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INSTRUCTORS' NOTES

Denise V. Siegfeldt
Florida Institute of Technology
Editor

Rafiuddin Ahmed
James Cook University
Co Editor

Raymond J Elson
Valdosta State University
Associate Editor

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GREENWASH AND ASK FOR FORGIVENESS LATER: A CASE STUDY

Ahmed Maamoun, University of Minnesota Duluth

INSTRUCTORS' NOTES

CASE DESCRIPTION

On September 18, 2015, the U.S. Environmental Protection Agency (EPA) made a shocking announcement that some of Volkswagen's TDI diesel vehicles had a "defeat device" that allowed the nitrogen oxide (NOx) engine output to meet U.S. emissions standards during testing while the vehicle was emitting up to 40 times the permitted level in true driving conditions. The sophisticated scheme, also known as "Dieselgate," started with approximately 500,000 cars in the U.S., but the total of affected vehicles climbed sharply to nearly 11 million worldwide within days. The irony was that while Volkswagen was boasting about its eco-friendly, green image, its engineers were rigging millions of its theoretically clean diesel engines with software that tricked emissions tests.

This case is an excellent vehicle for demonstrating how greenwashing and deceptive advertising exist in today's world. The case highlights the significance of business ethics and corporate governance and could be used in an undergraduate green marketing or business ethics course. The case is designed to be taught in a 60–75-minute class and is expected to require 3 hours of outside preparation by students.

CASE SYNOPSIS

Volkswagen entered the U.S. market in 1955, but it wasn't until almost half a century later that the German automaker found its niche in the U.S. diesel engine (which uses diesel fuel) category. VW adored diesel. It accounted for half the new cars sold in Europe, triggered by lax EU regulations. Diesel vehicles were cheaper than hybrids and packed more power under the hood yet still garnered more than 40 miles to the gallon. The U.S. market was a different game with more strict environmental standards. Thus the trick came down to how to engineer a mechanism to strip soot exhaust of its pollutants to meet the tough U.S. regulations. Situations in which there is a significant gap between the expressed and genuine commitments to sustainability, like Volkswagen's, is known as greenwashing - The greenwashing was certainly elaborate as it involved fraud and deception on a wide scale. VW spared no effort to mislead millions of unsuspecting customers in an attempt to position itself as one of the world's greenest carmakers. But it backfired! The company found itself in a plethora of legal nightmares, and its impeccable reputation and brands were severely tarnished. The scandal plunged the German

auto giant into the deepest crisis of its history, costing $30 billion in fines, recalls, buybacks, and class-action lawsuits. VW's revenues, profits, and market capitalization tanked for months. However, the new CEO, Matthias Müller, has managed to turn things around. Volkswagen bounced back and became the largest carmaker in the world with 9 million deliveries in 2021. The multi-brand company, which also produces 10 prominent brands like Audi, Lamborghini, and Porsche in addition to Volkswagen vehicles, has been more aggressively moving into electronic vehicle manufacturing lately, investing billions.

SUGGESTED TEACHING STRATEGY

The author typically starts the case discussion by asking students if they have heard this statement: "With great power comes great responsibility," alternatively known as the "Peter Parker Principle." Some students may recognize it is indeed a line from the Spider-Man 2002 movie. Playing the video clip usually triggers a conversation about the moral responsibility of MNCs to do the right thing and act in a way that is both legal and ethical. Depending on the scope and time of the class, the instructor can divide students into teams and assign each team icebreaker questions like: "How could such a scandal happen?" "How could so many laws be so blatantly violated?" "How could it have gone on for so long?" "Was greenwashing acceptable in VW's corporate culture?" "How could a corporate culture evolve into one that crosses ethical lines?" Teams can also research other companies' public relations fiascos to see how each crisis was handled. Sadly, there is no shortage of those: Boeing 737 MAX back-to-back plane crashes, BP Deepwater Horizon oil spill, CBS sexual harassment scandal, Chipotle food poisoning, Equifax data breach, Exxon Valdez ocean tanker, Facebook-Cambridge Analytica data scandal, Felicity Huffman and Lori Loughlin college admissions scandals, HP spying scandal, Johnson & Johnson baby powder recall, Lehman Brothers scandal, Luckin Coffee debacle, Martha Stewart's insider trading affair, Monsanto's GMO controversy, Nike sweatshops, Siemens bribery scandal, SpaceX rocket launch failure, Toyota accelerator scandal, and Wells Fargo accounts fraud. This case can be used in a class with a timeframe of 60 to 75 minutes (Table 1).

