

THE WM. WRIGLEY JR. COMPANY

Group 1: Chad Barber, Austin Hatchett, Jose Rubio,
Sulaiman Alkhalefa, Timothy Houghton, & Zoe Johnston

Capital Structure,
Valuation, and
Cost of Capital

A few minor computational issues (credit rating table)
and some minor styles/grammar items. Group 1
I wouldn't say there was an ethical issue in this case
The WM. Wrigley Jr. Company

As close to perfect as you can get! Excellent job

Page 1 of 16

Table of Contents

$$58.8 = 98\% = A$$

Company Background 2

Main Objectives and Identifying Issues 3

Assumptions 3

Impact on Share Value 4

Share Value after Dividend Payout 5

Share Value after Share Buyback 5

Impact on Debt Rating 5

Impact on Cost of Capital 6

Impacts on Reported Earnings per Share 8

Impact on Voting Control 8

Solutions 9

Ethical Considerations 10

Appendix 11

Exhibit 1 11

Exhibit 2 12

Exhibit 3 13

Exhibit 5 13

Exhibit 6 14

Exhibit 7 15

Exhibit 8..... 16

Company Background

Aurora Borealis LLC was a hedge fund with about \$3 billion under management. Its investment strategy focused on distressed companies, merger arbitrage, change-of-control transactions, and recapitalization. Blanka Dobrynin, a managing partner, found a potential investment in the WM Wrigley which currently has zero debt. If Aurora can persuade Wrigley to do a leveraged debt recapitalization for a dividend or major share repurchase, they both can benefit from the significant new value. Dobrynin tasked Susan Chandler, an associate, to research the potential investment.

William Wrigley Jr. Company is the world's largest manufacturer and distributor of chewing gum. The industry has a few competitors, though it is very competitive—however, each company appeals to specific target markets. A few examples include Hersey Food Corp., the largest U.S. producer of chocolate and non-chocolate confectionery products, Kraft Foods Inc., the largest branded good and beverage company, and Cadbury Schweppes PLC., a producer and distributor of confectionery and beverage products.

"Interest rates are at their lowest point in 50 years," according to Dobrynin; the world experienced the burst of the Dot Com bubble and is amid the resulting recession. The current date is June 2002. Wrigley, however, has significantly outperformed the S&P 500. Over the past two years, Wrigley's revenues had grown at an annual compound rate of 10% due to the success of new products and foreign expansion, a surprising move because the firm had been conservatively financed. This may be a timely opportunity during which Aurora can persuade

*market downturn
not a recession*

✓ Wrigley to recapitalize by borrowing \$3 billion. However, the unlevered firm must be analyzed, the recapitalization issues identified, then solved or addressed before this opportunity can be pursued.

Main Objectives and Identifying Issues

✓ Aurora's main objectives are to see if Wrigley will be a good investment after it has been leveraged with \$3 billion in debt for a dividend payout or major share repurchase. If so, Aurora must convince Wrigley's board of directors to restructure. However, leveraging an unlevered company such as Wrigley will affect the share value, cost of capital, debt rating, earnings per share, and voting control; the case will address the issues for the impacted values with the following assumptions:

Assumptions

The critical assumption decided by Chandler and Dobrynin is that Wrigley could borrow \$3,000,000,000 at a credit rating between BB and B to yield an estimated 13%. The best, base, and worst-case EBIT assumptions are 25%, 0%, and -15%, respectively. According to a CNN article, a bull market occurs when stocks gain at least 20%, and a bear market, a loss of 20%.

With these estimates and with Wrigley outperforming S&P by 5%, this performance was added to bull and bear markets' movements to determine best and worst-case EBIT growth scenarios. In exhibit 1, major confectionary firms' financial characteristics are shown, which states that Wrigley's market value of equity, thus the total market value of Wrigley since it is unlevered, is \$13,103,000,000, and their shares outstanding are 232,440,000. Chandler suggested a tax rate of 40%, which reflected the sum of federal, state, and local taxes. The practice at Aurora Borealis LLC is to use a market risk premium of 7%. The total assets are \$1,765,648,000, and the total

This sentence is put out of place here

I book

book value
of stockholder's equity is \$1,276,287,000; these numbers were derived from Wrigley's balance sheet as of 2001 shown in **exhibit 2**. The 10-year treasury yield was chosen for the risk-free rate, 4.87%.

