

Valuing and Selecting Investment Opportunities

Valuing Capital Investment Projects

1. Growth Enterprises, Inc. (GEI) has \$40 million that it can invest in any or all of the four capital investment projects, which have cash flows as shown in Table A below.

TABLE A
Comparison of
Project Cash Flows*
(\$ thousands)

Project	Type of Cash Flow	Year of Cash Flow			
		Year 0	Year 1	Year 2	Year 3
A.	Investment	(\$10,000)			
	Revenue		\$21,000		
	Operating expenses		11,000		
B.	Investment	(\$10,000)			
	Revenue		\$15,000	\$17,000	
	Operating expenses		5,833	7,833	
C.	Investment	(\$10,000)			
	Revenue		\$10,000	\$11,000	\$30,000
	Operating expenses		5,555	4,889	15,555
D.	Investment	(\$10,000)			
	Revenue		\$30,000	\$10,000	\$5,000
	Operating expenses		15,555	5,555	2,222

*All revenues and operating expenses can be considered *cash* items.

Each of these projects is considered to be of equivalent risk. The investment will be depreciated to zero on a straight-line basis for tax purposes. GEI's marginal corporate tax rate on taxable income is 40%. None of the projects will have any salvage value at the end of their respective lives. For purposes of analysis, it should be assumed that all cash flows occur at the *end* of the year in question.

This case was prepared as the basis for class discussion rather than to illustrate either effective or ineffective handling of an administrative situation. Problem 1 appears in the case, "Introduction to Investment Evaluation Techniques" (HBS case no. 285-115) by Professor Dwight B. Crane and was revised for inclusion in this case. Problems 3 and 4 appear in the case, "Investment Analysis and Lockheed Tri Star" (HBS case no. 291-031) by Professor Michael E. Edleson and were also revised for inclusion in this case.

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A. Rank GEI's four projects according to the following four commonly used capital budgeting criteria:

- (1) Payback period.
- (2) Accounting return on investment. For purposes of this exercise, the accounting return on investment should be defined as follows:

$$\frac{\text{Average annual after-tax profits}}{(\text{Required investment})/2}$$

- (3) Internal rate of return.
- (4) Net present value, assuming alternately a 10% discount rate and a 35% discount rate.

B. Why do the rankings differ? What does each technique measure and what assumptions does it make?

C. If the projects are independent of each other, which should be accepted? If they are mutually exclusive (i.e., one and only one can be accepted), which one is best?

2. Electronics Unlimited was considering the introduction of a new product that was expected to reach sales of \$10 million in its first full year, and \$13 million of sales in the second year. Because of intense competition and rapid product obsolescence, sales of the new product were expected to remain unchanged between the second and third years following introduction. Thereafter, annual sales were expected to decline to two-thirds of peak annual sales in the fourth year, and one-third of peak sales in the fifth year. No material levels of revenues or expenses associated with the new product as expected after five years of sales. Based on past experience, cost of sales for the new product was expected to be 60% of total annual sales revenue during each year of its life cycle. Selling, general, and administrative expenses were expected to be 23.5% of total annual sales. Taxes on profits generated by the new product would be paid at a 40% rate.

To launch the new product, Electronics Unlimited would have to incur immediate cash outlays of two types. First, it would have to invest \$500,000 in specialized new production equipment. This capital investment would be fully depreciated on a straight-line basis over the five-year anticipated life cycle of the new product. It was not expected to have any material salvage value at the end of its depreciable life. No further fixed capital expenditures were required after the initial purchase of equipment.

Second, additional investment in net working capital to support sales would have to be made. Electronics Unlimited generally required 27¢ of net working capital to support each dollar of sales. As a practical matter, this buildup would have to be made by the *beginning* of the sales year in question (or, equivalently, by the end of the previous year). As sales grew, further investments in net working capital ahead of sales would have to be made. As sales diminished, net working capital would be liquidated and cash recovered. At the end of the new product's life cycle, all remaining net working capital would be liquidated and the cash recovered.

Finally, Electronics Unlimited expected to incur tax-deductible introductory expenses of \$200,000 in the first year of the new product's sales. These costs would not be recurring over the product's life cycle. Approximately \$1.0 million had already been spent developing and test marketing the new product. These expenditures were also one-time expenses that would not be recurring during the new product's life cycle.

- A. Estimate the new product's future sales, profits, and cash flows throughout its five-year life cycle.
- B. Assuming a 20% discount rate, what is the product's net present value? (Except for changes in net working capital, which must be made before the start of each

sales year, you should assume that all cash flows occur at the end of the year in question.) What is its internal rate of return?

C. Should Electronics Unlimited introduce the new product?

3. You are the CEO of Valu-Added Industries, Inc. (VAI). Your firm has 10,000 shares of common stock outstanding, and the current price of the stock is \$100 per share. There is no debt; thus, the “market value” balance sheet of VAI appears as follows:

VAI Market Value Balance Sheet

Assets	\$1,000,000	Equity	\$1,000,000
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You then discover an opportunity to invest in a new project that produces positive net cash flows with a present value of \$210,000. Your total initial costs for investing and developing this project are only \$110,000. You will raise the necessary capital for this investment by issuing new equity. All potential purchasers of your common stock will be fully aware of the project’s value and cost, and are willing to pay “fair value” for the new shares of VAI common.

- A. What is the net present value of this project?
 B. How many shares of common stock must be issued, and at what price, to raise the required capital?
 C. What is the effect, if any, of this new project on the value of the stock of the existing shareholders?

4. Lockheed Tri Star and Capital Budgeting¹

In 1971, the American aerospace company, Lockheed, found itself in Congressional hearings seeking a \$250 million federal guarantee to secure bank credit required for the completion of the L-1011 Tri Star program. The L-1011 Tri Star Airbus was a wide-bodied commercial jet aircraft with a capacity of up to 400 passengers, competing with the DC-10 trijet and the A-300B airbus.

Spokesmen for Lockheed claimed that the Tri Star program was economically sound and that their problem was merely a liquidity crisis caused by some unrelated military contracts. Opposing the guarantee, other parties argued that the Tri Star program had been economically unsound and doomed to financial failure from the very beginning.

The debate over the viability of the program centered on estimated “break-even sales”—the number of jets that would need to be sold for total revenue to cover all accumulated costs. Lockheed’s CEO, in his July 1971 testimony before Congress, asserted that this break-even point would be reached at sales somewhere between 195 and 205 aircraft. At that point, Lockheed had secured only 103 firm orders plus 75 options-to-buy, but they testified that sales would eventually exceed the break-even point and that the project would thus become “a commercially viable endeavor.” Lockheed also testified that it hoped to capture 35%–40% of the total free-world market of 775 wide bodies over the next decade (270–310 aircraft). This market estimate had been based on the optimistic assumption of 10% annual growth in air travel. At a more realistic 5% growth rate, the total world market would have been only about 323 aircraft.

¹Facts and situations concerning the Lockheed Tri Star program are taken from U. E. Reinhardt, “Break-Even Analysis for Lockheed’s Tri Star: An Application of Financial Theory,” *Journal of Finance* 27 (1972), 821–838, and from House and Senate testimony.

Costs

The preproduction phases of the Tri Star project began at the end of 1967 and lasted four years after running about six months behind schedule. Various estimates of the initial development costs ranged between \$800 million and \$1 billion. A reasonable approximation of these cash outflows would be \$900 million, occurring as follows:

End of Year	Time "Index"	Cash Flow (\$ millions)
1967	t=0	-\$100
1968	t=1	-\$200
1969	t=2	-\$200
1970	t=3	-\$200
1971	t=4	-\$200

According to Lockheed testimony, the production phase was to run from the end of 1971 to the end of 1977 with about 210 Tri Stars as the planned output. At that production rate, the average unit production cost would be about \$14 million per aircraft.² The inventory-intensive production costs would be relatively front-loaded, so that the \$490 million (\$14 million per plane, 35 planes per year) annual production costs could be assumed to occur in six equal increments at the end of years 1971 through 1976 (t=4 through t=9).

Revenues

In 1968, the expected price to be received for the L-1011 Tri Star was about \$16 million per aircraft. These revenue flows would be characterized by a lag of a year to the production cost outflows; annual revenues of \$560 million could be assumed to occur in six equal increments at the end of years 1972 through 1977 (t=5 through t=10). Inflation-escalation terms in the contracts ensured that any future inflation-based cost and revenue increases offset each other nearly exactly, thus providing no incremental net cash flow.

Deposits toward future deliveries were received from Lockheed customers. Roughly one-quarter of the price of the aircraft was actually received two years early. For example, for a single Tri Star delivered at the end of 1972, \$4 million of the price was received at the end of 1970, leaving \$12 million of the \$16 million price as cash flow at the end of 1972. So, for the 35 planes built (and presumably, sold) in a year, \$140 million of the \$560 million in total annual revenue was actually received as a cash flow two years earlier.

Discount Rate

Experts estimated that the cost of capital applicable to Lockheed's cash flows (prior to Tri Star) was in the 9%–10% range. Since the Tri Star project was quite a bit riskier (by any measure) than the typical Lockheed operation, the appropriate discount rate was almost certainly higher than that. Thus, 10% was a reasonable (although possibly generous) estimate of the appropriate discount rate to apply to the Tri Star program's cash flows.

²This figure excludes preproduction cost allocations. That is, the \$14 million cost figure is totally separate from the \$900 million of preproduction costs shown in the table above.

Break-Even Revisited

In an August 1972 *Time* magazine article, Lockheed (after receiving government loan guarantees) revised its break-even sales volume: “[Lockheed] claims that it can get back its development costs [about \$960 million] and start making a profit by selling 275 Tri Stars.”³ Industry analysts had predicted this (actually, they had estimated 300 units to be the break-even volume) even prior to the Congressional hearings.⁴ Based on a “learning curve” effect, production costs at these levels (up to 300 units) would average only about \$12.5 million per unit, instead of \$14 million as above. Had Lockheed been able to produce and sell as many as 500 aircraft, this average cost figure might even have been as low as \$11 million per aircraft.

- A. At originally planned production levels (210 units), what would have been the estimated value of the Tri Star program as of the end of 1967?
- B. At “break-even” production of roughly 300 units, did Lockheed break even in terms of net present value?
- C. At what sales volume would the Tri Star program have reached true economic (as opposed to accounting) break-even?
- D. Was the decision to pursue the Tri Star program a reasonable one? What effects would you predict the adoption of the Tri Star program would have on shareholder value?

³*Time* (August 21, 1972), 62.

⁴Mitchell Gordon, “Hitched to the Tri Star—Disaster at Lockheed Would Cut a Wide Swathe,” *Barron's* (March 15, 1971), 5–14.

Merck & Company: Evaluating a Drug Licensing Opportunity

Rich Kender, Vice President of Financial Evaluation & Analysis at Merck, was working with his team to decide whether his company should license Davanrik, a new drug with the potential to treat both depression and obesity. The small pharmaceutical concern that developed the drug, LAB Pharmaceuticals, lacked the resources to complete the lengthy approval process, manufacture the compound, and market the drug. LAB had approached Merck with an offer to license the compound. Under this agreement, Merck would be responsible for the approval of Davanrik, its manufacture, and its marketing. The company would pay LAB an initial fee, a royalty on all sales, and make additional payments as Davanrik completed each stage of the approval process.

Merck

In 2000, Merck & Co., Inc., was a global research-driven pharmaceutical company that discovered, developed, manufactured, and marketed a broad range of human and animal health products, directly and through its joint ventures, and provided pharmaceutical benefit management services (PBM) through Merck-Medco Managed Care. Since 1995, Merck had launched 15 new products including Vioxx™ for the treatment of osteoarthritis, Fosamax™ for the treatment of osteoporosis, and Singulair™ for treating asthma. The Company earned \$5.9 billion on 1999 sales¹ of \$32.7 billion, about a 20% increase from 1998. Exhibits 1 and 2 contain Merck's Income Statement and Balance Sheet.

A handful of Merck's most popular drugs, Vasotec™, Mevacor™, Prinivil™, and Pepcid™, generated \$5.7 billion in worldwide sales. The patents for these drugs, however, would expire by 2002.² Once the patents expired, Merck anticipated that the sales of these drugs would decline substantially as generic substitutes became available. The only way to counter the loss of sales from drugs going off patent was to develop new drugs and constantly refresh the company's portfolio. The company develops new compounds primarily through internal research, but complements this through initiatives with biotechnology companies to ensure Merck is on the leading edge of select therapeutic categories.

¹Including \$15.2 billion in Medco (PBM) sales.

²Deutsche Bank Equity Analyst Report, January 2000.

David Krieger (MBA '00) and Professor Richard S. Ruback prepared this case. HBS cases are developed solely as the basis for class discussion. Cases are not intended to serve as endorsements, sources of primary data, or illustrations of effective or ineffective management.

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Davanrik

LAB Pharmaceuticals originally developed Davanrik to treat depression. Antidepressant drugs work by affecting certain parts of the central nervous system. Various receptors in the human brain, when stimulated or blocked, create or inhibit various moods. The serotonin system controls nervousness, depression, insomnia, hunger, sexual dysfunction, nausea, and headaches. Through a combination of chemical compounds, the receptors in this system of cells can be stimulated or blocked to treat a patient with one or more of the given symptoms.³ Davanrik seemed not only to stimulate the receptor that promotes antidepressation, but also to block the receptor that causes hunger.

At the time of LAB's offer, Davanrik was in pre-clinical development, ready to enter the three-phase clinical approval process required for pharmaceuticals in the United States. In Phase I, the drug is given to a small number of healthy volunteers to test for safety. This usually takes about 1½ years. In Phase II, a larger number of patients are tested to determine if the drug is effective in treating a certain condition and to measure potential side effects. This usually takes about 2½ years. Finally, in Phase III, a large number of patients are tested for safety and efficacy. This phase takes about 3 years to complete. Exhibit 3 summarizes the FDA approval process.

LAB Pharmaceuticals specializes in developing compounds for the treatment of neurological disorders. While the company was only 15 years old and though it had a few drugs in Phase II and Phase III testing, none had successfully completed the FDA approval process. In fact, the FDA had recently denied approval of another of LAB's compounds that had completed all three phases of clinical testing; LAB's stock price fell by over 30% in response to this decision. As a result, LAB was hesitant to issue additional equity to finance the testing of Davanrik and was seeking a larger pharmaceutical company to license the drug and provide LAB with some much-needed cash. The licensee would design, administer, and fund the clinical testing of the compound, its manufacturing, and its marketing. The licensor, LAB, would receive an initial payment followed by additional payments as Davanrik completes each clinical testing phase. LAB would also receive a royalty on the eventual sales of Davanrik.

Davanrik's Potential Cash Flows

Rich Kender assembled a team to evaluate the potential profitability of Davanrik. Senior researchers evaluated scientific aspects of the compound, and marketers evaluated the market size, potential competition, and requirements to successfully launch the drug. Meanwhile, manufacturing managers determined the capital required to produce the drug, and people in Kender's own department built a financial analysis of the licensing decision.

The evaluation team determined the costs and likelihood of completing each stage of the FDA approval process along with a forecast of profitability of the drug if it successfully completed the approval process. Overall, the approval process was expected to consume about seven years. LAB obtained a patent on the product which is estimated to have a remaining life, including all possible extensions, of 17 years. Therefore, the product would have a 10 year period of exclusivity, beginning in 7 years.

³From The Merck Manual of Diagnosis and Therapy, Section 15, Chapter 189 (Mood Disorders).

Phase I

Davanrik would be administered to 20–80 healthy people to determine if the drug was safe enough to continue into the efficacy stages of clinical testing. Phase I would take two years to complete. It was expected to cost \$30 million, including an initial \$5 million fee to LAB for licensing the drug. There was a 60% chance that Davanrik would successfully complete Phase I.

Phase II

In this phase, Davanrik would be given to 100–300 patient volunteers to determine its efficacy for treating depression and/or weight loss and to document any side effects. To complete the efficacy tests, Davanrik would have to demonstrate a statistically significant impact on patients suffering from depression, obesity, or both. The Merck team estimated a 10% probability that Phase II would show that Davanrik would be efficacious for depression only, a 15% probability for weight loss only, and a 5% probability that it would be efficacious for both depression and weight loss at the same time.⁴ Like Phase I, Phase II would require two years of clinical testing to complete. Phase II was expected to cost \$40 million, including a \$2.5 million licensing milestone payment to LAB.⁵

Phase III

In Phase III, Davanrik would be administered to 1000–5000 volunteers to determine safety and efficacy in long term use. Because of the number of volunteers and nature of testing, this was the most costly of the phases and was expected to take three years to complete. The costs and probabilities of success depended on the outcome from Phase II. If Davanrik was effective for only depression, Phase III trials would cost \$200 million including a \$20 million payment to LAB, and have an 85% chance of success. If it was effective for weight loss only, it would cost \$150 million (including a \$10 million LAB payment), and have a 75% chance of success. If, however, it was efficacious for both weight loss and depression, more specialized trials would be required to determine efficacy for the dual indication. The total cost of the Phase III clinical tests for the two separate indications together with the dual indication was expected to be \$500 million, including a \$40 million licensing payment to LAB, and had a 70% chance of successful outcome. Under this scenario, there was a 15% chance of a successful outcome for depression only, and a 5% chance of a successful outcome for weight loss only. The probability of complete failure of the dual indications or either separate indication was only 10%.

Davanrik had substantial potential profits, especially if it was effective as a treatment for both depression and weight loss. If the drug were approved only for the treatment of depression, it would cost \$250 million to launch, and had a commercialization present value of \$1.2 billion.⁶ If Davanrik were only approved for weight loss, it would cost \$100 million to launch, and would have a PV of \$345 million. However, if Merck could launch the product with claims for both indications, it would cost \$400 million to launch and have a PV of \$2.25 billion.

⁴According to the FDA, a pharmaceutical must prove dual indications in addition to proving each indication separately if it wants to be able to claim therapeutic effects for people suffering from both disorders.

⁵All cash flows are expressed as after-tax present values discounted to time zero, including capital expenditures.

⁶This PV was calculated as the after-tax present value of 10 years' worth of cash flows from the drug discounted back to today. It was believed that after 10 years, the drug had very little value to the company since it would be off its patent by then (and thus a terminal value of zero was used in the calculation).

EXHIBIT 1
Consolidated
Statement of Income
and Retained
Earnings

Source: 1999 Merck & Co.
 Annual Report.

	Year Ended December 31,		
	1999	1998	1997
Sales	32,714.0	26,898.2	23,636.9
Costs, Expenses, and Other Materials and Production	17,534.2	13,925.4	11,790.3
Marketing and Administrative	5,199.9	4,511.4	4,299.2
Research and Development	2,068.3	1,821.1	1,683.7
Acquired Research	51.1	1,039.5	0
Equity Income from Affiliates	(762.0)	(884.3)	(727.9)
Gains on Sales of Businesses	0	(2,147.7)	(213.4)
Other (income) Expense, Net	3.0	499.7	342.7
	<u>24,094.5</u>	<u>18,765.1</u>	<u>17,174.6</u>
Income Before Taxes	8,619.5	8,133.1	6,462.3
Taxes on Income	<u>2,729.0</u>	<u>2,884.9</u>	<u>1,848.2</u>
Net Income	<u>5,890.5</u>	<u>5,248.2</u>	<u>4,614.1</u>
Basic Earnings per Common Share	2.51	2.21	1.92
Earnings per Common Share Assuming Dilution	<u>2.45</u>	2.15	<u>1.87</u>
Retained Earnings Balance, January 1	20,186.7	17,291.5	14,772.2
Net Income	5,890.5	5,248.2	4,614.1
Common Stock Dividends Declared	<u>(2,629.3)</u>	<u>(2,353.0)</u>	<u>(2,094.8)</u>
Retained Earnings Balance, December 31	<u>23,447.9</u>	<u>20,186.7</u>	<u>17,291.5</u>

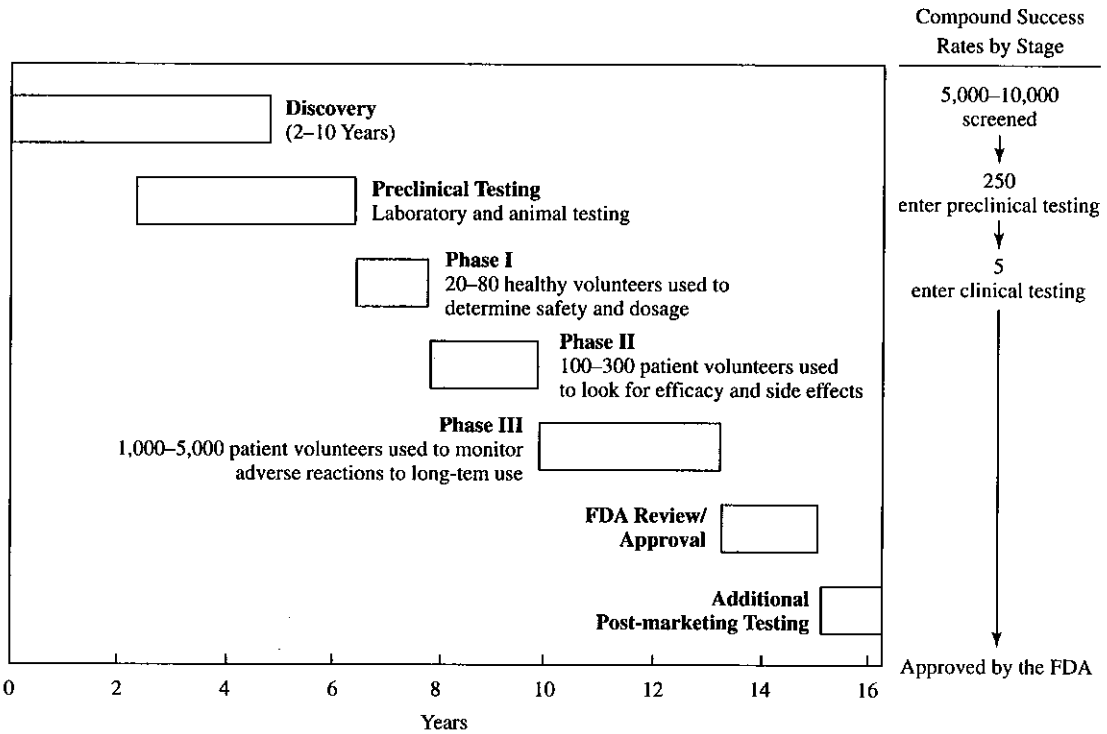
EXHIBIT 2
Consolidated Balance
Sheet

Source: 1999 Merck & Co.
 Annual Report.