Table 1. Teaching Plan Based on a 75-Minute Session

Case Overview	10 minutes
Discussion of the greenwashing phenomenon	15 minutes
Evaluation of the effectiveness of government regulators	15 minutes
Discussion of the roots of VW "Dieselgate"	10 minutes
Debating how the scandal will transform VW in the next 10 years	20 minutes
Update on the case	5 minutes

SUGGESTED ANSWERS TO DISCUSSION QUESTIONS

1. What are some legal and ethical issues associated with the VW scandal?

In early 2014, researchers from the International Council on Clean Transportation (ICCT) conducted tests on diesel models of the Volkswagen Passat and Jetta to verify that the "clean

diesel" technology these cars were touting was in fact clean. ICCT also solicited help from researchers at the West Virginia University (WVU) Center for Alternative Fuels, Engines, and Emissions. Meanwhile, the California Air Resources Board (CARB) was conducting its own tests on VW diesel cars. The ICCT/WVU researchers road-tested their vehicles under real driving conditions, while CARB's tests were performed in a lab. The results were baffling. VW vehicles tested in the lab conformed to the EPA standards, while the same models tested on the open road exceeded U.S. emissions standards by almost 40 times. Initially, Volkswagen adamantly denied any wrongdoing. In December 2014, Volkswagen issued a voluntary recall of about 500,000 vehicles in the United States, claiming a software glitch as the reason for the emissions discrepancy. ICCT and CARB continued testing the repaired vehicles but found no or little improvement when the cars were tested on the road. It wasn't until September 2015 that Volkswagen, unable to explain the tests, implied that some diesel models might have been designed to provide inaccurate emissions test results that comply with the legal limit. On September 18, 2015, the EPA officially notified Volkswagen that its "clean diesel" vehicles were found to be in violation of the Clean Air Act. On September 23, 2015, CEO Martin Winterkorn released a statement maintaining that the diesel scheme was the brainchild of low-level engineers, not senior management. Nevertheless, he accepted responsibility for the crisis and resigned his position. Chairman of Porsche AG, Matthias Müller, succeeded him and vowed transparency in getting to the bottom of what really happened.

What followed was a Greek tragedy-level scandal. Volkswagen shocked the world and admitted that it had deliberately equipped its models of Turbocharged Direct Injection (TDI) diesel engines with a "defeat device" that was intended to trick elements of a vehicle's emission control system during emissions testing. VW's diesel cars were essentially programmed to sense when emissions were being tested and to turn on equipment that reduced the emissions. Then when driven on the road, the cars had better fuel economy and performance but produced as much as 40 times the legal amount of nitrogen oxide.

Initial reports suggested that approximately 500,000 Volkswagen diesel cars in the U.S. were equipped with the device. As the scandal continued to develop, the number of vehicles affected ballooned to almost 11 million vehicles across multiple VW brands worldwide. Table 1 breakdowns VW's vehicles fitted with "defeat devices." Some reporters have termed the scandal as "Dieselgate," referring to the Watergate scandal that forced President Richard Nixon to resign in 1974. Even the German Chancellor, Angela Merkel, stepped in and described the VW predicament as "difficult," and pressed the automaker to demonstrate "complete transparency" and to explain its actions fully.

Table 2: VW Vehicles with Deceptive Emissions Software (October 2015)

Brand	Number of Vehicles (Worldwide) in Millions
Audi	2.1
Seat	0.7
Skoda	1.2
Volkswagen	5.0
VW Commercial Vehicles	1.8

Source: Statista (2015)

On November 2, 2015, the EPA issued a second notice of violation to VW that included Audi diesel vehicles. As U.S. regulators accused the company of cheating on environmental standards, the Department of Justice filed a complaint on behalf of the EPA against VW for deliberate violations of the Clean Air Act, citing a sophisticated and orchestrated scheme to cheat diesel emissions tests. The 2016 complaint contended that Volkswagen had intentionally concealed the fact that the automaker was polluting 40 times above the legal limits. The affected vehicles included nearly 500,000 vehicles from model year 2009 through 2015 Volkswagen TDI diesel cars of Jettas, Passats, Golfs, and Beetles, as well as the TDI Audi A3.