Like the risk premium sentence this seems out of place

Impact on Share Value

An issue regarding determining the post recap share value is "how would debt increase a firm's value through shielding cash flows from taxes?" According to Modigliani- Miller's II, the first proposition states that the tax shields that result from the tax-deductible interest payments make the value of a levered firm higher than the value of an unlevered firm. Thus, given that Wrigley is an unlevered firm, the share value will increase due to debt addition because of implied tax shields. Thus, the next objective is to calculate by how much, then determine the impact of using debt for dividend payout or major share repurchase.

The assumption for Wrigley's current share value is \$56.37; this was calculated by dividing the value of the company's market value (\$13,103,000,000) since it is unlevered, we used the market value of equity by the number of outstanding shares (232,440,000).

To calculate the value of the levered company's share value, we must multiply the assumed debt of \$3,000,000,000 with the tax rate, 40%, then divide that by the current number of shares outstanding; this value gives us the implied addition value of the stock price due to the tax shield,

\$5.16. Thus, the post capital restructures share value is \$61.53; this fulfills Modigliani- Miller's II, first proposition. However, there are two other scenarios in which we must consider after recapitalization:

Share Value after Dividend Payout

Wrigley's post recap share value after using debt for a dividend payout is \$48.63. It is calculated by taking the difference of the pre recap market value of equity and debt (\$11,302,642,800), then dividing that by the current shares outstanding. A decrease of \$12.90, and not what Wrigley would want, nor would Aurora.

Share Value after Share Buyback

The number of shares needed to be repurchased using the assumed debt to maintain the post recap share price of \$61.53 is 48,754,626; thus, resulting in total shares outstanding of 183,685,374. The shares outstanding in this scenario was derived from dividing the post recap market value of equity (\$11,302,642,800) by the post recap share price (\$61.53). The increase of share value due to the share repurchasing is something Wrigley should consider and one of Aurora's selling points.

It's the pre-debt market value of equity plus the value of the tax shield less the debt amount divided by shares

Impact on Debt Rating

The issues regarding the impact of debt rating are as follows: is the assumed rating of BB/B likely. Currently, Wrigley does not have a debt rating since it has no debt. However, the initial post recap assumption is between BB and B, a non-investment grade rating since it is below BBB. To determine the probable rating, a creative approach shown in **exhibit 8** was applied given the debt rating criteria provided in the case from Standard & Poor's Creditstats. Each of the seven debt metrics was assumed to be equally as important in weight in determining the credit rating of a corporate debt offering. The individual metrics were calculated from Wrigley's post-recap financials, and then each individual metric was matched to its corresponding debt letter rating for that metric from the given S&P table. Next, each debt rating

was assigned a "rating criteria score" from one to six, with a B rating assigned a score of one, the lowest, and an AAA rating assigned a score of six, the highest. Next, the average of Wrigley's post-recap rating criteria scores was taken, resulting in an average score of 2.71 across the seven different debt metrics. Because 2.71 is between the BB rating score of two and the BBB rating score of three, it was determined that a rating of BB to BBB would be a more appropriate assumption if Wrigley takes on the debt recapitalization project. It is reasonable to assume that in the long term, this higher debt rating will result in a decrease in Wrigley's cost of debt and the cost of capital if the firm decides to issue the debt in question.

Impact on Cost of Capital

Wrigley's weighted average cost of capital (WACC) will be affected if the company pursues a restructuring; this represents the cost of capital for a company that they must exceed on proposed projects to generate value. To determine the new WACC, we must calculate the post recap cost of equity and debt cost.

