligned}$$

PROFITABILITY RATIOS

Profitability is the net result of a large number of policies and decisions chosen by an organization's management. Profitability ratios indicate how effectively the total firm is being managed. The profit margin for a firm is calculated by dividing net earnings by sales. This ratio is often called *return on sales* (ROS). There is wide variation among industries, but the average for U.S. firms is approximately 5 percent.

$$\begin{aligned}\frac{\text{Net earnings}}{\text{Sales}} &= \frac{\$410,000}{\$8,250,000} = 0.0497 \text{ (2011)} \\ &= \frac{\$395,000}{\$8,000,000} = 0.0494 \text{ (2010)}\end{aligned}$$

A second useful ratio for evaluating profitability is the *return on investment*—or ROI, as it is frequently called—found by dividing net earnings by total assets. The ABC Company's ROI is calculated as follows:

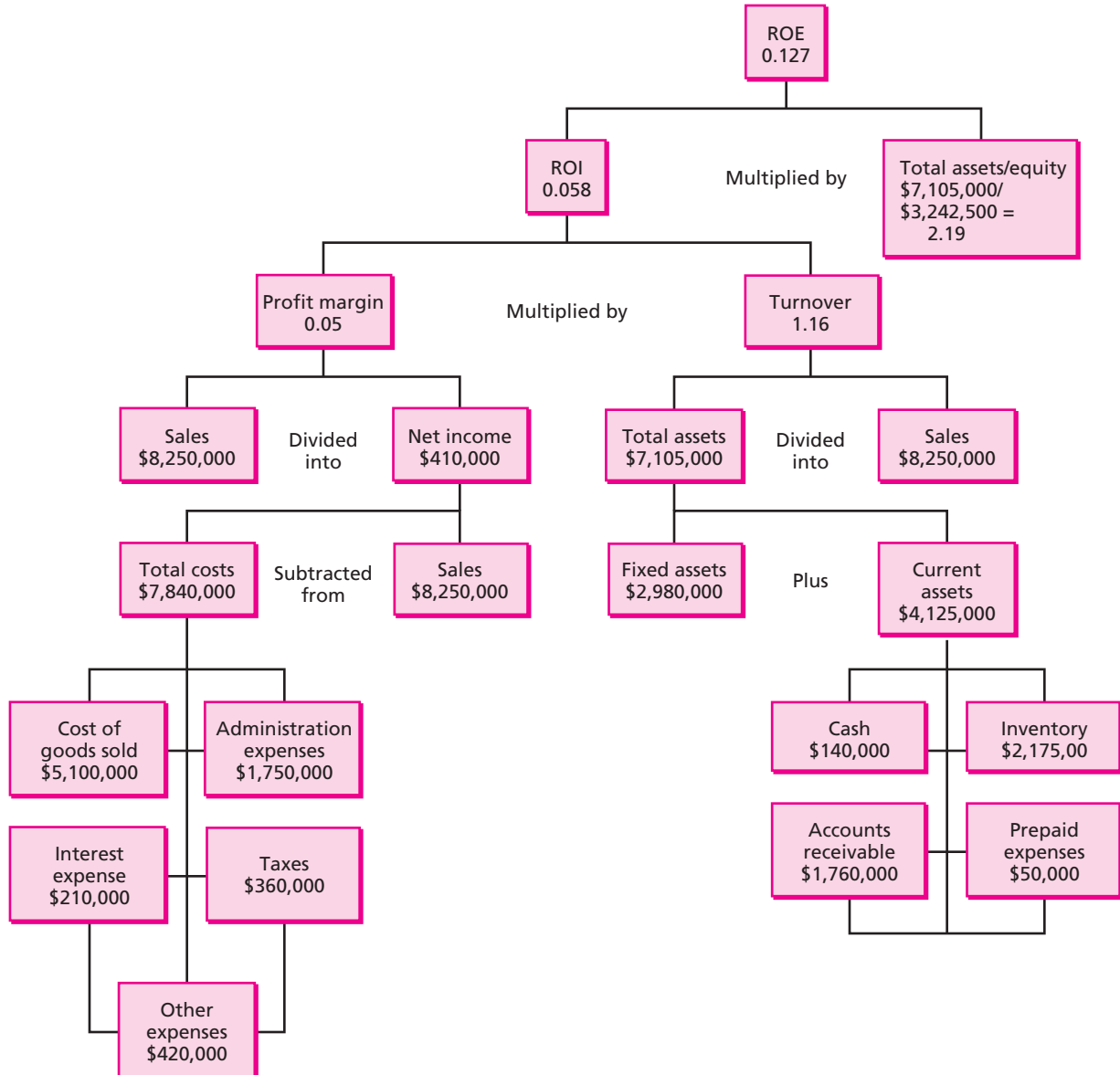
$$\begin{aligned}\frac{\text{Net earnings}}{\text{Total assets}} &= \frac{\$410,000}{\$7,105,000} = 0.0577 \text{ (2011)} \\ &= \frac{\$395,000}{\$6,393,000} = 0.0618 \text{ (2010)}\end{aligned}$$

