

American Home Products Corporation

"I just don't like to owe money," said William F. Laporte when asked about his company's almost debt-free balance sheet and growing cash reserves.¹ The exchange took place in 1968, 4 years after Mr. Laporte had taken over as chief executive of American Home Products (AHP). The 13 subsequent years did not improve his opinion of debt financing. During Mr. Laporte's tenure as chief executive, AHP's abstinence from debt continued, while the growth in its cash balance outpaced impressive growth in both sales and earnings. At the end of 1980, AHP had almost no debt and a cash balance equal to 40% of its net worth. In 1981, after 17 years as chief executive, Mr. Laporte was approaching retirement, and analysts speculated on the possibility of a more aggressive capital structure policy.

Description of the Company

AHP's 1981 sales of more than \$4 billion were produced by over 1,500 heavily marketed brands in four lines of business: prescription drugs, packaged (i.e., proprietary or over-the-counter) drugs, food products, and housewares and household products. Consumer products included a diversity of well-known brand names, such as Anacin, Preparation H, Sani-Flush, Chef Boy-Ar-Dee, Gulden's Mustard, Woolite, and the Ekco line of housewares. AHP's largest and most profitable business, prescription drugs, included sizable market shares in antihypertensives, tranquilizers, and oral contraceptives. AHP's success in these lines of business was built on marketing expertise. Whether the product was an oral contraceptive or a toilet bowl cleaner, "they sell the hell out of everything they've got," said one competitor.²

AHP's Corporate Culture

AHP had a distinctive corporate culture that, in the view of many observers, emanated from its chief executive. This culture had several components. One was reticence. A poll of Wall Street analysts ranked AHP last in corporate communicability among 21 drug companies. A second element of AHP's managerial philosophy was frugality and tight financial control. Reportedly, all expenditures greater than \$500 had to be personally approved by Mr. Laporte even if authorized in the corporate budget.

Another important component of AHP's culture was conservatism and risk aversion. AHP consistently avoided much of the risk of new product development and introduction in the volatile drug industry. Most of its new products were acquired or licensed after their development by other firms or were copies of new products introduced by competitors. A substantial portion of AHP's new products were clever extensions of existing products. AHP thus avoided risky gambles on R&D and new product introductions and used its marketing prowess to promote acquired products and product extensions. When

¹Forbes, September 1, 1968, p. 87.

²The Wall Street Journal, December 28, 1981, p. 1.

truly innovative products were introduced by competitors. AHP responded with "me-too" products and relied on its marketing clout to erode competitors' head starts.

Finally, an integral part of AHP's corporate philosophy was the firm's long-standing policy of centralizing complete authority in the chief executive. The current incumbent was described by a former colleague as a "brilliant marketer and tightfisted spender."³ Mr. Laporte's management style was characterized as management from the top, unparalleled in any firm of comparable size. Though reticent in discussing operations, Mr. Laporte was emphatic in stating the objective underlying his use of this authority: "We run the business for the shareholders."⁴ The author of a *Business Week* article on the firm commented, "One of the most common business platitudes is that a corporation's primary mission is to make money for its stockholders and to maximize profits by minimizing costs. At American Home, these ideas are a dogmatic way of life."⁵

AHP's Performance

This managerial philosophy produced impressive results. AHP's financial performance was characterized by stable, consistent growth and profitability. The firm had increased sales, earnings, and dividends for 29 consecutive years through 1981. This growth had been consistent and steady, ranging in recent years between 10% and 15% annually (see Exhibit 1 for a 10-year review of AHP's performance). Under Mr. Laporte's stewardship, AHP's return on equity had risen from about 25% in the 1960s to 30% in the 1980s. Because of its passion for parsimony, AHP had been able to finance this growth internally while paying out almost 60% of its annual earnings as dividends.

During Mr. Laporte's reign as chief executive, AHP's price-earnings ratio had fallen by about 60%, reflecting the marketwide collapse of price-earnings ratios of growth companies. Nonetheless, AHP's more than sixfold growth in earnings per share had pushed up the value of its stock by a factor of 3 during his tenure. AHP's stock was widely held by major institutional investors. Its popularity among investors reflected analysts' assessment of AHP's management. In the opinion of one analyst, "When you think of American Home Products, you think of the best-managed company in the whole pharmaceutical field."⁶ Nevertheless, AHP's excess liquidity and low degree of leverage were criticized by many analysts. Others wondered whether it would be a good idea to tinker with success.

Capital Structure Policy

Many drug firms were relatively unleveraged, but none matched AHP's conservative capital structure. Because of AHP's diversified operations, it was difficult to find a truly comparable firm for comparative analysis. However, Warner-Lambert Company was about the same size as AHP and competed in roughly similar lines of business (see Exhibit 2 for a comparison of AHP and Warner-Lambert). Warner-Lambert had a debt ratio of 32%, and its bond rating was on the borderline between AAA and AA in 1980.

³The Wall Street Journal, December 28, 1981, p. 6.

⁴HBS Bulletin, January/February 1981, p. 123.

⁵Business Week, March 21, 1970, p. 76.

⁶David S. Saks, Wertheim & Co., quoted in The Wall Street Journal, January 7, 1981, p. 18.

For many years, analysts had speculated on the impact of a more aggressive AHP capital structure policy. An example of a pro forma recapitalization analysis is presented in Exhibit 3. This exhibit shows actual 1981 performance plus pro forma restatements of the 1981 results under three alternative capital structures: 30% debt, 50% debt, and 70% debt. As described in Exhibit 3, these restatements assume that AHP issued debt and used the proceeds plus \$233 million of excess cash to repurchase stock in early 1981 at the then prevailing stock price of \$30 per share. Though this approach is only one of several ways to achieve a higher debt ratio, it illustrates, in approximate terms, the impact of higher debt on AHP's financial performance.

In view of AHP's firmly rooted financial conservatism, it was premature to consider the details of a realistic recapitalization plan. However, the likely imminent retirement of the firm's strong-willed chief executive fueled speculation concerning an appropriate capital structure policy for AHP and the magnitude of the payoff from such a policy.

EXHIBIT 1

Year	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981
Sales	1,000	1,100	1,200	1,300	1,400	1,500	1,600	1,700	1,800	1,900
Operating Profit	100	110	120	130	140	150	160	170	180	190
Net Income	80	85	90	95	100	105	110	115	120	125
Dividends	40	45	50	55	60	65	70	75	80	85
EPS	1.00	1.10	1.20	1.30	1.40	1.50	1.60	1.70	1.80	1.90
Market Price	30	35	40	45	50	55	60	65	70	75
Book Value	10	12	14	16	18	20	22	24	26	28
Debt Ratio	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%
Return on Equity	25%	26%	27%	28%	29%	30%	31%	32%	33%	34%

EXHIBIT 1 Selected Financial Data for American Home Products Corporation, 1972-1981 (millions of dollars except per share data)

	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981
Sales	\$1,587.1	\$1,784.4	\$2,048.7	\$2,258.6	\$2,471.7	\$2,685.1	\$3,062.6	\$3,406.3	\$3,798.5	\$4,131.2
Cash	—	—	—	—	358.8	322.9	436.6	493.8	593.3	729.1
Total debt	—	—	—	—	7.8	10.3	13.7	10.3	13.9	16.6
Net worth	—	—	—	—	991.5	1,035.3	1,178.0	1,322.0	1,472.8	1,654.5
Total assets	1,042.0	1,126.0	1,241.6	1,390.7	1,510.9	1,611.3	1,862.2	2,090.7	2,370.3	2,588.5
Net income	172.7	199.2	225.6	250.7	277.9	306.2	348.4	396.0	445.9	497.3
Earnings per share	\$ 1.08	\$ 1.25	\$ 1.42	\$ 1.58	\$ 1.75	\$ 1.94	\$ 2.21	\$ 2.51	\$ 2.84	\$ 3.18
Dividends per share	.59	.625	.777	.90	1.00	1.15	1.325	1.50	1.70	1.90
<i>Percentages</i>										
Annual growth in sales	—	12.4%	14.8%	10.2%	9.4%	8.6%	14.1%	11.1%	11.7%	8.8%
Annual growth in EPS	—	15.7	13.6	11.3	10.8	10.9	13.9	13.6	13.1	12.0
Dividend payout	54.6%	50.0	54.7	57.0	57.1	59.3	60.0	59.8	60.0	59.7
After-tax profit margin	10.9	11.2	11.0	11.1	11.2	11.4	11.4	11.6	11.7	12.0
Return on equity	25.9	28.2	28.2	27.9	28.0	29.5	29.6	30.0	30.3	30.1

EXHIBIT 2
1980 Data for
American Home
Products
Corporation and
Warner-Lambert
Company (millions
of dollars except per
share data)

	American Home Products Corporation	Warner-Lambert Company
Sales	\$3,798.5	\$3,479.2
5-year compound annual growth rate	11.0%	9.9%
Profit after taxes	\$ 445.9	\$ 192.7
5-year compound annual growth rate	12.2%	3.3%
Cash and equivalents	\$ 593.3	\$ 360.3
Accounts receivable, net	517.3	541.5
Inventory	557.3	645.8
Net property, plant, and equipment	450.5	827.1
Other	251.9	582.5
Total assets	\$2,370.3	\$2,957.2
Total debt	\$ 13.9	\$ 710.1
Net worth	1,472.8	1,482.7
Earnings per share	\$ 2.84	\$ 2.41
5-year compound annual growth rate	12.4%	3.0%
Dividends per share	\$ 1.70	\$ 1.32
5-year compound annual growth rate	13.6%	8.0%
Stock price (end of 1980)	\$ 30	\$ 20
Price-earnings ratio	10.6	8.3
Profit margin (Profit after taxes/Sales)	11.7%	5.5%
Return on equity	30.3%	13.0%
Percentage of total debt to total capital	.9%	32.4%
Interest coverage	436.6	5.0
Bond rating	AAA	AAA/AA ^a

a. Warner-Lambert's debt was rated AAA, but analysts felt the firm was close to being downgraded to AA.

EXHIBIT 3
Pro Forma 1981
Results for
Alternative Capital
Structure (millions
of dollars except per
share data)

	Actual 1981	Pro Forma 1981 for Varying Percentages of Debt to Total Capital		
		30%	50%	70%
Sales	\$4,131.2	\$4,131.2	\$4,131.2	\$4,131.2
EBIT ^a	954.8	922.2	922.2	922.2
Interest	2.3	52.7	87.8	122.9
Profit before taxes	952.5	869.5	834.4	799.3
Taxes	455.2	417.4	400.5	383.7
Profit after taxes	497.3	452.1	433.9	415.6
Dividends on preferred stock ..	.4	.4	.4	.4
Earnings available to common shareholders	496.9	451.7	433.5	415.2
Dividends on common stock ..	295.3	271.0	260.1	249.1
Average common shares outstanding	155.5	135.7	127.3	118.9
Earnings per share	\$ 3.18	\$ 3.33	\$ 3.41	\$ 3.49
Dividends per share	1.90	2.00	2.04	2.10
<i>Beginning of Year after Recapitalization</i>				
Cash and equivalents	\$ 593.3	\$ 360.3	\$ 360.3	\$ 360.3
Total debt	13.9	376.1	626.8	877.6
Net worth	1,472.8	877.6	626.9	376.1
Common stock price	\$ 30	—	—	—
Aggregate market value of common stock	\$4,665.0	—	—	—

a. EBIT is reduced in pro forma results because of the loss of interest income from the \$233 million in excess cash used to repurchase stock.

Detailed Assumptions for Pro Forma Recapitalizations

1. Debt is assumed to be added to the capital structure by issuing debt and using the proceeds to repurchase common stock. All repurchases are assumed to be executed in January 1981.
2. Stock is assumed to be repurchased at a price of \$30 per share, which was the prevailing stock price in early January 1981.
3. The minimum cash balance is assumed to be \$360.3 million (equal to Warner-Lambert's 1980 cash balance); thus \$233 million in excess cash is available for use in repurchasing stock.
4. A tax rate of 48% is used.
5. The common dividend payout ratio is 60%.
6. Interest rate on all debt in all recapitalizations is assumed to be 14% before tax.
7. Interest forgone on excess cash is assumed to be at a rate 14% before tax, so with recapitalization, EBIT falls by .14 times excess cash of \$233 million or \$32.6 million. Thus, pro forma EBIT is \$922.2 million (actual EBIT of \$954.8 million minus \$32.6 reduction in interest from excess cash).