2. Discuss why simply issuing an apology is not enough when handling a public relations crisis of the magnitude of "Dieselgate."

The scandal hit the brand at its core—its authenticity—and negatively impacted the company's image, sales, and bottom line. When VW admitted in September 2015 to cheating on U.S. air pollution tests for years, shares tanked, and the company lost 30% of its market value overnight. This led to Moody's downgrading the automaker's rating one notch. Obviously, the diesel scandal had a noticeable effect on Volkswagen AG's customers' loyalty and trust, leading to a crucial drop in sales and profits. In the United States, the company ceased selling the affected 2015 models, did not introduce its 2016 diesels, and extended its warranty to 6 years/72 miles bumper-to-bumper coverage on all other models. However, Volkswagen kept selling 2015 and 2016 diesels in Europe. The company also faced backlash from the millions of vehicle owners, and it was forced to recall or even buyback most of those vehicles. The fines in the U.S. alone were $14.7 billion for violating emission standards for almost one-half million diesel cars. The fines, lawsuits, recalls, and buybacks for VW vehicles overall amounted to $30 billion worldwide.

Diesel vehicles account for more than half of all vehicles sold in Europe mainly because of EU's policies that have made diesel fuels cheaper than gasoline and because of less strict emissions standards for diesels than in the United States. Revelations that Volkswagen cars were not as environmentally friendly or green as its "clean diesel" advertising had pledged were more damaging to the company's reputation in Europe than in any other part in the world. The United States, as the second-largest car market after China, is theoretically critical to Volkswagen's prosperity. However, U.S. unit sales come in at just six percent, compared to 40 percent in Europe. Thus, mayhem in Europe is a far greater threat to Volkswagen's future growth and profitability.

3. When faced with such an ethical crisis, how should companies like Volkswagen respond?

When Müller became the new CEO of Volkswagen AG in September 2015, he brought his unblemished reputation and proven track record that he had gained at Porsche. Suddenly he was in charge of re-establishing Volkswagen's reputation for environmental friendliness and restoring the confidence of various stakeholder. On the first day of the job, he said, "My most urgent task is to win back trust for the Volkswagen Group—by leaving no stone unturned and with maximum transparency, as well as drawing the right conclusions from the current situation. Under my leadership, Volkswagen will do everything it can to develop and implement the most stringent compliance and governance standards in our industry. If we manage to achieve that, then the Volkswagen Group with its innovative strength, its strong brands, and above all its

competent and highly motivated team has the opportunity to emerge from this crisis stronger than before".

Four years later, it is safe to say that Müller had delivered on his promise. Revenues, profits, stock price, and market capitalization had rebounded and surpassed the scandal plunge. In 2019, Volkswagen AG held a 9% market share in the $3 trillion global auto industry. Meanwhile, Volkswagen has strived to put the fiasco behind it and restore its green reputation. In 2016, VW vowed to boost its electric vehicle production by 50% over the next decade, with electric engines in half of all Porsche sports cars by then too.

4. Can Volkswagen earn back customers' trust? How would you propose the company goes about it?

The German automaker is aiming to have VWs with fewer emissions (for real this time!) and sell 1 million electric cars annually by 2025. In 2018, Volkswagen announced a $50 billion investment in electrification. The company is also planning to manufacture a fully electric SUV for the Chinese market starting in 2024, which is expected to compete directly with the Tesla Model X. And starting in 20225, Volkswagen will also build the ID.4 compact crossover in Tennessee, where it already assembles a number of VW conventional models. VW has invested $800 million to expand its U.S. facility for the ID.4 electric vehicle production. The U.S. subsidiary has started taking orders for the concept car which has a price tag of approximately $35,000 that is anticipated to satisfy value-conscious consumers with aspirations of owning an electric vehicle.

While there is still some amount of trust left with some consumers, VW will need to ensure that this trust is well deserved this time. Strong brands, like VW, can prove to be robust assets, and VW can capitalize on that to regain customer loyalty while being a green carmaker. The key is to continue to act in a legal, ethical, socially, and environmentally responsible, and sustainable manner. Only then will Volkswagen be able to sustain itself, benefiting the communities where it conducts business, the public, and the planet as a whole.