	Year Ended December 31,	
	1999	1998
Assets		
Current assets		
Cash and cash equivalents	2,021.9	2,606.2
Short-term investments	1,180.5	749.5
Accounts receivable	4,089.0	3,374.1
Inventories	2,846.9	2,623.9
Prepaid expenses and taxes	<u>1,120.9</u>	<u>874.8</u>
Total current assets	<u>11,259.2</u>	<u>10,228.5</u>
Investments	4,761.5	3,607.7
Property, plant, and equipment (at cost)		
Land & buildings	4,725.0	3,892.8
Machinery, equipment, and office furnishings	7,385.7	6,211.7
Construction in progress	<u>2,236.3</u>	<u>1,782.1</u>
	14,347.0	11,886.6
Less allowance for depreciation	<u>4,670.3</u>	<u>4,042.8</u>
	<u>9,676.7</u>	<u>7,843.8</u>
Goodwill and other intangibles	7,584.2	8,287.2
Other assets	<u>2,353.3</u>	<u>1,886.2</u>
	<u>35,634.9</u>	<u>31,853.4</u>
Liabilities and Stockholders' Equity		
Current liabilities		
Accounts payable and accrued liabilities	4,158.7	3,682.1
Loans payable and current portion of long-term debt	2,859.0	624.2
Income tax payable	1,064.1	1,125.1
Dividends payable	<u>677.0</u>	<u>637.4</u>
Total current liabilities	<u>8,758.8</u>	<u>6,068.8</u>
Long-term debt	3,143.9	3,220.8
Deferred income taxes and noncurrent liabilities	7,030.1	6,057.0
Minority interests	<u>3,460.5</u>	<u>3,705.0</u>
Stockholders' equity		
Common stock	29.7	29.7
Other paid-in capital	5,920.5	5,614.5
Retained earnings	23,447.9	20,186.7
Accumulated other comprehensive income (loss)	<u>8.1</u>	<u>(21.3)</u>
	<u>29,406.2</u>	<u>25,809.6</u>
Less treasury stock, at cost	<u>16,164.6</u>	<u>13,007.8</u>
Total stockholders' equity	<u>13,241.6</u>	<u>12,801.8</u>
	<u>35,634.9</u>	<u>31,853.4</u>

EXHIBIT 3 Compound Success Rates by Stage

Source: PhRMA, based on data from Center for the Study of Drug Development, Tuft University, 1995.



Tree Values

Joe Smith, a forest owner in southern New Hampshire, sought Karen Bennett's help after receiving an unsolicited but attractive offer from a local businessman for some of his timber. Ms. Bennett, a forest resource specialist with the University of New Hampshire Cooperative Extension, provided non-industrial private forest owners with advice on managing their forests. Ms. Bennett had visited Mr. Smith and walked his property with him. She aimed to help Mr. Smith understand the alternatives available to him so that he could make an informed decision about whether he should cut his trees.

Earning Potential of Trees

Mr. Smith inherited the woodland from his father. He always considered the forestland an asset but, aside from occasionally checking on the prices of land in the region, he had given little thought to the value of his holding. The logger who approached Mr. Smith about a timber sale proposed cutting the trees that were 12" DBH (diameter at breast height, i.e., 4½ feet above ground) and larger, leaving more space for the smaller trees to grow. He said this selective harvest would leave the smaller, fastest growing trees to provide for future harvests.

On her visit to Mr. Smith, Ms. Bennett observed that the acreage included a variety of New England hardwoods, including Sugar Maples, Paper Birches, Red Maples, and Red Oaks. Although Mr. Smith was curious about the value of individual trees, Ms. Bennett explained that foresters usually think and talk in terms of total board feet of a forest area rather than the price of individual trees. Timber is a high volume business, and prices for standing timber (or stumpage prices) were given in dollars per thousand board feet (MBF). Stumpage prices varied according to species, property location, tree size and quality, and ease of access. Current prices for Red Oak in central New Hampshire ranged from \$40–\$1200 per MBF, and prices for Sugar Maples were \$90–\$900 per MBF.¹

Ms. Bennett explained that the value of a tree depended on the volume of usable lumber that could be cut from it, and also on the tree's quality, or grade. As trees grew larger their volume increased, and larger trees provided more board feet of lumber. Exhibit 1 contains information on average hardwood volumes. For example, a 12" DBH tree would yield about 60 board feet of lumber; a 14" DBH tree would provide about 110 board feet. Trees smaller than about 12" DBH had little commercial value except as firewood. The rate of physical growth of trees could vary widely because of differences in sites and conditions. In general, a good quality hardwood tree growing on a

¹*NHTOA Quarterly Forest Product Market Report*, 1st Quarter 2000 (January–March).

Research Associate Kathleen S. Luchs prepared this case under the supervision of Professor Richard S. Ruback as the basis for class discussion rather than to illustrate either effective or ineffective handling of an administrative situation.

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well managed site in New England would grow about 2" in diameter in ten years, while lower quality trees on inferior or unmanaged sites might grow at only half that rate.²

In addition to physical size, a tree's value also depended on its quality. As trees grew larger they provided not just more lumber, but also better quality lumber, especially if the trees had sufficient growing space and few defects such as knots or wormholes. The U.S. Forest Service had a system of log grades for assessing timber quality but there was no law requiring the use of this system. Individual mills often defined their own standards and some foresters used a system of tree grades to value a stand. Whatever method was used to measure the quality of timber, a tree's value increased significantly as its quality improved.³ Quality or tree grade increases peaked for most New England hardwoods at around 20 inches DBH, although a tree continued to grow in diameter.⁴ Trees could be a similar size and provide about the same board feet of lumber, but their value could be very different depending on the grade of that lumber. Exhibit 2 presents average hardwood prices by tree grade.

Tree values also depended on increases in timber prices. Prices of hardwood timber had steadily increased over the last 20 years and would likely continue to do so. One authority estimated that prices for New England hardwoods were currently increasing 1–3% above the rate of inflation.⁵

Woodland Management

Like many New England woodlands, Mr. Smith's forest was "middle aged," with most of the trees around 50 to 60 years old, most likely having grown on former farmland. Although there were as many as 300 trees per acre on the property, most of these trees had no commercial use except for firewood because of their species, size, or quality. Ms. Bennett estimated that on the 40 acres of forestland there were about 60 crop trees per acre. The crop trees were about evenly divided between 12" DBH and 14" DBH trees. While the site was favorable, the land had not been actively managed, and many of the trees were crowded. The size and current condition of the crop trees meant they were mostly tree grade 4. The smaller trees in the forest were not necessarily younger than the larger trees. Some of them were simply slow growing because of genetics, stress, disease, or poor growing conditions.

Ms. Bennett suggested that if Mr. Smith was interested in improving his forestland, he should consider thinning, including cutting about half of the 12" and 14" trees. Selecting and cutting the lower quality trees would eliminate competition. Such thinning would allow the better quality trees to grow as much as 2" in diameter over 10 years. Exhibit 3 shows that these trees were also more likely to move into the next tree grade. Mr. Smith would need to hire a private forester to select which trees to thin and to develop an overall management plan for his forest.

²Gary Gof and Peter Smallidge, "Tree Value: A Basis of Woodland Management," <http://www.dnr.cornell.edu/ext/forestry/page/publications%20&%20articles/proceedings/sawtimber_economics_goff.htm>

³Robert R. Morrow, "Tree Value: A Basis for Woodland Management," An Extension Publication of the Department of Natural Resources, New York State College of Agriculture and Life Sciences at Cornell University, Ithaca, New York, vol. 19, no. 4 (Fall 1981).

⁴Mark J. Ducey, "How Fast Do Quality Hardwoods Grow?" Proceedings for Tree Investment Workshop, Caroline A. Fox Research and Demonstration Forest, Hillsborough, NH, Oct. 15 and 29, 1999.

⁵Ibid.

EXHIBIT 1

Average Hardwood Volumes

Source: Karl Davies, "The Myth of Low Tree Value Growth Rates," *Massachusetts Woodland Steward*, vol. 29, no. 4 (Fall 1999) and additional information provided by author.

DBH (inches)	Number of 16 ft Logs	Board Feet/Tree
10	0.50	20
11	0.75	40
12	1.00	60
13	1.25	85
14	1.50	110
15	1.75	145
16	2.00	180
17	2.25	230
18	2.50	280
19	2.50	315
20	2.50	350
21	2.50	385
22	2.50	430

EXHIBIT 2

Average Hardwood Stumpage Prices by Tree Grade

Source: New Hampshire Forest Market Report 1998-1999, University of New Hampshire Cooperative Extension; additional values estimated by case writer.

Tree Grade	\$MBF
4	40
3	120
2	260
1	445
Veneer	845

EXHIBIT 3

Probabilities of Tree Grade Increases with Each 2" Growth in DBH

Source: Estimates provided by Karl Davies based on his research and paper "Grade Value Increase Rates for Northeastern Timber Species" (Second draft). A first draft of this paper is available at <http://www.daviesand.com/Papers/Economics/GVI_Rates/index.html>

Tree Grade Change	4 to 3	3 to 2	2 to 1	1 to Veneer
Trees on unthinned, unmanaged forestland	60%	50%	40%	10%
Trees on thinned, managed forestland	80%	70%	60%	20%

The Super Project

In March 1967, Crosby Sanberg, a financial analysis manager at General Foods Corporation, told a casewriter, "What I learned about incremental analysis at the Business School doesn't always work." He was convinced that under some circumstances sunk costs were relevant to capital project evaluations. He was also concerned that financial and accounting systems did not provide an accurate estimate of incremental costs and revenues, and that this was one of the most difficult problems in measuring the value of capital investment proposals. Mr. Sanberg used the Super project as an example.¹

Super was a new instant dessert, based on a flavored, water-soluble, agglomerated powder.² Although four flavors would be offered, it was estimated that chocolate would account for 80% of total sales.

General Foods was organized along product lines in the United States, with foreign operations under a separate division. Major U.S. product divisions included Post, Kool-Aid, Maxwell House, Jell-O, and Birds Eye. Financial data for General Foods are given in Exhibits 1, 2, and 3.

The \$200,000 capital investment project request for Super involved \$80,000 for building modifications and \$120,000 for machinery and equipment. Modifications would be made to an existing building, where Jell-O was manufactured. Since available capacity of a Jell-O agglomerator would be used in the manufacture of Super, no cost for the key machine was included in the project. The \$120,000 machinery and equipment item represented packaging machinery.

The Market

A Nielsen survey indicated that powdered desserts constituted a significant and growing segment of the total dessert market, as shown in Table A. On the basis of test market experience, General Foods expected Super to capture a 10% share of the total dessert market. Eighty percent of this expected Super volume would come from growth in total market share or growth in the powders segment, and 20% would come from erosion of Jell-O sales.

Production Facilities

Test market volume was packaged on an existing line, inadequate to handle long-run requirements. Filling and packaging equipment to be purchased had a capacity of 1.9 million units on a two-shift, five-day workweek basis. This represented considerable excess capacity, since 1968 requirements were expected to reach 1.1 million units, and the national potential was regarded as 1.6 million units. However, the extra capacity resulted from purchasing standard equipment, and a more economical alternative did not exist.

¹The name and nature of this new product have been disguised to avoid the disclosure of confidential information.

²Agglomeration is a process by which the processed powder is passed through a steam bath and then dried. This fluffs up the powder particles and increases solubility.

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Harvard Business School case 112-034. This case was written by Richard F. Vancil.

TABLE A
Dessert Market,
August–September
1966 Compared with
August–September
1965

Desserts	Market Share Aug.–Sept. 1966	Change from Aug.–Sept. 1965	
		Share Points	Volume (%)
Jell-O	19.0%	3.6	40.0
Tasty	4.0	4.0	(new)
Total powders	25.3	7.6	62.0
Pie fillings and cake mixes	32.0	-3.9	(no change)
Ice cream	42.7	-3.4	5.0
Total market	100.0%		13.0

Capital Budgeting Procedure

The General Foods Accounting and Financial Manual identified four categories of capital investment project proposals: (1) safety and convenience; (2) quality; (3) increased profit; and (4) other. Proposal procedures and criteria for accepting projects varied according to category (Exhibit 4). In discussing these criteria, Mr. Sanberg noted that the payback and return guidelines were not used as cutoff measures and added:

Payback and return on investment are rarely the only measures of acceptability. Criteria vary significantly by type of project. A relatively high return might be required for a new product in a new business category. On the other hand, a much lower return might be acceptable for a new product entry which represented a continuing effort to maintain leadership in an existing business by, for example, filling out the product line.

Super fell into the third category, as a profit-increasing project. Estimates of payback and return on funds employed were required for each such project requiring \$50,000 or more of new capital funds and expense before taxes. The payback period was the length of time required for the project to repay the investment from the date the project became operational. In calculating the repayment period, only incremental income and expenses related to the project were used.

Return on funds employed (ROFE) was calculated by dividing 10-year average profit before taxes by the 10-year average funds employed. Funds employed included incremental net fixed assets plus or minus related working capital. Start-up costs and any profits or losses incurred before the project became operational were included in the first profit and loss period in the financial evaluation calculation.

Capital Budgeting Atmosphere

A General Foods accounting executive commented on the atmosphere within which capital projects were reviewed:

Our problem is not one of capital rationing. Our problem is to find enough good solid projects to employ capital at an attractive return on investment. Of course, the rate of capital inputs must be balanced against a steady growth in earnings per share. The short-term impact of capital investments is usually an increase in the capital base without an immediate realization of profit potential. This is particularly true in the case of new products.

The food industry should show a continuous growth. A cyclical industry can afford to let its profits vary. We want to expand faster than the gross national product. The key to our capital budgeting is to integrate the plans of our eight divisions into a balanced company plan which meets our overall growth objectives. Most new products show a loss in the first two or three years, but our divisions are big enough to introduce new products without showing a loss.

Documentation for the Super Project

Exhibits 5 and 6 document the financial evaluation of the Super project. Exhibit 5 is the summary appropriation request prepared to justify the project to management and to secure management's authorization to expend funds on a capital project. Exhibit 6 presents the backup detail. Cost of the market test was included as "Other" expense in the first period, because a new product had to pay for its test market expense, even though this might be a sunk cost at the time capital funds were requested. The "Adjustments" item represented erosion of the Jell-O market and was calculated by multiplying the volume of erosion times a variable profit contribution. In the preparation of this financial evaluation form, costs of acquiring packaging machinery were included, but no cost was attributed to Jell-O agglomerator capacity to be used for the Super project, because the General Foods Accounting and Financial Manual specified that capital project requests be prepared on an incremental basis:

The incremental concept requires that project requests, profit projections, and funds-employed statements include only items of income and expense and investment in assets which will be realized, incurred, or made directly as a result of, or are attributed to, the new project.

Exchange of Memos on the Super Project

After receiving the paperwork on the Super project, Mr. Sanberg studied the situation and wrote a memorandum arguing that the incremental approach advocated by the manual should not be applied to the Super project. His superior agreed with the memorandum and forwarded it to the corporate controller with the covering note contained in Appendix A. The controller's reply is given in Appendix B.

Appendix A Memos to Controller

To: J. C. Kresslin, Corporate Controller

From: J. E. Hooting, Director, Corporate Budgets and Analysis

March 2, 1967

Super Project

At the time we reviewed the Super project, I indicated to you that the return on investment looked significantly different if an allocation of the agglomerator and building, originally justified as a Jell-O project, were included in the Super investment. The pro rata allocation of these facilities, based on the share of capacity used, triples the initial gross investment in Super facilities from \$200,000 to about \$672,000.

I am forwarding a memorandum from Crosby Sanberg summarizing the results of three analyses evaluating the project on an

1. Incremental basis
2. Facilities-used basis
3. Fully allocated facilities and costs basis

Crosby has calculated a 10-year average ROFE using these techniques. Please read Crosby's memo before continuing with my note.

* * *

Crosby concludes that the fully allocated basis, or some variation of it, is necessary to understand the long-range potential of the project.

I agree. We launch a new project because of its potential to increase our sales and earning power for many years into the future. We must be mindful of short-term consequences, as indicated by an incremental analysis, but we must also have a long-range frame of reference if we are to really understand what we are committing ourselves to. This long-range frame of reference is best approximated by looking at fully allocated investment and "accounted" profits, which recognize fully allocated costs, because in fact, over the long run all costs are variable unless some major change occurs in the structure of the business.

Our current GF preoccupation with only the incremental costs and investment causes some real anomalies that confuse our decision making. Super is a good example. On an incremental basis the project looks particularly attractive because, by using a share of the excess capacity built on the coattails of the lucrative Jell-O project, the incremental investment in Super is low. If the excess Jell-O capacity did not exist, would the project be any less attractive? In the short term, perhaps yes because it would entail higher initial risk; but in the long term, it is not a better project just because it fits a facility that is temporarily unused.

Looking at this point from a different angle, if the project exceeded our investment hurdle rate on a short-term basis but fell below it on a long-term basis (and Super comes close to doing this), should we reject the project? I say yes, because over the long run, as "fixed" costs become variable and as we have to commit new capital to support the business, the continuing ROFE will go under water.

In sum, we have to look at new project proposals from both the long-range and the short-term point of view. We plan to refine our techniques of using a fully allocated basis as a long-term point of reference and will hammer out a policy recommendation for your consideration. We would appreciate any comments you may have.

To: J. E. Hooting, Director, Corporate Budgets and Analysis

From: C. Sanberg, Manager, Financial Analysis

February 17, 1967

Super Project: A Case Example of Investment Evaluation Techniques

This will review the merits of alternative techniques of evaluating capital investment decisions using the Super project as an example. The purpose of the review is to provide an illustration of the problems and limitations inherent in using incremental ROFE and payback, and thereby provide a rationale for adopting new techniques.

Alternative Techniques

The alternative techniques to be reviewed are differentiated by the level of revenue and investment charged to the Super project in figuring a payback and ROFE, starting with incremental revenues and investment. Data related to the alternative techniques are summarized at the end of this memo.

Alternative 1. Incremental Basis

Method

The Super project as originally evaluated considered only incremental revenue and investment, which could be directly identified with the decision to produce Super. Incremental fixed capital (\$200M) basically included packaging equipment.

Result

On this basis, the project paid back in 7 years with a ROFE of 63%.

Discussion

Although it is General Foods' current policy to evaluate capital projects on an incremental basis, this technique does not apply to the Super project. The reason is that Super extensively utilizes existing facilities, which are readily adaptable to known future alternative uses.

Super should be charged with the "opportunity loss" of agglomerating capacity and building space. Because of Super, the opportunity is lost to use a portion of agglomerating capacity for Jell-O and other products that could potentially be agglomerated. In addition, the opportunity is lost to use the building space for existing or new product volume expansion. To the extent there is an opportunity loss of existing facilities, new facilities must be built to accommodate future expansion. In other words, because the business is expanding, Super utilizes facilities that are adaptable to predictable alternative uses.

Alternative 2. Facilities-Used Basis

Method

Recognizing that Super will use half of an existing agglomerator and two thirds of an existing building, which were justified earlier in the Jell-O project, we added Super's pro rata share of these facilities (\$453M) to the incremental capital. Overhead costs directly related to these existing facilities were also subtracted from incremental revenue on a shared basis.