Details of Recapitalizations (millions of dollars)

	30% Debt	50% Debt	70% Debt
Excess cash	\$233.0	\$233.0	\$ 233.0
Additional debt	362.2	612.9	863.7
Total repurchase	595.2	845.9	1,096.7
Reduction in common shares outstanding (million shares)	19.8	28.2	36.6

Debt Policy at UST Inc.

In December 1998, UST Inc.'s board of directors approved a plan to borrow up to \$1 billion over five years to accelerate its stock buyback program.¹ For UST Inc., the leading producer of moist smokeless tobacco products and a company widely known for its conservative debt policy and high dividend payout (uninterrupted cash dividends since 1912), this announcement generated considerable attention on Wall Street. Investors eagerly awaited the subsequent actions of Vincent Gierer, Jr., UST's Chairman and CEO.

In 1997, UST had suspended its stock repurchase program, approved in 1996, because of legislative and legal issues confronting the tobacco industry.² In November 1998, the company signed the Smokeless Tobacco Master Settlement Agreement resolving its potential state Medicaid liability and reinstated its repurchase program.³ Management believed that this agreement represented significant progress with respect to the legal and legislative matters confronting the company, permitting UST to proceed with its business strategy and potential recapitalization.

The Smokeless Tobacco Market

The U.S. smokeless tobacco industry generated \$2 billion of retail revenue in 1998 with approximately 5 million consumers of moist smokeless tobacco and 7 million consumers of chewing tobacco including loose leaf, twist, plug, and dry. Moist smokeless tobacco consumption approximated 50% of the total. See Table A for a description of smokeless tobacco products. While decelerating recently, the USDA reported moist smokeless tobacco has been the fastest growing segment of the tobacco industry with volume increasing at a 3.7% annual growth rate over the past 17 years compared with a 2% annual decline in cigarette volume over the same period. A.C. Nielson reported that moist snuff volume grew 2.9% in 1997 and 1.2% in 1998.⁴

A number of factors contributed to the continued growth of the moist smokeless tobacco segment. The increased prevalence of smoking bans has led consumers to switch to smokeless tobacco to circumvent smoking restrictions. Consumers perceive that moist smokeless tobacco is less of a health risk than cigarettes. Smokeless tobacco is

¹UST Inc. Press Release, "UST Increases First Quarter 1999 Dividend; Accelerates Stock Repurchase with \$1 Billion to Be Borrowed Over 5 Years," December 10, 1998.

²"UST Stock Buybacks: Initiatives Planned for 1999," *Dow Jones News Service*, December 10, 1998.

³Merrill Lynch & Co., "UST Inc.," December 4, 1998.

⁴Data in this paragraph from Credit Suisse First Boston, "UST, Inc.: Still Chewing on the Story—Stay Tuned," August 27, 1999.

Professor Mark Mitchell prepared this case from published sources with the assistance of Janet T. Mitchell as the basis for class discussion rather than to illustrate either effective or ineffective handling of an administrative situation.

Copyright © 2000 by the President and Fellows of Harvard College. To order copies or request permission to reproduce materials, call 1-800-545-7685, write Harvard Business School Publishing, Boston, MA 02163, or go to <http://www.hbsp.harvard.edu>. No part of this publication may be reproduced, stored in a retrieval system, used in a spreadsheet, or transmitted in any form or by any means—electronic, mechanical, photocopying, recording, or otherwise—without the permission of Harvard Business School.

TABLE A Smokeless Tobacco Products

Source: Credit Suisse First Boston, "UST, Inc.: Still Chewing on the Story—Stay Tuned," August 27, 1999

Category	Definition	Use	Brand/(Manufacturer)
Snuff			
Dry	Powdered dry tobacco	Snorted through nose	(Conwood), (Swisher), (UST) & (B&W)
Moist	Fine, long, or powdered cut moist tobacco	Placed between lower lip and gum	Copenhagen (UST), Skoal (UST), Kodiak (Conwood), Silver Creek (Swisher) & Timber Wolf (Pinkerton)
Chewing Tobacco			
Loose Leaf	Moist tobacco which is cut into small strips	Placed between cheek and gum	Red Man (Pinkerton), Levi Garrett (Conwood) & Beech Nut (National)
Plug	Moist or dry tobacco compressed into a chunk	Placed between cheek and gum	Day's Work (Pinkerton), Red Man (Pinkerton), & Levi Garrett (Conwood)
Twist/Roll	Tobacco fashioned into a roll	Placed between cheek and gum	(Conwood)

less expensive to use than cigarettes based upon an average per-week usage measurement. Additionally, consumers have been shifting over time to moist smokeless tobacco from loose leaf chewing tobacco. While the consumer base remains primarily male (approximately 98%), smokeless tobacco use is no longer confined to the stereotypical blue collar or rural users as approximately 30% of users have attended some college. The overall moist smokeless tobacco market is expected to continue to grow at an annual rate of 1–3%, with a large portion of the growth expected in the price-value segment.⁵

Competitive Position

UST is the dominant producer of moist smokeless tobacco, or moist snuff, controlling approximately 77% of the market.⁶ Exhibit 1 provides a description of UST's products and Exhibit 2 displays market share in the moist smokeless tobacco market from 1991 to 1998. Table B displays the 1998 market share of the top moist smokeless tobacco brands. UST was a driving force in the overall expansion of the moist smokeless tobacco market over the years, primarily through product innovations such as new forms and flavors. Historically, UST has been aggressive with its price increases, instituting almost annual, often twice annual, price increases over the past twenty-five years. Steadily increasing prices provided a solid boost to earnings and the company's stock price. Meanwhile, as UST expanded the category and continued to raise prices, smaller players eroded UST's market share primarily by cutting price.

Given UST's relatively significant share erosion in recent years, the investment community called upon management to take actions to compete more effectively against the value brands and stem the erosion of market share. Despite its history of expanding the overall smokeless tobacco industry through new product introductions and innovations, UST had been criticized recently for a reduction in innovation and tardiness of new product introductions and product line extensions. Inroads by smaller competitors, primarily in the value segment, led to missed earnings and lowered Wall

⁵Ibid.⁶Ibid.**TABLE B Smokeless Tobacco Brands (1998 Dollar Share)**

Source: 1998 A.C. Nielson data

Copenhagen Fine Cut (UST)	29.9%
Skoal Fine Cut Wintergreen (UST)	11.8%
Kodiak Wintergreen (Conwood)	9.5%
Skoal Long Cut Wintergreen (UST)	9.4%
Copenhagen Long Cut (UST)	7.2%
Skoal Long Cut Straight (UST)	5.9%
Skoal Long Cut Mint (UST)	4.4%
Skoal Long Cut Cherry (UST)	2.9%
Skoal Bandits Wintergreen (UST)	2.2%
Skoal Long Cut Classic (UST)	2.0%
Skoal Long Cut Spearmint (UST)	1.8%
Skoal Fine Cut Straight (UST)	1.3%

Street expectations. A *Wall Street Journal* article in 1997 noted "The company's management, pleased with their dominant market share and keenly aware of the company's strong heritage, turned their noses at the smaller upstarts."⁷ In fact, an alleged dispute over the company's course of action reportedly led to the resignation of two key executives. In February 1997, John J. Bucchignano, CFO, and Robert D. Rothenburg, President of the tobacco unit, resigned due to "philosophical differences about the strategic direction of the company."⁸

In 1997, rather than cut prices to counter the growth of value players, UST introduced its Red Seal brand tobacco to compete with the price-value brands and preserve pricing power and profitability of its premium brands.⁹ Despite this new product, analysts felt that UST was too slow in responding to the threat of value competitors. At the time of its introduction, the value segment had already gained 9% market share, requiring Red Seal to compete against already successful value brands. Another 1997 product introduction, Copenhagen Long Cut, was introduced to combat Conwood's full-priced Kodiak brand. Conwood, through its promotion of "long-cut" brands, which are easier to use than fine cut products, had made strong inroads with young and new consumers. UST originally stood by its traditional Copenhagen Fine Cut, only succumbing to the pressure to introduce a competitive product after continuing market share losses. Rooster, introduced in 1998, was a new premium product packaged in a larger can, 1.5 ounce compared to the traditional 1.2 ounce, to provide more tobacco for the consumers' money.¹⁰

In addition to product introductions, UST renewed its focus on marketing and promotion. Due to restrictions on public advertising, UST focused its marketing expenditures on free samples, mail-in rebates, and promotional sales. In 1997 and 1998, the company implemented a number of marketing initiatives and promotions. For example, UST offered 4-for-3 pricing on selected products, increased couponing, expanded its sales force, provided retailer and wholesaler incentive programs, expanded outlets and/or markets for new products, executed selected per can discounts, used special commemorative lids, and repositioned certain Skoal products.¹¹

⁷See Suein L. Hwang, "UST Stock Falls 12% as Firm Says Profit Won't Meet Expectations," *Wall Street Journal*, March 3, 1997.⁸See Cathleen Egan, "UST Resignations Likely Turned on Battle vs. Private Labels," *Dow Jones News Service*, February 24, 1997.⁹David Adelman, "UST(UST): No Surprises in 1Q Results; Retaining Underperform Rating," Morgan Stanley Dean Witter U.S. Investment Research, April 30, 1998.¹⁰Credit Suisse First Boston, "UST, Inc.: Still Chewing on the Story—Stay Tuned," August 27, 1999.¹¹Ibid.

Litigation and Legislative Environment

Litigation and legislation are everyday occurrences in the tobacco industry. Smokeless tobacco manufacturers have historically faced less exposure to health related lawsuits than cigarette manufacturers. For example, UST had seven pending health related lawsuits (excluding the state Medicaid cases) at the end of 1998, compared to cases numbering in the hundreds filed against cigarette companies.¹² The lower exposure to health-related lawsuits is largely due to the fact that scientific evidence linking smokeless tobacco to cancer is less conclusive than studies researching cigarettes' tie to cancer, and snuff producers face no potential "secondhand" smoke litigation.

In 1998, the tobacco industry experienced a number of developments in the legal and political arena, most of which were viewed positively by the industry. In June, Congressional efforts to pass broad-based tobacco legislation unfavorable to the industry collapsed. In July, a U.S. District Court judge issued a ruling to "vacate" major portions of a 1993 EPA report classifying environmental tobacco smoke as a known human carcinogen.¹³ In August, a federal appeals court ruled that "the FDA lacks jurisdiction to regulate tobacco products, and all of the FDA's regulations of tobacco products are invalid." Additionally, cigarette manufacturers won dismissal of several class-action lawsuits filed on behalf of smokers and labor union health care funds.¹⁴

Furthermore, in a landmark event for the tobacco industry, the industry agreed in November to settle state Medicaid lawsuits with a \$206 billion settlement and a ban on advertising and promotions that appeal to youths. The settlement was negotiated among the four major cigarette manufacturers and eight states, but received unanimous approval of all 46 Attorneys General for states attempting to recover Medicaid costs for treating victims of tobacco related ailments. Separately, in November, UST negotiated and signed the Smokeless Tobacco Master Settlement Agreement to settle its Medicaid disputes. The agreement provided that UST pay \$100 to \$200 million, or \$.015 to \$.02 per can, over 10 years and agree to advertising and promotion restrictions, primarily aimed at reducing youth exposure. UST was the only major smokeless tobacco manufacturer to sign this agreement. Despite the major Medicaid state settlements, lawmakers are expected to continue to push for new laws to combat youth tobacco use, further restrict advertising, and empower the FDA to regulate nicotine as a drug. Other litigation against tobacco companies is expected to continue, especially suits filed by individuals. In addition to health related litigation, UST also faced a pending dispute at the end of 1998 whereby Conwood Co. alleged that UST had violated antitrust and advertising laws and participated in anti-competitive conduct.

Financial Results

UST has historically been one of the most profitable companies, not only in the tobacco sector, but also in corporate America. In 1997 and 1998, UST received accolades from *Forbes* which named UST the top company in terms of profitability. UST's five-year return on capital of 92.1% was nearly 20% higher than the 2nd ranked firm.¹⁵ In a

¹²In 1986, UST prevailed with a unanimous jury verdict in the only moist smokeless tobacco liability lawsuit to make it through the trial process.

¹³See "Judge Rejects EPA Secondhand Smoke Report," *Association of Trial Lawyers of America*, 1998.

¹⁴See Alissa J. Rubin, "Judges Rule against FDA on Tobacco. U.S. to Appeal Decision That Bars Regulation," *Los Angeles Times*, August 15, 1998.