5. What strategies would you recommend to management for implementation to prevent these issues from reoccurring?

This is the $30 billion question! Volkswagen (and other companies for that matter) must learn from this fiasco and put policies in place to prevent reoccurrence. The giant automaker should start with its corporate culture. A code of ethics must be published. For example, a written document stating ethical and unethical behavior must be part of a training program that ALL employees have to take. A zero-tolerance policy must be implemented against any employee who crosses the line. Transparency and open communication should be the norm. A hotline for anonymous whistle-blowers could be established. Ensuring anonymity and rewarding legitimate whistle-blowers will encourage various stakeholders to come forward and will deter unethical behavior. In other words, training, transparency, and not being tone-deaf to the writing on the wall is the way to go.

USING ACCOUNTING INFORMATION TO VALUE A BUSINESS – A CASE STUDY FOR THE MBA FINANCIAL ACCOUNTING COURSE

Timothy Kelley, University of San Diego
Loren Margheim, University of San Diego

TEACHING NOTES

CASE DESCRIPTION

The primary purpose of this case is to illustrate how financial accounting information can be used by potential purchasers of an existing business to develop a bid to purchase the business shown in the case. Secondary issues include the use of Excel for present value calculations such as calculating internal rate of return and differential use of operating cash flow and accrual accounting information for valuation purposes. The case has a difficulty level of five, appropriate for first year graduate students. The case has been designed to be used in a Financial Accounting course within an MBA program. Additionally, the case could be used in a junior or senior level finance or accounting class where students have the appropriate knowledge of financial statements and present value analysis. The case can be taught in 1-2 hours with no outside preparation by students as long as students have had exposure to present value concepts and financial accounting ratios.

CASE SYNOPSIS

In this case, students play the role of investors seeking to buy a fictitious company (USD Motors) that has prior financial statements available. Students forecast future income and operating cash flows for USD Motors and use this information to create a bid to buy the Company. Students learn how to use Excel to compute the present value of future net incomes and future operating cash flows as part of the process of putting together a bid. Students will discover how past accounting information can be used to make an important business decision. Students will compare their bid to benchmark data for Price to Earnings Ratio and Market to Book Value Ratio to make sure that their bid is reasonable. Students will prepare "sealed bids" that will be submitted to the course instructor toward the end of a class session. The highest bidding group will be the new "owner" of USD Motors.

RECOMMENDED QUESTIONS TO PROVIDE STUDENTS

1. Use Approach 1 (as described in the case) to estimate the average expected earnings (i.e., equal earnings for each year) over the next 20 years for USD Motors and compute the present value of an ordinary annuity using these estimated earnings. You are to use an interest rate for present value purposes that reflects the amount of risk that you think is associated with the purchase of USD Motors. The greater the perceived risk, the higher the interest rate (rate of return that is expected to be provided to the investors of USD Motors) that should be used by student groups for this case. Add this present value figure to the Company's current cash balance to determine your Bid #1.

2. Use Approach 2 (as described in the case) to estimate the expected earnings for each individual year over the next 20 years for USD Motors (reflecting some estimate about the expected growth in earnings) and compute the present value of these 20 future years of net incomes. Because each year will have a different expected net income, use Excel to determine the present value to save time. Without Excel, separate calculations would be needed (using a present value table) to take the present value of each individual net income figure and to add the resulting 20 calculated present value figures to determine the overall present value of the forecasted earnings (over the next 20 years) for USD Motors. Add your overall present value figure to the Company's current cash balance to determine your Bid #2.

3. Use Approach 3 (as described in the case) to estimate the expected operating cash flows over the next 20 years for USD Motors and to compute the present value of these estimated operating cash flows. For this calculation, forecast the expected earnings for each year for USD Motors for the next 20 years. Then add back depreciation expense for each year as an attempt to estimate the operating cash flows for each future year. For this case, all the Company's revenues are received as a cash flow at the end of the year that they are earned, and all expenses are cash outflows (at year end) in the year when they are incurred except for depreciation expense. Depreciation expense must be added back to net income (for each future year) to approximate operating cash flows because depreciation expense is an expense for accrual accounting purposes but is not a cash outflow (the cash outflow was previously incurred when the property, plant and equipment was purchased). Add your present value figure to the Company's current cash balance to determine your Bid #3.