Due to the risk involved with debt, the cost of equity will increase because it represents the rate of return its equity holders are compensated for risk. To determine the new rate, we calculate the unlevered cost of equity through the capital asset pricing model (CAPM), a model used to determine investors' required rate. Using the firm's levered beta through Hamada's equation, we calculate the new component cost of equity given the addition of debt.

The CAPM's components comprise the risk-free rate, beta, and market risk premium, with the given assumptions shown in exhibit 3 regarding the unlevered company of 4.86%, .75, and 7%, respectively. The calculation is as follows: multiply the market risk premium with the unlevered beta, then add the risk-free rate. The unlevered cost of equity is 10.11%, and since an

unlevered company has no debt and no cost of debt, the present WACC for Wrigley is 10.11%.

Next, we calculate the levered CAPM, which will require the calculation of the levered beta.

To determine the levered beta, we first calculate the leverage ratio, also known as the debt-to-equity ratio (D/E). It is the ratio that determines the total percentage of debt in a firm. We divided the assumed debt (\$3,000,000,000) by the market value of equity (\$13,103,000,000), which yielded 22.9%. The levered company's assets will be financed with 22.9% debt. Next, we determine the Levered beta. Here, we can use the Hamada equation. It requires the following components: unlevered beta, tax rate, and D/E, which are 0.75, 40%, and 22.9%, respectively. With the levered beta, market risk premium, and risk-free premium identified, the levered cost of equity is 10.83%. Equity investors will require an increase of 0.73% if Wrigley recapitalizes.

The next piece needed to solve the levered WACC is determining the cost of debt. By multiplying the assumed pretax cost of debt of 13% by one minus the assumed tax rate of 40%, the post-tax component cost of debt equates to 7.8%.

Finally, to calculate the weights of debt and equity, we add the market value of equity (11,302,642,800) with the assumed debt (3,000,000,000) to find the firm's total value. The relative weight of debt in the recapitalize structure divides the debt with the firm's total value, which gives us the weight of debt, 20.98%. One minus the weight of debt will determine the weight of equity, 79.02%.

All the components needed to calculate the levered WACC are identified: cost of equity, cost of debt, and weights of debt and equity. The cost of equity multiplied by the weight of equity plus the cost of debt multiplied by the weight of debt equates to 10.20%. Wrigley's WACC will increase by nine basis points from its pre-recap WACC (10.11%), compensating shareholders for the risks involved in leveraging the firm.

Impacts on Reported Earnings per Share

Our first task is to determine EPS levels before recapitalization. The second is to identify the effects and changes of interest on the post recap EPS values. The third is to observe how a dividend payout or share repurchase affects the EPS and determine which option provides a more desirable outcome. The calculation for EPS is net income divided by shares outstanding. It indicates how much money Wrigley makes in net income for each share of its stock. The higher the EPS, the more profitable it is. Post recap dividend payout and share repurchase effects are shown in **exhibit 6**.

There are three different levels of EBIT assumptions: a 25% increase, 0% stagnation, and -15% decrease from 2001. The pre recap EPS for the best-case scenario is 1.66 while the post recap dividend payout EPS is 0.65, and share repurchase is 0.82. In post recap cases, the EPS decreased trend continues with the base and worst-case estimates. The EPS for the pre recap base case is 1.33, post recap dividend payout is 0.32, and share repurchase is 0.40. Finally, the EPS for the worst-case pre recap is 1.13, and the post recap dividend payout and share repurchase are 0.12 and 0.15, respectively.

These drastic decreases in EPS imply that a capital restructure will negatively impact how investors view Wrigley's shares. However, since Wrigley is one of few companies succeeding during a recession, it can still be one of the best options in its industry.

Impact on Voting Control

To convince the Wrigley family, Aurora must demonstrate that the share purchase scenario after recapitalization would increase their voting control position in the company, a

significant selling point. Before the capital restructuring, the family owns 58% of Class B stock and 21% of Common stock. Class B stock has superior voting rights over Common stock by ten votes to one, and there are a total of 42.641 million and 189.8 million, respectively, thus a total of 232.441 million shares outstanding. Given the percentages and the number of shares, we determined that there is a total of 616.21 million votes, Wrigley owns 287.18 million while the other equity owners have 329.03 million; this is a current concern for the family that Aurora can fix if Wrigley accepts to restructure and use debt to repurchase shares. In exhibit 7 shows pre recap and post recap after share repurchase.