Result

A ROFE of 34% results.

Discussion

Although the existing facilities utilized by Super are not incremental to this project, they are relevant to the evaluation of the project because, potentially, they can be put to alternative uses. Despite a high return on an incremental basis, if the ROFE on a project were unattractive after consideration of the shared use of existing facilities, the project would be questionable. Under these circumstances, we might look for a more profitable product for the facilities.

In summary, the facilities-used basis is a useful way of putting various projects on a common ground for purposes of *relative* evaluation. One product using existing capacity should not necessarily be judged to be more attractive than another practically identical product that necessitates an investment in additional facilities.

Alternative 3. Fully Allocated Basis

Method

Further recognizing that individual decisions to expand inevitably add to a higher overhead base, we increased the costs and investment base developed in Alternative 2 by a provision for overhead expenses and overhead capital. These increases were made in year 5 of the 10-year evaluation period, on the theory that, at this point, a number of decisions would result in more fixed costs and facilities. Overhead expenses included manufacturing costs, plus selling and general and administrative costs on a per unit basis equivalent to Jell-O. Overhead capital included a share of the distribution system assets (\$40M).

Result

A ROFE of 25% results.

Discussion

Charging Super with an overhead burden recognizes that overhead costs in the long run increase in proportion to the level of business activity, even though decisions to spend more overhead dollars are made separately from decisions to increase volume and provide the incremental facilities to support the higher volume level. To illustrate, the Division-F1968 Financial Plan budgets about a 75% increase in headquarters' overhead spending in F1968 over F1964. A contributing factor was the decision to increase the sales force by 50% to meet the demands of a growing and increasingly complex business. To illustrate further, about half of the capital projects in the F1968 3-year Financial Plan are in the "nonpayback" category. This group of projects comprised largely "overhead facilities" (warehouses, utilities, etc.), which are not directly related to the manufacture of products but are necessary components of the total business activity as a result of the cumulative effect of many decisions taken in the past.

The Super project is a significant decision that will most likely add to more overhead dollars, as illustrated above. Super volume doubles the powdered dessert business category; it increases the Division businesses by 10%. Furthermore, Super requires a new production technology: agglomeration and packaging on a high-speed line.

Conclusions

1. The incremental basis for evaluating a project is an inadequate measure of a project's worth when existing facilities with a known future use will be utilized extensively.
2. A fully allocated basis of reviewing major new product proposals recognizes that overheads increase in proportion to the size and complexity of the business and provides the best long-range projection of the financial consequences.

Alternative Evaluations of Super Project (thousands of dollars)

	1. Incremental Basis	2. Facilities-Used Basis	3. Fully Allocated Basis
<i>Investment</i>			
Working capital	\$267	\$267	\$267
Fixed capital			
Gross	200	653	672
Net	113	358	367
Total net investment	380	625	634
Profit before taxes ^a	239	211	157
ROFE	63%	34%	25%
<i>Jell-O Project</i>			
Building	$200 \times \frac{1}{2} = 133$		
Agglomerator	$640 \times \frac{1}{2} = 320$		
	\$453		

Note: Figures based on 10-year averages.

^aAssumes 20% of Super volume will replace existing Jell-O business.

Appendix B Controller's Reply

To: Mr. J. E. Hooting, Director, Corporate Budgets and Analysis

From: Mr. J. C. Kresslin, Corporate Controller

Subject: Super Project

March 7, 1967

On March 2 you sent me a note describing Crosby Sanberg's and your thoughts about evaluating the Super project. In this memo you suggest that the project should be appraised on the basis of fully allocated facilities and production costs.

In order to continue the dialogue, I am raising a couple of questions below.

It seems to me that in a situation such as you describe for Super, the real question is a *management decision* as to whether to go ahead with the Super project or not go ahead. Or to put it another way, on the basis of our current knowledge, are we or are we not better off in the aggregate if we use half of the agglomerator and two thirds of an existing building for Super?

It might be assumed that, for example, half of the agglomerator is being used and half is not and that a minimum economically sized agglomerator was necessary for Jell-O and, consequently, should be justified by the Jell-O project itself. If we find a way to utilize it sooner by producing Super on it, aren't we better off in the aggregate, thus rendering the different ROFE figure for the Super project by itself somewhat irrelevant? A similar point of view might be applied to the portion of the building. Or if we charge the Super project with half an agglomerator and two thirds of an existing building, should we then go back and relieve the Jell-O projects of these costs in evaluating the management's original proposal?

To put it another way, since we are faced with making decisions at a certain point in time on the basis of what we know, I see very little value in looking at the Super project all by itself. Better we should look at the total situation before and after to see how we fare.

As to allocated production costs, the point is not so clear. Undoubtedly, over the long haul, the selling prices will need to be determined on the basis of a satisfactory margin over fully allocated costs. Perhaps this should be an additional requirement in the course of evaluating capital projects, as we seem to have been surprised at the low margins for "Tasty" after allocating all costs to the product.

I look forward to discussing this subject with you and with Crosby at some length.

EXHIBIT 1

Consolidated Balance Sheet of General Foods Corporation at April 1, 1967 (millions of dollars)

Cash	\$ 20
Marketable securities	89
Receivables	180
Inventories	261
Prepaid expenses	14
Current assets	<u>564</u>
Land, buildings, equipment (at cost, less depreciation)	332
Long-term receivables and sundry assets	7
Goodwill	26
Total assets	<u>\$929</u>
Notes payable	\$ 22
Accounts payable	86
Accrued liabilities	73
Accrued income taxes	57
Current liabilities	<u>238</u>
Long-term notes	39
3 ¾% debentures	22
Other noncurrent liabilities	10
Deferred investment tax credit	9
Total liabilities	<u>318</u>
Common stock issued	164
Retained earnings	449
Common stock held in treasury, at cost	(2)
Stockholders' equity	<u>611</u>
Total liabilities and stockholders' equity	<u>\$929</u>
Common stock—no. of shares outstanding at year-end	25,127,007

EXHIBIT 2

Common Stock Prices of General Foods Corporation, 1958-1967

	Low	High
1958	\$24	\$ 39½
1959	37%	53%
1960	49%	75½
1961	68%	107¾
1962	57%	96
1963	77%	90%
1964	78%	93%
1965	77½	89%
1966	62%	83
1967	65%	81%

EXHIBIT 3 Summary of Statistical Data of General Foods Corporation, Fiscal Years 1958-1967 (millions of dollars except assets per employee and figures on a share basis)

	1958	1959	1960	1961	1962	1963	1964	1965	1966	1967
Earnings										
Sales to customers (net)	\$1,009	\$1,053	\$1,087	\$1,160	\$1,189	\$1,216	\$1,338	\$1,478	\$1,555	\$1,652
Cost of sales	724	734	725	764	769	769	838	937	965	1,012
Marketing, admin., and general expenses	181	205	236	261	267	274	322	362	406	449
Earnings before income taxes	105	115	130	138	156	170	179	177	185	193
Taxes on income	57	61	69	71	84	91	95	91	91	94
Net earnings	\$ 48	\$ 54	\$ 61	\$ 67	\$ 72	\$ 79	\$ 84	\$ 86	\$ 94	\$ 99
Dividends on common shares	24	28	32	35	40	45	50	50	53	55
Retained earnings—current year	24	26	29	32	32	34	34	36	41	44
Net earnings per common share ^a	\$ 1.99	\$ 2.21	\$ 2.48	\$ 2.69	\$ 2.90	\$ 3.14	\$ 3.33	\$ 3.44	\$ 3.73	\$ 3.93
Dividends per common share	1.00	1.15	1.30	1.40	1.60	1.80	2.00	2.00	2.10	2.20
Assets, Liabilities, and Stockholders' Equity										
Inventories	\$ 169	\$ 149	\$ 157	\$ 189	\$ 183	\$ 205	\$ 256	\$ 214	\$ 261	\$ 261
Other current assets	144	180	200	171	204	206	180	230	266	303
Current liabilities	107	107	126	123	142	162	202	173	219	238
Working capital	\$ 206	\$ 222	\$ 230	\$ 237	\$ 245	\$ 249	\$ 234	\$ 271	\$ 308	\$ 326
Land, buildings, equipment, gross	203	221	247	289	328	375	436	477	517	569
Land, buildings, equipment, net	125	132	148	173	193	233	264	283	308	332
Long-term debt	49	44	40	37	35	34	23	37	54	61
Stockholders' equity	287	315	347	384	419	454	490	527	569	611
Stockholders' equity per common share ^a	\$11.78	\$12.87	\$14.07	\$15.46	\$16.80	\$18.17	\$19.53	\$20.99	\$22.64	\$24.32
Capital Program										
Capital additions	\$ 28	\$ 24	\$ 35	\$ 40	\$ 42	\$ 57	\$ 70	\$ 54	\$ 65	\$ 59
Depreciation	11	14	15	18	21	24	26	29	32	34
Employment Data										
Wages, salaries, and benefits	\$ 128	\$ 138	\$ 147	\$ 162	\$ 171	\$ 180	\$ 195	\$ 204	\$ 218	\$ 237
Number of employees (000s)	21	22	22	25	28	28	30	30	30	32
Assets per employee (\$ 000s)	\$ 21	\$ 22	\$ 23	\$ 22	\$ 22	\$ 23	\$ 24	\$ 25	\$ 29	\$ 29

Note: Column totals may not add exactly because of rounding.

^aPer share figures calculated on shares outstanding at year-end and adjusted for 2-for-1 stock split in August 1960.

EXHIBIT 4 Criteria for Evaluating Projects by General Foods Corporation

Source: The General Foods Accounting and Financial Manual.

The basic criteria to be applied in evaluating projects within each of the classifications are set forth in the following schedule:

Purpose of Project	Payback and ROFE Criteria
<p>a. Safety and Convenience:</p> <ol style="list-style-type: none">1. Projects required for reasons of safety, sanitation, health, public convenience, or other overriding reason with no reasonable alternatives. Examples: Sprinkler systems, elevators, fire escapes, smoke control waste disposal, treatment of water pollution, etc.2. Additional nonproductive space requirements for which there are no financial criteria. Examples: Office space, laboratories, service areas (kitchens, rest rooms, etc.)	<p>Payback—return on funds projections not required but the request must clearly demonstrate the <i>immediate</i> need for the project and the lack or inadequacy of alternative solutions.</p> <p>Requests for nonproductive facilities, such as warehouses, laboratories, and offices should indicate the advantages of owning rather than leasing, unless no possibility to lease exists. In those cases where the company owns a group of integrated facilities and wherein the introduction of rented or leased properties might complicate the long-range planning or development of the area, owning rather than leasing is recommended. If the project is designed to improve customer service (such as market-centered warehouses), this factor is to be noted on the project request.</p>
<p>b. Quality: Projects designed primarily to improve quality.</p>	<p>If payback and ROFE cannot be computed, it must be clearly demonstrated that the improvement is identifiable and desirable.</p>
<p>c. Increased Profit:</p> <ol style="list-style-type: none">1. Projects justified primarily by reduced costs.2. Projects designed primarily to increase production capacity for an existing product.3. Projects designed to provide facilities to manufacture and distribute a new product or product line.	<p>Projects with a payback period up to ten years and a ten year return on funds as low as 20% PBT are considered worthy of consideration, provided (1) the end product involved is believed to be a reasonably permanent part of our line or (2) the facilities involved are so flexible that they may be usable for successor products.</p> <p>Projects for a proven product where the risk of mortality is small, such as coffee, Jell-O gelatin, and cereals, should assure a payback in no more than ten years and a ten-year PBT return on funds of no less than 20%.</p> <p>Because of the greater risk involved, such projects should show a high potential return on funds (not less than a ten-year PBT return of 40%). The payback period, however, might be as much as ten years because of losses incurred during the market development period.*</p>
<p>d. Other This category includes projects which by definition are excluded from the three preceding categories. Examples: standby facilities intended to insure uninterrupted production, additional equipment not expected to improve profits or product quality and not required for reasons of safety and convenience, equipment to satisfy marketing requirements, etc.</p>	<p>While standards of return may be difficult to set, some calculation of financial benefits should be made where possible.</p>

*These criteria apply to the United States and Canada only. Profit-increasing capital projects in other areas in categories c1 and c2 should offer at least a ten-year PBT return of 24% to compensate for the greater risk involved. Likewise, foreign operation projects in the c3 category should offer a ten-year PBT return of at least 48%.

EXHIBIT 5 Capital Project Request Form of General Foods Corporation

Source: General Foods.

NY 1292-C 10-64
 PTD. In USA
 "Super" Facilities 66-42
Division & Location
 Jell-O Division — St. Louis
Division & Location

December 23, 1966

Date

New Request Supplement

Expansion-New Product A
 Purpose R

Project Description
 To provide facilities for production of Super, chocolate dessert. This project included finishing a packing room in addition to filling and packaging equipment.

Summary of Investment	
New Capital Funds Required	\$200M
Expense Before Taxes	--
Less: Trade-In or Salvage, If Any	--
Total This Request	\$200M
Previously Appropriated	--
Total Project Cost	\$200M

Financial Justification	
ROFE (PBT Basis) - 10 Yr. Average	62.9
Payback Period	6.83 Yrs.
Not Required	<input type="checkbox"/>
* Based on Total Project Cost and Working Fund of	\$510M

Estimated Expenditure Rate	
Quarter Ending Mar. F19 67	\$160M
Quarter Ending June F19 68	40M
Quarter Ending F19	
Quarter Ending F19	
Remainder	

Other Information	
Major <input type="checkbox"/> Specific Ordinary <input type="checkbox"/> Blanket <input type="checkbox"/>	
Included in Annual program Yes <input type="checkbox"/> No <input type="checkbox"/>	
Percent of Engineering Completed	80%
Estimated Start-Up Cost	\$15M
Estimated Start-Up Date	April

Level of Approval Required	
<input type="checkbox"/> Board <input type="checkbox"/> Chairman <input type="checkbox"/> Exec. V.P. <input type="checkbox"/> Gen. Mgr.	

For Division Use—Signatures	
Name & Title	Date

Signatures		
Director Corp. Eng.		Date
Director B&A		
General Manager		
Exec. Vice President		
President		
Chairman		

EXHIBIT 5 (concluded)

INSTRUCTIONS FOR CAPITAL PROJECT REQUEST FORM NY 1292-A

The purpose of this form is to secure management's authorization to commit or expend funds on a capital project. Refer to Accounting and Financial Manual Statement No. 19 for information regarding projects to which this form applies.

NEW REQUEST-SUPPLEMENT—Check the appropriate box.

PURPOSE—Identify the primary purpose of the project in accordance with the classifications established in Accounting and Financial Statement No. 19, i.e., Sanitation, Health and Public Convenience, Non-Productive Space, Safety, Quality, Reduce Cost, Expansion—Existing Products, Expansion—New Products, Other (specify). Also indicate in the appropriate box whether the equipment represents an addition or a replacement.

PROJECT DESCRIPTION—Comments should be in sufficient detail to enable Corporate Management to appraise the benefits of the project. Where necessary, supplemental data should be attached to provide complete background for project evaluation.

SUMMARY OF INVESTMENT

New Capital Funds Required—Show gross cost of assets to be acquired.

Expense Before Taxes—Show incremental expense resulting from project.

Trade-In or Salvage—Show the amount expected to be realized on trade-in or sale of a replaced asset.

Previously Appropriated—When requesting a supplement to an approved project, show the amount previously appropriated even though authorization was given in a prior year.

FINANCIAL JUSTIFICATION

ROFE—Show the return on funds employed (PBT basis) as calculated on Financial Evaluation Form NY 1292-C or 1292-F. The appropriate Financial Evaluation Form is to be attached to this form.

Not Required—Where financial benefits are not applicable or required or are not expected, check the box provided. The nonfinancial benefits should be explained in the comments.

In the space provided, show the sum of The Total Project Cost plus Total Working Funds (line 20, Form NY 1292-C, or line 5, Form NY 1292-F) in either of the first three periods, whichever is higher.

ESTIMATED EXPENDITURE RATE—Expenditures are to be reported in accordance with accounting treatment of the asset and related expense portion of the project. Insert estimated quarterly expenditures beginning with the quarter in which the first expenditure will be made. The balance of authorized funds unspent after the fourth quarter should be reported in total.

OTHER INFORMATION—Check whether the project is a major, specific ordinary, or blanket, and whether or not the project was included in the Annual Program. Show estimated percentage of engineering completed; this is intended to give management an indication of the degree of reliability of the funds requested. Indicate the estimated start-up costs as shown on line 32 of Financial Evaluation Form NY 1292-C. Insert anticipated start-up date for the project; if start-up is to be staggered, explain in comments.

LEVEL OF APPROVAL REQUIRED—Check the appropriate box.

EXHIBIT 6 Financial Evaluation Form of General Foods Corporation (thousands of dollars)

Source: General Foods.

NY 1292-C 10-64
PTD. In USA

Project Request Detail	St. Louis Location		The Super Project Project Title			67-89 Project No.		Date Supplement No.				
	1st Per.	2nd Per.	Per.	Per.	Per.	Return of New Funds Employed—10-Yr. Avg.						
1. Land	\$					PBT (C + A)		PBT (B + A)				
2. Buildings	80					A - New Funds Employed (Line 21)		\$380				
3. Machinery & Equipment	120					B - Profit Before Taxes (Line 35)		\$239				
4. Engineering						C - Net Profit (Line 37)		\$115				
5. Other (Explain)						D - Calculated Return		30.2%				
6. Expense Portion (Before Tax)						Part Year Calculation for First Period						
7. Sub Total	\$200					Part Year Calculation for Last Period						
8. Less: Salvage Value (Old Asset)						Total Years to Pay Back						
9. Total Project Cost*	\$200					- Yrs.						
10. Less: Taxes on Exp. Portion						6.00 Yrs.						
11. Net Project Cost	\$200					0.83 Yrs.						
*Same as Project Request						6.83 Yrs.						
Funds Employed	1st Per. F 68	2nd Per. F 69	3rd Per. F 70	4th Per. F 71	5th Per. F 72	6th Per. F 73	7th Per. F 74	8th Per. F 75	9th Per. F 76	10th Per. F 77	11th Per.	10-Yr. Avg.
12. Net Project Cost (Line 11)	\$200	200	200	200	200	200	200	200	200	200		
13. Deduct Depreciation (Cum.)	19	37	54	70	85	98	110	121	131	140		
14. Capital Funds Employed	\$181	163	146	130	115	102	90	79	69	60		113
15. Cash												
16. Receivables	124	134	142	157	160	160	169	169	178	178		157
17. Inventories	207	222	237	251	266	266	281	281	296	296		260
18. Prepaid & Deferred Exp.												
19. Less Current Liabilities	(2)	(82)	(108)	(138)	(185)	(184)	(195)	(195)	(207)	(207)		(150)
20. Total Working Funds (15 Thru 19)	329	274	271	264	241	242	255	255	267	267		267
21. Total New Funds Employed (14 + 20)	\$510	437	417	394	356	344	345	334	336	327		380
Profit and Loss												
22. Unit Volume (in thousands)	1100	1200	1300	1400	1500	1500	1600	1600	1700	1700		1460
23. Gross sales	\$2200	2400	2600	2800	3000	3000	3200	3200	3400	3400		2920
24. Deductions	88	96	104	112	120	120	128	128	136	136		117
25. Net Sales	2112	2304	2496	2668	2880	2880	3072	3072	3264	3264		2803
26. Cost of Goods Sold	1100	1200	1300	1400	1500	1500	1600	1600	1700	1700		1460
27. Gross Profit	1012	1104	1196	1288	1380	1380	1472	1472	1564	1564		1343
Gross Profit % Net Sales												
28. Advertising Expense	1100	1050	1000	900	700	700	730	730	750	750		841
29. Selling Expense												
30. Gen. and Admin. Cost												
31. Research Expense												
32. Start-Up Costs	15											2
33. Other (Explain) Test Mkt.	360											36
34. Adjustments (Explain) Erosion	180	200	210	220	230	230	240	240	250	250		250
35. Profit Before Taxes	\$(643)	(146)	(14)	168	450	450	502	502	564	564		239
36. Taxes	(334)	(76)	(7)	87	234	234	261	261	293	293		126
36A. Add: Investment Credit	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	-	-		(1)
37. Net Profit	(308)	(69)	(6)	82	217	217	242	242	271	271		115
38. Cumulative Net Profit	\$(308)	(377)	(383)	(301)	(84)	133	375	617	888	1159		
39. New Funds to Repay (21 less 38)	\$818	814	800	695	440	211	(30)	(283)	(552)	(832)		

See Accounting & Financial Manual Policy No. 19 for Instructions.

INSTRUCTIONS FOR PREPARATION OF FORM NY 1292-C FINANCIAL EVALUATION

This form is to be submitted to Corporate Budget and Analysis with each profit-increasing capital project request requiring \$50,000 or more of capital funds and expense before taxes.