4. Use the information from your answers to the first three case questions above to judgmentally decide which bid (of your three calculated bids) you would like to use for your "sealed" bid. Before submitting your group's bid to your instructor, make sure that your bid is reasonable considering what Price to Earnings Ratio and Market to Book Value Ratio for USD Motors is implied by the bid your group will be submitting.

These teaching notes are organized around the above four case questions. Additionally, the authors provide some concluding observations concerning:

(a) computing internal rate of return with the case materials and
(b) approaches the authors have used to employ the case materials in the classroom.

Case Question #1: Estimate the average expected earnings over the next 20 years for USD Motors and compute the present value of an ordinary annuity using that average expected earnings figure in your calculation.

In each group's initial attempt at coming up with a reasonable bid, students are asked to develop a bid based on the present value of an ordinary annuity after estimating an average annual net income for USD Motors over the next 20 years. Here the students are using a simplified assumption that all future years will have the same annual increase in earnings beyond Year 4 and that you can just present value the "average" of future years' income (in this initial step toward coming up with a reasonable bid).

One approach to estimating an average net income for the next 20 years would be to create a forecast assuming that the $5,000,000 net income per year annual increase over the last 4 years will continue over the next 20 years. For example, with this assumption, net income would be estimated to be $36,500,000 in Year 5. This $36,500,000 figure is computed by adding the actual net income in Year 4 of $31,500,000 to the $5,000,000 expected annual increase in net income. Adding $5,000,000 in net income per year would result in a net income of $131,500,000 in Year 24. One approach to computing the average net income over the next 20 years would be to find a simple average of the forecasted net incomes for Year 5 and Year 24. This estimated average annual net income would be $84,000,000 [($36,500,000 + 131,500,000)/2].

Using Excel, we can compute the present value of the expected net incomes for USD Motors over the next 20 years. Since we have already estimated an average annuity of $84,000,000 over the next 20 years based on forecasted future net incomes, we must now determine what interest rate to use. In Table 1 of the Teaching Notes (shown below) we have used 16% as our illustration interest rate. Student groups that perceive less risk could well justify a lower rate which will result in a higher present value and a higher bid. Table 1 of the Teaching Notes shown below indicates that the present value of an ordinary annuity of $84,000,000 over 20 years at i = 16% is $498,022,636.

To determine a bid for USD Motors students' groups would need to add the value of any liquid assets like cash and subtract any liabilities from the computed present value. In this case, USD Motors does not have any liabilities, so to determine the bid we would add the $498,022,636 present value of forecasted average earnings to the current cash balance of $110,000,000 to compute a potential bid of $608,022,636 for USD Motors.

It should be noted that the above calculation could also be made by looking up the present value factor for an ordinary annuity without using Excel. The present value factor (with an ordinary annuity) for n = 20 years and i = 16% is 5.929. A present value of an ordinary annuity of $498,036,000 would be determined by multiplying the $84,000,000 annuity by the

present value factor of 5.929. The $14,000 difference between this $498,036,000 value computed using a present value factor and the $498,022,636 calculated in the previous paragraph using Excel is due to rounding.

Students will hopefully realize that the first attempt at coming up with a bid (USD Motors Bid #1--$608,022,636) may be on the high side. Assuming for Bid #1 that the forecasted earnings will be an annuity, the resulting calculations to determine this bid will likely overstate the present value of earnings from the earlier years because the annuity of $84,000,000 would likely overstate forecasted earnings in the early years when the present value factors are greater. On the other hand, Bid #1 would likely tend to understate the present value of earnings from the later years (when the present value factors are lower) as long as earnings are increasing over time. The overstated present value of earnings from the earlier years will likely be greater than the understated present value of earnings from the later years, yielding a net overstatement when calculating the present value of expected earnings. Thus, Bid #1 is likely to be overstated.

Case Question #2: Estimate the expected earnings for each individual year over the next 20 years for USD Motors (reflecting some estimate about the expected growth in earnings) and compute the present value of these 20 future years of net incomes.