The ratio of net earnings to net worth is a measure of the rate of return or profitability of the stockholders' investment. It is calculated by dividing net earnings by net worth, the common stock equity and retained earnings account. ABC Company's *return on net worth* or *return on equity*, also called ROE, is calculated as follows:

$$\begin{aligned}\frac{\text{Net earnings}}{\text{Net worth}} &= \frac{\$410,000}{\$3,242,500} = 0.1264 \text{ (2011)} \\ &= \frac{\$395,000}{\$2,725,750} = 0.1449 \text{ (2010)}\end{aligned}$$

It is often difficult to determine causes for lack of profitability. The Du Pont system of financial analysis provides

EXHIBIT 6.B4 Du Pont's Financial Analysis



management with clues to the lack of success of a firm. This financial tool brings together activity, profitability, and leverage measures and shows how these ratios interact to determine the overall profitability of the firm. A depiction of the system is set forth in Exhibit 6.B4.

The right side of the exhibit develops the turnover ratio. This section breaks down total assets into current assets (cash, marketable securities, accounts receivable, and

inventories) and fixed assets. Sales divided by these total assets gives the turnover on assets.

The left side of the exhibit develops the profit margin on sales. The individual expense items plus income taxes are subtracted from sales to produce net profits after taxes. Net profits divided by sales gives the profit margin on sales. When the asset turnover ratio on the right side of Exhibit 6.B4 is multiplied by the profit margin on sales developed on the left

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side of the exhibit, the product is the return on assets (ROI) for the firm. This can be shown by the following formula:

$$\frac{\text{Sales}}{\text{Total assets}} \times \frac{\text{Net earnings}}{\text{Sales}} = \frac{\text{Net earnings}}{\text{Total assets}} = \text{ROI}$$

The last step in the Du Pont analysis is to multiply the rate of return on assets (ROI) by the equity multiplier, which is the ratio of assets to common equity, to obtain the rate of return on equity (ROE). This percentage rate of return, of course, could be calculated directly by dividing net income by common equity. However, the Du Pont analysis demonstrates how the return on assets and the use of debt interact to determine the return on equity.

The Du Pont system can be used to analyze and improve the performance of a firm. On the left, or profit, side of the exhibit, attempts to increase profits and sales could be investigated. The possibilities of raising prices to improve profits (or lowering prices to improve volume) or seeking new products or markets, for example, could be studied. Cost accountants and production engineers could investigate ways to reduce costs. On the right, or turnover, side, financial officers could analyze the effect of reducing investment in various assets as well as the effect of using alternative financial structures.

There are two basic approaches to using financial ratios. One approach is to evaluate the corporation's performance over several years. Financial ratios are computed for different years, and then an assessment is made about whether there has been an improvement or deterioration over time. Financial ratios also can be computed for projected, pro forma, statements and compared with present and past ratios.

The other approach is to evaluate a firm's financial condition and compare it with the financial conditions of similar firms or with industry averages in the same period. Such a comparison gives insight into the firm's relative financial condition and performance. Financial ratios for industries are provided by Robert Morris Associates, Dun & Bradstreet, Prentice Hall, and various trade association publications. (Associations and their addresses are listed in the *Encyclopedia of Associations* and in the *Directory of National Trade Associations*.) Information about individual firms is available through *Moody's Manual*, Standard & Poor's manuals and surveys, annual reports to stockholders, and the major brokerage houses.