Note that the ten-year term has been divided into eleven periods. The first period is to end on the March 31st following the operational date of the project, and the P & L projection may thereby encompass any number of months from one to twelve, e.g., if the project becomes operational on November 1, 1964, the first period for P & L purposes would be 5 months (November 1, 1964 through March 31, 1965). The next nine periods would be fiscal years (F'66, F'67, etc.) and the eleventh period would be 7 months (April 1, 1974 through October 30, 1974). This has been done primarily to facilitate reporting of projected and actual P & L data by providing for fiscal years. See categorized instructions below for more specific details.

PROJECT REQUEST DETAIL—Lines 1 through 11 show the breakdown of the Net Project Cost to be used in the financial evaluation. Line 8 is to show the amount expected to be realized on trade-in or sale of a replaced asset. Line 9 should be the same as the "Total Project Cost" shown on Form NY 1292-A, Capital Project Request. Space has been provided for capital expenditures related to this project which are projected to take place subsequent to the first period. Indicate in such space the additional costs only; do not accumulate them.

EXHIBIT 6 (continued)

FUNDS EMPLOYED

Capital Funds Employed—Line 12 will show the net project cost appearing on line 11 as a constant for the first ten periods except in any period in which additional expenditures are incurred; in that event show the accumulated amounts of line 11 in such period and in all future periods.

Deduct cumulative depreciation on line 13. Depreciation is to be computed on an incremental basis, i.e., the net increase in depreciation over present depreciation on assets being replaced. In the first period depreciation will be computed at one half of the first year's annual rate; no depreciation is to be taken in the eleventh period. Depreciation rates are to be the same as those used for accounting purposes.

Exception: When the depreciation rate used for accounting purposes differs materially from the rate for tax purposes, the higher rate should be used. A variation will be considered material when the first full year's depreciation on a book basis varies 20% or more from the first full year's depreciation on a tax basis.

The ten-year average of Capital Funds Employed shall be computed by adding line 14 in each of the first ten periods and dividing the total by ten.

Total Working Funds—Refer to Financial Policy No. 21 as a guide in computing new working fund requirements. Items which are not on a formula basis and which are normally computed on a five-quarter average shall be handled proportionately in the first period. For example, since the period involved may be less than 12 months, the average would be computed on the number of quarters involved. Generally, the balances should be approximately the same as they would be if the first period were a full year.

Cash, based on a formula which theorizes a two weeks' supply (2/52nds), should follow the same theory. If the first period is for three months, two-thirteenths (2/13ths) should be used; if it is for 5 months, two-twenty-firsts (2/21sts) should be used, and so forth.

Current liabilities are to include one half of the tax expense as the tax liability. The ten-year averages of Working Funds shall be computed by adding each line across for the first ten periods and dividing each total by ten.

PROFIT AND LOSS PROJECTION

P & L Categories (Lines 22-34)—Reflect only the incremental amounts which will result from the proposed project; exclude all allocated charges. Include the P & L results expected in the individual periods comprising the first ten years of the life of the project. Refer to the second paragraph of these instructions regarding the fractional years' calculations during the first and eleventh periods.

Any loss or gain on the sale of a replaced asset (see line 8) shall be included in line 33.

As indicated in the caption Capital Funds Employed, no depreciation is to be taken in the eleventh period. The ten-year averages of the P & L items shall be computed by adding each line across for the eleven periods (10 full years from the operational data) and dividing the total by ten.

Adjustments (Line 34)—Show the adjustment necessary, on a before-tax basis, to indicate any adverse or favorable incremental effect the proposed project will have on any other products currently being produced by the corporation.

Investment Credit is to be included on line 36-A. The Investment Credit will be spread over 8 years, or fractions thereof, as an addition to PAT.

RETURN ON NEW FUNDS EMPLOYED—Ten-year average returns are to be calculated for PAT (projects requiring Board approval only) and PBT. The PAT return is calculated by dividing average PAT (line 37) by average new funds employed (line 21); the PBT return is derived by dividing average PBT (line 35) by average new funds employed (line 21).

PAYBACK YEARS FROM OPERATIONAL DATE

Part Year Calculation for First Period—Divide number of months in the first period by twelve. If five months are involved, the calculation is $5/12 = .4$ years.

Number of Full Years to Payback—Determined by the last period, excluding the first period, in which an amount is shown on line 39.

Part Year Calculation for Last Period—Divide amount still to be repaid at the end of the last full period (line 39) by net profit plus the annual depreciation in the following year when payback is completed.

Total Years to Payback—Sum of full and part years.

NetFlix.com, Inc.

In July 2000, Reed Hastings, chairman and CEO of NetFlix.com, Inc., faced a critical decision. Three months earlier, following one of the worst episodes on record for the NASDAQ market, NetFlix had submitted its S-1 filing for its initial public offering (IPO).¹ As a result of the market downturn, many Internet companies had been forced to withdraw their IPOs. Investment bankers indicated to Hastings that NetFlix would need to show positive cash flows within a twelve-month horizon in order to have a successful offering. Hastings knew that NetFlix was at a crucial stage. With revenues doubling every six months, NetFlix was enjoying tremendous success. But continued success depended on the company's ability to sustain triple-digit growth for the foreseeable future. Soon, Hastings would have to decide whether or not to proceed with the company's anticipated IPO.

Hastings asked Barry McCarthy, the chief financial officer, to reevaluate the cash flow requirements of the company's current business plan, to suggest modifications that would improve the company's projected cash flows, and to make a recommendation on whether the company should go forward with its planned offering. As McCarthy reviewed the existing NetFlix business model, he considered possible changes that might allow the company to proceed with its planned IPO and yet sustain the type of future growth that would be necessary for the company to achieve its long-run objectives. McCarthy was acutely aware of the company's current financing need, but he worried about the effect that changes to the business plan might have on the company's current operations.

The Company

NetFlix.com, Inc., was founded in 1997 by Reed Hastings and Marc Randolph. NetFlix operated an Internet-based unlimited rental subscription service for digital video disc (DVD) formatted movies. The DVD provided a new technology for storing and playing movies with image and sound quality exceeding that of traditional videocassettes. A DVD was similar in size to an audio compact disc and was capable of holding an entire feature-length film, as well as additional information such as subtitles in different languages, additional shorter videos about the making of the film or other related subject matter, and information about the actors, director, and producers. With its high quality and additional features, the new DVD technology provided an attractive alternative to

¹After reaching a historical high of 5,048 on March 10, 2000, the NASDAQ Composite Index had fallen 25% to 3,794 by April 18, 2000, the day of the NetFlix S-1 filing.

Professor E. Scott Mayfield prepared this case. HBS cases are developed solely as the basis for class discussion. Cases are not intended to serve as endorsements, sources of primary data, or illustrations of effective or ineffective management.

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traditional videocassettes for the home video market. By combining the superiority of the new DVD technology with the convenience of the Internet, NetFlix provided a new way to select and to rent home movies.

Randolph managed production of the NetFlix web site, including the features, functionality, and content on the site. Randolph believed that consumers were often frustrated in their efforts to select and view movies at traditional video stores because of limited selections and a focus on new release movies. With its unlimited "virtual" shelf space for stocking videos, the NetFlix web site focused on improving the experience of selecting a movie to watch by providing an intelligent interface for browsing, searching, and evaluating potential movies. The NetFlix web site also integrated movies currently showing in theaters by providing the ability to check local listings and show times, as well as the ability to view movie trailers on its web site. In addition, the NetFlix web site kept track of each subscriber's preference for various types of movies and provided an individualized predicted rating for all of the movies on the web site.

Since launching its web site in April 1998, NetFlix had experienced rapid growth. Revenues had grown from \$1.4 million in 1998 to \$5.0 million in 1999. The number of full-time employees increased from 46 in December 1998 to 270 in December 1999. By March 31, 2000, NetFlix had over 120,000 paying subscribers. Typical of most Internet startups, however, NetFlix had not yet earned a profit, reporting net losses of \$11.1 and \$29.8 million in 1998 and 1999, respectively. Exhibit 1 and Exhibit 2 provide annual financial statements for 1998 and 1999. Exhibit 3 provides quarterly operating results for 1999.

The NetFlix business model focused exclusively on the new DVD format technology. Management had four main reasons for focusing on this specific segment of the home video market.

- DVD players were the fastest growing segment of the video player market. Because of the rapid adoption of the new DVD technology, sales were forecast to grow at a 49% compound annual rate over the next five years.² Exhibit 4 provides a comparison of DVD player and videocassette recorder sales during the first five years after their respective introductions.
- Because of their small size, light weight, and durability, DVDs could be distributed to subscribers on a cost effective basis via regular U.S. mail. Including the costs associated with processing the order, McCarthy estimated the round-trip cost of shipping a DVD to a subscriber and back to NetFlix to be about \$1.00.
- In order to promote sales of DVD players, manufacturers were willing to include NetFlix promotional offers with their packaging materials at essentially no cost, which allowed customer acquisition costs to be kept to a minimum. Management had negotiated agreements with most of the leading DVD manufacturers, including Sony, Toshiba, Panasonic, and RCA. These manufacturers accounted for over 90% of the DVD players sold in the United States in 1999.
- Management believed that early adopters of DVD technology were likely to have a computer with an already existing Internet connection and were likely to be willing to conduct commerce over the Internet.

Hastings viewed NetFlix as a combination of a traditional video store, such as Blockbuster or Hollywood Video, and a subscription cable TV service, such as HBO, Cinemax, or Showtime. By paying a single monthly subscription fee ranging from \$15.95 to \$19.95, a NetFlix subscriber could rent an unlimited number of DVDs each

²Paul Kagan Associates, Inc., as cited in NetFlix S-1 filing.

month and could keep a DVD as long as desired.³ Because NetFlix did not impose a specific date on which a DVD was to be returned, subscribers did not have to worry about paying additional fees for videos that were returned late. In order to attract new subscribers to the NetFlix web site, NetFlix distributed coupons for a free month of service with new DVD players. The costs associated with these free months of service to new subscribers made up the majority of sales and marketing expenses. In 1999 alone, NetFlix recorded over \$16.4 million in sales and marketing expense.

Once a subscriber had signed up for the free month of service, the objective was to get the subscriber to convert from free- to paid-status and then to retain that subscriber for as long as possible. In order to study the effect of the subscription fee on conversion and retention rates, management had tested a variety of different price points. Based on analyses of data from these market tests, McCarthy believed that his company's ability to retain subscribers was comparable to that of successful subscription cable services. McCarthy estimated that approximately 70% of new subscribers converted to paid-status and that 40% of subscribers that converted to paid-status continued to subscribe after six months. McCarthy expected retention rates for subscribers that subscribed more than six months to be quite high.

Because the NetFlix business model focused on the acquisition and retention of individual subscribers, McCarthy projected future NetFlix financing requirements using a subscriber model. First, McCarthy modeled the expected cash flows from a newly acquired subscriber, including the subscription fees paid, the expected number of discs rented, the costs associated with shipping and disc acquisition, and any other cash flows that varied directly with the acquisition or loss of an individual subscriber. Second, McCarthy modeled the likelihood that any given subscriber would be retained over the forecast horizon. And last, McCarthy used the projected number of future new subscribers together with the number of existing subscribers to forecast the company's expected aggregate cash flows.

The Marquee Queue

A key aspect of the NetFlix business model was the "Marquee Queue" concept. The "Marquee Queue" allowed a subscriber to have several movies on hand for viewing at all times. A subscriber's queue was simply a list of all the movies that the subscriber had selected, but that had not yet been sent to the subscriber. After logging on to the NetFlix web site, a new subscriber would browse the virtual aisles and select movies that he or she wanted to watch. These movies would be used to build the subscriber's queue. The NetFlix web site made it easy for the subscriber to edit the queue, such that the list could be arranged in the desired order. NetFlix would then ship the DVDs at the top of the queue to the subscriber.

NetFlix allowed a subscriber to have up to four DVDs in his or her possession at one time. Once a subscriber had viewed a movie and returned the DVD to NetFlix, the next DVD in the queue was automatically sent to the subscriber. In this way, a subscriber could always have movies in his or her possession for immediate viewing.

³Since launching its web site, management had tested a variety of different pricing plans. From February 1999 through October 1999, NetFlix generated most of its revenues from individual DVD rentals and associated shipping charges. In September 1999, NetFlix launched its subscription rental service for a fixed monthly fee of \$15.95. Under this plan, subscribers could rent up to four DVDs per month. In February 2000, NetFlix modified its subscription rental service to provide unlimited rentals for a fixed monthly fee of \$19.95. At that time, existing subscribers were migrated to the unlimited rental service at their original fee of \$15.95.

In order to fulfill subscriber requests, NetFlix maintained an extensive DVD library. As of December 1999, the NetFlix DVD library contained approximately 5,800 titles and over 620,000 individual discs. In order to process subscriber orders, NetFlix leased a 58,000 square foot distribution facility capable of processing and shipping over 6 million DVDs per month. During the month of March 2000, NetFlix shipped over 800,000 DVDs to about 155,000 total subscribers.

NetFlix purchased its DVDs on a wholesale basis from distributors. Approximately 20% of the DVDs in the library were allocated to new release titles and the remainder to back catalogue (non-new release) titles. New release titles were generally defined as movies that had been made available to the home video market within the past two months. As of the end of 1999, the net book value of the DVD library was about \$8.7 million. Exhibit 5 provides information on the accounting treatment of the DVD library. For financial reporting purposes, NetFlix depreciated its DVD library over three years. However, because of their digital technology, McCarthy expected the actual DVD library to last an indefinite length of time without any deterioration in quality except for damage resulting from shipping or misuse. For this reason, NetFlix did not sell its older DVDs. Instead, discs naturally migrated into the back catalogue as they aged.

The Personal Movie Finder Service

In addition to providing a “storefront” for renting movies, NetFlix offered individualized movie recommendations as part of its Personal Movie Finder Service. NetFlix asked its subscribers to evaluate the movies they rented using a simple point-and-click scoring system. Using this information, NetFlix constructed a preference profile for each subscriber. These profiles were used to supply a predicted rating for every movie on the NetFlix web site that was unique to each NetFlix subscriber. As more subscribers were added to the database and as existing subscribers rated more movies, NetFlix expected the quality of its movie recommendations to improve.

By providing reliable recommendations for selecting movies, NetFlix sought to develop sufficient brand loyalty to compete effectively against potential future entrants as well as existing video rental retailers. In addition, NetFlix anticipated that the information collected from its subscribers would also be useful to movie studios for promoting movies showing in theaters. According to the Motion Picture Association of America, the industry spent an average of \$21.4 million per movie to market and promote the theatrical release of new feature films. Management believed that their rapidly growing subscriber base and Movie Finder database could provide the industry with an effective means to market movies to a targeted audience on a personalized basis. Finally, as Internet technology developed, NetFlix was hopeful that its technology could be used as a programming guide to Internet delivered video. Through the development of its Personal Movie Finder service and the growth of its subscriber base, NetFlix hoped to become the definitive online intermediary for choosing movies and other video entertainment.

Consolidation and Innovation in the Home Video Market

Analysts estimated that U.S. consumers spent about \$25.6 billion on movie theater tickets and home videos, with home video rentals accounting for about 32% or \$8.3 billion.⁴ Although success at the box office was important to movie studios, profitability often

⁴Paul Kagan Associates, Inc., as cited in NetFlix S-1 filing.

depended on revenues from alternative markets, such as home video, pay-per-view, and television. In 1999, revenues from the home video market were estimated to account for almost 50% of domestic movie studio revenues.⁵

The home video industry was highly fragmented. However, with a 14% decrease in the number of video stores operating in the United States since 1997, the industry was consolidating rapidly.⁶ In 1999, Blockbuster, Inc., was the world's largest video retailer with a 30% revenue share of the home video rental market.⁷ Having almost three times as many domestic stores as its nearest competitor, Blockbuster estimated that roughly 60% of the U.S. population lived within three miles of a Blockbuster store. The typical Blockbuster store carried 4,500 different movie titles, 500 of which were new release titles. In 1999, approximately 78% of Blockbuster domestic rental revenue was from new release movies. Blockbuster also had begun to rent movies in DVD format. In 1999, most Blockbuster stores stocked between 200 and 300 different DVD titles.⁸

Traditionally, movies were made available for distribution in the home video market about two months after the end of their theatrical release. Video rental retailers typically purchased copies of videos from distributors and then rented them to their customers, keeping the revenue generated from the rental and/or sale of the tapes. However, two major innovations were anticipated to have a permanent impact on the way in which the industry distributed movies. They were: (1) revenue sharing and (2) video-on-demand.

Revenue Sharing

With the consolidation of the home video market and the increased importance of the home video to movie studios, revenue sharing agreements between movie studios and major retailers were becoming more common. Under a revenue sharing agreement, a retailer paid a lower price for each videocassette in exchange for sharing a portion of the rental revenue with the movie studio.⁹ Because revenue sharing reduced a retailer's required inventory investment, retailers were willing to stock more copies of each new release title and customers were more likely to find a copy of the movie they wanted to rent. Since implementing revenue sharing in 1997, the typical Blockbuster store carried 60% more movie titles and stocked nearly four times the number of videocassettes.

Video-on-Demand

With the widespread adoption of the Internet, analysts believed that home video would eventually be delivered directly to consumers over high-speed Internet connections. The eventual advent of video-on-demand meant that video retailers had a limited time frame in which to position themselves for this new environment. Although it was generally agreed that such a change would take place, there was less agreement on the length of time it would take for the necessary infrastructure to be put in place or on who would eventually become the conduit for providing home video entertainment.

⁵Paul Kagan Associates, Inc., as cited in Blockbuster 1999 Annual Report

⁶Blockbuster 1999 Annual Report.

⁷Casewriter estimate.

⁸Blockbuster 1999 Annual Report.

⁹In a typical revenue-sharing agreement, a retailer might purchase a new release videocassette for less than \$10 in exchange for returning 40% of the rental revenue generated during the first six months to the movie studio.

Conclusion

Knowing that NetFlix had a limited time frame in which to assemble a "critical mass" of subscribers, McCarthy considered the effect that entering into revenue-sharing agreements with movie studios might have on projected NetFlix cash flows. He also wondered whether the major movie studios that had already signed agreements with Blockbuster would be willing to sign similar agreements with a relatively new Internet startup such as NetFlix. Considering the enormous growth requirements facing NetFlix, McCarthy was concerned that revenue-sharing agreements alone might not free up enough working capital to allow for a successful offering later in the year. McCarthy also considered whether NetFlix could afford to continue offering a free month of service in order to attract potential new subscribers. At the same time, he wondered whether the company could afford not to do so.

EXHIBIT 1 Income Statements for NetFlix.com, Inc. (thousands of dollars)

Source: Company reports.

	<u>Year Ended December 13,</u>	
	<u>1998</u>	<u>1999</u>
Revenues	1,339	5,006
Cost of revenue	<u>1,311</u>	<u>4,373</u>
Gross profit	28	633
Operating expenses:		
Product development	3,857	7,413
Sales and marketing	4,815	16,424
General and administrative	1,358	2,085
Stock-based compensation	<u>1,151</u>	<u>4,742</u>
Total operating expenses	<u>11,181</u>	<u>30,664</u>
Operating loss	<u>(11,153)</u>	<u>(30,031)</u>
Other income (expense)		
Interest and other income, net	114	924
Interest expense, net	<u>(42)</u>	<u>(738)</u>
Net loss	<u>(11,081)</u>	<u>(29,845)</u>

EXHIBIT 2
Balance Sheets for
NetFlix.com, Inc.
(thousands of dollars)

Source: Company reports.