The way to remedy the overstatement created by the overly simple first attempt at developing a reasonable bid for USD Motors is to estimate the forecasted earnings for each year individually and to calculate the present value of these earnings using Excel. In Table 2 of the Teaching Notes, we increase the forecasted net income by $5,000,000 each year like what was done when computing Bid #1. Using Excel to do the present valuing of each individual year's estimated net income, we would find that the present value of the forecasted net incomes for the next 20 years is $369,563,061 when using 16% as the interest rate for present value calculations. After adding the current cash balance of $110,000,000 to this $369,563,061 present value figure, we determine that our Bid #2 is $479,563,061.

As expected, Bid #2 is lower than Bid #1 because Bid #2 has lower net incomes in the earlier years compared with using the average annuity assumed for Bid #1. Since Bid #2 has lower incomes in the earlier years and because these earlier years have higher present value factors (compared with the much lower present value factors associated with the later years), Bid #2 at $479,563,061 is lower than Bid #1 at $608,022,636.

It can be asserted that the more conservative (lower) Bid #2 is more realistic than Bid #1 since it is unlikely that USD Motors' earnings would suddenly increase to the $84,000,000 average earnings shown under the discussion of the Case Question #1 solution. Bid #2 is built upon the more realistic assumption (for forecasting purposes) that USD Motors will see a gradual $5,000,000 increase in net income each year over the next 20 years consistent with what was experienced in the first four years of the Company's operations.

For this question, student groups will likely try to use other data to estimate yearly earnings other than the simple assumption that earnings will increase $5,000,000 per year and other data to justify a different interest rate to use in the present valuing process. Instructors

should specifically ask groups to justify how the estimated yearly earnings were estimated and to also justify the interest rate they used to perform the present valuing process.

Case Question #3: Estimate the expected operating cash flows (over the next 20 years) for USD Motors and compute the present value of these estimated operating cash flows.

While Bid #2 (with increasing forecasted income each year) is shown to be more realistic than Bid #1 (which assumes that forecasted income forms an annuity), it could be argued that Bid #2 is flawed in that it is based on forecasted future incomes rather than forecasted future operating cash flows. In an investment decision, investors may be more interested in making a bid based on expected operating cash flows (instead of using expected accrual accounting net income figures). One way to approximate operating cash flows is to add back depreciation expense to net income. This add back is needed as depreciation expense is an accrual accounting expense that is not a cash flow in the current period, as the cash flow took place when the property, plant and equipment was previously purchased. In Table 3 of these Teaching Notes, we add back the $3,500,000 annual depreciation expense (see Table 2 in the case for USD Motors' income statements showing this depreciation figure) to the forecasted net income figures for USD Motors for the next 20 years (from Table 2 -- Teaching Notes) in order to forecast the operating cash flows for each year. The present value of the forecasted operating cash flows for USD Motors is found to be $390,314,004 (see Table 3 -- Teaching Notes). This present value figure is added to the $110,000,000 current cash balance of USD Motors and the resultant figure of $500,314,004 is Bid #3.

This Bid #3 of $500,314,004 is found to be larger than Bid #2 at $479,563,061 which reflects (in this case) that operating cash flows (Bid #3) are greater than accrual-based income (Bid #2) since the add back of depreciation expense to net income is assumed in this case to be the only adjustment between net income and operating cash flows. We believe that most investors would be more interested in using forecasted operating cash flows when making an investing decision (instead of using forecasted net income figures) and that therefore Bid #3 is more realistic than Bid #2.

Case Question #4: Before submitting your group's bid to your instructor, make sure that your bid is reasonable in light of the Price to Earnings Ratio and Market to Book Value Ratio for USD Motors that would be implied by the bid your group will be submitting.

For discussion purposes, let's say that the highest group bid for a particular class session is $500,314,004 (from Bid #3 above). To get an idea if this bid is reasonable, let's compute the Price to Earnings Ratio and the Market to Book Value Ratio for USD Motors and compare these ratios to some useful benchmarks. To compute the Price to Earnings Ratio for USD Motors we would divide the $500,314,004 purchase price by the Year 4 earnings for USD Motors of $31,500,000 resulting in a Price to Earnings Ratio of 15.88. (Note: The purchase price and net income figures could both be divided by the 140,000,000 outstanding common shares, yielding a purchase price per share of $3.57 and an earnings per share of $.23. Dividing the purchase price

per share by the earnings per share would give us a Price to Earnings Ratio of 15.52, with the slight difference between 15.88 and 15.52 being due to rounding).