When Wrigley repurchases 48.75 million common stock, it will bring the total votes down to 567.46 million, thus granting the family superior voting rights because their total number of votes, 287.18 million, will eclipse the other owners, 280.28 million. The pre recap Wrigley family voting control was 46.60%, the post recap after a share repurchase is 50.61%, an increase of 4% in voting control.

Solutions

In conclusion, Aurora should invest in Wrigley and convince them to restructure by using its debt to repurchase shares for Wrigley. Regarding an impact on share value, debt would increase Wrigley's share price from \$56.37 to \$61.53 due to tax shields, and to maintain the post recap share price, Wrigley should repurchase 48,754,626 shares of common stock. Repurchasing shares will also benefit Wrigley's family voting control position by eliminating the number of available votes from 616.21 million to 567.46 million, increasing their voting control position from 46.60% to 50.61%. The assumed debt rating will increase from the estimated B/BB to BB/BBB. However, WACC will increase by nine basis points, from 10.11% to 10.20%, and

when repurchasing shares, the EPS for the best, base, and worst scenarios would decrease from 1.66 to 0.82, 1.33 to 0.4, and 1.13 to 0.15, respectively.

Ethical Considerations

Within this case, the primary ethical consideration is the effects of a leveraged recapitalization on the company's voting control structure. Before the recapitalization, the general market held a larger voting control position relative to the Wrigley family, and company outsiders held majority voting control. However, after the recapitalization, the Wrigley family assumes majority voting control rights through the share repurchase scenario. We would encourage management to consider whether it is ethical to cede a majority voting block to the Wrigley family. Also, management must consider whether their personal views on the Wrigley family could potentially influence their analysis. If management and stakeholders feel that a majority voting block owned by the Wrigley family is in the best interest of all stakeholders, we will encourage management to pursue this leveraged recapitalization and subsequent share repurchase program.

In terms of my take on the issue

Appendix

Exhibit 1

**THE WM. WRIGLEY JR. COMPANY: CAPITAL STRUCTURE,
VALUATION, AND COST OF CAPITAL**
Financial Characteristics of Major Confectionary Firms

Company Name	Recent Price	Common Shares Outstanding	Market Value of Equity (millions)	Book Value of Equity (millions)	Total LT Debt		LT Debt/(LT Debt + Book Value of Equity)		LT Debt/Market Value of Equity
					Total LT Debt (millions)	Debt Value of Equity (millions)	(LT Debt + Book Value of Equity) / Market Value of Equity	Debt/Book Value of Equity	
Cadbury Schweppes plc	\$ 26.66	502,50	\$ 13,397	\$ 5,264	\$ 2,264	30.07%	14.46%	43.01%	16.90%
Hershey Foods Corp.	\$ 65.45	136,63	\$ 8,942	\$ 2,785	\$ 869	23.77%	8.85%	31.18%	9.71%
Kraft Foods	\$ 38.82	1,735,00	\$ 67,353	\$ 39,920	\$ 8,548	17.64%	11.26%	21.41%	12.69%
Tootsie Roll Industries Inc.	\$ 31.17	51,66	\$ 1,610	\$ 509	\$ 8	1.45%	0.46%	1.47%	0.47%
Wm. Wrigley Jr. Co.	\$ 56.37	232,44	\$ 13,103	\$ 1,276	\$ -	0.00%	0.00%	0.00%	0.00%
S&P 500 Composite	\$ 1,148.08				\$ 18,23%	8.76%	24.27%	9.94%	