	Year Ended December 31,	
	1998	1999
Assets		
Current assets		
Cash and cash equivalents	1,061	14,198
Short-term investments	—	6,322
Prepays and other current assets	<u>635</u>	<u>720</u>
Total current assets	1,696	21,240
Rental library, net	2,011	8,695
Property and equipment, net	1,062	4,499
Deposits and other assets	<u>80</u>	<u>339</u>
Total assets	<u>4,849</u>	<u>34,773</u>
Liabilities and Shareholders' Equity		
Current liabilities		
Notes payable	1,000	625
Current portion of capital lease obligations	579	571
Accounts payable	3,063	5,334
Accrued liabilities	1,640	3,211
Deferred revenue	<u>118</u>	<u>471</u>
Total current liabilities	6,400	10,212
Capital lease obligations	172	811
Note payable	—	<u>3,959</u>
Total liabilities	6,572	14,982
Mandatorily redeemable conv. pref stock	6,321	51,819
Shareholders equity (deficit):		
Convertible preferred stock	4	4
Common stock	3	7
Additional paid-in capital	8,100	16,087
Deferred stock-based compensation	(4,711)	(6,841)
Accumulated deficit	<u>(11,440)</u>	<u>(41,285)</u>
Total shareholders' equity (deficit)	<u>(8,044)</u>	<u>(32,028)</u>
Total liabilities and shareholders' equity (deficit)	<u>4,849</u>	<u>34,773</u>

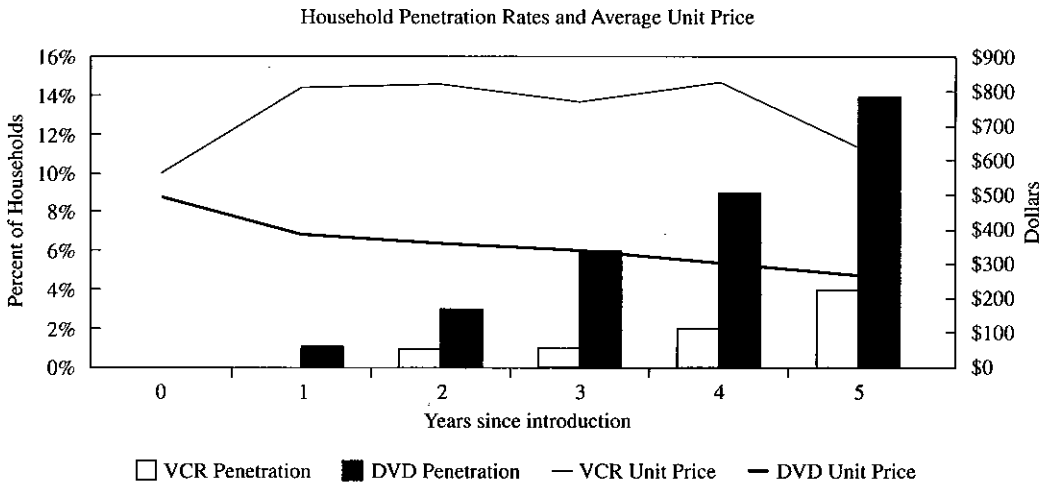
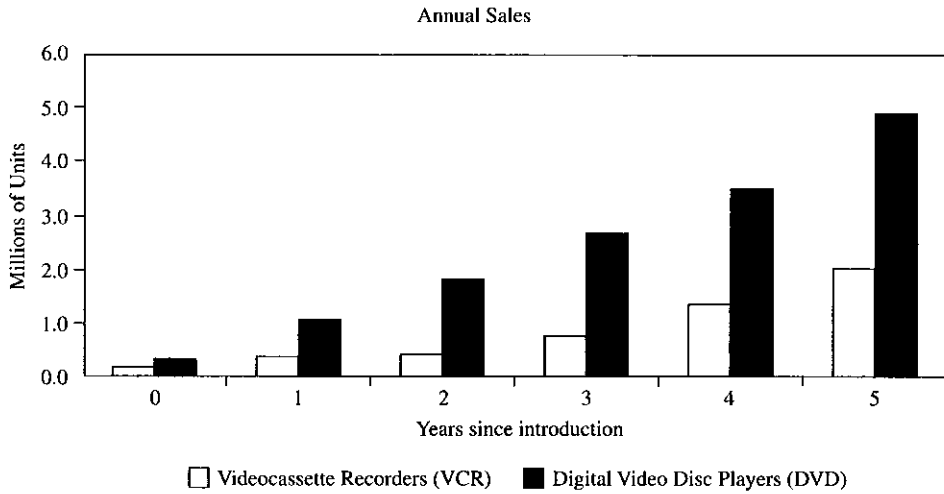
EXHIBIT 3**Quarterly Operating****Results for****NetFlix.com, Inc.****(thousands of dollars)**

Source: Company reports.

	Quarter Ended			
	March 31 1999	June 30 1999	Sept. 30 1999	Dec. 31 1999
Revenues	847	854	1,170	2,135
Cost of revenue	<u>663</u>	<u>670</u>	<u>1,276</u>	<u>1,764</u>
Gross profit	184	184	(106)	371
Operating expenses				
Product development	1,324	1,533	2,106	2,450
Sales and marketing	1,954	2,930	4,994	6,546
General and administrative	532	553	404	596
Stock-based compensation	<u>787</u>	<u>1,203</u>	<u>1,500</u>	<u>1,252</u>
Total operating expenses	<u>4,597</u>	<u>6,219</u>	<u>9,004</u>	<u>10,844</u>
Operating loss	(4,413)	(6,035)	(9,110)	(10,473)
Interest and other income, net	74	112	351	387
Interest expense, net	<u>(165)</u>	<u>(129)</u>	<u>(149)</u>	<u>(295)</u>
Net loss	(4,504)	(6,052)	(8,908)	(10,381)

EXHIBIT 4 Historical and Projected Unit Sales, Average Unit Price, and Household Penetration Rates for Videocassette Recorders and Digital Video Disc Players during the First Five Years after Introduction^a

Source: Consumers Electronics Manufacturer's Association.



^aUnit sales are sales to dealers. Consumer sales are estimated to be about 60% of dealer sales. For DVD players, years 3, 4, and 5 are forecasted values.

**EXHIBIT 5
Rental Library
(thousands of dollars)**

Source: Company reports.

	As of December 31,	
	1998	1999
Rental library	2,186	10,882
Less accumulated depreciation	(175)	(2,187)
Rental library, net	2,011	8,695

A-Rod: Signing the Best Player in Baseball

Introduction

In December of 2000 Alex Rodriguez, perhaps the best young player in baseball, became a free agent. Tom Hicks, the Chairman of Southwest Sports Group; Mike Cramer, the President and COO of Southwest Sports Group; and Doug Melvin, the General Manager of the Texas Rangers, faced a major long-term investment decision. They were on the verge of offering Rodriguez a 10-year contract to leave the Seattle Mariners and play shortstop for the Rangers. Rodriguez became a free agent at the end of the 2000 season and was able to negotiate freely with any of the 30 teams in Major League Baseball. Hicks, Cramer, and Melvin knew that the bidding would be fierce, and believed the competition was willing to offer contracts well over \$100 million. They wanted to offer a contract that would be accepted, but only if it was at a price that was justified financially.

Alex Rodriguez

At the age of 17, Alex Rodriguez became the first overall pick in the 1993 Major League Draft. He broke into Major League Baseball one year later, and quickly developed into one of the game's best players, exhibiting a rare combination of stellar offense and defense. By his third full season in the majors, Rodriguez won a batting title and became just the third man in baseball history to hit 40 home runs and steal 40 bases in the same year. He also set the American League record for home runs by a shortstop.¹ (See Table A.)

TABLE A
Alex Rodriguez Key
Offensive Statistics

Source: www.espn.com
accessed on May 5, 2002

Year	Team	Batting Avg.	Home Runs	RBI	Stolen Bases
1996	Seattle	.358	36	123	15
1997	Seattle	.300	23	84	29
1998	Seattle	.310	42	124	46
1999	Seattle	.285	42	111	21
2000	Seattle	.316	41	132	15

¹Major League Index of Player Pages (ML-IPP)

Professor Randolph B. Cohen and Jason Wallace prepared this case. HBS cases are developed solely as the basis for class discussion. Cases are not intended to serve as endorsements, sources of primary data, or illustrations of effective or ineffective management.

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Aside from his superb playing ability, Rodriguez possessed intangible qualities that made him a crowd favorite. He was young, handsome, articulate, and humble, which, in combination with his Hispanic background, allowed him to have a broad appeal among fans worldwide. At 25 years old in 2000, he was young enough for the team that signed him to have confidence that he would still be in his prime at the end of a lengthy contract. Most important of all, Hicks, Cramer, and Melvin all believed Rodriguez to possess the kind of leadership and desire to win that would make the whole team better.

Major League Baseball

In 2000, Major League Baseball consisted of 30 teams, split between the National and American Leagues. The leagues and their members were parties to a Major League Agreement, which governed matters concerning MLB teams.

Team revenue was derived from three primary sources:

1. *Local revenues* consist of ticket sales, local television, radio and cable rights, ball-park concessions, parking, and team sponsorships.
2. *Central Fund revenues* serve as a receipt and disbursement fund for central transactions that were shared equally by the 30 teams. It primarily consisted of national television contracts and licensing arrangements.
3. *Revenue sharing* transfers a portion of local revenues from high-revenue teams to low-revenue teams.²

Revenue sharing was created as a result of the Collective Bargaining Agreement that became effective on January 1, 1997. The agreement called for each team to contribute a portion of its local revenues, a percentage that peaked at 20% in 2000, to a pool. Once the pool was accumulated, 75% of the proceeds were distributed equally to all teams. The remaining 25% were distributed to teams whose total revenue was below the average revenue for all teams based on the extent to which that team's revenue was below the average.³

MLB teams differed greatly in their local revenue, which made up the vast majority of MLB's total revenue. In 2000, the Montreal Expos had approximately \$13 million of local revenue, versus \$190 million for the New York Yankees (Exhibit 1). Most other professional sports leagues pooled a much larger percentage of television rights and distributed them equally among all the teams. In Major League Baseball, however, most television and radio rights were negotiated and sold locally to each individual team.⁴ Since the 30 Major League teams were located in cities of varying size, the local broadcast revenues that accrued to each team varied a great deal.

From 1996 to 2000, salaries accounted for a little over 50% of total league expenses.⁵ Other expenses for each team included costs for player development (minor league salaries, team expenses, and scouting), transportation, road-meal expenses, salaries for coaches and trainers, player disability insurance, stadium expenses, front office expenses, ticket office and promotion expenses, and other administrative expenses.⁶ Most types of operating expenses are fixed costs that vary little from team to team. But salaries vary tremendously across the teams (Exhibit 1). Higher levels of

²The Report of the Independent Members of the Commissioner's Blue Ribbon Panel, p. 15

³Cleveland Indians 10-K filing, March 31, 1999

⁴Report of the Blue Ribbon Panel, p. 18

⁵Derived from various sources from *Forbes* (April 16, 2001), baseball-almanac.com (accessed on September 6, 2002), and Report of the Blue Ribbon Panel on Baseball Economics (July 2000)

⁶*Baseball and Billions*, Andrew Zimbalist, p. 59

local revenue enabled large media market teams and teams with better stadiums to pay higher salaries and attract the best players. This led to strong on-field performance and further increased fan enthusiasm and hence, local revenues. Under free agency, which began in 1976, star players who improved team quality and attracted fans could successfully demand to be compensated for the revenue they helped generate. The rapid increase in the salaries of top players explained why average player salaries grew much faster than minimum salaries (Exhibit 2).

The Texas Rangers

The history of the Texas Rangers dated to 1971, when the owner of the Washington Senators received approval to move the team to Arlington, Texas, and rename them the Texas Rangers.⁷ The team was part of the American League and played in the four-team West division. From the team's inception in Texas through 1994, they played in Arlington Stadium, which held 42,000 people after a 1976 renovation. In 1994, the team moved into a new 49,200-seat stadium, The Ballpark at Arlington (Exhibit 3). The Rangers played 81 of each season's 162 games at The Ballpark. The stadium cost \$191 million to build and was financed in a public/private partnership between the Rangers and the city of Arlington. \$135 million came from the issuance of municipal bonds with the remainder coming from the sale and lease of luxury suites, loans guaranteed by the Rangers, and the concessions contract.⁸ The Rangers maintained, operated, and kept all revenues from the games held there (other than the revenue to cover the lease payment).⁹

Ownership changed hands several times over the years, including an ownership stint by an investor group that included George W. Bush before he became President. Southwest Sports Group purchased the team in January 1998 for \$250 million. Tom Hicks formed Southwest Sports Group in 1998 as a sports entertainment company for the purpose of holding the Rangers and other sports-related properties. The holdings of Southwest Sports Group included the Dallas Stars of the National Hockey League, the Rangers, Mesquite Championship Rodeo, and one-half stakes in the Frisco Roughriders Minor League Baseball team and the Center Operating Company, which constructed and operated American Airlines Center, the home of the Stars. Southwest Sports was also a joint venture partner with Fox Sports and Colorado Studios in Lone Star Mobile Productions. Mr. Hicks is also Chairman and a founding partner of Hicks, Muse, Tate & Furst, a Dallas-based leveraged-buyout firm.

Mr. Hicks' pursuit of Rodriguez was part of a formula for the Rangers that had been successfully implemented with the Stars. The plan was to spend considerable resources on talent to upgrade the quality of the team. It was likely this would result in short-term losses. Soon, though, a championship caliber team would fill the seats and significantly boost profits and franchise value in the long term. When Hicks bought the Stars for \$84 million in 1995, they were struggling, having finished in fifth place in their division. Hicks and his management team were very aggressive in trading for and signing top-flight players. The team improved dramatically, as they finished first in their division and won the Stanley Cup championship in 1999. They were also able to build American Airlines Center, a state-of-the-art arena outfitted with considerable high-revenue luxury box and club seating. By 2000, the team had tripled revenues and was on well on its way to becoming the top team in the NHL in revenue. This, along with the Stars' very healthy operating profit margins, had led to a tripling of the value of the franchise.

⁷www.rangers.mlb.com accessed on May 5, 2002

⁸www.rangers.mlb.com accessed on May 5, 2002

⁹www.rangers.mlb.com accessed on May 5, 2002

In pursuit of Rodriguez, Mr. Hicks and his team spent a lot of time in the fall of 2000 with Rodriguez and his agent, Boras. Top Stars player Mike Modano showed Rodriguez the town and discussed the organization's commitment to winning. This was not just a contract negotiation; it was an all-out effort to sell Rodriguez on the future of the Rangers. At the end of the recruitment process, the Rangers' management had several issues to consider. First, they had to determine how much to offer Rodriguez. They also needed to determine what incremental benefits Rodriguez had to bring the Rangers in order for the investment to be worthwhile.

Rodriguez and Revenue

When determining how much to offer Rodriguez, the negotiating team needed to form an opinion of the tangible benefits that Rodriguez would bring the franchise. They evaluated how quickly they would see results, and if they could rely upon them every year over the contract life. The most obvious benefit would be increased attendance. Baseball's history had consistently shown that winning teams drew more fans. Baseball experts felt that although most star players would in a normal year add only a game or two to a team's win total, a player of Rodriguez's rare talents could enable a team to win perhaps eight additional games in a typical year. The Rangers drew an average of 35,000 fans per game for the 80 home games of the 2000 season, so the capacity utilization of their stadium was about 71%—there was room in the stadium for the new fans a better team might draw. Recent historical trends had shown that fans, on average, spent \$2.50 on parking and concessions and an additional \$1.80 on merchandise. Average ticket prices were \$18. The extraordinary skill of Rodriguez would also likely increase the Rangers' probability of making the playoffs. Reaching the American League Championship Series could add about \$10 million of incremental revenue and reaching the seventh game of the World Series could add over \$20 million in incremental revenue.

The wide appeal of Rodriguez would also likely make the Rangers more attractive to potential sponsorship partners. Sponsorship revenue for teams with relatively new ballparks could account for 7% to 10% of total local revenue. Rodriguez's presence would also likely increase the team's television and radio audience, but due to long-term fixed-fee deals with local broadcasters, it was not clear that the Rangers would directly benefit from this. It also needed to be kept in mind that the Rangers would not be able to keep all of the incremental revenue that Rodriguez generated. Due to the Rangers' relatively high level of revenue, they were a net payer into Major League Baseball's revenue sharing arrangement laid out in the most recent Collective Bargaining Agreement.

The negotiating team also considered the many intangible benefits that Rodriguez could bring to the Rangers. His signing would demonstrate a commitment to winning and to being a first-class organization. They believed that this would help with future free agent signings and would prevent their own young players from signing with other teams. Rodriguez could add significantly to the visibility of the franchise and enhance their ability to negotiate future projects for the franchise, including a new state-of-the-art spring training facility. They believed that even after Rodriguez retired, his value and presence would still stay with the team. Hicks and Cramer felt that the long-term presence of a legendary player could turn an ordinary franchise into a franchise that was one of a select group of baseball "crown jewels." These franchises, such as the Boston Red Sox and Los Angeles Dodgers, could carry price tags \$100 or \$200 million higher than similar franchises that lacked their prestige and glamour (Exhibit 4). Ultimately Hicks, Cramer, and Melvin believed that the incremental revenue that Rodriguez generated, combined with the intangible benefits, could substantially increase the long-term franchise value of the Rangers.

The Texas Rangers generally used an 8% discount rate for calculating comparable numbers.

The Contract

Hicks, Cramer, Melvin, and their organizations spent hours analyzing how much they could pay Rodriguez. Their latest internal proposal was a 10-year contract that would have a nominal value of \$252 million. If the proposed contract was put forth to Rodriguez and accepted, it would break new ground for its size. The next highest paid player was Kevin Brown, whose annual salary averaged \$15 million as a pitcher for the Los Angeles Dodgers. The proposed contract would also dwarf Rodriguez's prior contract with the Mariners that had paid him less than \$4 million a year. The size of the contract would be slightly larger than the \$250 million that Southwest Sports Group paid for the entire franchise in 1998. Large as it was, the Rangers felt their offer was appropriate under the circumstances. They had learned that offers were outstanding to Yankees shortstop Derek Jeter and to slugger Manny Ramirez for over \$18 million per season, and that hard-hitting Carlos Delgado had been offered in excess of \$17 million annually. While these were all excellent players, the Rangers felt Rodriguez was considerably more valuable and would cost commensurately more. Additionally, it was important to note that because Rodriguez was so young, his abilities justified a 10-year contract beginning in 2001. The Rangers' fans would know that their star player was committed to the team for the long haul, and this in turn would likely lead to increased loyalty and enthusiasm among the fans.

The contract would have two basic pieces, a base salary and a signing bonus.¹⁰ The signing bonus was to be \$10 million, paid evenly over the first five years of the contract. The contract called for a portion of each year's compensation to be deferred for 10 years at a 3% interest rate. The payout schedule can be seen in Exhibit 5. The annual salary and prorated signing bonus would not be the only expenses related to the contract. Since the proposed contract was guaranteed for 10 years, it must be paid regardless of Rodriguez's performance or time out for injury. The Rangers planned to purchase contract insurance in the event that Rodriguez had a career-ending injury. Contract insurance for a contract of this magnitude would require a premium each year of approximately 10% of that year's contract value.

The negotiating team also believed that the right way to examine the financial attractiveness of the contract was only to consider that portion of his salary and insurance premium that would compensate for the extra tangible and intangible benefits he brought to the team. The Rangers had to have a shortstop, and the price of an average shortstop was increasing every year; so they believed the true "cost" of his contract was only the incremental amount that was meant to be payment for the "Rodriguez factor." The average salary of all the starting shortstops in Major League Baseball for 2000 was a little over \$3 million.¹¹ Nomar Garciaparra, the fine Red Sox shortstop, would be paid \$7.25 million for next season.

Now it was time for a decision. Additional team statistics are available in Exhibit 6. If they put forth a contract for \$252 million, they were confident it would be accepted. Could they financially justify that high a price? Should they offer less? And if they did, how much lower could they go before another team outbid them?

¹⁰The contract would also include nominal bonuses for milestones such as All Star appearances and MVP awards.