¹⁵*Forbes'* annual ranking of companies.

profitability study performed in 1998, John Dorfman of Dreman Value Management found UST the most profitable company as measured by return on equity, return on assets, and gross profit margin. Of 1,825 U.S. companies with a market value in excess of \$500 million, only 15 companies passed a stringent test that included a minimum 40% return on equity, minimum 20% return on assets, and a gross profit margin of 20% or more. UST beat corporate icons such as Coca-Cola and Microsoft to attain the title of most profitable company.¹⁶ UST's profitability stems from several factors including its commanding share of the moist smokeless tobacco market, premium product and strong name brand recognition, historical pricing flexibility, continued growth of moist smokeless tobacco, and limited market access by new competitors due to tobacco advertising restrictions.

Exhibit 3 presents summary financial information for the 11-year period from 1988 to 1998. Other than decreases in earnings and cash flow in 1997, UST posted continuous increases in sales, earnings, and cash flow over the entire period. Sales, earnings, and cash flow have grown at 10-year compound annual growth rates of 9%, 11%, and 12%, respectively. Concurrently, UST maintained enviable margins with average gross profit, EBITDA, EBIT, and net margins of 77%, 53%, 50%, and 31%, respectively. Annual return on equity averaged 89% and return on assets averaged 48%. Over this same period, UST provided a generous return of capital to investors, paying \$2.2 billion in dividends and repurchasing \$2.0 billion in stock.

While the vast majority of UST's operations revolve around the production of smokeless tobacco products, the company also produces and markets wine and premium cigars. Historically, UST has dallied modestly in operations outside of its core moist smokeless tobacco operations.¹⁷ Such investments in non-core operations have traditionally provided returns far below those of the moist smokeless tobacco business. In 1998, smokeless tobacco contributed approximately 88% of revenues and 97% of operating profit. Wine and other businesses (cigars and international marketing of moist smokeless tobacco) contributed 10% and 2% of revenues, respectively, and 3% and 0% of operating profit, respectively. Exhibit 4 provides segment information for UST's operations from 1996 to 1998.

The Tobacco Industry

UST's 1998 financial performance relative to other tobacco companies is shown in Exhibit 5. Review of the operating statistics indicates UST compares very favorably to the other tobacco firms. UST's gross profit margin of 80% compares to a median of 28% for the group. Average return on assets of 54% and return on equity of 103% for UST compare to medians of 3.1% and 22.5% for the group. Furthermore, UST achieves these high returns with low financial leverage. UST's total debt to book capitalization is 17.6% compared to the group median of nearly 66%.

Standard & Poor's ("S&P") rates the debt of three of the six other tobacco companies as investment grade and two companies are rated BB, the highest level of speculative grade credit ratings. See Exhibit 6 for tobacco companies' S&P ratings and financial

¹⁶See John Dorfman, "Smokeless Tobacco Maker UST Tops Profitability Test," *Rocky Mountain News*, August 16, 1998.

¹⁷For example, UST purchased two Michigan television stations in 1980 (sold in 1985), acquired Heritage Health, a chain of alcohol and substance abuse centers, in 1986 (sold in 1988), bought 76% of the stock in Camera Platforms, a firm that leases camera cars to the movie industry, in 1990 (sold in 1995), and formed Cabin Fever Entertainment in 1988 to produce video and television programming (sold in 1998).

ratios. The favorable ratings are due primarily to the highly cash generative nature of the tobacco industry. S&P views the near-term outlook of the tobacco industry to be stable and the longer-term view to be less clear. Despite strong cash flows, the U.S. tobacco industry is characterized by legal challenges, declining volumes, marketing restrictions, taxes, discounting, and consolidation.¹⁸

UST has historically maintained an A-1 credit rating for its commercial paper. As UST increases its debt level, it will likely issue long-term debt, thereby increasing the average maturity of debt outstanding. S&P and the other rating agencies will review UST's overall corporate profile, pro-forma capital structure, and investment intentions to determine the appropriate senior debt rating for the company. S&P will consider, among other things, UST's cash flow generation and payment obligations, financial policies, market position and brand name recognition, geographic and product diversification, pricing power, industry dynamics, profitability margins and returns, capitalization ratios, and coverage ratios. The rating determination could have a significant impact on the cost of the recapitalization. See Exhibit 7 and Exhibit 8 for an overview of S&P's ratings criteria and key financial ratios.

Outlook

Once a Wall Street darling, research analysts in late 1998 have mixed views of UST's future, with a number of analysts maintaining "Neutral" ratings on the company. While UST has somewhat stabilized its market share, analysts remain concerned about the continued threat of price-value competitors and a softening smokeless tobacco market. Unlike cigarette companies who combat declining domestic consumption trends with offshore growth, UST has no immediate opportunity for international expansion. Historically lackluster performance of non-core operations creates some concern that management might use funds to over-invest in under-performing businesses. Additionally, public and political sentiment remains negative regarding the tobacco industry.

Despite the less than glowing outlook, the board of directors decided to borrow up to \$1 billion to accelerate the company's stock repurchase program. Looking forward to 1999, Vincent Gierer and the UST management team face the task of implementing the major change in debt policy.

¹⁸See "Divergent Credit Trends for the Global Tobacco Industry," *Standard & Poor's* (September 22, 1999).

EXHIBIT 1 UST Inc. Product Information

Source: Credit Suisse First Boston research dated August 27, 1999.

Brands	Category	Introduction	% 1998 Sales	1998 Average Retail Cost per Can	Description	Competition
Copenhagen	Full Price	1822	48%	\$3.13	Top selling brand in the industry. Straight-flavored. Copenhagen has a "made-date" on bottom of its container so consumers recognize that it is fresh. Both fine and long cut varieties. Long cut variety introduced in the first quarter of 1997.	Timberwolf (Swedish Match) and Redwood (Swisher)
Skoal Fine Cut	Full Price	1935	18%	\$2.98	Second largest selling brand in the industry. Wintergreen and straight-flavored.	Kodiak (Conwood)
Skoal Long Cut	Full Price	1984	29%	\$3.11	Available in six varieties: wintergreen, straight, mint, cherry, classic, and spearmint.	Kodiak (Conwood), Timberwolf (Swedish Match), and Silver Creek (Helme)
Skoal Bandits	Full Price	National introduction in 1983	3%	\$3.10	Skoal packed in "tea bags" that are individual portion packs that make it easy to use and dispose.	Renegades (Swedish Match)
Red Seal	Price Value	Third Qtr 1997	1%	\$1.29	Available in wintergreen and straight-flavors. Introduced in a 1.2 oz package.	Timberwolf (Swedish Match), Cougar, Redwood (Swisher), and Silver Creek (Helme)
Rooster	Full Price	Test marketed in Fourth Qtr 1997; National introduction in 1998	<1%	\$2.44	Long-cut wintergreen and straight-flavored. Priced competitively to Copenhagen and Skoal but is packaged in a 1.5 oz can, offering consumers 25% more tobacco for their money.	Kodiak (Conwood)

EXHIBIT 2 Market Share Information for UST Inc.

Source: Credit Suisse First Boston Research dated August 27, 1999. Compiled from A. C. Neilson data and estimates.

	1991	1992	1993	1994	1995	1996	1997	1998	7 Yr. CAGR
Industry									
Premium Market Share %	99.0%	97.9%	97.2%	96.3%	94.9%	92.7%	90.9%	89.2%	(1.5%)
Price Value Market Share %	1.0%	2.1%	2.8%	3.7%	5.1%	7.3%	9.1%	10.8%	40.5%
UST									
Total Market Share %	86.2%	84.6%	85.1%	83.8%	81.7%	79.5%	78.2%	77.2%	(1.6%)
Increase/(Decrease)%	(1.9%)	(1.9%)	0.6%	(1.5%)	(2.5%)	(2.7%)	(1.6%)	(1.3%)	(1.7%)
Premium Market Share %	86.2%	84.6%	85.1%	83.8%	81.7%	79.5%	78.2%	76.6%	—
Price Value Market Share %	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.6%	—
Conwood									
Total Market Share %	10.1%	11.3%	10.8%	11.1%	11.9%	12.8%	13.1%	13.2%	3.9%
Increase/(Decrease)%	11.9%	11.9%	(4.4%)	2.8%	7.2%	7.6%	2.3%	0.8%	—
Premium Market Share %	10.1%	11.3%	10.8%	11.1%	11.9%	12.2%	11.8%	11.6%	2.0%
Price Value Market Share %	0.0%	0.0%	0.0%	0.0%	0.0%	0.6%	1.3%	1.6%	—
Swedish Match									
Total Market Share %	1.8%	2.0%	1.0%	1.1%	1.4%	2.3%	3.0%	4.6%	14.3%
Increase/(Decrease)%	11.1%	11.1%	(50.0%)	10.0%	27.3%	64.3%	30.4%	53.3%	—
Premium Market Share %	1.8%	2.0%	1.0%	1.0%	0.8%	0.5%	0.3%	0.3%	(22.6%)
Price Value Market Share %	0.0%	0.0%	0.0%	0.1%	0.6%	1.8%	2.7%	4.3%	—
Swisher									
Total Market Share %	1.0%	2.1%	2.8%	3.6%	4.5%	4.9%	5.1%	3.8%	21.0%
Increase/(Decrease)%	110.0%	110.0%	33.3%	28.6%	25.0%	8.9%	4.1%	(25.5%)	—
Premium Market Share %	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	—
Price Value Market Share %	1.0%	2.1%	2.8%	3.6%	4.5%	4.9%	5.1%	3.8%	21.0%
Other Manufacturers									
Total Market Share %	0.9%	0.0%	0.3%	0.4%	0.5%	0.5%	0.6%	1.2%	4.2%
Increase/(Decrease)%	(100.0%)	(100.0%)	NM	33.3%	25.0%	0.0%	20.0%	100.0%	—
Premium Market Share %	0.9%	0.0%	0.3%	0.4%	0.5%	0.5%	0.6%	0.7%	(3.5%)
Price Value Market Share %	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.5%	—

EXHIBIT 3 Summary Financial Information for UST Inc. (in millions, except per-share data and ratios)

Source: Company annual report for fiscal year ended December 31, 1998, and author's adjustments and calculations.

	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	5-Yr CAGR	10-Yr CAGR
Summary Operating Data^a													
Net Sales	\$611.9	\$673.9	\$756.4	\$898.4	\$1,032.2	\$1,097.5	\$1,204.0	\$1,305.8	\$1,371.7	\$1,401.7	\$1,423.2	5%	9%
Gross Profit	437.3	488.4	564.6	670.9	775.4	851.1	952.0	1,043.6	1,098.9	1,109.8	1,139.7	6%	11%
EBITDA	277.9	315.0	368.6	446.4	525.2	591.4	668.9	736.9	779.2	749.8	785.0	6%	11%
EBIT	260.2	298.4	349.0	423.8	500.8	564.8	640.7	707.8	750.9	719.3	753.3	6%	11%
Interest Expense	(1.1)	(3.2)	(3.2)	(2.3)	(1.9)	(2.0)	0.1	3.2	6.4	7.5	(2.2)		
(Income)	261.3	301.6	352.2	426.1	502.6	566.8	640.6	704.6	744.5	703.9	755.5		
Pretax Earnings	162.2	190.5	223.3	265.9	312.6	347.9	387.5	429.8	464.0	443.9	467.9	6%	11%
Net Income													
Free Operating													
Cash Flow	\$135.2	\$195.1	\$217.8	\$247.3	\$267.9	\$340.7	\$399.2	\$521.2	\$456.4	\$287.4	\$429.5	5%	12%
Special Charges/													
Non-Recurring													
Items (Gains) ^b	—	—	—	—	—	\$(35.0)	—	—	—	\$8.0	\$21.0		
Basic Earnings	\$0.74	\$0.87	\$1.04	\$1.26	\$1.49	\$1.67	\$1.92	\$2.21	\$2.48	\$2.41	\$2.52	9%	13%
per Share													
Diluted Earnings	\$0.71	\$0.83	\$0.99	\$1.20	\$1.43	\$1.63	\$1.88	\$2.17	\$2.44	\$2.39	\$2.50	9%	13%
per Share	\$0.37	\$0.46	\$0.55	\$0.66	\$0.80	\$0.96	\$1.12	\$1.30	\$1.48	\$1.62	\$1.62	11%	16%
Dividend per Share	50%	53%	53%	52%	54%	58%	58%	59%	60%	67%	64%		
Dividend Payout Ratio													
Balance Sheet and Cash Flow Data													
Cash and Cash													
Equivalents	\$72.7	\$54.6	\$46.6	\$41.5	\$36.4	\$25.3	\$50.7	\$69.4	\$54.5	\$6.9	\$33.2		
Total Assets	\$598.0	\$630.2	\$622.6	\$656.5	\$674.0	\$706.2	\$741.2	\$784.0	\$806.6	\$826.4	\$913.3		
Long-Term Debt	\$21.8	\$6.8	\$3.1	—	—	\$40.0	\$125.0	\$100.0	\$100.0	\$100.0	\$100.0		
Total Debt	\$30.8	\$14.5	\$4.8	\$1.3	—	\$40.0	\$125.0	\$200.0	\$250.0	\$110.0	\$100.0		
Shareholders' Equity	\$453.3	\$482.3	\$473.9	\$482.9	\$516.6	\$463.0	\$361.7	\$292.8	\$281.2	\$436.8	\$468.3		
Average Basic Shares	220.6	219.8	215.2	211.6	209.8	208.5	202.0	194.4	187.4	183.9	185.5		
Outstanding	\$221.1	\$209.3	\$197.2	\$210.0	\$249.0	\$228.4	\$221.2	\$144.8	\$144.0	\$275.3	\$309.9		
Working Capital	\$20.8	\$23.7	\$37.2	\$28.4	\$30.1	\$54.5	\$23.7	\$14.0	\$36.7	\$55.8	\$35.5		
Capital Expenditures ^c	\$81.7	\$101.2	\$118.3	\$139.7	\$168.0	\$199.7	\$225.7	\$252.4	\$277.3	\$298.1	\$301.1		
Dividends Paid	\$67.4	\$97.5	\$151.3	\$184.4	\$212.6	\$236.7	\$298.8	\$274.8	\$237.8	\$45.7	\$151.6		
Share Repurchases													