Company Name	Beta	EPS	Price/Earnings	Cash Dividend	Dividend Payout	Dividend Yield	Interest Coverage Before Tax	Compound Growth of EPS Past 5 Years			Firm Value/EBITDA
								Interest Coverage Before Tax	Compound Growth of EPS Past 5 Years	Firm Value/EBITDA	
Cadbury Schweppes plc	0.60	1.39	15.20	\$ 0.67	44.0%	2.50%	4.6X	6.50%	10.3		
Hershey Foods Corp.	0.60	2.74	20.40	\$ 1.16	41.0%	2.00%	11.1X	6.50%	11.4		
Kraft Foods	nmf	1.17	18.70	\$ 0.26	12.0%	1.50%	3.4X	nmf	10.1		
Tootsie Roll Industries Inc.	0.65	1.30	24.00	\$ 0.28	22.0%	0.90%	nmf	12.50%	14.6		
Wm. Wrigley Jr. Co.	0.75	1.61	29.30	\$ 0.75	46.0%	1.50%	nmf	9.00%	22.6		
S&P 500 Composite	1.00	18.78	40.55					-49.57%			

Note: nmf = not a meaningful figure.

Sources of data: *Value Line Investment Survey*.

Exhibit 2

**THE WM. WRIGLEY JR. COMPANY: CAPITAL STRUCTURE,
VALUATION, AND COST OF CAPITAL**

Consolidated Balance Sheets for the Wm. Wrigley Jr. Company

(in thousands of dollars)	2001	2000
ASSETS		
Current assets:		
Cash and equivalents	\$ 307,785	\$ 300,599
Short-term investments, at amortized cost	25,450	29,301
Accounts receivable	239,885	191,570
Inventories		
Finished goods	75,693	64,676
Raw materials and supplies	203,288	188,615
	<u>278,981</u>	253,291
Other current assets	46,896	39,728
Deferred income taxes - current	14,846	14,226
Total current assets	913,843	828,715
Marketable equity securities, at fair value	25,300	28,535
Deferred charges and other assets	115,745	83,713
Deferred income taxes - noncurrent	26,381	26,743
Property, plant, and equipment (at cost)		
Land	39,933	39,125
Buildings and building equipment	359,109	344,457
Machinery and equipment	857,044	756,050
	<u>1,256,086</u>	1,139,632
Less accumulated depreciation	571,717	532,598
Net property, plant and equipment	684,379	607,034
TOTAL ASSETS	<u>\$ 1,765,648</u>	\$ 1,574,740
LIABILITIES AND STOCKHOLDERS' EQUITY		
Current liabilities:		
Accounts payable	\$ 91,225	\$ 73,129
Accrued expenses	128,406	113,779
Dividends payable	42,711	39,467
Income and other taxes payable	68,437	60,976
Deferred income taxes - current	1,455	859
Total current liabilities	332,234	288,210
Deferred income taxes - noncurrent	43,206	40,144
Other non-current liabilities	113,921	113,489
Common stock	12,646	12,558
Class B convertible stock	2,850	2,938
Additional paid-in capital	1,153	346
Retained earnings	1,684,337	1,492,547
Treasury stock	(289,799)	(256,478)
Accumulated other comprehensive income	(134,900)	(119,014)
Total stockholders' equity	<u>1,276,287</u>	1,132,897
TOTAL LIABILITIES AND STOCKHOLDERS' EQUITY	<u>\$ 1,765,648</u>	\$ 1,574,740

Exhibit 3

Inputs & Assumptions	
Total Assets	\$ 1,765,648,000
Shareholder equity	\$ 1,276,287,000
Original Market Value	\$ 13,100,000,000
Borrowing amount	\$ 3,000,000,000
Bond yield	13%
Tax Rate	40%
Market Risk Premium	7%
Pre tax cost of debt	13%
Unlevered beta	0.75
Shares Outstanding	232.44 million
Risk Free Rate (10Y)	4.86%
Post Cap Weights	
Equity	77.1%
Debt	22.9%