¹¹CBS Sportsline.com accessed on May 5, 2002

EXHIBIT 1
Fiscal Year 2000

Source: Adapted from *Forbes* (April 16, 2001), baseball-almanac.com (accessed on September 6, 2002), and Report of the Blue Ribbon Panel on Baseball Economics (July 2000)

Team	Total Revenue	Local Revenue %	Player Payroll
New York Yankees	\$192,400,000	98.9%	\$92,538,260
New York Mets	\$162,000,000	94.1%	\$79,509,776
Atlanta Braves	\$145,500,000	92.9%	\$84,537,836
Cleveland Indians	\$142,900,000	94.2%	\$75,880,971
San Francisco Giants	\$138,800,000	69.8%	\$53,737,826
Seattle Mariners	\$138,300,000	84.7%	\$58,915,000
Los Angeles Dodgers	\$131,300,000	88.9%	\$88,124,286
Texas Rangers	\$126,500,000	87.4%	\$70,795,921
Boston Red Sox	\$125,700,000	89.7%	\$77,940,333
Baltimore Orioles	\$124,000,000	91.8%	\$81,447,435
Houston Astros	\$122,200,000	72.3%	\$51,289,111
Detroit Tigers	\$120,800,000	66.0%	\$58,265,167
Colorado Rockies	\$119,100,000	89.8%	\$61,111,190
Chicago Cubs	\$112,400,000	87.1%	\$60,539,333
St. Louis Cardinals	\$110,500,000	84.7%	\$61,453,863
Arizona Diamondbacks	\$109,100,000	89.9%	\$81,027,333
Anaheim Angels	\$94,400,000	72.7%	\$51,464,167
Chicago White Sox	\$92,600,000	71.3%	\$31,133,500
San Diego Padres	\$84,000,000	72.3%	\$54,821,000
Tampa Bay Devil Rays	\$81,300,000	86.6%	\$62,765,129
Toronto Blue Jays	\$80,300,000	68.2%	\$46,238,333
Philadelphia Phillies	\$79,200,000	66.8%	\$47,308,000
Cincinnati Reds	\$77,800,000	58.4%	\$46,867,200
Oakland Athletics	\$74,700,000	53.9%	\$31,971,333
Kansas City Royals	\$72,600,000	53.8%	\$23,433,000
Pittsburgh Pirates	\$70,400,000	51.7%	\$28,928,333
Milwaukee Brewers	\$69,600,000	54.8%	\$36,505,333
Florida Marlins	\$67,300,000	60.5%	\$20,072,000
Minnesota Twins	\$58,000,000	33.9%	\$16,519,500
Montreal Expos	\$53,900,000	24.5%	\$34,807,333

Note: Local revenue % are as of fiscal year 1999

EXHIBIT 2
Major League
Baseball Player
Salary Information

Source: *Charleston Gazette*, 13
 December 2001

Season	Minimum Salary	Average Salary
2000	\$200,000	\$1,895,630
1999	\$200,000	\$1,611,166
1998	\$170,000	\$1,398,831
1997	\$150,000	\$1,336,609
1996	\$122,667	\$1,119,981
1995	\$109,000	\$1,110,766
1994	\$109,000	\$1,168,263
1993	\$109,000	\$1,076,089
1992	\$109,000	\$1,028,667
1991	\$100,000	\$851,492
1990	\$100,000	\$597,537
1989	\$68,000	\$497,254
1988	\$62,500	\$438,729
1987	\$62,500	\$412,454
1986	\$60,000	\$412,520
1985	\$60,000	\$371,571
1984	\$40,000	\$329,408
1983	\$35,000	\$289,194
1982	\$33,500	\$241,497
1981	\$32,500	\$185,651
1980	\$30,000	\$143,756
1979	\$21,000	\$113,558
1978	\$21,000	\$99,876
1977	\$19,000	\$76,066
1976	\$19,000	\$51,501
1975	\$16,000	\$44,676
1974	\$15,000	\$40,839

EXHIBIT 3
Texas Rangers Home
Attendance
Information

Source: www.rangers.com.
Siegler.net accessed on May 5,
 2002 Note: The 1994 and 1995
 seasons were shortened by a
 players' strike

Year	Games	Total Attendance	Average	Capacity
1993	79	2,244,616	28,413	42,000
1994	62	2,503,198	40,374	49,200
1995	72	1,985,910	27,582	49,200
1996	80	2,889,020	36,113	49,200
1997	80	2,945,244	36,816	49,200
1998	81	2,927,409	36,141	49,200
1999	80	2,771,469	34,643	49,200
2000	80	2,800,147	35,002	49,200

EXHIBIT 4
Estimated Franchise
Values
Source: *Forbes* (April 16, 2001)

Team	Value	2000 Revenue	Multiple
New York Yankees	\$635,000,000	\$192,400,000	3.3x
New York Mets	\$454,000,000	\$162,000,000	2.8x
Atlanta Braves	\$407,000,000	\$145,500,000	2.8x
Los Angeles Dodgers	\$381,000,000	\$131,300,000	2.9x
Cleveland Indians	\$372,000,000	\$142,900,000	2.6x
Texas Rangers	\$342,000,000	\$126,500,000	2.7x
Boston Red Sox	\$339,000,000	\$125,700,000	2.7x
Baltimore Orioles	\$335,000,000	\$124,000,000	2.7x
Colorado Rockies	\$334,000,000	\$119,100,000	2.8x
San Francisco Giants	\$333,000,000	\$138,800,000	2.4x
Seattle Mariners	\$332,000,000	\$138,300,000	2.4x
Houston Astros	\$318,000,000	\$122,200,000	2.6x
Detroit Tigers	\$290,000,000	\$120,800,000	2.4x
Chicago Cubs	\$247,000,000	\$112,400,000	2.2x
Arizona Diamondbacks	\$245,000,000	\$109,100,000	2.2x
St. Louis Cardinals	\$243,000,000	\$110,500,000	2.2x
Chicago White Sox	\$213,000,000	\$92,600,000	2.3x
Pittsburgh Pirates	\$211,000,000	\$70,400,000	3.0x
Milwaukee Brewers	\$209,000,000	\$69,600,000	3.0x
Anaheim Angels	\$198,000,000	\$94,400,000	2.1x
Cincinnati Reds	\$187,000,000	\$77,800,000	2.4x
San Diego Padres	\$176,000,000	\$84,000,000	2.1x
Toronto Blue Jays	\$161,000,000	\$80,300,000	2.0x
Philadelphia Phillies	\$158,000,000	\$79,200,000	2.0x
Tampa Bay Devil Rays	\$150,000,000	\$81,300,000	1.8x
Oakland Athletics	\$149,000,000	\$74,700,000	2.0x
Kansas City Royals	\$138,000,000	\$72,600,000	1.9x
Florida Marlins	\$128,000,000	\$67,300,000	1.9x
Minnesota Twins	\$99,000,000	\$58,000,000	1.7x
Montreal Expos	\$92,000,000	\$53,900,000	1.7x

Note: Value is the value of the team, without deduction for debt, other than stadium debt.

EXHIBIT 5
Rodriguez Proposed
Contract
Source: <http://rangers.siegler.net/roster/rodriguez.html> accessed on May 5, 2002

Year	Base Salary	Signing Bonus	Amount Deferred
2001	\$21 million	\$2 million	\$5 million in 2011
2002	\$21 million	\$2 million	\$4 million in 2012
2003	\$21 million	\$2 million	\$3 million in 2013
2004	\$21 million	\$2 million	\$3 million in 2014
2005	\$25 million	\$2 million	\$4 million in 2015
2006	\$25 million		\$4 million in 2016
2007	\$27 million		\$4 million in 2017
2008	\$27 million		\$3 million in 2018
2009	\$27 million		\$3 million in 2019
2010	\$27 million		\$3 million in 2020

EXHIBIT 6 Team Statistics

Sources: Adapted from Baseballstats.net (accessed on May 5, 2002), baseball-almanac.com (accessed on September 6, 2002), and U.S. Census Bureau (populations between 1990 and 2000 are interpolated)

Team	1990			
	Attendance	Player Payroll	Population	Wins
Anaheim Angels	2,555,688	\$21,405,390	14,531,529	80
Atlanta Braves	980,129	\$11,429,334	2,959,500	65
Baltimore Orioles	2,415,189	\$ 7,982,084	6,726,395	76
Boston Red Sox	2,528,986	\$21,968,333	5,455,403	88
Chicago Cubs	2,243,791	\$13,768,500	8,239,820	77
Chicago White Sox	2,002,357	\$10,461,000	8,239,820	94
Cincinnati Reds	2,400,892	\$15,519,166	1,817,569	91
Cleveland Indians	1,225,240	\$14,595,000	2,859,644	77
Detroit Tigers	1,495,785	\$18,170,167	5,187,171	79
Houston Astros	1,310,927	\$17,313,000	3,731,029	75
Kansas City Royals	2,244,956	\$22,046,282	1,582,874	75
Los Angeles Dodgers	3,002,396	\$20,948,461	14,531,529	86
Milwaukee Brewers	1,752,900	\$18,277,000	1,607,183	74
Minnesota Twins	1,751,584	\$13,872,300	2,538,776	74
Montreal Expos	1,373,087	\$21,907,668	3,208,970	85
New York Mets	2,732,745	\$21,172,073	19,565,441	91
New York Yankees	2,006,436	\$20,215,750	19,565,441	67
Oakland Athletics	2,900,217	\$23,092,000	6,277,525	103
Philadelphia Phillies	1,992,484	\$13,510,167	5,893,019	77
Pittsburgh Pirates	2,049,908	\$14,749,000	2,394,811	95
San Diego Padres	1,856,396	\$16,598,334	2,498,016	75
San Francisco Giants	1,975,528	\$21,940,709	6,277,525	85
Seattle Mariners	1,509,727	\$12,288,167	2,970,300	77
St. Louis Cardinals	2,573,225	\$19,577,000	2,492,348	70
Texas Rangers	2,057,911	\$12,672,333	4,037,282	83
Toronto Blue Jays	3,885,284	\$17,019,001	3,898,933	86

Team	1991			
	Attendance	Player Payroll	Population	Wins
Anaheim Angels	2,416,236	\$31,782,501	14,715,741	81
Atlanta Braves	2,140,217	\$18,923,500	3,074,770	94
Baltimore Orioles	2,552,753	\$14,627,334	6,814,563	67
Boston Red Sox	2,562,435	\$32,767,500	5,491,773	84
Chicago Cubs	2,314,250	\$26,813,120	8,331,592	77
Chicago White Sox	2,934,154	\$16,730,437	8,331,592	87
Cincinnati Reds	2,372,377	\$25,369,166	1,833,732	74
Cleveland Indians	1,051,863	\$18,070,000	2,868,263	57
Detroit Tigers	1,641,661	\$23,736,334	5,214,097	84
Houston Astros	1,196,152	\$11,156,000	3,824,883	65
Kansas City Royals	2,161,537	\$28,122,662	1,602,193	82
Los Angeles Dodgers	3,348,170	\$32,916,664	14,715,741	93
Milwaukee Brewers	1,478,729	\$24,398,000	1,615,422	83
Minnesota Twins	2,293,842	\$22,331,000	2,581,779	95
Montreal Expos	934,742	\$20,208,500	3,231,923	71
New York Mets	2,284,484	\$32,590,002	19,728,883	77
New York Yankees	1,863,733	\$27,615,835	19,728,883	71
Oakland Athletics	2,713,493	\$36,332,500	6,353,709	84
Philadelphia Phillies	2,050,012	\$20,073,332	5,922,563	78
Pittsburgh Pirates	2,065,302	\$23,064,667	2,391,199	98
San Diego Padres	1,804,289	\$22,585,001	2,529,598	84
San Francisco Giants	1,737,478	\$30,839,333	6,353,709	75
Seattle Mariners	2,147,905	\$16,126,834	3,028,746	83
St. Louis Cardinals	2,448,699	\$21,435,001	2,503,474	84
Texas Rangers	2,297,720	\$19,184,500	4,155,734	85
Toronto Blue Jays	4,001,527	\$27,538,751	3,977,070	91

EXHIBIT 6 (Continued)

1992				
Team	Attendance	Player Payroll	Population	Wins
Anaheim Angels	2,065,444	\$32,584,670	14,899,952	72
Atlanta Braves	3,077,400	\$35,853,321	3,190,040	98
Baltimore Orioles	3,567,819	\$23,963,719	6,902,730	89
Boston Red Sox	2,468,574	\$42,138,665	5,528,142	73
Chicago Cubs	2,126,720	\$32,374,664	8,423,364	78
Chicago White Sox	2,681,156	\$30,180,333	8,423,364	86
Cincinnati Reds	2,315,946	\$35,429,559	1,849,896	90
Cleveland Indians	1,224,094	\$9,323,339	2,876,881	76
Detroit Tigers	1,423,963	\$28,222,167	5,241,022	75
Houston Astros	1,211,412	\$14,916,500	3,918,737	81
Kansas City Royals	1,867,689	\$31,968,586	1,621,512	72
Los Angeles Dodgers	2,473,266	\$42,050,166	14,899,952	63
Milwaukee Brewers	1,857,351	\$29,953,168	1,623,661	92
Minnesota Twins	2,482,428	\$27,272,834	2,624,782	90
Montreal Expos	1,669,127	\$16,050,854	3,254,876	87
New York Mets	1,779,534	\$44,009,334	19,892,326	72
New York Yankees	1,748,737	\$34,902,292	19,892,326	76
Oakland Athletics	2,494,160	\$48,029,667	6,429,892	96
Philadelphia Phillies	1,927,448	\$25,451,334	5,952,108	70
Pittsburgh Pirates	1,829,395	\$36,228,647	2,387,588	96
San Diego Padres	1,721,406	\$27,689,604	2,561,179	82
San Francisco Giants	1,560,998	\$33,240,600	6,429,892	72
Seattle Mariners	1,651,367	\$26,373,334	3,087,192	64
St. Louis Cardinals	2,418,483	\$28,714,502	2,514,600	83
Texas Rangers	2,198,231	\$26,228,500	4,274,186	77
Toronto Blue Jays	4,028,318	\$49,427,166	4,055,206	96
1993				
Anaheim Angels	2,057,460	\$27,444,899	15,084,164	71
Atlanta Braves	3,884,720	\$47,206,416	3,305,309	104
Baltimore Orioles	3,644,965	\$29,253,066	6,990,898	85
Boston Red Sox	2,422,021	\$46,164,788	5,564,512	80
Chicago Cubs	2,653,763	\$36,005,976	8,515,136	84
Chicago White Sox	2,581,091	\$42,115,723	8,515,136	94
Cincinnati Reds	2,453,232	\$41,641,387	1,866,059	73
Cleveland Indians	2,177,908	\$16,690,997	2,885,500	76
Detroit Tigers	1,971,421	\$38,038,498	5,267,948	85
Houston Astros	2,084,618	\$30,130,233	4,012,592	85
Kansas City Royals	1,934,578	\$40,164,878	1,640,830	84
Los Angeles Dodgers	3,170,393	\$33,529,000	15,084,164	81
Milwaukee Brewers	1,688,080	\$25,635,387	1,631,900	69
Minnesota Twins	2,048,673	\$27,127,768	2,667,785	71
Montreal Expos	1,641,437	\$17,622,040	3,277,829	94
New York Mets	1,873,183	\$40,822,667	20,055,768	59
New York Yankees	2,416,942	\$46,588,791	20,055,768	88
Oakland Athletics	2,035,025	\$35,351,334	6,506,076	68
Philadelphia Phillies	3,137,674	\$28,695,858	5,981,652	97
Pittsburgh Pirates	1,650,593	\$24,318,667	2,383,976	75
San Diego Padres	1,375,432	\$12,842,333	2,592,761	61
San Francisco Giants	2,606,354	\$36,342,322	6,506,076	103
Seattle Mariners	2,052,638	\$33,311,042	3,145,638	82
St. Louis Cardinals	2,844,977	\$24,190,667	2,525,726	87
Texas Rangers	2,244,616	\$35,959,690	4,392,638	86
Toronto Blue Jays	4,057,947	\$51,935,034	4,133,343	95

EXHIBIT 6 (Continued)

Team	1994			
	Attendance	Player Payroll	Population	Wins
Anaheim Angels	1,512,622	\$24,528,385	15,268,375	47
Atlanta Braves	2,539,240	\$44,100,972	3,420,579	68
Baltimore Orioles	2,535,359	\$38,711,487	7,079,065	63
Boston Red Sox	1,775,818	\$36,337,937	5,600,882	54
Chicago Cubs	1,845,208	\$32,546,333	8,606,908	49
Chicago White Sox	1,697,398	\$40,144,836	8,606,908	67
Cincinnati Reds	1,897,681	\$41,458,052	1,882,222	66
Cleveland Indians	1,995,174	\$31,705,667	2,894,119	66
Detroit Tigers	1,184,783	\$41,118,509	5,294,874	53
Houston Astros	1,561,136	\$33,092,500	4,106,446	66
Kansas City Royals	1,400,494	\$40,667,375	1,660,149	64
Los Angeles Dodgers	2,279,355	\$38,837,526	15,268,375	58
Milwaukee Brewers	1,268,399	\$24,786,857	1,640,139	53
Minnesota Twins	1,398,565	\$25,053,237	2,710,788	53
Montreal Expos	1,276,250	\$18,771,000	3,300,782	74
New York Mets	1,151,471	\$30,903,583	20,219,211	55
New York Yankees	1,675,556	\$47,512,342	20,219,211	70
Oakland Athletics	1,242,692	\$34,574,000	6,582,260	51
Philadelphia Phillies	2,290,971	\$31,143,000	6,011,197	54
Pittsburgh Pirates	1,222,520	\$21,503,250	2,380,365	53
San Diego Padres	953,857	\$13,774,268	2,624,343	47
San Francisco Giants	1,704,608	\$42,260,538	6,582,260	55
Seattle Mariners	1,104,206	\$28,463,110	3,204,084	49
St. Louis Cardinals	1,866,544	\$29,622,052	2,536,852	53
Texas Rangers	2,503,198	\$32,399,097	4,511,090	52
Toronto Blue Jays	2,907,933	\$42,265,168	4,211,480	55
1995				
Anaheim Angels	1,748,680	\$34,702,577	15,452,587	78
Atlanta Braves	2,561,831	\$47,023,444	3,535,849	90
Baltimore Orioles	3,098,475	\$48,739,636	7,167,233	71
Boston Red Sox	2,164,410	\$38,157,750	5,637,252	86
Chicago Cubs	1,918,265	\$36,797,696	8,698,680	73
Chicago White Sox	1,609,773	\$40,750,782	8,698,680	68
Cincinnati Reds	1,837,649	\$47,739,109	1,898,386	85
Cleveland Indians	2,842,745	\$40,180,750	2,902,738	100
Detroit Tigers	1,180,979	\$28,663,667	5,321,800	60
Houston Astros	1,363,801	\$33,614,668	4,200,300	76
Kansas City Royals	1,233,530	\$31,181,334	1,679,468	70
Los Angeles Dodgers	2,766,251	\$36,725,956	15,452,587	78
Milwaukee Brewers	1,087,560	\$17,407,384	1,648,378	65
Minnesota Twins	1,057,667	\$15,362,750	2,753,791	56
Montreal Expos	1,309,618	\$13,116,557	3,323,735	66
New York Mets	1,273,183	\$13,097,944	20,382,653	69
New York Yankees	1,705,263	\$58,165,252	20,382,653	79
Oakland Athletics	1,174,310	\$33,372,722	6,658,444	67
Philadelphia Phillies	2,043,598	\$30,333,350	6,040,741	69
Pittsburgh Pirates	905,517	\$17,665,833	2,376,753	58
San Diego Padres	1,041,805	\$25,008,834	2,655,925	70
San Francisco Giants	1,241,500	\$33,738,683	6,658,444	67
Seattle Mariners	1,643,203	\$37,984,610	3,262,530	79
St. Louis Cardinals	1,756,727	\$28,679,250	2,547,978	62
Texas Rangers	1,985,910	\$35,888,726	4,629,542	74
Toronto Blue Jays	2,826,483	\$42,233,500	4,289,617	56

EXHIBIT 6 (Continued)

1996				
Team	Attendance	Player Payroll	Population	Wins
Anaheim Angels	1,820,521	\$25,140,142	15,636,799	70
Atlanta Braves	2,901,242	\$53,797,000	3,651,119	96
Baltimore Orioles	3,646,950	\$55,127,855	7,255,400	88
Boston Red Sox	2,315,231	\$38,516,402	5,673,621	85
Chicago Cubs	2,219,110	\$32,605,000	8,790,452	76
Chicago White Sox	1,676,403	\$44,827,833	8,790,452	85
Cincinnati Reds	1,861,428	\$43,696,946	1,914,549	81
Cleveland Indians	3,318,174	\$47,686,907	2,911,356	99
Detroit Tigers	1,168,610	\$17,955,500	5,348,725	53
Houston Astros	1,975,888	\$29,613,000	4,294,154	82
Kansas City Royals	1,435,997	\$19,980,250	1,698,787	75
Los Angeles Dodgers	3,188,454	\$37,313,500	15,636,799	90
Milwaukee Brewers	1,327,155	\$11,701,000	1,656,616	80
Minnesota Twins	1,437,352	\$21,254,000	2,796,794	78
Montreal Expos	1,616,709	\$17,264,500	3,346,688	88
New York Mets	1,588,323	\$24,890,167	20,546,095	71
New York Yankees	2,250,877	\$61,511,870	20,546,095	92
Oakland Athletics	1,148,380	\$22,524,093	6,734,627	78
Philadelphia Phillies	1,801,677	\$30,403,458	6,070,285	67
Pittsburgh Pirates	1,332,150	\$16,994,180	2,373,141	73
San Diego Padres	2,187,886	\$33,376,026	2,687,506	91
San Francisco Giants	1,413,922	\$34,646,793	6,734,627	68
Seattle Mariners	2,723,850	\$43,131,001	3,320,976	85
St. Louis Cardinals	2,654,718	\$38,730,666	2,559,103	88
Texas Rangers	2,889,020	\$41,330,028	4,747,993	90
Toronto Blue Jays	2,559,573	\$28,778,577	4,367,753	74
1997				
Anaheim Angels	1,767,330	\$46,684,364	15,821,010	84
Atlanta Braves	3,464,488	\$53,111,000	3,766,389	101
Baltimore Orioles	3,711,132	\$64,611,399	7,343,568	98
Boston Red Sox	2,226,136	\$40,611,351	5,709,991	78
Chicago Cubs	2,190,308	\$30,791,000	8,882,224	68
Chicago White Sox	1,864,782	\$41,849,500	8,882,224	80
Cincinnati Reds	1,785,788	\$38,206,000	1,930,712	76
Cleveland Indians	3,404,750	\$58,865,056	2,919,975	86
Detroit Tigers	1,365,157	\$20,985,500	5,375,651	79
Houston Astros	2,046,781	\$34,932,500	4,388,008	84
Kansas City Royals	1,517,638	\$33,868,149	1,718,106	67
Los Angeles Dodgers	3,319,504	\$48,472,321	15,821,010	88
Milwaukee Brewers	1,444,027	\$26,564,840	1,664,855	78
Minnesota Twins	1,411,064	\$32,197,500	2,839,797	68
Montreal Expos	1,497,609	\$18,010,500	3,369,641	78
New York Mets	1,766,174	\$34,985,330	20,709,538	88
New York Yankees	2,580,325	\$73,389,577	20,709,538	96
Oakland Athletics	1,264,218	\$7,879,889	6,810,811	65
Philadelphia Phillies	1,490,638	\$31,102,439	6,099,830	68
Pittsburgh Pirates	1,657,022	\$15,124,166	2,369,530	79
San Diego Padres	2,089,333	\$32,765,172	2,719,088	76
San Francisco Giants	1,690,869	\$43,067,378	6,810,811	90
Seattle Mariners	3,192,237	\$46,298,970	3,379,422	90
St. Louis Cardinals	2,634,014	\$50,224,167	2,570,229	73
Texas Rangers	2,945,228	\$44,591,013	4,866,445	77
Toronto Blue Jays	2,589,297	\$48,964,833	4,445,890	76