To the extent possible, accounting data from different companies must be so standardized that companies can be compared or so a specific company can be compared with an industry average. It is important to read any footnotes of financial statements, because various accounting or management practices can have an effect on the financial picture of the company. For example, firms using sale-leaseback methods may have leverage pictures quite different from what is shown as debts or assets on the balance sheet.

ANALYSIS OF THE SOURCES AND USES OF FUNDS

The purpose of this analysis is to determine how the company is using its financial resources from year to year. By

comparing balance sheets from one year to the next, we can determine how funds were obtained and how these funds were employed during the year.

To prepare a statement of the sources and uses of funds, it is necessary to (1) classify balance sheet changes that increase and decrease cash, (2) classify from the income statement those factors that increase or decrease cash, and (3) consolidate this information on a sources and uses of funds statement form.

Sources of Funds That Increase Cash

1. A net decrease in any other asset than a depreciable fixed asset.
2. A gross decrease in a depreciable fixed asset.
3. A net increase in any liability.
4. Proceeds from the sale of stock.
5. The operation of the company (net income, and depreciation if the company is profitable).

Uses of Funds

1. A net increase in any other asset than a depreciable fixed asset.
2. A gross increase in depreciable fixed assets.
3. A net decrease in any liability.
4. A retirement or purchase of stock.
5. Payment of cash dividends.

We compute gross changes to depreciable fixed assets by adding depreciation from the income statement for the period to net fixed assets at the end of the period and then subtracting from the total net fixed assets at the beginning of the period. The residual represents the change in depreciable fixed assets for the period.

For the ABC Company, the following change would be calculated:

Net property and plant (2011)	\$1,175,000
Depreciation for 2011	+ 80,000
	<u>\$1,255,000</u>
Net property and plant (2010)	-1,155,000
	<u>\$ 100,000</u>

To avoid double counting, the change in retained earnings is not shown directly in the funds statement. When the funds statement is prepared, this account is replaced by the earnings after taxes, or net income, as a source of funds, and dividends paid during the year as a use of funds. The difference between net income and the change in the retained earnings account will equal the amount of dividends paid during the year. The accompanying sources and uses of funds statement was prepared for the ABC Company.

A funds analysis is useful for determining trends in working-capital positions and for demonstrating how the firm has acquired and employed its funds during some period.

ABC Company Sources and Uses of Funds Statement for 2011

Sources		Uses	
Prepaid expenses	\$ 13,000	Cash	\$ 25,000
Accounts payable	100,000	Accounts receivable	320,000
Accrued federal taxes	250,000	Inventory	175,000
Dividends payable	3,750	Long-term receivables	165,000
Common stock	1,200	Property and plant	100,000
Additional paid-in capital	195,000	Other fixed assets	20,000
Earnings after taxes (net income)	410,000	Bank loans payable	75,000
Depreciation	80,000	Current maturities of long-term debt	8,500
Total sources	\$1,053,500	Long-term liabilities	75,000
		Dividends paid	90,000
		Total uses	<u>\$1,053,500</u>

Conclusion

It is recommended that you prepare a chart, such as that shown in Exhibit 6.B5, so you can develop a useful portrayal of these financial analyses. The chart allows a display of the ratios over time. The “Trend” column could be used to indicate your evaluation of the ratios over time (e.g., “favorable,” “neutral,” or “unfavorable”). The “Industry Average” column could include recent industry averages on these ratios or those of key

competitors. These would provide information to aid interpretation of the analyses. The “Interpretation” column could be used to describe your interpretation of the ratios for this firm. Overall, this chart gives a basic display of the ratios that provides a convenient format for examining the firm’s financial condition.

Finally, Exhibit 6.B6 is included to provide a quick reference summary of the calculations and meanings of the ratios discussed earlier.