	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	5-Yr CAGR	10-Yr CAGR
Stock Price Data													
High	\$10.50	\$15.38	\$18.25	\$33.88	\$35.38	\$32.75	\$31.50	\$36.00	\$35.88	\$36.94	\$36.88		
Low	\$6.00	\$9.63	\$12.38	\$16.38	\$25.38	\$24.38	\$23.63	\$26.63	\$28.25	\$25.50	\$24.56		
Year End	\$10.25	\$15.31	\$18.25	\$32.75	\$32.00	\$27.75	\$27.88	\$33.38	\$32.38	\$36.94	\$34.88	5%	13%
Price/Earnings Ratio ^d	13.9x	17.6x	17.5x	26.0x	21.5x	16.6x	14.5x	15.1x	13.1x	15.3x	13.8x		
Market Equity ^e	\$2,260.6	\$3,366.0	\$3,926.6	\$6,930.0	\$6,713.7	\$5,785.0	\$5,630.6	\$6,487.2	\$6,066.6	\$6,794.0	\$6,470.8		
Selected Growth Rates and Ratios												5-Yr Avg	10-Yr Avg
Sales Growth	7.2%	10.1%	12.3%	18.8%	14.9%	6.3%	9.7%	8.5%	5.0%	2.2%	2.2%	1.5%	
Net Income Growth	23.9%	17.5%	17.2%	19.1%	17.5%	11.3%	11.4%	10.9%	8.0%	(4.3%)	(4.3%)	5.4%	
Dividend Growth	23.3%	24.3%	19.6%	20.0%	21.2%	20.0%	16.7%	16.1%	13.8%	9.5%	9.5%	0.0%	
Gross Profit Margin	71.5%	72.5%	74.6%	74.7%	75.1%	77.5%	79.1%	79.9%	80.1%	79.2%	79.2%	80.1%	79.7%
EBITDA Margin	45.4%	46.7%	48.7%	49.7%	50.9%	53.9%	55.6%	56.4%	56.8%	53.5%	53.5%	55.2%	55.5%
EBIT Margin	42.5%	44.3%	46.1%	47.2%	48.5%	51.5%	53.2%	54.2%	54.7%	51.3%	51.3%	52.9%	53.3%
Net Margin	26.5%	28.3%	29.5%	29.6%	30.3%	31.7%	32.2%	32.9%	33.8%	31.7%	31.7%	32.9%	32.7%
Return on Average Equity	38.0%	40.7%	46.7%	55.6%	62.5%	71.0%	94.0%	131.3%	161.7%	123.7%	103.4%	122.8%	89.1%
Return on Average Assets	28.3%	31.0%	35.6%	41.6%	47.0%	50.4%	53.5%	56.4%	58.3%	54.4%	53.8%	55.3%	48.2%
Long-Term Debt/Capitalization	4.6%	1.4%	0.6%	0.0%	0.0%	8.0%	25.7%	25.5%	26.2%	18.6%	17.6%	22.7%	12.4%
Total Debt/Capitalization	6.4%	2.9%	1.0%	0.3%	0.0%	8.0%	25.7%	40.6%	47.1%	20.1%	17.6%	30.2%	16.3%

^aBefore the cumulative effect of accounting changes. Excludes settlement charges and other special charges or non-recurring items. All net income adjustments apply a 40% tax rate.

^bAuthor's estimates of pretax settlement charges and other special charges or non-recurring items. Does not include effect of accounting changes.

^cAdditions for property, plant, and equipment net of dispositions.

^dBased upon year-end stock price and basic earnings per share.

^eBased upon average basic shares outstanding and year-end stock price.

EXHIBIT 4 Summary Financial Information (Segment Data) for UST Inc. (in millions)

Source: Company annual report for fiscal year ended December 31, 1998, and author's calculations.

	1996	% Total	1997	% Total	1998	% Total
Net Sales (unaffiliated customers)						
Tobacco	\$1,167.5	85.1%	\$1,181.8	84.3%	\$1,245.6	87.5%
Wine	122.5	8.9%	145.0	10.3%	148.5	10.4%
Other	81.7	6.0%	74.9	5.3%	29.2	2.1%
Total Net Sales	\$1,371.7		\$1,401.7		\$1,423.2	
Operating Profit						
Tobacco	\$745.6	97.6%	\$700.4	96.3%	\$720.6	96.8%
Wine	17.9	2.3%	28.2	3.9%	22.1	3.0%
Other	0.1	0.0%	(1.3)	(0.2%)	1.7	0.2%
Total Operating Profit	\$763.5		\$727.3		\$744.4	
Operating Profit Margin						
Tobacco	63.9%		59.3%		57.9%	
Wine	14.6%		19.4%		14.9%	
Other	0.1%		(1.7%)		5.9%	
Identifiable Assets at December 31						
Tobacco	\$458.2	56.8%	\$468.0	56.6%	\$497.6	54.5%
Wine	194.9	24.2%	230.9	27.9%	277.2	30.4%
Other	91.6	11.4%	102.2	12.4%	87.2	9.5%
Corporate	61.9	7.7%	25.3	3.1%	51.3	5.6%
Total Identifiable Assets	\$806.6		\$826.4		\$913.3	
Capital Expenditures (Gross)						
Tobacco	\$29.2	65.3%	\$29.4	50.6%	\$27.7	49.2%
Wine	12.0	26.9%	20.1	34.6%	25.6	45.6%
Other	2.7	6.0%	6.1	10.5%	2.5	4.4%
Corporate	0.8	1.8%	2.5	4.3%	0.5	0.8%
Total Capital Expenditures	\$44.7		\$58.2		\$56.3	
Depreciation						
Tobacco	\$15.8	56.2%	\$16.3	54.0%	\$16.1	51.3%
Wine	8.9	31.7%	10.4	34.6%	12.0	38.1%
Other	1.8	6.4%	1.8	6.1%	1.7	5.3%
Corporate	1.6	5.8%	1.6	5.3%	1.7	5.3%
Total Depreciation	\$28.1		\$30.1		\$31.4	

EXHIBIT 6 Key Financial Ratios for Tobacco Companies

Source: Data provided by Standard & Poor's to the casewriter.

	Tobacco Product Manufacturers			Tobacco Leaf Merchants			Tobacco Companies Median ^b	UST Inc.
	Philip Morris	North Atlantic Trading Co. ^a	RJR Nabisco Holdings	DiMon Inc.	Standard Commercial	Universal Corp		
Three years (1996-1998)								
Corporate Credit Rating Outlook	A Stable	B+ Stable	BBB- Stable	BB+ Negative	BB- Positive	A- Stable	3.0	101.5
EBIT interest coverage (x)	11.2	1.3	2.5	2.6	3.3	3.5	4.1	105.6
EBITDA interest coverage (x)	12.7	1.6	3.7	3.3	5.4	4.4	13.4	364.0
Fund flow/total debt (%)	56.3	6.8	14.5	12.3	6.7	18.5	6.2	296.5
Free operating cash flow/total debt (%)	41.8	5.6	6.8	10.1	(2.6)	2.9	12.6	140.6
Return on capital (%)	38.4	11.8	10.3	13.4	6.6	16.9	16.0	55.7
Operating income/sales (%)	26.0	38.1	15.6	16.4	3.6	7.6	66.8	28.2
Total debt/capital (including ST debt) (%)	49.3	90.6	55.1	67.8	77.5	65.8		

^aData for 1997-1998.

^bExcludes UST Inc.

EXHIBIT 7 S&P Credit Ratings

Source: Standard & Poor's Corporate Ratings Criteria.

Long-Term Issue Credit Ratings

Investment Grade

- AAA** Obligor's capacity to meet its financial commitment on the obligation is extremely strong.
- AA** Obligor's capacity to meet its financial commitment on the obligation is very strong.
- A** Somewhat more susceptible to adverse effects of changes in circumstances and economic conditions. However, obligor's capacity to meet financial commitment on obligation is still strong.
- BBB** Adequate protection parameters. However, adverse economic conditions or changing circumstances are more likely to lead to a weakened capacity of the obligor to meet its financial commitment on the obligation.

Speculative Grade

- BB** Obligation faces major ongoing uncertainties or exposure to adverse business, financial, or economic conditions which could lead to obligor's inadequate capacity to meet its financial commitment on the obligation.
- B** Obligor currently has capacity to meet its financial commitment on the obligation. Adverse business, financial, or economic conditions will likely impair obligor's capacity or willingness to meet financial commitment on the obligation.

Notes:

S&P's ratings of long-term speculative grade debt also includes CCC, CC, C, and D (default) with these grades displaying successively greater vulnerabilities to default. Plus (+) or minus (-) may be added to ratings AA to CCC to indicate relative standing within the major ratings definitions.

Short-Term Issue Credit Ratings

- A-1** Obligor's capacity to meet its financial commitment on the obligation is strong. Within the category, certain obligations are designated with a (+) sign which indicates obligor's capacity is extremely high.
- A-2** Somewhat more susceptible to the adverse effects of changes in circumstances and economic condition, however, obligor's capacity to meet financial commitment on obligation is satisfactory.
- A-3** Exhibits adequate protection parameters. However, adverse economic conditions or changing circumstances are more likely to lead to a weakened capacity of obligor to meet its financial commitment on the obligation.
- B** Regarded as having significant speculative characteristics. Obligor currently has the capacity to meet its financial commitment on the obligation; however, it faces major ongoing uncertainties which could lead to inadequate capacity to meet financial commitment on the obligation.

Notes:

S&P's ratings of short-term speculative grade debt also includes C and D (default).

While Diageo's name was not well known to the average consumer, its brands were among the most famous in the world. The firm was organized along four business segments. The largest was the Spirits and Wine business, which produced and marketed a portfolio of beverage alcohol such as scotch, vodka, gin, and tequila. Diageo's brands included Johnnie Walker, Smirnoff, J&B, Bailey's, Gordon's, Tanqueray, Cuervo, and Malibu. This division was not only the biggest (with revenues of £5 billion and the leading market share in the U.S. and U.K. markets) but also the fastest growing of Diageo's businesses, with sales growth of 8% for the year. More than 70% of sales and sales growth came from the Europe and North America markets. This segment enjoyed the largest profit margins of all of the segments, with 15% operating margins and growth in total operating profits of 15%. The high levels of operating profits reflected Diageo's strategy of concentrating on premium brands and pricing. (Exhibits 1 and 2 contain historical financial information for Diageo and its business segments.)

Diageo's second largest division was Guinness Brewing, which produced and sold beer to markets around the world. This segment, while substantially smaller in sales than the Spirits and Wine Division, was a close second to it in terms of operating profit growth rate. Due to the similarity in the products and distribution channels for these two businesses, Diageo was in the process of integrating them, which might result in cost reductions of £130 million annually.

Diageo's two remaining businesses were in packaged and fast foods. Its Pillsbury subsidiary was a leading producer of packaged food products. Its brands included Progresso, Green Giant, and Haagen Dazs. Diageo's fourth and smallest business segment was its Burger King subsidiary, which had sales of £941 million. Burger King operated a series of fast-food restaurants throughout the world, though the bulk of revenues came from North America.