EXHIBIT 6 (Continued)

Team	1998			
	Attendance	Player Payroll	Population	Wins
Anaheim Angels	2,519,280	\$54,190,500	16,005,222	85
Atlanta Braves	3,360,860	\$61,840,254	3,881,658	106
Baltimore Orioles	3,684,650	\$77,320,921	7,431,735	79
Boston Red Sox	2,314,704	\$59,547,000	5,746,361	92
Chicago Cubs	2,623,194	\$51,061,000	8,973,996	90
Chicago White Sox	1,391,146	\$37,855,000	8,973,996	80
Cincinnati Reds	1,793,649	\$20,707,333	1,946,875	77
Cleveland Indians	3,467,299	\$56,843,441	2,928,594	89
Detroit Tigers	1,409,391	\$23,318,980	5,402,577	65
Houston Astros	2,458,451	\$48,354,000	4,481,863	102
Kansas City Royals	1,494,875	\$35,610,000	1,737,424	72
Los Angeles Dodgers	3,089,222	\$60,731,667	16,005,222	83
Milwaukee Brewers	1,811,593	\$37,254,036	1,673,094	74
Minnesota Twins	1,165,976	\$22,027,500	2,882,800	70
Montreal Expos	914,909	\$8,317,500	3,392,594	65
New York Mets	2,287,948	\$58,710,665	20,872,980	88
New York Yankees	2,955,193	\$73,963,698	20,872,980	114
Oakland Athletics	1,232,343	\$18,585,114	6,886,995	74
Philadelphia Phillies	1,715,722	\$29,922,500	6,129,374	75
Pittsburgh Pirates	1,560,950	\$13,695,000	2,365,918	69
San Diego Padres	2,555,874	\$53,081,166	2,750,670	98
San Francisco Giants	1,925,364	\$48,339,715	6,886,995	89
Seattle Mariners	2,651,511	\$44,845,014	3,437,868	76
St. Louis Cardinals	3,195,691	\$47,608,948	2,581,355	83
Texas Rangers	2,927,399	\$62,755,368	4,984,897	88
Toronto Blue Jays	2,454,303	\$37,618,500	4,524,027	88
1999				
Anaheim Angels	2,253,040	\$53,345,297	16,189,433	70
Atlanta Braves	3,284,901	\$79,831,599	3,996,928	103
Baltimore Orioles	3,432,099	\$78,948,641	7,519,903	78
Boston Red Sox	2,446,277	\$75,260,656	5,782,730	94
Chicago Cubs	2,813,854	\$55,544,648	9,065,768	67
Chicago White Sox	1,349,151	\$24,535,000	9,065,768	75
Cincinnati Reds	2,061,324	\$38,891,007	1,963,039	96
Cleveland Indians	3,468,436	\$73,341,692	2,937,212	97
Detroit Tigers	2,026,491	\$36,979,666	5,429,502	69
Houston Astros	2,706,017	\$58,064,000	4,575,717	97
Kansas City Royals	1,506,068	\$17,442,000	1,756,743	64
Los Angeles Dodgers	3,098,042	\$76,607,247	16,189,433	77
Milwaukee Brewers	1,701,790	\$43,576,575	1,681,333	74
Minnesota Twins	1,202,829	\$15,795,000	2,925,803	63
Montreal Expos	772,737	\$18,140,250	3,415,547	68
New York Mets	2,726,008	\$72,503,334	21,036,423	96
New York Yankees	3,293,659	\$92,440,955	21,036,423	98
Oakland Athletics	1,434,632	\$24,562,547	6,963,178	87
Philadelphia Phillies	1,825,337	\$32,116,500	6,158,919	77
Pittsburgh Pirates	1,638,023	\$24,532,420	2,362,307	78
San Diego Padres	2,523,538	\$46,487,179	2,782,251	74
San Francisco Giants	2,078,365	\$46,016,934	6,963,178	86
Seattle Mariners	2,915,908	\$47,001,254	3,496,314	79
St. Louis Cardinals	3,235,833	\$46,337,129	2,592,481	75
Texas Rangers	2,774,501	\$81,676,598	5,103,349	95
Toronto Blue Jays	2,163,486	\$49,972,300	4,602,163	84

EXHIBIT 6 (Continued)

Team	2000			
	Attendance	Player Payroll	Population	Wins
Anaheim Angels	2,066,982	\$51,464,167	16,373,645	82
Atlanta Braves	3,234,304	\$84,537,836	4,112,198	95
Baltimore Orioles	3,153,397	\$81,447,435	7,608,070	74
Boston Red Sox	2,625,333	\$77,940,333	5,819,100	85
Chicago Cubs	2,789,511	\$60,539,333	9,157,540	65
Chicago White Sox	1,947,799	\$31,133,500	9,157,540	95
Cincinnati Reds	2,577,371	\$46,867,200	1,979,202	85
Cleveland Indians	3,456,278	\$75,880,971	2,945,831	90
Detroit Tigers	2,438,617	\$58,265,167	5,456,428	79
Houston Astros	3,020,581	\$51,289,111	4,669,571	72
Kansas City Royals	1,564,847	\$23,433,000	1,776,062	77
Los Angeles Dodgers	2,880,242	\$88,124,286	16,373,645	86
Milwaukee Brewers	1,573,621	\$36,505,333	1,689,572	73
Minnesota Twins	1,000,760	\$16,519,500	2,968,806	69
Montreal Expos	926,272	\$34,807,333	3,438,500	67
New York Mets	2,820,530	\$79,509,776	21,199,865	94
New York Yankees	3,227,657	\$92,538,260	21,199,865	87
Oakland Athletics	1,728,885	\$31,971,333	7,039,362	91
Philadelphia Phillies	1,612,769	\$47,308,000	6,188,463	65
Pittsburgh Pirates	1,748,908	\$28,928,333	2,358,695	69
San Diego Padres	2,423,149	\$54,821,000	2,813,833	76
San Francisco Giants	3,318,800	\$53,737,826	7,039,362	97
Seattle Mariners	3,148,317	\$58,915,000	3,554,760	91
St. Louis Cardinals	3,336,493	\$61,453,863	2,603,607	95
Texas Rangers	2,800,075	\$70,795,921	5,221,801	71
Toronto Blue Jays	1,819,919	\$46,238,333	4,680,300	83

Note: Colorado, Florida, Tampa Bay, and Arizona are not included as they were not in existence for the whole time period.

Ocean Carriers

In January 2001, Mary Linn, Vice President of Finance for Ocean Carriers, a shipping company with offices in New York and Hong Kong, was evaluating a proposed lease of a ship for a three-year period, beginning in early 2003. The customer was eager to finalize the contract to meet his own commitments and offered very attractive terms. No ship in Ocean Carrier's current fleet met the customer's requirements. Linn, therefore, had to decide whether Ocean Carriers should immediately commission a new capesize carrier that would be completed two years hence and could be leased to the customer.

Ship Operations

Ocean Carriers Inc. owned and operated capesize dry bulk carriers that mainly carried iron ore worldwide. This type of vessel ranged in size from 80,000 deadweight tons to 210,000 deadweight tons of cargo carrying capacity. Capesize carriers were too large to transit the Panama Canal and therefore had to sail around Cape Horn to travel between the Atlantic and Pacific Oceans. In January 2001, there were 553 capesizes in service in the world.

Ocean Carriers' vessels were mostly chartered on a "time charter" basis for a period such as one year, three years, or five years, although the spot charter market was used on occasion. The company that chartered the ship was called the "charterer." The charterer paid Ocean Carriers a daily hire rate for the entire length of the contract, determined what cargo the vessel carried, and controlled where the vessel loaded and unloaded. The company, in turn, supplied a seaworthy vessel that complied with international regulations and manned the vessel with a fully qualified and certified crew.

Operations also included ensuring adequate supplies and stores were onboard, supplying lubricating oils, scheduling repairs, conducting overall maintenance of the vessel, and placing all insurances for the vessel. For a new ship coming on line in early 2003, operating costs were expected to initially average \$4,000 per day, and to increase annually at a rate of 1% above inflation. Charterers were not charged a daily rate for the time the vessel spent in maintenance and repair, although operating costs were still incurred. Initially, 8 days a year were scheduled for such work. The time allotted to maintenance and repairs increased to 12 days per year after five years of operation, and to 16 days a year for ships older than 10 years.

The company had a policy of not operating vessels older than 15 years. Every five years, international regulations mandated that a special survey be undertaken to ensure seaworthiness as defined by international regulations. By the fifteenth year, the maintenance required to comply with the special surveys was very costly. Exhibit 1 shows the

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EXHIBIT 1
Capital Expenditures
Anticipated in
Preparation for
Special Surveys

2007	2012	2017	2022	2027
\$300,000	\$350,000	\$750,000	\$850,000	\$1,250,000

Source: Company estimates

capital expenditures anticipated in preparation for the special surveys. These outlays were considered capital expenditures, which would each be depreciated on a straight-line basis over a 5-year period. To avoid the larger expenditures for older ships, the company planned to sell the vessel into the secondhand market, or "scrap" the vessel just before the third special survey. When scrapped, the vessel was demolished and its steel was sold to demolition yards. The company estimated the scrap value to be \$5M at the end of the fifteenth year.

Supply of Capesizes

Daily hire rates were determined by supply and demand. The number of ships available equaled the number of vessels in service the previous year plus any new ships delivered minus any scrappings and sinkings. When the market demand for shipping capacity was high, owners would keep a vessel in operation as long as possible. Conversely, when market demand was low, scrapping rose. Supply was also affected by the increases in size and efficiency the newer ships offered. As ships got bigger, faster, and more fuel efficient, fewer ships were needed to carry the same amount of cargo. Moreover, there had been very few scrappings in recent years, and most of the capacity of the worldwide fleet of capesizes was fairly young. Exhibit 2 shows the capesize fleet by age category as of December 2000. Exhibit 3 shows the number of new capesize vessels by expected delivery date.

Estimates of future orders for vessels were not entirely reliable, especially projections spanning more than two or three years in the future. If sentiment was optimistic on market conditions, more vessels would be added to the order book. If the market outlook was poor, then vessels would be cancelled or converted to other types of vessels. A capesize took approximately 10 months to build, but contracts were signed to secure a berth place approximately two years before delivery and over one year before steel cutting for the vessel. "Delivery" referred to when the vessel was complete and delivered from the shipyard to the owner.

Market Conditions

The demand for dry bulk capesizes was determined by the world economy, especially its basic industries. Over 85% of the cargo carried by capesizes was iron ore and coal. Production and demand for these products increased in a strong economy. Changes in trade patterns also affected the demand for capesizes. For example, if a Western European country decided to switch its supply of iron ore from the United States to Australia, the demand for capesizes would increase since the distance between Europe and Australia is greater than the distance between Western Europe and the United States.

Spot charter rates tended to fluctuate more widely than time charter rates, i.e., the highs were higher and the lows were lower in the spot market. Therefore, when the market was high, ship owners sought time charters to lock in the high rates for as long a period as possible while the charterers preferred to trade in the spot market to avoid

EXHIBIT 2
Capesize Fleet by
Age Category as of
December 2000

Source: Company estimates

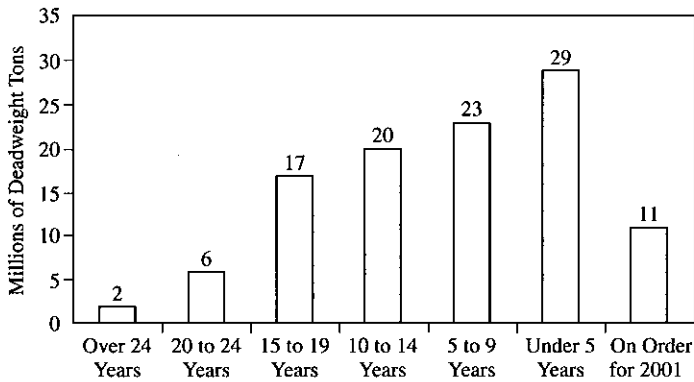


EXHIBIT 3
Current Order
Book for Dry Bulk
Capesizes by
Delivery Date

Source: Company documents

	2001	2002	2003	2004
Number of vessels	63	33	21	9

EXHIBIT 4 Daily Hire Rate Adjustment Factor for Dry Bulk Capesizes Based on Age of Vessel

Source: Company estimates

Over 24 Years	20 to 24 Years	15 to 19 Years	10 to 14 Years	5 to 9 Years	Under 5 Years
0.65	0.75	0.80	1.00	1.05	1.15

having to pay high daily rates any longer than necessary. Because Ocean Carriers' vessels were relatively new and a bit larger than the industry average, they earned a premium to the market. For example, new ships generally earned a 15% premium in daily hire rates relative to the industry-wide average, while ships over 25 years old typically received a 35% discount from the industry average. Exhibit 4 shows average adjustments to daily hire rates for 3-year time charters based on the age of the ship.

The average prevailing spot market rate at the time was \$22,000 per day.¹ With Australian production in iron ore expected to be strong and Indian iron ore exports expected to take off in the next few years, Linn took an optimistic view of the long-term market demand for capesizes. However, she also considered that 63 new vessels were scheduled for delivery in 2001 and that imports of iron ore and coal would probably remain stagnant over the next two years. Linn therefore anticipated that spot rates would fall in 2001 and 2002. In 2003, however, Linn was aware that Australian and Indian ore exports would begin, and that these new supplies would significantly increase trading volumes. Demand for capesizes would likely increase with these higher trading volumes, possibly boosting prices. Exhibit 5 provides data on some demand drivers, fleet size, and average daily hire rates over time.

¹This was the current spot rate for a 10–14 year old ship. Newer ships commanded a higher daily rate, and older ships received a lower rate.

EXHIBIT 5 Worldwide Iron Ore Vessel Shipments, Fleet Size, and Average Daily Hire Rates for Capesize Charters, 1994–2001

Source: Company documents

	1994	1995	1996	1997	1998	1999	2000	2001E
Iron ore vessel shipments	375	397	385	424	420	410	440	436
Fleet size	NA	NA	NA	540	523	523	552	612
Avg. spot rate	\$16,851	\$20,149	\$11,730	\$14,794	\$10,105	\$ 9,427	\$22,575	
Avg. 3-yr charter rate	\$18,250	\$18,544	\$14,079	\$16,063	\$13,076	\$12,626	\$15,344	

Linn enlisted the services of a shipping-industry consulting firm to help her forecast daily hire rates for a new capesize. Worldwide iron ore vessel shipments and charter rates had been very strongly associated historically. The consulting group felt that this relation would continue to hold in the future, and based its forecast of charter rates off of long-term forecasts for worldwide iron ore vessel shipments. The long-term forecast for worldwide iron ore vessel shipments was for 2% annual growth during 2002 to 2005, and then dropping to 1.5% thereafter. Exhibit 6 shows the forecast of daily hire rates that was prepared for Linn.

Newbuilding

The charterer currently in negotiations with Ocean Carriers for a three-year time charter starting in 2003 had offered a rate of \$20,000 per day with an annual escalation of \$200 per day. The expected rate of inflation was 3%.

The vessels in Ocean Carriers' current fleet could not be committed to a time charter beginning in 2003 because the ships either were already leased during that period or were too small to meet the customer's needs. Moreover, there were no sufficiently large capesizes available in the secondhand market. Ocean Carriers had to decide immediately if it should commission a new 180,000 deadweight ton ship for delivery in early 2003. The ship would cost \$39 million, with 10% of the purchase price payable immediately and 10% due in a year's time. The balance would be due on delivery. A new ship would be depreciated on a straight-line basis over 25 years. In addition, Linn expected to make a \$500,000 initial investment in net working capital, which she anticipated would grow with inflation.

Linn was also confident that the charterer would honor his proposed contract with Ocean Carriers if the company agreed to the terms. While there is always a risk that the charterer would stop paying before the end of the contract or terminate the contract early, Linn considered that the risk was small. Ocean Carriers had long established relationships with its charterers and only contracted with reputable charterers.

The proposed contract, though, was only for three years, and it was Linn's responsibility to decide if future market conditions warranted the considerable investment in a new ship.

EXHIBIT 6 Forecasted Daily Time Charter Rates for New Capesize Vessel

Source: Company documents

Age of Ship	Event Year	Calendar Year	Iron Ore Shipments (Millions of Tons)	% Growth	Avg Daily Charter Rate	% Growth	Adjustment Factor for Hire Rate	Adjusted Daily Hire Rate	Expected Daily Hire Rate
	0	2000	440	7.3%	15,344	21.5%			
	1	2001	436	-0.9%	14,747	-3.9%			
	2	2002	445	2.0%	15,072	2.2%			
1	3	2003	454	2.0%	15,403	2.2%	1.15	17,713	20,000
2	4	2004	463	2.0%	15,742	2.2%	1.15	18,103	20,200
3	5	2005	472	2.0%	16,088	2.2%	1.15	18,501	20,400
4	6	2006	479	1.5%	16,273	1.2%	1.15	18,714	18,714
5	7	2007	486	1.5%	16,460	1.2%	1.05	17,283	17,283
6	8	2008	493	1.5%	16,650	1.2%	1.05	17,481	17,481
7	9	2009	501	1.5%	16,841	1.2%	1.05	17,682	17,682
8	10	2010	508	1.5%	17,035	1.2%	1.05	17,886	17,886
9	11	2011	516	1.5%	17,231	1.2%	1.05	18,092	18,092
10	12	2012	524	1.5%	17,429	1.2%	1.00	17,428	17,428
11	13	2013	532	1.5%	17,629	1.2%	1.00	17,628	17,628
12	14	2014	540	1.5%	17,832	1.2%	1.00	17,831	17,831
13	15	2015	548	1.5%	18,037	1.2%	1.00	18,036	18,036
14	16	2016	556	1.5%	18,245	1.2%	1.00	18,243	18,243
15	17	2017	564	1.5%	18,454	1.2%	0.80	14,762	14,762
16	18	2018	573	1.5%	18,667	1.2%	0.80	14,932	14,932
17	19	2019	581	1.5%	18,881	1.2%	0.80	15,104	15,104
18	20	2020	590	1.5%	19,098	1.2%	0.80	15,278	15,278
19	21	2021	599	1.5%	19,318	1.2%	0.80	15,454	15,454
20	22	2022	608	1.5%	19,540	1.2%	0.75	14,654	14,654
21	23	2023	617	1.5%	19,765	1.2%	0.75	14,823	14,823
22	24	2024	626	1.5%	19,992	1.2%	0.75	14,993	14,993
23	25	2025	636	1.5%	20,222	1.2%	0.75	15,166	15,166
24	26	2026	645	1.5%	20,455	1.2%	0.75	15,341	15,341
25	27	2027	655	1.5%	20,690	1.2%	0.65	13,448	13,448

Whirlpool Europe

By the spring of 1999, Whirlpool Corporation (WHR:NYSE), the worldwide leader in the home appliance industry, had nearly ten years experience selling to the European market and had grown its European market share to a sizeable 13%. Whirlpool Europe's chief financial officer and its vice president of logistics were evaluating an investment in an enterprise resource planning (ERP) system. Named *Project Atlantic*, the system would re-organize the information flow in all of Whirlpool Europe. If successful, the project would improve operating effectiveness and efficiency in Whirlpool's sales and marketing, operations and logistics, and finance areas. The cost of the project, however, would be substantial, and would include the direct costs of the system and the personnel that would be required to complete the complex implementation. Senior management had quantified the costs and benefits, and now needed to evaluate them.