In our class discussion, we would look at the Price to Earnings Ratios of growth stock companies (with higher price to earnings ratios and earnings growth rates) and the Price to Earnings Ratios of so-called value stock companies (with lower Price to Earnings Ratios and earnings growth rates) to determine if students believe that USD Motors is more of a growth stock or a value stock and if the "winning" (highest) bid for the class is reasonable. In most class discussions, students will see USD Motors as a value stock and that the winning bid for the class is reasonable. For example, on March 9, 2023, the average Price to Earnings Ratio (based on trailing twelve month "as reported" earnings) for the S & P 500 was 20.94 (https://www.multpl.com/s-p-500-pe-ratio). Since USD Motors' Price to Earnings Ratio is lower than the S & P 500 average for this ratio, there is evidence that USD Motors is being considered a value stock with lower expected growth in future earnings (compared with the average U.S company).

In order to compute the Market to Book Value Ratio for USD Motors, the Company's fair market value of $500,314,004 (using Bid #3) would be divided by the $236,000,000 book value of its stockholders' equity at the end of Year 4 (the date of acquisition) to yield a Market to Book Value Ratio of 2.12. In our class discussion, we would look at this 2.12 Market to Book Value Ratio and compare it to growth stocks (with higher Market to Book Value Ratios) and to value stocks (with lower Market to Book Value Ratios) and generally most classes will find that the winning bid is reasonable for a company that seems to be a value stock. USD Motors can be seen as a value stock since its Market to Book Value Ratio of 2.12 is lower than the Market to Book Value Ratio of the average U.S. Company. (Note: On March 9, 2023, the average Market to Book Value Ratio for the S & P 500 was 3.93 (https://www.multpl.com/s-p-500-price-to-book).

CONCLUDING OBSERVATIONS

(a) Internal Rate of Return Considerations:

If there is time at the end of the class, we like to show students how to compute the Internal Rate of Return associated with the purchase of USD Motors. To illustrate the concept of internal rate of return, we extend the information from Bid #3. Let's say that instead of the computed Bid #3 of $500,314,004, a student group decides to bid $600,000,000 in its attempt to purchase USD Motors. Of course, the investors' implied rate of return with Bid #3 is 16% which is the interest rate that was used for present value purposes to develop Bid #3. If, on the other hand, the investors bid $600,000,000 (Bid #4) for USD Motors, the question remains: what would be the investors' rate of return implied by this purchase price (assuming that we are using the same forecasted operating cash flows that was used for Bid #3). The computed internal rate of return would be the interest rate that would cause the present value of future net operating cash flows to equal the net cost of the investment to purchase USD Motors.

In order to compute the internal rate of return, students would first need to determine the net cost of purchasing USD Motors. In this case, if the cost to acquire USD Motors is $600,000,000 (Bid #4) and USD Motors has a cash balance of $110,000,000, then the net cost to acquire USD Motors is $490,000,000 (see Table 4 of the Teaching Notes). Students can then use Excel to find out what interest rate is needed that will cause the present value of 20 years of forecasted operating cash flows to equal the net cost to acquire USD Motors. Near the bottom of Table 4 of the Teaching Notes, we can see that the internal rate of return related to this $600,000,000 bid is 12.85%. The formula for computing this internal rate of return is =IRR(D32:D52). The judgement call for the (hypothetical) winning student group with Bid #4 was deciding that the group felt comfortable with a forecasted 12.85% rate of return considering the group's perception of the risk/rate-of-return trade-offs associated with investing in USD Motors.

(b) How the Authors have used the Case Materials in the Classroom:

This case has been used by the authors in MBA financial accounting classes and in honors sections of Principles of Financial Accounting classes (in which we use an MBA level financial accounting textbook). In these classes, the case is done after the class has covered present value calculations and financial statement analysis. The case normally takes up an entire 80-minute class but is well worth the time as students discover experientially how accounting information can be used to make a business decision. We have not used this case in our regular (nonhonors) Principles of Financial Accounting classes because textbooks used in these classes do not generally cover present value calculations.