Since the 1997 merger, Diageo's stock price performance had lagged versus broad market indices. (See Exhibit 3.) In September 2000, Paul Walsh, who had previously been the CEO of the Pillsbury subsidiary, was named the Group Chief Executive of Diageo. Walsh's new strategy involved focusing on "beverage alcohol, driving growth through innovation around our unrivalled portfolio of brands and providing an improved base for sustained profitable top line growth." To achieve this goal, Diageo agreed to sell Pillsbury to General Mills. Under the proposal, General Mills would pay Diageo \$5.1 billion in cash plus 141 million newly issued shares of General Mills stock. The shares were worth approximately \$5.4 billion and would result in Diageo owning approximately 33% of the new General Mills/Pillsbury business. In addition, Diageo management announced their intention to exit the fast food business through an initial public offering of Burger King. Walsh stated in July that "we are going to develop the option first of all to float 20 percent of Burger King. Then after 2002, we will potentially float the balance of 80 percent. . . . We can float 20 percent now without triggering a significant tax charge. There are tax regulations that say after 2002 we should be able to float the balance without incurring any taxes."²

With these actions, Diageo would concentrate solely on the beverage alcohol business. Continued growth could come from organic growth or from potential acquisitions. "Organic growth" might involve increased sales of existing products or product extensions, such as Smirnoff Ice, a blend of Vodka and lemon juice, or a new bottled version of Guinness. Ongoing capital expenditures to support organic growth as well as to modernize existing production facilities was projected to require about £ 400–500 million per year for the next five years.

Growth could also come from acquisitions, but the amount that Diageo might need was virtually impossible to estimate with much certainty. It was unclear which firms Diageo might be able to acquire, which other firms might bid for them, how much rival

²Bloomberg News Service, June 22, 2000.

bidders might be able and willing to spend, and how hotly contested the bidding might become. Diageo's major rivals in the alcoholic beverage industry, such as Bacardi, Allied Domecq, Seagrams, and Pernod Ricard, were not only potential rival bidders for firms and brands, but potential acquisition targets themselves in the consolidating beverage alcohol business. For example, Seagram's beverage unit was up for sale in autumn of 2000 and analysts guessed it might fetch \$7 to \$9 billion. Diageo was working on a joint bid for Seagrams with Pernod Ricard, which might commit Diageo to spend \$3 to \$5 billion. Smaller private firms and individual brands were also considered potential acquisition candidates at the right price. In an "expansion scenario," Diageo might spend as much as \$6 to \$8 billion for acquisitions in the next three years including Seagram's; a "minimalist" scenario might involve very little acquisition, and a "midrange" estimate was about \$2.5 billion over five years. These were not official Diageo forecasts, but rather very rough guesses by the finance team. (See Exhibit 4 for comparable companies.) As part of its focus on shareholder value, Diageo was also an active seller of brands that did not fit into its growth strategy.³

In general, Diageo sought to be in a strong position to expand its beverage spirits business. While Diageo was already the world's largest beverage spirits firm, acquisitions could be integrated into its system, allowing Diageo to enjoy certain efficiencies and synergies. These benefits could arise from cost savings in manufacturing, procurement, and supply, or through savings in the distribution system and an enhanced ability to reach consumers. Acquisitions might be important in light of the industry consolidation, among both suppliers and distributors, in the alcoholic beverage business. It was therefore critical for the finance side of the business to be able to fund these opportunities, if and when they arose.

Diageo's Historical Capital Structure

In general, British firms tended to have more conservative financial policies than firms in other nations. Research showed that the book value of equity accounted for 42% of the total assets of the average U.K. firms (excluding financial service firms), as compared with 28% to 40% in other highly developed nations.⁴ Both Guinness and Grand Metropolitan used reasonably little debt to finance themselves prior to the creation of Diageo. (See Exhibit 1.) This policy choice was reflected in the relatively high ratings on the bonds of the two firms, AA and A, respectively.⁵ Rating agencies, like Standard

³For example, Diageo sold Dewar's Scotch whiskey and Bombay Gin to Bacardi for 1.2 billion pounds in early 1998. Approximately 500 million pounds of the cash payment was paid out to shareholders under the B-share program that began in February 1998. The 320 million pounds remaining after taxes went to pay down debt. Source: *The Financial Post*, March 31, 1998.

⁴R. Rajan and L. Zingales, "What Do We Know about Capital Structure? Some Evidence from International Data." *The Journal of Finance*, 50, (December 1995) 1421–1460. The study examined firms in the G-7 countries (the seven countries with the largest economies) which included the United States (with 34% equity as a percentage of assets), Japan (33%), Germany (28%), France (31%), Italy (33%), and Canada (40%). The calculation measured the book value of equity divided by total assets for each firm listed in the Global Vantage database.

⁵Debt ratings were generally broken down into two classes, Investment Grade (IG) and Non-Investment Grade (NIG). IG consists of debt with S&P ratings of BBB– and higher, while NIG were BB+ and lower. While many of the differences between individual ratings were small, NIG credits were considered to have significantly more risk and lower market liquidity for a few reasons. First, the higher credit risk required more time and expertise to value, and investors demanded higher promised returns. Second, regulations prohibited many institutional investors (such as money market mutual funds) from owning low-rated debt. Consequently, there was less money available to make the investments, shrinking the size of the market and reducing the bidding competition for the offered debt instruments. Together, these effects reduced the amount of money that weaker credits could raise, and increased the interest expense.

and Poor's and Moody's, assigned ratings to bonds to reflect the company's ability to make promised interest and principal payments on its debt.

When Guinness and Grand Met announced their merger, the companies were put on Credit Watch by one of the rating agencies due to the uncertainty about their new financial policies.⁶ When the companies merged, management chose to retain the policies of the merged companies, in part to maintain the status quo, and in part because the policy "felt right." While Diageo could have increased its debt and let its debt rating fall to BBB (one level below its current A rating), the feeling was that this "seemed a bit risky." They also felt that there had been an implicit promise to the public when the individual companies had previously issued bonds. Diageo communicated its decision to investors and rating agencies in the merger announcement by stating "The enlarged group's policy will be to manage actively the capital structure so as to keep the interest cover ratio, in normal circumstances, within a band of five to eight times."⁷ Once the merger was complete and policies disclosed, the rating agencies confirmed that the firm's debt would be rated A+, the rough average of the two predecessor firms.

Credit rating agencies use a long list of quantitative and qualitative factors to establish the creditworthiness of firms. The Treasury team, however, found that the firm's interest coverage ratio was probably a critical variable that determined its rating. Interest coverage was measured as Earnings Before Interest, Taxes, Depreciation, and Amortization (EBITDA) divided by Interest Payments. The Treasury team felt that Diageo could maintain its credit rating of A+ by maintaining interest coverage of 5 to 8 times. This was lower than required in some other industries to obtain an A+ rating, in part due to the stable nature of Diageo's portfolio of brands. (As a secondary target, they sought to keep EBITDA divided by Total Debt at about 30 to 35%.) If the firm's coverage were to fall below 5, it would risk a downgrade. The firm adjusted its coverage ratio in a lumpy fashion through a combination of debt issuance, repurchases, and other large transactions. Figure I, taken from an internal Diageo presentation, shows the firm's interest coverage over time, and the actions the firm took.

The strong debt rating afforded considerable benefits for Diageo in the capital markets. In general, the highest rated firms (known as Investment Grade firms) were able to raise financing more readily and paid lower promised yields than firms with weaker ratings. (See Exhibits 5 and 6.) The additional yield that lower-rated firms needed to pay on their debt (the credit yield spread) was calculated and reported widely. However, limitations on lower-rated firms' abilities to borrow were less well measured. The capital markets for highly rated international firms like Diageo were relatively deep. When the Treasury team was asked to speculate on its ability to raise funds, they guessed that as an A-rated borrower, they could probably raise additional debt of \$8 billion in 12 months while maintaining the rating. If Diageo were rated BBB, it might be able to raise \$5 to \$8 billion, and if they were rated BB they could raise less than \$5 billion over the same time. These were very rough unofficial estimates, which might vary over time. (In comparison, Diageo speculated that if their competitors were willing to sell assets and risk a credit rating downgrade, their two largest could each raise maybe \$9 billion over this time, two others might be able to raise \$3–\$4 billion each, and a fifth \$2–\$2.5 billion.)

⁶A firm is placed on "CreditWatch" when it is exposed to material specific events or short-term trends that need special attention to evaluate, such as mergers, recapitalizations, voter referendums, regulatory action, or anticipated operating developments. A listing does not guaranty that the rating will change.

⁷Bloomberg News Service.

An additional benefit of a high rating was the ability to access short-term commercial paper borrowings at attractive rates. Short-term interest rates available through the commercial paper⁸ (CP) market were up to 25 basis points below the London Inter-Bank Offer Rate (LIBOR), a rate that large banks quoted for short term unsecured loans. For comparison, the interest rate that A rated companies paid on 5-year bonds was typically LIBOR + 40 basis points, or 0.65% higher than the CP rates. Lower rated firms found it difficult to raise money in the commercial paper market, as this was an unsecured form of borrowing. Furthermore, the major holders of commercial paper (money market funds) were prohibited by regulation from holding more than 5% of their portfolios in low-rated short-term funds. Approximately 47% of Diageo's debt, about 3.2 billion pounds, was issued as short-term commercial paper with maturities of 6 months to one year. If Diageo's long-term debt were to be rated BBB, its ability to raise commercial paper might be severely limited.

The Corporate Treasury's Simulation-Based Model

One of Diageo's core philosophies, inherited from Grand Metropolitan, was the idea of "Managing for Value," a variant of "Economic Value Added." The idea was relatively simple—the return earned by a division should cover not only its operating expenses, but also the cost of the capital employed by the division.⁹ While the mandate for Managing for Value came from the highest levels of Diageo, the Treasury team was charged with establishing the cost of capital for each of the 110 countries in which the firm operated. This was a very difficult task that kept them focused on calculating the pros and cons of various financing policies.

In December 1998, the Treasury team retreated to Drummur, a resort in Scotland, to brainstorm about Diageo's financial policies. In particular, the staff considered new approaches in finance and rethought which treasury functions should be centralized, what the firm's risk footprint should be, how to calculate the cost of capital, and how to optimally structure the firm's balance sheet.

One of the more novel discussions revolved around the firm's funding policies. Finance textbooks and MBA programs often taught that a firm's gearing should reflect the tradeoff between the tax benefits of debt (modeled as tax shields) and the costs of financial distress. While the tax deductibility of interest on debt was easily modeled (Diageo's composite marginal tax rate was 27%), the costs of financial distress were more elusive. Textbooks depicted graphs of the stylized tradeoff between the tax shields and costs of financial distress, but it was much more difficult to examine this tradeoff rigorously in practice.

A long line of academic research attempted to measure the costs of financial distress. Financial difficulties gave rise to direct costs, including the costs for legal and financial advisors. Financial distress could also lead to indirect or strategic costs in three ways. First, competitors could attempt to take advantage of the situation by increasing their market share (for example, by starting a price war with the hope that the distressed firm

⁸Commercial paper is an unsecured promissory note, typically maturing within 270 days.

⁹Diageo instituted the philosophy through the bonus plan, which applied to the top three ranks of managers, more than 1,400 people in all. The plan was uncommon in three aspects. First, the bonus pool was benchmarked against the capital charges incurred by a division. Second, negative bonuses could be earned (penalized) when the capital charges were not covered. Finally, bonuses were paid into a "bonus bank" with a claw-back provision. Every year, an employee's bonus would be "paid" to his or her account. One-half of the balance was paid out immediately. The other half was held in escrow against potential future negative bonuses. This kept managers focused on long-term performance while meeting short-term goals.

just collapses). Second, customers might be less willing to purchase from the distressed firm, especially if the purchases are long-term in nature and might require future support (for example, warranty repairs). Third, management might focus on the financial crisis and not running the business, and the firm might forgo profitable investments for future cash flow. Recent research that quantified the average value loss of distressed firms influenced the Treasury team's thinking.¹⁰ This data gave an indication of the cost of financial distress, but not its likelihood.

Simpson and Williams now felt they had most of the information they needed to roughly quantify the implications of the tradeoff between tax shields and the costs of distress. In order to do this, they would need to calculate their tax shields each year, as well as whether Diageo would get into financial distress in each year. To evaluate the likelihood of financial distress, they would have to model the firm's cash flow generation over time, over a broad range of market conditions.