Company Background

In 1989, Whirlpool Corporation entered the European market, paying \$470 million to purchase a 53% stake in the appliance division of Dutch-based Philips Electronics. The companies formed a joint venture firm named Whirlpool International BV (WIBV) and one year later, launched a dual-branding program which added the Whirlpool name to the Philips product lines. In July 1991, Whirlpool purchased Philips' 47% stake for \$600 million to become the sole owner of WIBV. Over time, Whirlpool developed three pan-European brands to differentiate its product line: Whirlpool, Bauknecht, and Ignis. Other regional brands like Laden, sold exclusively in France, were also created. By fiscal 1998, Whirlpool Europe was third in market share with \$2.4 billion in sales.

Whirlpool Europe manufactured products based on sales budgets or forecasts, and then held them as finished goods inventory. European manufacturing operated 11 plants, ten located in Europe and one in Africa. Each plant produced a specific product line across all brands. Exhibit 1 provides a plant listing. Unique country requirements, such as language, products attribute preferences, and electrical specifications resulted in multiple stock-keeping units (SKUs) for the same model. In total, Whirlpool Europe manufactured 6,900 SKUs. Orders moved from manufacturing to one of two central distribution centers and then on to one of 12 regional distribution centers before reaching the customer.

In each major European market, a country sales office—responsible for sales generation and forecasting, order processing and fulfillment, billing and cash collection—was the primary interface with customers. Whirlpool Europe operated many stand-alone

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information systems that were developed by individual plants, distribution centers, or sales offices specifically to meet their own business requirements. Information could not be easily shared across functions or organizations, and was often inconsistent and irreconcilable. The sales organization, for example, had to access as many as 13 independent inventory systems to view inventory across the supply chain.

There were two types of customers: consumers who purchased stand-alone appliances for their homes and contractors who purchased built-in appliances for new home construction or kitchen remodeling.

Success in the consumer market depended on product quality, price, and availability. Whirlpool Europe estimated that its distribution centers had the product that matched the customer's demand 79% of the time. If the product was unavailable, the customer had to either wait or switch to another product. Often, the lack of immediate availability resulted in lost sales.

Kitchen remodeling in Europe generally involved the installation of new cabinets along with built-in appliances. Installation often occurred only a few weeks after the kitchen was ordered by the homeowner. Whirlpool estimated that this segment of the market would grow to about 25% of kitchen appliance sales. To supply the built-in appliances to this market, Whirlpool would have to deliver its appliances within ten days of being ordered by the contractor. Under its current inventory and information systems, Whirlpool was unable to reliably satisfy the contractors' required delivery time.

Project Atlantic

Description

The goal of Project Atlantic was to design and implement an enterprise resource planning (ERP) system that would allow Whirlpool Europe to better serve its consumer market for stand-alone appliances and contract market for built-in appliances and, at the same time, reduce its inventory by 12 days of sales. These competing goals would be accomplished through an information system that would allow a country sales office to view product throughout the supply chain, thereby increasing the efficiency of the distribution process. Project Atlantic was expected to provide some integration with suppliers and to increase inventory visibility across the supply chain. This would enable the company to improve product availability and have a substantially lower inventory level. In addition, the ERP system would allow Whirlpool to build products to specific orders from contractors.

Whirlpool Corporation took a phased approach to implementation of its ERP systems, beginning in North America, Brazil, and select central European countries. Project Atlantic would focus on the remaining European countries. With ERP, Whirlpool Europe's disparate information systems would be retired and replaced with a single computing architecture for all of Europe. The company planned to install a standard or so-called "off-the-shelf" ERP system, without any modifications, requiring the company to change many of its operating processes.¹ Employee acceptance of change was therefore critical for success.

The project would be managed under country groupings called Waves. Exhibits 2A and 2B detail the Wave groupings and implementation schedules.

¹The company identified seven top-level operational processes, of which 74 sub-processes were determined to be impacted by ERP.

Benefits

Working Capital Reduction

The company had 51 days sales of inventory (DSI).² Of the 51 days, approximately eight days were reserved and allocated units, nine were in transit, and three were obsolete. The ERP system would enable Whirlpool to make its supply chain more transparent and efficient, thereby eliminating the reserved, allocated, and obsolete units, and reducing the in-transit time. After a statistical study of its inventory, Whirlpool Europe developed a theoretical model target inventory level of 29 days. Project Atlantic was forecasted to reduce 12 days of inventory in each Wave—over half of the difference between its actual inventory and the theoretical model inventory. Exhibit 3 shows data for 1997 including DSI by Wave. Exhibit 4 details the yearly percent DSI reduction in DSI by Wave.

Revenue and Gross Margin Increase

A primary goal of the ERP system was to increase product availability by making the supply chain more visible and by integrating sales forecasting and inventory management. The company's targeted product availability was 92%. The projections assumed that the ERP system and process changes would enable the company to realize an increase in unit sales equal to 25% of the improvement in product availability. Those incremental sales would contribute to increasing the profitability of Whirlpool Europe. Exhibit 3 includes 1997 data on product availability, units, revenue, and margins by Wave. Exhibit 4 details the projected timing of the product availability improvements.

The company's ability to evaluate profitability at a product line, account, or order level was hindered by the lack of an integrated information system. Decisions on prices, for example, were sometimes made with incomplete or dated information. By installing ERP, the company forecasted a 0.25% gross margin increase by the second year after implementation. To forecast the impact, the company used 1997 revenue as the baseline to apply the gross margin increase for each year of cash flow projections. Exhibit 5 presents the projected improvements by year and by wave.

Other Cost Savings

The ERP system was expected to substantially simplify the processing and management of customer orders. An 18% reduction in the 79 order desk employees at an average cost of \$40,000 per year per employee was expected once the system was implemented. The ERP system would also simplify the accounting function and result in a 15% reduction in the 60 finance employees. The expected cost saving was \$45,000 per year for each employee that was eliminated.

The ERP system was also anticipated to generate other cost savings. Whirlpool paid about \$40 annually for each square meter of warehouse space. With the reduction in inventory from the implementation of the ERP system, warehouse space could be reduced by 15% (7,200 square meters). Also, customers returned 3% of units they purchased, which cost Whirlpool about \$30 per unit returned. ERP was expected to reduce the number of returned units by eliminating shipping errors. The ERP system was also forecast to reduce bad debt expense and information system expenses. Exhibit 6 details these anticipated savings.

²DSI = (Ending Inventory) / (COGS/Days in Period)

Costs

Capital Expenditures

The company would need to spend \$4.3 million in 1999 for capital equipment, \$8.6 million in 2000, \$6.9 million in 2001, and \$4.1 million in 2002. It would cost \$600,000 and \$300,000 for software licenses in 1999 and 2000, respectively. The capital equipment would be depreciated in equal amounts over five years.

Implementation

Implementation required extensive employee training; creation, testing, and documentation of new business processes; and, of course, installation of the ERP software. Implementation of each Wave would require an average of 50 current Whirlpool employees working with external consultants at an expected cost of \$45,000 for each employee. According to forecast, the company would need 19 consultants in 1999, nine in 2000, seven in 2001, and four in the following year, at an average monthly cost per consultant of \$15,400.

To ensure compliance with the project plan, the company planned to put a three-person task force in place beginning in July 2000 through June 2004, at an annual cost of \$600,000.

Ongoing Operational

Beginning in 2003, when all Wave implementations were completed, the cost to manage and maintain the new information systems was forecasted to be \$3 million annually. However, because each Wave was scheduled to go on-line at a different time, costs would begin early in the program. Beginning in 1999, the company expected to incur \$600,000 in annual expense, which would increase by an additional \$600,000 each subsequent year through 2003, reaching \$3,000,000 annually.

License maintenance fees were forecasted to begin in 2000 at a cost of \$100,000 and increase an additional \$100,000 each year through 2003, reaching \$400,000 annually. These costs would continue until the system was replaced.

Cost of Capital and Taxes

Whirlpool Europe used a 9% cost of capital to discount the ERP project and faced a 40% tax rate.

EXHIBIT 1 Whirlpool Europe's Manufacturing Sites

Source: Company documents.

Location	Products
Amiens France	Washers and Dryers
Norrköping Sweden	Microwave Ovens
Poprad Slovakia	Washers
Neunkirchen Germany	Dishwashers
Schorndorf Germany	Washers
Cassinetta Italy	Refrigerators and Cooking Appliances
Naples Italy	Washers
Siena Italy	Chest Freezers
Trento Italy	Refrigerators and Freezers
Isithebe South Africa	Refrigerators and Freezers

EXHIBIT 2A Project Atlantic Implementation Groupings^a

Source: Company documents.

Wave West	Wave South	Wave Central	Wave North
Belgium	Italy	Czech Republic	Denmark
France	Portugal	Hungary	Finland
Netherlands	Spain	Poland	Ireland
Plus: Warehouse Mgt and Physical Dist.		Slovakia	Norway
			Sweden
			United Kingdom

^aAustria, Germany, and Switzerland were not part of Project Atlantic.

EXHIBIT 2B Wave Implementation Schedule

Source: Company documents.

	West	South	Central	North
Start Date:	MAY 1999	MAY 2000	MAR 2001	JAN 2002
End Date:	APR 2000	FEB 2001	DEC 2001	AUG 2002

EXHIBIT 3 1997 Data for Whirlpool Europe

Source: Company documents.

Wave	DSI	Product Availability	Units Sold	Revenue (000s US\$)	Margin (000s US\$)
West	45	73.5%	2,271,139	477,784	58,859
South	51	83.1%	1,415,949	283,549	46,241
Central	67	76.8%	977,665	185,625	43,678
North	55	83.2%	1,443,156	280,901	29,818

EXHIBIT 4 Improvements in DSI and Availability by Year and Wave

Source: Company documents.

Wave	Improvements by Year by Wave					
	2000	2001	2002	2003	2004	2005
West	25%	40%	35%			
South		35%	40%	25%		
Central			40%	40%	20%	
North				40%	40%	20%

EXHIBIT 5
Margin Improvements
by Year by Wave

Source: Company documents.

Wave	Cumulative Margin Improvements by Year by Wave					
	2000	2001	2002	2003	2004	2005
West	0.06%	0.25%	0.25%	0.25%	0.25%	0.25%
South		0.10%	0.25%	0.25%	0.25%	0.25%
Central			0.13%	0.25%	0.25%	0.25%
North				0.13%	0.25%	0.25%

EXHIBIT 6 Forecasted Other Expense Savings by Year (000s US\$)

Source: Company documents.

	2000	2001	2002	2003	2004	2005	2006	2007
Order Desk Headcount	0	190	411	442	474	506	537	569
Finance Headcount	81	135	216	324	405	405	405	405
Warehouse Space	18	72	155	230	274	288	288	288
Bad Debt Expense	102	512	922	1,024	1,024	1,024	1,024	1,024
Information Systems	<u>420</u>	<u>840</u>	<u>840</u>	<u>1,280</u>	<u>1,280</u>	<u>1,280</u>	<u>1,280</u>	<u>1,280</u>
	621	1,749	2,544	3,300	3,457	3,503	3,534	3,566

Health Development Corporation

Mr. Paul Couturier, the CEO of Health Development Corporation (HDC), was negotiating the sale of his company in the spring of 2000. The Company, which owned and managed health clubs in the Greater Boston area, had retained a local investment firm, Kaufman & Co., to solicit bids. They received several bids from national or regional health club companies seeking to establish themselves in the Boston area. The bids were lower than expected, largely because of the way the bidding companies considered HDC's ownership of Lexington Club's real estate. Like most health clubs, HDC generally leased their health club real estate but in 1999, HDC had taken advantage of an opportunity to purchase the Lexington Club at what Paul Couturier thought was a very attractive price. He was surprised that HDC's ownership of the Lexington Club seemed to be reducing the company's offering price and was mulling his alternatives.

The Company

HDC owned nine health and fitness clubs in the Greater Boston area. It also operated three other facilities under management contracts, including Shad Hall at the Harvard Business School. As Exhibits 1 and 2 demonstrate, the Company had realized rapid growth between 1994 and 1999, almost doubling its revenue and tripling its operating margin.

Much of HDC's success came from its three largest clubs located in Boston suburbs near the Route 128 beltway. Each of these clubs offered a range of services, including fitness, personal training, tennis, swimming, and childcare. The Wellesley Center, located in Wellesley, MA, was a 75,000 square foot facility that had over 4500 members. Its projected annual revenue was in excess of \$6.3 million for the year 2000. The Lexington Club, located in Lexington, MA, was a 62,000 square foot facility that had over 4000 members with projected annual revenue in excess of \$3.9 million for the year 2000. The Colonial Club, located in Lynnfield, MA, near the intersection of Routes 128 and 95, was a 55,000 square foot facility that had over 2500 members with projected annual revenue in excess of \$2.7 million for the year 2000.

The Company continued to expand during 1999, adding the Franklin Club in Franklin, MA, and the Andover Club in Andover, MA. The Andover Club required a substantial capital investment to convert it from a tennis-only facility into a multi-purpose facility. The Company anticipated that the new facilities would not be profitable for about two years after their acquisition. The startup costs of the two new facilities were expected to reduce operating profits by about \$400,000 in the year 2000.

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The Opportunity to Purchase the Lexington Club Real Estate

Until the spring of 1999, HDC leased the building and 9 acres of land that housed the Lexington Club. The lease terms of health clubs are generally linked to the revenue generated by the facility. HDC's lease payments for the Lexington Club were about 23.5% of its revenue. With anticipated revenue of about \$3.9 million in the year 2000, the projected lease payment was about \$925,000. The revenue and the lease payments were expected to grow at about 5% a year.

In 1999, HDC had the option to purchase the Lexington Club real estate for \$6.5 million. The Company had not purchased real estate in the past for two reasons. First, as a small privately held company, HDC preferred to use its limited capital to add, expand, or enhance clubs. Second, leasing property allowed the company to reduce its risk by keeping real estate costs proportional to revenue. In the case of the Lexington property, however, HDC management determined that the lease payments were substantially greater than the costs of owning the real estate. After attempting unsuccessfully to renegotiate the lease payments downward, HDC decided to purchase the Lexington Club property. The Company financed the Lexington Club purchase with \$750,000 of excess cash and a mortgage for \$5,750,000 at an interest rate of 8.75%.

The Offers to Purchase

Kaufman & Company solicited bids for HDC in February 2000. In exchange for signing a confidentiality agreement, potential bidders received an information memorandum that provided a detailed description of the Company, its operations, and its financial results. Potential bidders were also given the opportunity to visit the health clubs and to interview management. Five potential buyers submitted bids.

HDC, with the advice of Kaufman & Co., decided to focus on the bid by Town Sports International (TSI). TSI had a large share of the New York health club market, with 67 clubs, but only five clubs in the Boston market. TSI shared many of HDC's operating philosophies, making it an ideal fit with HDC. TSI's offer price was the highest of the initial offers and the potential synergies between TSI and HDC made Kaufman confident that the highest final bid would also come from TSI. Nevertheless, HDC was disappointed with the initial offer price and hoped that negotiations would substantially improve the offer.

In negotiations, TSI revealed that it viewed the Lexington purchase as a negative, and would have been willing to pay the same or a higher multiple of EBITDA if HDC did not own the real estate. HDC argued that the Lexington purchase was clearly a value increasing decision, and therefore should increase the equity value of the Company. The math, however, undeniably supported TSI's position. The valuation projected HDC's year 2000 earnings before taxes, interest, depreciation, and amortization (EBITDA). A multiple of about five times was applied to the EBITDA to determine the total enterprise value, and the debt of the Company was subtracted to determine the equity value of the Company. Exhibit 3 shows that the real estate purchase reduced excess cash by \$750,000 and added \$5.75 million in debt. This \$6.5 million was greater than five times the resulting increase in EBITDA.

Paul Couturier and Kaufman & Company began to assess alternative structures. One choice was to sell the Lexington real estate to another entity that would in turn lease it back to the potential buyer. According to TSI's operating model, which set benchmark operating cost ratios, the projected lease payment for the Lexington Club could not exceed \$525,000. Given current interest rates, HDC believed they could obtain a ten-year mortgage at an 8.5% interest rate but that would require the lease payments to increase to 110% of the mortgage payment. This arrangement seemed to have the potential to meet the concerns of TSI and maximize the value to the HDC shareholders, but it was going to be difficult to structure.

EXHIBIT 1 Income Statement for Health Development Corporation

Source: Company reports.

	Year Ended December 31,									
	1994	1995	1996	1997	1998	1999	2000 ^a	2001 ^a	2002 ^a	
Total Revenue	8,316	9,957	12,584	13,636	14,549	16,162	19,324	21,311	22,809	
Club Operating Expenses	5,779	6,990	8,837	9,337	9,877	10,885	13,130	14,313	15,092	
Gross Profit	2,537	2,967	3,747	4,299	4,672	5,277	6,194	6,998	7,717	
Rent and Other Expenses ^b	1,831	2,226	2,869	2,842	2,771	2,299	2,275	2,375	2,510	
Depreciation and Amortization	363	426	517	619	682	1,058	1,233	1,466	1,452	
Operating Income	343	315	361	838	1,219	1,920	2,687	3,157	3,755	
Net Interest Expense	17	3	(22)	(28)	(36)	480	975	1,094	1,061	
Non-Recurring Expenses ^c	0	36	52	186	40	(6)	0	0	0	
Pre-Tax Income	325	279	331	680	1,216	1,445	1,712	2,062	2,694	
Income Taxes	146	126	158	333	499	660	729	798	1,032	
Net Income	179	153	173	347	716	785	982	1,264	1,662	
Expense Adjustments:										
Non-Recurring Items	0	36	52	(3)	40	(6)	0	0	0	
Directors' Wages and Fees	42	40	83	78	64	74	91	96	102	
Professional Fees	24	44	68	140	143	123	126	130	130	
Terminated Operations	0	0	0	236	41	0	0	0	0	
Contributions and Other Items	0	2	3	4	41	28	17	19	22	
Adjusted Pre-Tax Income	391	400	537	1,135	1,544	1,665	1,946	2,307	2,948	
Adjusted EBITDA ^d	771	830	1,032	1,726	2,190	3,202 ^e	4,152	4,867	5,460	
EBITDA Margin	9.3%	8.3%	8.2%	12.7%	15.1%	19.8%	21.5%	22.8%	23.9%	

^aProjections include only current HDC properties, and include no assumptions regarding additional future acquisitions.

^bIncludes Rent, Insurance, Real Estate Taxes, and other Tax Expenses.

^cIncludes \$50,000 in claim settlement in 1996, \$189,000 in losses on a club termination in 1997, \$40,000 in purchase financing costs in 1998.

^dFigure includes \$80,000 and \$528,000 of losses for the company's new Andover facility for 1999 and 2000, respectively.

^eDoes not reflect a full year of ownership of HDC's Lexington facility, which would result in an additional \$200,000 of EBITDA if annualized.

EXHIBIT 2
Balance Sheets for
Health Development
Corporation

As of September 30, 1999

Source: Company reports.

Assets	
Current assets	
Cash and Marketable Securities	997
Accounts Receivable	226
Inventory	21
Prepaid and Other Current Items	127
Total Current Assets	<u>1,371</u>
Property, Plant, and Equipment	
Property and Equipment	12,047
Construction in Progress	1,320
Total Property, Plant, and Equipment	<u>13,367</u>
Less: Accumulated Depreciation	(3,349)
Net Property and Equipment	<u>10,018</u>
Other Assets	716
Total Assets	<u><u>12,105</u></u>
Liabilities and Shareholders' Equity	
Current Liabilities	
Accounts Payable	135
Accrued Expenses	1,250
Prepaid Membership Fees	1,888
Current Portion of Long-Term Debt	210
Other Current Liabilities	39
Total Current Liabilities	<u>3,522</u>
Long-Term Debt	6,704
Other Long-Term Liabilities	682
Total Liabilities	<u>10,908</u>
Shareholders' Equity	
Common and Preferred Stock	9
Paid-In Capital	718
Retained Earnings	470
Total Shareholders' Equity	<u>1,197</u>
Total Liabilities and Equity	<u><u>12,105</u></u>

EXHIBIT 3
Value of HDC with
Owned and Leased
Lexington Real
Estate

Source: Casewriter estimates.

	Lexington Real Estate	
	Owning	Leasing
Adjusted Pre-Tax Income (excluding Lexington Real Estate)	2,612	2,612
Cost of Lexington Real Estate		
Interest	504	0
Depreciation	162	0
Lease Cost	0	925
Adjusted Pre-Tax Income	1,946	1,687
Interest (excluding Lexington)	471	471
Depreciation (excluding Lexington)	1,071	1,071
Lexington Real Estate Interest	504	0
Lexington Real Estate Depreciation	162	0
EBITDA	4,154	3,229
Multiple	5x	5x
Value of Operations	20,770	16,145
Plus:		
Excess Cash	0	750
Total Enterprise Value	20,770	16,895
Less:		
Corporate Debt (excluding Lexington)	1,917	1,917
Lexington Real Estate Debt	5,750	0
Equity Value	13,103	14,978