EXHIBIT 6.B5 A Summary of the Financial Position of a Firm

Ratios and Working Capital	2007	2008	2009	2010	2011	Trend	Industry Average	Interpretation
<i>Liquidity:</i>								
Current								
Quick								
<i>Leverage:</i>								
Debt-assets								
Debt-equity								
<i>Activity:</i>								
Asset turnover								
Fixed asset ratio								
Inventory turnover								
Accounts receivable turnover								
Average collection period								
<i>Profitability:</i>								
ROS								
ROI								
ROE								
Working-capital position								

EXHIBIT 6.B6 A Summary of Key Financial Ratios

Ratio	Calculation	Meaning
Liquidity Ratios:		
Current ratio	$\frac{\text{Current assets}}{\text{Current liabilities}}$	The extent to which a firm can meet its short-term obligations.
Quick ratio	$\frac{\text{Current assets} - \text{Inventory}}{\text{Current liabilities}}$	The extent to which a firm can meet its short-term obligations without relying on the sale of inventories.
Leverage Ratios:		
Debt-to-total-assets ratio	$\frac{\text{Total debt}}{\text{Total assets}}$	The percentage of total funds that are provided by creditors.
Debt-to-equity ratio	$\frac{\text{Total debt}}{\text{Total stockholders' equity}}$	The percentage of total funds provided by creditors versus the percentage provided by owners.
Long-term-debt-to-equity ratio	$\frac{\text{Long-term debt}}{\text{Total stockholders' equity}}$	The balance between debt and equity in a firm's long-term capital structure.
Times-interest-earned ratio	$\frac{\text{Profits before interest and taxes}}{\text{Total interest charges}}$	The extent to which earnings can decline without the firm becoming unable to meet its annual interest costs.
Activity Ratios:		
Inventory turnover	$\frac{\text{Sales}}{\text{Inventory of finished goods}}$	Whether a firm holds excessive stocks of inventories and whether a firm is selling its inventories slowly compared to the industry average.
Fixed assets turnover	$\frac{\text{Sales}}{\text{Fixed assets}}$	Sales productivity and plant equipment utilization.
Total assets turnover	$\frac{\text{Sales}}{\text{Total assets}}$	Whether a firm is generating a sufficient volume of business for the size of its assets investment.
Accounts receivable turnover	$\frac{\text{Annual credit sales}}{\text{Account receivable}}$	In percentage terms, the average length of time it takes a firm to collect on credit sales.
Average collection period	$\frac{\text{Account receivable}}{\text{Total sales/365 days}}$	In days, the average length of time it takes a firm to collect on credit sales.
Profitability Ratios:		
Gross profit margin	$\frac{\text{Sales} - \text{Cost of goods sold}}{\text{Sales}}$	The total margin available to cover operating expenses and yield a profit.
Operating profit margin	$\frac{\text{Earning before interest and taxes (EBIT)}}{\text{Sales}}$	Profitability without concern for taxes and interest.
Net profit margin	$\frac{\text{Net income}}{\text{Sales}}$	After-tax profits per dollar of sales.
Return on total assets (ROA)	$\frac{\text{Net income}}{\text{Total assets}}$	After-tax profits per dollar of assets; this ratio is also called <i>return on investment</i> (ROI).

EXHIBIT 6.B6 (continued)

Ratio	Calculation	Meaning
Return on stockholders' equity (ROE)	$\frac{\text{Net income}}{\text{Total Stockholders' equity}}$	After-tax profits per dollar of stockholders investment in the firm.
Earnings per share (EPS)	$\frac{\text{Net income}}{\text{Number of shares of common stock outstanding}}$	Earnings available to the owners of common stock.
Growth Ratios:		
Sales	Annual percentage growth in total sales	Firm's growth rate in sales.
Income	Annual percentage growth in profits	Firm's growth rate in profits.
Earnings per share	Annual percentage growth in EPS	Firm's growth rate in EPS.
Dividends per share	Annual percentage growth in dividends per share	Firm's growth rate in dividends per share.
Price-earnings ratio	$\frac{\text{Market price per share}}{\text{Earnings per share}}$	Faster-growing and less risky firms tend to have higher price-earnings ratios.