A thorough review of historical results, as well as an audit by outside consultants, found that Diageo's operating cash flow or return on assets, as measured by EBIT/assets,¹¹ was driven by the fluctuations in sales and exchange rates. They calculated the historical time series of profitability by segment for Diageo as well as for a sample of comparable firms. (See Exhibit 7.) This distribution of profitability, especially for the beverage alcohol business, would give them some information on the future distribution of profitability. In general, all of Diageo's businesses, including the beverage alcohol business which it would retain, had relatively stable cash flows, which had allowed Diageo to take on a higher level of debt than other companies. Financial distress was determined by the financial policies of the company—in particular by its level of gearing and by the maturity of the debt it issued. (Interest payments on Diageo's short-term debt would be affected by interest rates.) With broad probability distributions and multiple gearing policies to consider, Simpson and Williams turned to Monte Carlo simulation analysis to help guide the process.

Monte Carlo analysis was a technique that physicists developed to help build the first nuclear weapons during the latter stages of the Second World War. This form of simulation was used to quantify uncertainty when the underlying problem was difficult or impossible to solve exactly, for example, when key parameters are random variables, and to understand the final distribution of outcomes, not just the expected value. Operating cash flow, exchange rates, and interest rates changed over time in a hard-to-predict fashion, and financial distress was a low probability, high significance "non-linear" event. The simulation technique was a statistical analysis of multiple experiments or "trials." Each trial represented the results from one "realized" set of random draws of the different input variables. By keeping track of the output of each trial as well as the summary statistics, the user could construct a more precise distribution for the expected variability of the underlying model.

Simpson and Williams used spreadsheet programs to simulate the present value of taxes paid and financial distress costs paid, across a set of gearing policies. For each trial, earnings (EBIT) as a percentage of assets were forecast, by year, as a function of three

¹⁰See T. Opler, M. Saron, and S. Titman, "Designing Capital Structure to Create Shareholder Value," *Journal of Applied Corporate Finance*, 10 (1), Spring 1997, 21–32, and T. Opler, S. Titman, "Financial Distress and Corporate Performance," *Journal of Finance*, 49 (3), July 1994, 1015–1040. Over the period 1972–1991, the research studied industry-adjusted change in sales, operating income, and market value of highly levered firms in industries experiencing downturns. Industry downturns were defined as drops in sales and market values of 30% or greater. After controlling for industry performance, the studies found that highly levered firms lost an additional 14%, 12%, and 7% of sales, operating income, and market value relative to the average firm in the industry, and 26%, 27%, and 15% more than the least levered firms in their industry.

¹¹Depreciation and amortization in this industry were relatively low, so EBIT and EBITDA were similar.

uncertainties: the return on assets for each geographical region, the currency exchange rates, and the interest rate paid on the firm's debt. Separately for each gearing policy, the model calculated the interest rate (as a rating-dependent credit spread over a base rate), and the total interest that the company would pay every year. The earnings and interest determined both the taxes paid, and the interest coverage ratio for the current period. The interest coverage ratio, in turn, established the current period debt rating. Diageo was assumed to be in financial distress when the interest coverage ratio was less than one. Economically, this was equivalent to a firm EBIT less than the interest payments, or that the firm would have to borrow money (or draw down reserves) to meet its debt obligations. A distress condition imposed a one-time permanent 20% reduction in the value of the firm. There was no provision in the model for issuing equity to pay down debt when coverage fell. However, when the interest coverage was too high, the firm issued a special dividend to "regear" itself back to the targeted coverage range.¹² The model assumed a constant year-end zero cash balance. An excess cash flow that the business generated (i.e., EBIT—interest—taxes—total dividends) was used to pay down the outstanding debt, while new debt was issued to finance a cash shortfall. Otherwise, assets were assumed to grow at the current interest rate. (See Exhibit 8 for a simplified flow chart of the analysis.)

Each trial was a 15-year sequence, which kept track of the firm's operating cash flows, interest payments, coverage, and distress on a semiannual basis. In any one trial, the firm might enjoy large tax shields from leveraging up, but never get into trouble. For some trials, however, the firm's cash flows might dip low enough to trigger distress and a 20% reduction in asset value. The model was run for 10,000 trials. Each trial calculated the present value of taxes paid and the cost of financial distress for each of the different debt policies. Once all trials were completed, the model generated statistical expectations for total tax paid and costs of financial distress under each of the different policies. See Figure II for the summary diagram from the analysis, which shows the average tax bill and costs of financial distress under a variety of interest coverage policies.

The Capital Structure Decision

Cray looked again at the value trade-off chart from the Monte Carlo analysis. Simpson and Williams had completed much of the analysis under the previous treasurer, so he could look at their work with fresh eyes. It was an interesting analysis that had the potential to help shape the capital structure of the restructured Diageo. However, he needed to make sure that it was robust enough to bring to attention of the Group Finance Director, Nick Rose, and ultimately to the Board of Directors. He reflected on his own concerns: He had always defined financial distress as "being unable to meet the expectations of the bondholders and equity holders of the firm."¹³ He had spent a great deal of time making sure that firm's financial policies provided enough flexibility for Diageo to carry out its core strategy. Further, he appreciated that the firm had flexibility in some of its operating areas; for example, in times of stress, perhaps the firm would "tinker" with its £1 billion advertising budget. Cray wondered how these concerns might affect his interpretation of the analysis, and what he should recommend as the financial policy for Diageo looking forward.

¹²The model included regular dividend payments, which could be cut if cash flow after interest and tax payments were not large enough. Diageo's dividend policy was considered important to investors, and it was thought that the firm would have cut other expenditures, such as marketing or capital expenditures, or borrowed money, before cutting the dividend.

¹³Diageo's annual dividends were historically 4–5% of the firm's stock price, and the firm paid out about 70% of its net earnings. In absolute terms, the firm paid out £710 million in 1999.

EXHIBIT 1 Grand Metropolitan, Guinness, and Diageo Financial Statements (£ Millions)

Source: Diageo Annual Reports, Datastream.

	GrandMet CY 97 PF	Guinness CY 97 PF	FY 97 PF	FY 98	FY 99	FY 00
Sales	8,045	4,539	12,985	12,029	11,795	11,870
Operating costs	6,978	3,584	10,982	10,659	10,278	10,088
Interest payable (net)	153	81	268	360	324	363
Associates (net)	5	71	89	112	95	121
Other	(229)	(320)	(618)	478	94	(163)
Taxes	249	255	532	721	440	401
Net Income	441	370	674	879	942	976
Dividends			654	835	674	713
		See Note	FY98	FY99	FY00	
Operating profits			1,866	1,966	2,043	
Cash interest paid (net)			(258)	(432)	(405)	
Taxes paid			(603)	(566)	(285)	
Cash from Operations			1,005	968	1,353	
Dividends from investments			120	58	64	
Net capital sales (expenditures)			(370)	(444)	(488)	
Net divestitures (acquisitions)			1,368	121	487	
Cash from Investments			1,118	(265)	63	
Management of liquid resources ^a			(600)	2,195	(219)	
Dividends paid			(695)	(702)	(710)	
Paid in capital from shares issued (repurchased)			(2,662)	(1,336)	(80)	
New debt			2,097	(716)	(544)	
Cash from Financing			(1,860)	(559)	(1,553)	
Total Change in Cash			263	144	(137)	
	GrandMet CY 97 PF	Guinness CY 97 PF	FY 97 PF	FY 98	FY 99	FY 00
Assets						
Cash and marketable securities	1,786	454	2,173	2,987	1,097	1,063
Accounts receivable	2,243	1,432	3,216	3,054	3,259	3,071
Inventory	995	1,909	2,374	2,236	2,202	2,139
Fixed assets	5,513	4,105	9,625	8,977	9,720	9,863
Total Assets	10,537	7,900	17,388	17,254	16,278	16,136
Liabilities and Owners' Equity						
Accounts payable	1,833	1,783	2,930	3,524	3,532	3,275
Short-term debt	1,730	1,289	2,293	4,724	3,905	3,066
Long-term debt	2,515	760	4,190	3,137	3,495	3,816
Other	463	167	674	705	753	694
Total Liabilities	6,541	3,999	10,087	12,090	11,685	10,851
Minority interests	416	131	530	535	567	574
Common stock	531	476	1,001	1,139	992	990
Retained earnings	3,049	3,294	5,770	3,490	3,034	3,721
Total Equity	3,996	3,901	7,301	5,164	4,593	5,285
Total Liabilities and Owners' Equity	10,537	7,900	17,388	17,254	16,278	16,136
Shares Outstanding	2,119 ^b	1,877 ^b		3,880	3,402	3,397
Market Value of Equity	12,565 ^b	11,209 ^b		27,548	22,538	20,144

Notes: Both Grand Metropolitan and Guinness reported year-end results on a calendar year basis. After the merger, Diageo established a fiscal year ending on June 30. The 1998 fiscal year overlaps calendar year 1997 by six months. Because the merger occurred before the GrandMet and Guinness fiscal years were over, and after the Diageo 1997 fiscal year was over, the 1997 results were pro forma. Historical pro forma cash flows were not required to be reported for GrandMet, Guinness, and Diageo for 1997, and were not calculated by Diageo after the merger.

^aLiquid financial assets such as cash could be held in short- or long-term investments. A positive number in "Management of liquid resources" represented assets that were moved from short-term investments ("Cash") to longer-term investments, such as bank accounts that required withdrawal notices longer than one day.

^bAs of December 16, 1997, the day before the merger closed.

EXHIBIT 2 Diageo Segment Breakdown (£ Millions)

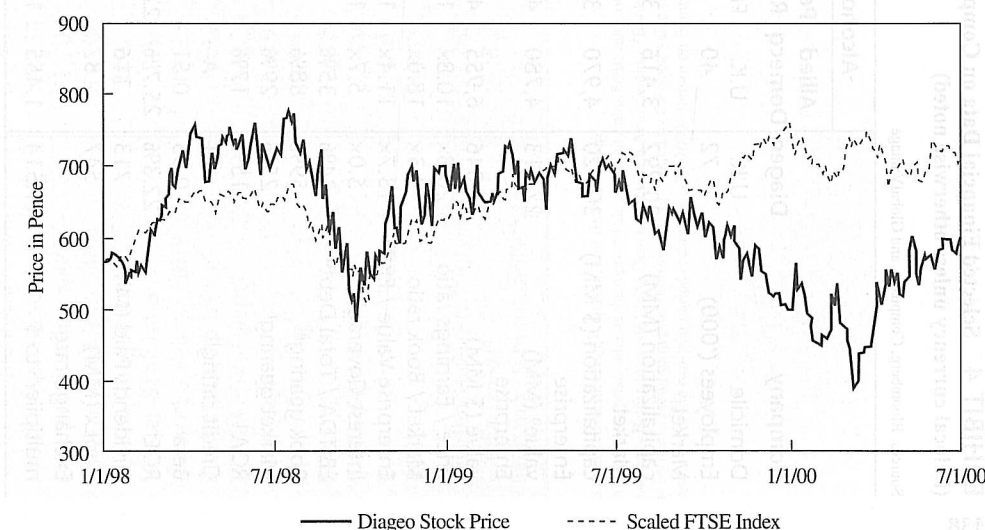
Source: Diageo Annual Reports

Turnover	CY 96 PF	FY 97 PF	FY 98	FY 99	FY 00
Class of business					
Spirits and Wine	5,830	5,692	5,327	4,929	4,971
Beer	2,262	2,259	2,176	2,234	2,146
Packaged Food	3,784	3,755	3,654	3,757	3,812
Restaurants	877	879	869	875	941
Associates and other ^a	687	400	3	0	0
Total	13,440	12,985	12,029	11,795	11,870
Geographical Area					
Europe	4,556	4,443	4,262	4,230	4,181
North America	5,790	5,718	5,619	5,656	5,639
Asia Pacific	1,260	1,226	915	777	886
Rest of World	1,147	1,198	1,230	1,132	1,164
Associates and other ^a	687	400	3	0	0
Total	13,440	12,985	12,029	11,795	11,870
Operating Profit					
Class of business					
Spirits and Wine	1,138	1,135	1,070	967	1,002
Beer	254	264	247	273	284
Packaged Food	412	423	447	478	492
Restaurants	161	160	179	185	202
Associates and other ^a	36	21	(1)	0	0
Total	2,001	2,003	1,942	1,903	1,980
Geographical Area					
Europe	543	552	534	594	585
North America	913	901	938	936	956
Asia Pacific	251	261	174	131	170
Rest of World	258	268	297	242	269
Associates and other ^a	36	21	(1)	0	0
Total	2,001	2,003	1,942	1,903	1,980

^aAn associate was an undertaking in which the group had a long-term equity interest and over which it exercises significant influence. The group's interest in the net assets of associates, other than goodwill, was included in investments in the group balance sheet. Joint arrangements where each party had its own separate interest in particular risks and rewards were accounted for by including the attributable share of the assets and liabilities, measured according to the terms of the arrangement. "Other" included discontinued operations. 1996 and 1997 results reflect the pro forma results for Grand Metropolitan and Guinness combined.