Exhibit 5

Impact on Share Value	Current Share Price	Recap Debt	Shares Outstanding
Value of Debt Tax Shield	\$ 56.37	\$3,000,000,000	232,440,000
Post-Recap Share Price	\$ 5.16		
Value of Levered Firm	\$ 61.53		
		\$ Change	% Change
Dividend Payout Share Price	\$ 48.63	\$ (7.74)	-13.74%
Share Repurchase Share Price	\$ 61.53	\$ 5.16	9.16%

Exhibit 6

Impact on Reported EPS	Pre Recap		
	<u>Worst Case</u>	<u>Most Likely</u>	<u>Best Case</u>
D/E Ratio (Leverage)	0	0	0
EBIT	\$436,353	\$513,356	\$641,695
Net Income	\$261,812	\$308,014	\$385,017
Shares Outstanding	232440	232440	232440
EPS	1.13	1.33	1.66

Impact on Reported EPS	Post Recap		
	Dividend Payout		
D/E Ratio (Leverage)	<u>Worst Case</u>	<u>Most Likely</u>	<u>Best Case</u>
EBIT	0.229	0.229	0.229
Net Income	\$436,353	\$513,356	\$641,695
Shares Outstanding	\$27,812	\$74,014	\$151,017
EPS	232440	232440	232440
	0.12	0.32	0.65

Impact on Reported EPS	Post Recap		
	Share Repurchase		
D/E Ratio (Leverage)	<u>Worst Case</u>	<u>Most Likely</u>	<u>Best Case</u>
EBIT	0.229	0.229	0.229
Net Income	\$436,353	\$513,356	\$641,695
Shares Outstanding	\$27,812	\$74,014	\$151,017
EPS	183685	183685	183685
	0.15	0.40	0.82

Exhibit 7

Impact on Voting Control			
Pre Recap (Before Share Repurchase)			
<i>All Values In Millions</i>	Total Market	Wrigley Family	Other Ownership
Class B Common Stock	42.64	24.73	17.91
Common Stock	189.80	39.86	149.94
Total Shares Outstanding	232.44	64.59	167.85
Class B Votes (10 per share)	426.41	247.32	179.09
Common Stock Votes	189.80	39.86	149.94
Total Votes	616.21	287.18	329.03
Post Recap (After Share Repurchase)			
<i>All Values In Millions</i>	Total Market	Wrigley Family	Other Ownership
Class B Common Stock	42.64	24.73	17.91
Common Stock	141.05	39.86	101.19
Total Shares Outstanding	183.69	64.59	119.10
Class B Votes (10 per share)	426.41	247.32	179.09
Common Stock Votes	141.05	39.86	101.19
Total Votes	567.46	287.18	280.28
Wrigley Family Voting Control	Pre Recap 46.60%	Post Recap 50.61%	Increase (Decrease) 4.00%

Exhibit 8

Impact on Debt Rating	Investment Grade		
	AAA	AA	A
EBIT interest coverage (x)	23.4	13.3	6.3
Funds from operations/total debt (%)	214.2	65.7	42.2
Free operating cash flow/total debt (%)	136.6	33.6	22.3
Return on capital (%)	35.0	26.6	18.1
Operating income/sales (%)	23.4	24.0	18.1
Long-term debt/capital(%)	(1.1)	21.0	33.8
Total debt/capital incl. short-term debt(%)	5.0	35.9	42.6
Corporate 10Y Yields	9.307%	9.796%	10.083%
<i>Debt should be rated between BB and BBB according to these metrics assuming their significance is weighted the same</i>			10.894%
Impact on Debt Rating	Impact on Debt Rating		
Non-Investment Grade	BB	B	Pre Recap
	2.2	1.0	0.00
EBIT interest coverage (x)	19.7	10.4	0.00%
Funds from operations/total debt (%)	7.3	1.5	0.00%
Free operating cash flow/total debt (%)	11.5	8.0	28.44%
Return on capital (%)	15.4	14.7	21.13%
Operating income/sales (%)	53.6	72.6	0.00%
Long-term debt/capital(%)	57.7	75.1	0.00%
Total debt/capital incl. short-term debt(%)	12.753%	14.663%	
Corporate 10Y Yields			2.71