EXHIBIT 3 Diageo Stock Price and Scaled Financial Times Stock Exchange 100 Index, January 1998-July 2000

Source: Datastream



Note: The FTSE 100 Index was scaled to have the same starting value as Diageo's stock price on January 1, 1998.

EXHIBIT 4 Selected Financial Data on Companies with Which Diageo Compared Itself, as of Latest Annual Reporting Period before October 2000
(in local currency unless otherwise noted)

Sources: Bloomberg, Compustat, and GlobalVantage

Company	Alcohol		Beer		Beverage		Packaged Food						
	Diageo	Allied Domecq	Pernod Ricard	Anheuser Busch	Carlsberg	Heineken	Coca-Cola	Pepsico	Campbell Soup	General Mills	Heinz	Kellogg	Nestle
Domicile	U.K.	U.K.	France	U.S.	Denmark	Netherlands	U.S.	U.S.	U.S.	U.S.	U.S.	U.S.	Switzerland
Employees ('000)	72	40	14	24	18	37	37	118	22	11	47	15	231
Market capitalization (MM)	20,292	3,416	3,203	32,681	16,245	15,184	143,969	51,289	11,634	11,534	11,813	12,493	112,032
Enterprise value ^a (MM)	27,113	4,970	3,210	32,681	2,327	15,219	143,969	51,289	11,634	11,534	11,813	12,493	69,988
Enterprise value (\$ MM)	41,046	4,780	4,388	37,804	23,727	15,955	150,196	54,334	14,725	14,794	15,925	14,627	124,904
Price / Earnings ratio	20.8x	10.8x	13.7x	23.3x	14.0x	29.4x	59.2x	25.0x	16.3x	18.9x	13.3x	36.9x	23.7x
Market / Book ratio	4.3x	18.0x	1.6x	8.3x	1.6x	5.8x	15.1x	7.5x	84.9x	-39.9x	7.4x	15.4x	4.6x
Enterprise Value / EBIT ^b	13.7x	11.4x	11.8x	16.4x	14.2x	20.0x	31.3x	18.8x	11.3x	13.5x	11.8x	13.6x	15.8x
Interest Coverage ^c	5.0x	5.7x	10.4x	10.6x	4.1x	15.3x	15.5x	10.8x	7.3x	7.8x	6.2x	10.7x	7.4x
EBITDA / Total Debt ^d	34%	35%	40%	60%	40%	159%	84%	129%	48%	40%	40%	40%	85%
Book gearing ^e	59%	88%	36%	57%	42%	23%	40%	31%	96%	110%	72%	72%	34%
Market gearing ^f	25%	29%	27%	14%	32%	5%	4%	6%	21%	22%	26%	15%	10%
ROA ^g	15%	17%	39%	24%	10%	20%	24%	22%	29%	29%	19%	28%	18%
Credit rating ^h	A+	A-	NR	A+	BBB	AAA	A+	A	AA-	A+	A+	AA	AAA
Beta ⁱ	0.55	0.51	0.54	0.46	0.4	0.54	0.68	1.07	0.49	0.47	0.49	0.37	0.9
ROE	22.3%	25.7%	22.3%	34.5%	11.6%	13.4%	27.1%	30.9%	383.9%	-986.2%	52.4%	39.7%	19.9%
Dividends Paid (MM)	713	116	0	545	256	125	1,580	784	382	328	514	389	1,693
CapEx (MM)	547	87	112	865	2,024	441	1,069	1,118	200	268	452	266	2,806
Exchange rate multiplier ^k to \$	1.514	1.455	1.002	1	0.143	1.002	1	1	1	1	1	1	0.625

Notes: ^aEnterprise value is the market value of equity plus book value of short-term and long-term debt. ^bEBIT is the Earnings Before Interest and Taxes. ^cInterest coverage is defined as EBITDA/interest expense. ^dEBITDA is the Earnings Before Interest, Taxes, Depreciation, and Amortization. ^eBook gearing is defined as long-term plus short-term debt divided by the book value of capital (short-term debt plus long-term debt plus shareholder equity). ^fMarket gearing is defined as long-term plus short-term debt divided by the book value of debt plus the market value of equity. ^gROA is the Return on Assets, defined as the EBITDA/Assets. ^hStandard and Poor's rating. ⁱBeta is calculated using weekly returns over the two-year period ending June 30, 2000. ^jReturn on Equity. ^kThe number of U.S. dollars = foreign currency x exchange rate.

EXHIBIT 4 Continued

Company	Restaurants		Consumer			Conglomerate		
	McDonalds	Tricon Global Restaurants	Colgate-Palmolive	Gillette	Philip Morris	Procter & Gamble	Seagram	Unilever
Domicile	U.S.	U.S.	U.S.	U.S.	U.S.	U.S.	U.S.	U.K.
Employees ('000)	314	210	37	40	137	110	34	255
Market capitalization (MM)	54,454	5,832	37,626	43,865	53,786	74,761	25,352	13,262
Enterprise value ^a (MM)	61,706	8,340	40,416	48,594	68,254	86,887	33,229	21,374
Enterprise value (\$ MM)	61,706	8,340	40,416	48,594	68,254	86,887	33,229	16,239
Price/Earnings ratio	28.0x	9.3x	40.1x	34.8x	7.0x	21.1x	1,690.1x	7.3x
Market/Book ratio	5.3x	-10.4x	20.5x	12.8x	3.5x	6.1x	2.1x	2.7x
Enterprise Value / EBIT ^b	19.2x	9.3x	25.8x	23.1x	5.0x	12.8x	47.9x	5.7x
Interest coverage ^c	9.9x	5.9x	8.5x	18.6x	14.1x	12.4x	2.4x	12.2x
EBITDA/Total Debt ^d	56%	51%	68%	53%	107%	74%	22%	121%
Book gearing ^e	41%	129%	60%	58%	49%	50%	39%	38%
Market gearing ^f	12%	30%	7%	10%	21%	14%	24%	18%
ROA ^g	19%	32%	26%	21%	25%	26%	5%	21%
Credit rating ^h	AA	BB	A	AA	A	AA	BBB-	A+
Beta ⁱ	0.81	0.42	1.29	1.03	0.34	0.37	1.02	0.77
ROE	20.4%	-72.8%	47.2%	33.8%	48.7%	28.8%	1.0%	45.2%
Dividends paid (MM)	265	0	345	642	4,393	1,681	287	820
CapEx (MM)	1,868	470	373	932	1,749	3,018	607	865
Exchange rate multiplier ^k to \$	1	1	1	1	1	1	1	1.612

Sources: Bloomberg, Compustat, and GlobalVantage

Notes: ^aEnterprise value is the market value of equity plus book value of short-term and long-term debt. ^bEBIT is the Earnings Before Interest and Taxes. ^cInterest coverage is defined as EBITDA/interest expense. ^dEBITDA is the Earnings Before Interest, Taxes, Depreciation, and Amortization. ^eBook gearing is defined as long-term plus short-term debt divided by the book value of capital (short-term debt plus long-term debt plus shareholder equity). ^fMarket gearing is defined as long-term plus short-term debt divided by the book value of debt plus the market value of equity. ^gROA is the Return on Assets, defined as the EBITDA/Assets. ^hStandard and Poor's rating. ⁱBeta is calculated using weekly returns over the two-year period ending June 30, 2000. ^jReturn on Equity. ^kThe number of U.S. dollars = foreign currency x exchange rate.

EXHIBIT 5 Selected Data on Bond Market for 5-Year Notes, October 31, 2000

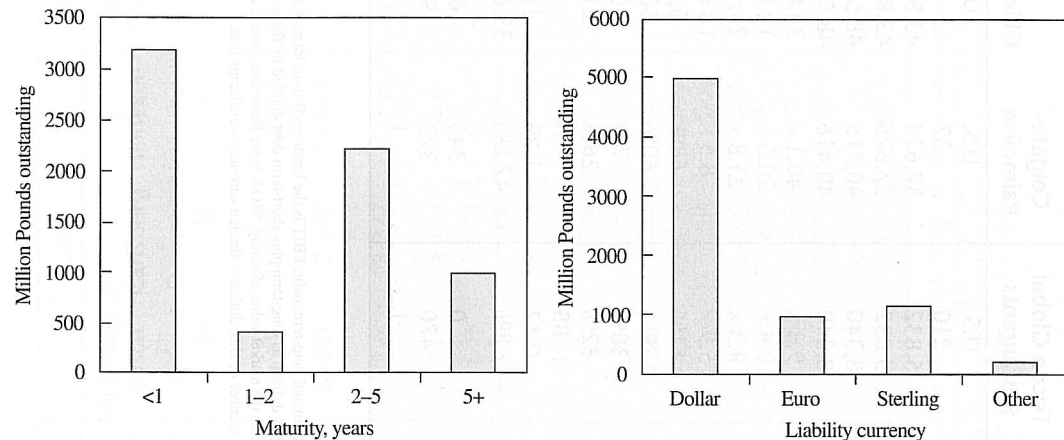
Sources: Bloomberg, Securities Data Corporation, Standard and Poor's "Ratings Performance 1999; Stability and Transition."

Rating	Interest Rate (Pounds)	Interest Rate (Dollars)	Median Interest Coverage ^a	Issuing Firms with Rating	Average Monthly Issuance (\$ Billion)	Minimum Monthly Issuance (\$ Billion)	Maximum Monthly Issuance (\$ Billion)
U.K. Government	5.56%	-	-	-	-	-	-
U.S. Government	-	5.83%	-	-	-	-	-
AAA	6.13%	6.76%	30.07	4%	3.64	0.53	11.08
AA	6.37%	6.81%	11.37	13%	3.25	0.00	23.63
A	6.76%	7.15%	8.34	25%	6.47	0.69	30.65
BBB	7.16%	7.57%	4.94	22%	1.76	0.09	8.73

Note: Monthly issuance data collected between January 1, 1998, and October 31, 2000, for dollar denominated bonds in the U.S. The global market for dollar denominated bonds was about half the size of the U.S. market. Issuers, however, tended to be higher rated firms or governments, and the individual issue sizes larger, relative to the U.S. market.
^aInterest coverage defined as EBITDA/interest expense.

EXHIBIT 6 Diageo Liability Structure, June 30, 2000

Source: Diageo Annual Report



Note: The debt outstanding included bank loans and overdrafts, other borrowings, financial leases, and other long-term obligations.

EXHIBIT 7A Industry Returns on Assets (EBITDA/Assets), with Diageo Mix of Businesses

Source: Diageo

Industry	Firms in Composite	Average ROA	Max ROA	Median ROA	Min ROA	Volatility of Industry ROA ^c	Average of Firm Volatility ^d
Spirits	6	16.9%	24.2%	16.7%	12.6%	2.3%	3.4%
Beer	1	20.6%	27.2%	21.2%	14.3%	3.0%	-
Food	4	19.8%	25.8%	19.8%	12.5%	3.1%	3.6%
Fast Food	2	21.0%	29.6%	19.9%	14.1%	3.6%	4.4%
Weighted Average ^a	-	19.7%	26.7%	19.5%	16.3%	1.9%	-
Weighted Avg (Beverages) ^b	-	17.7%	24.9%	17.2%	15.1%	1.9%	-

^aThe Weighted Average weights the segment performance by the weight of that division within Diageo.
^bThe Weighted Avg (Beverages) uses weights that exclude the packaged and fast food categories.
^cThe ROA was calculated for the industry for each year in the sample. The volatility of industry ROA was calculated as the standard deviation of the time series.
^dCalculated by taking the arithmetic average of the volatility (standard deviation) of each firm's ROA over the sample period.

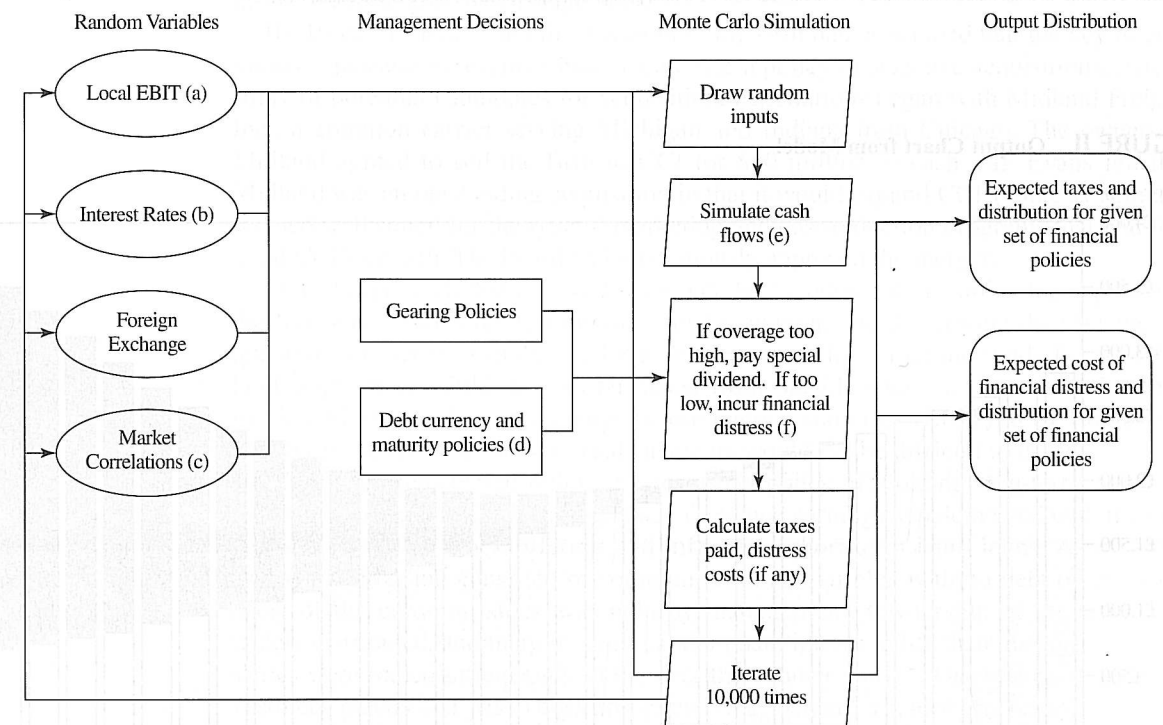
EXHIBIT 7B Median Industry Returns on Assets, 1950-1999

Source: Casewriter calculations based on Center for Research in Security Prices data with 239,126 observations over 50 years.

Industry	N	Mean ROA	Volatility
Food	155	15.4%	1.7%
Textiles/Printing	335	15.2%	2.0%
Retail	544	13.2%	2.2%
Transportation	266	14.3%	2.2%
Services	395	12.7%	2.2%
Chemicals	132	16.6%	2.4%
Financial Institutions	410	3.9%	2.5%
Extractive Industries	41	15.5%	2.8%
Utilities	194	11.7%	2.9%
Durable Manufacturing	1,187	14.2%	3.6%
Real Estate/Insurance	197	7.6%	3.8%
Pharmaceuticals	119	20.7%	4.8%
Computers	413	15.0%	4.8%
Mining/Construction	337	11.0%	5.0%

EXHIBIT 8 Simplified Flow Chart of Monte Carlo Simulation

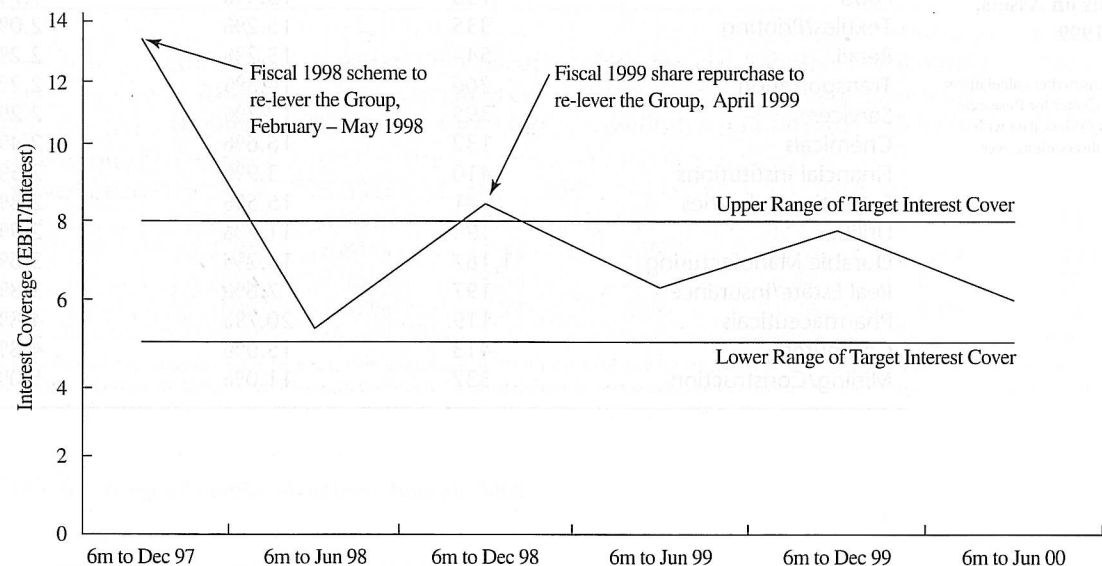
Source: Diageo



Notes:
^aLocal EBIT is calculated as (Assets) × (Simulated ROA), where ROA is the EBIT/Asset ratio.
^bInterest rates are all linked to the U.S. interest rate. Credit spread for different ratings assumed fixed.
^cModel assumes constant correlations between the random variables.
^dModel assumes a constant currency and maturity mix of debt. All interest is charged on a floating-rate basis.
^eThe book value of assets is assumed to grow each year at the market interest rate, unless the firm is suffering from financial distress. The model does not allow for new equity issues. The return on the assets is assumed to average around 18%, with random fluctuations (normally distributed) with a standard deviation of 4%. The model did not include major investments (like acquisitions or divestitures).
^fFinancial distress is defined as the inability to pay interest from operating cash flow, or EBIT/Interest < 1. Distress gives rise to a 20% permanent reduction in firm value.

FIGURE I Diageo Group Interest Coverage, 1997-2000

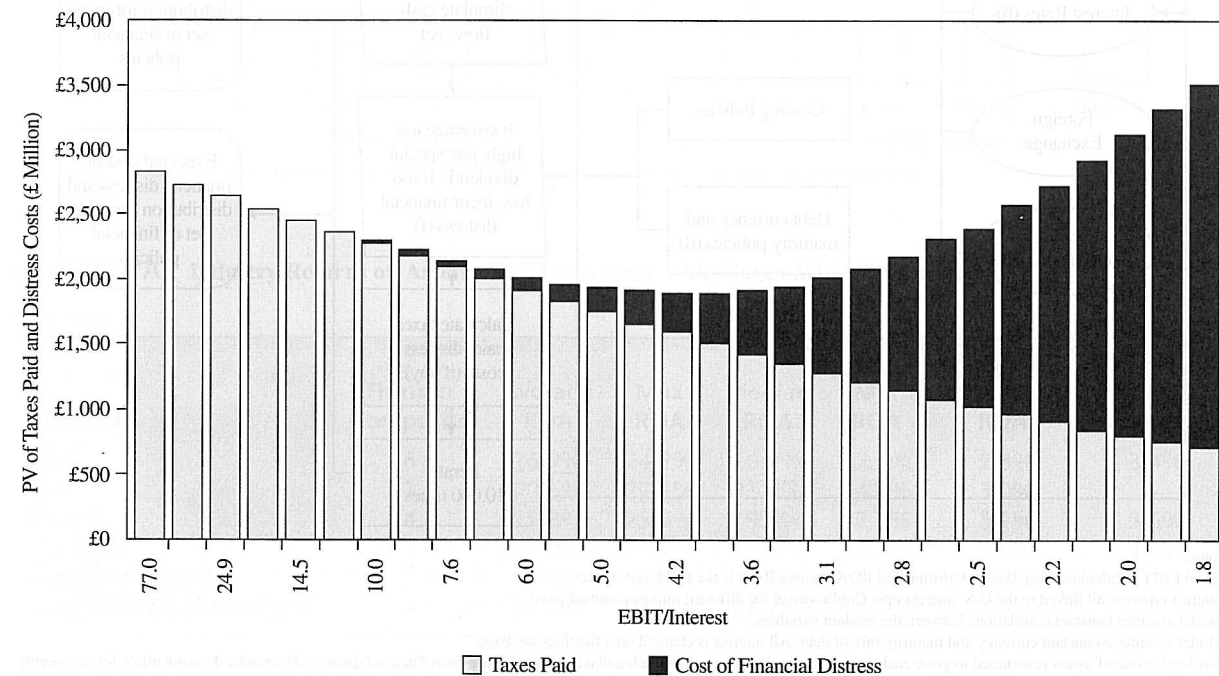
Source: Diageo



Notes: In the 1998 fiscal year, which ended on June 30, 1998, Diageo re-levered the firm by distributing 2.8 billion pounds to shareholders through a share repurchase scheme. In the 1999 fiscal year, Diageo purchased and cancelled 10.5 million shares in October 1998, and 161.5 million shares in April 1999, in addition to completing the earlier repurchase scheme. In total, transactions in the 1999 fiscal year cost 1.2 billion pounds and represented 5% of the issued capital base.

FIGURE II Output Chart from Model

Source: Diageo.



Note: Horizontal axis is decreasing in interest coverage, or increasing in gearing. The vertical axis is the present value of expected (average) taxes paid by Diageo plus the present value of the expected (average) cost of financial distress from the model.

Continental Carriers, Inc.

In May 1988, Elizabeth Thorp, treasurer of Continental Carriers, Inc. (CCI), was considering the advantages and disadvantages of several alternative methods of financing CCI's acquisition of Midland Freight, Inc. At a recent meeting of the board of directors, there had been substantial disagreement as to the best method of financing the acquisition. After the meeting, Ms. Thorp had been asked by John Evans, president of CCI, to assess the arguments presented by the various directors and to outline a position to be taken by management at the June directors' meeting.

CCI was a regulated general commodities motor carrier whose routes ran the length of the Pacific Coast, from Oregon and California to the industrial Midwest, and from Chicago to several points in Texas. Founded in 1952 by three brothers, the firm had experienced little growth until the mid-1970s. At that point, Mr. Evans joined the firm as president, after many years as an executive of a major eastern carrier. Mr. Evans first concentrated his efforts on expanding CCI's revenues on existing routes through an intensive marketing effort and a renewed emphasis on improving service. In 1982, utilizing the proceeds of CCI's initial public offering of common stock, Mr. Evans began a program designed to reduce operating costs through a combination of extensive computerization of operations and improvement in terminal facilities. As a result of these changes, CCI had become a large and profitable concern, widely respected in the industry for its aggressive management.

By 1988, Mr. Evans and the directors of the firm had concluded that the key to continued expansion in revenues and income was a policy of selective acquisitions. After a study of potential candidates for acquisition, negotiations began with Midland Freight, Inc., a common carrier serving Michigan and Indiana from Chicago. The owners of Midland agreed to sell the firm to CCI for \$50 million in cash. Mr. Evans felt that Midland was an outstanding acquisition in that it would expand CCI's route system and seemed well suited for the type of marketing and cost-reduction programs that had fostered CCI's growth. The board had unanimously approved the merger.

CCI's lawyers felt that no difficulty would be encountered in gaining the approval of the Interstate Commerce Commission for the merger, and the closing date for the acquisition was set for October 1, 1988. Mr. Evans realized that the funds for the Midland acquisition would have to be raised from outside sources. Given that Midland would add \$8.4 million in earnings before interest and taxes (EBIT) to CCI on an annual basis, he felt that such external financing would not be difficult to obtain.

CCI's management had followed a consistent policy of avoiding long-term debt. The company had met its needs through use of retained earnings supplemented with the proceeds of the 1982 stock offering and infrequent short-term bank loans. As of 1988, CCI's capitalization consisted of common stock and surplus with no debt of any kind. Most of the common stock was held by management. Ownership of the stock was widely distributed, and there was no real dominant interest other than management. The shares were traded infrequently in the over-the-counter market. Discussions with an investment banker led Ms. Thorp to believe that, barring a major market decline, new common stock could be sold to the public at \$17.75 per share. After underwriting fees and expenses, the net proceeds to the company would be \$16.75 per share. Thus, if common stock were used, the acquisition would require issuance of 3 million new shares.

Copyright © 1991 by the President and Fellows of Harvard College. Harvard Business School case 291-080.