We have found it most effective (while student groups are working on the case) to have the professor acting as a consultant to groups that get stuck with the process. Students oftentimes divide up tasks within the group with some group members focusing on the forecasting issues, while others in the group try to work out the present value calculations using Excel. We find that students have fun with this case and get emotionally involved debating within the group how much to bid for USD Motors. Groups become competitive hoping to win the bid (without paying too much). We have found that students become very animated when the "sealed" bids are brought up to the front of the classroom and the professor writes each group's bid on the board. We like to make sure that there is enough time at the end of the class to compute the Price to Earnings Ratio and Market to Book Value Ratio implied by the winning bid for USD Motors. In our experience, most winning bids have been deemed to be reasonable by the class.

Years ago, in the "early days" of conducting this case, some winning bids were way out of line (due to calculation or conceptual errors). We have had more success with student groups coming up with reasonable bids after we asked students to calculate the Price to Earnings Ratio and Market to Book Value Ratio implied by their bid for USD Motors and to compare their ratios to the S&P 500 averages for these ratios.

Table 1 of the Teaching Notes
Present Value of a Simple Average Earnings Over 20 Years at 16%

Year #	Expected Earnings	Present Value of Earnings	Cash Balance	**Total Bid #1**
0	0	$498,022,636	110 mil	608,022,636
1	84,000,000			
2	84,000,000			
3	84,000,000			
4	84,000,000			
5	84,000,000			
6	84,000,000			
7	84,000,000			
8	84,000,000			
9	84,000,000			
10	84,000,000			
11	84,000,000			
12	84,000,000			
13	84,000,000			
14	84,000,000			
15	84,000,000			
16	84,000,000			
17	84,000,000			
18	84,000,000			
19	84,000,000			
20	84,000,000			

Note: The formula used in cell C3 is =NPV(16%,B4:B23)

NPV means Net Present Value

16% is the interest rate used.

B4:B23 gives the cells that has the $84,000,000 annuity.

Table 2 of the Teaching Notes
Present Value of Individual Years' Estimated Earnings Over 20 Years at 16%

Year #	Expected Earnings	Present Value	Cash Balance	**Total Bid #2**
0	0	$369,563,061	110 mil	479,563,061
1	36,500,000			
2	41,500,000			
3	46,500,000			
4	51,500,000			
5	56,500,000			
6	61,500,000			
7	66,500,000			
8	71,500,000			
9	76,500,000			
10	81,500,000			
11	86,500,000			

Note: The formula used in cell C3 is =NPV(16%,B4:B23)

12	91,500,000
13	96,500,000
14	101,500,000
15	106,500,000
16	111,500,000
17	116,500,000
18	121,500,000
19	126,500,000
20	131,500,000

Table 3 of the Teaching Notes
Present Value of Individual Years' Operating Cash Flow Over 20 Years at 16%

USD Motors--Bid #3						
Time	Expected	Add:	Operating	Present	Cash	**Total**
Period	Earnings	Depr.	Cash Flow	Value	Balance	**Bid #3**
0	0			$390,314,004	110,000,000	$500,314,004
1	36,500,000	3,500,000	40,000,000			
2	41,500,000	3,500,000	45,000,000	Note: The formula used in cell E7 is		
3	46,500,000	3,500,000	50,000,000	=NPV(16%,D8:D27)		
4	51,500,000	3,500,000	55,000,000			
5	56,500,000	3,500,000	60,000,000		**Note:**	
6	61,500,000	3,500,000	65,000,000		Any liabilities would be	
7	66,500,000	3,500,000	70,000,000		subtracted before making bid.	
8	71,500,000	3,500,000	75,000,000			
9	76,500,000	3,500,000	80,000,000		Interest rate	
10	81,500,000	3,500,000	85,000,000		0.16	
11	86,500,000	3,500,000	90,000,000			
12	91,500,000	3,500,000	95,000,000			
13	96,500,000	3,500,000	100,000,000			
14	101,500,000	3,500,000	105,000,000			
15	106,500,000	3,500,000	110,000,000			
16	111,500,000	3,500,000	115,000,000			
17	116,500,000	3,500,000	120,000,000			
18	121,500,000	3,500,000	125,000,000			
19	126,500,000	3,500,000	130,000,000			
20	131,500,000	3,500,000	135,000,000			

Table 4 of the Teaching Notes
Internal Rate of Return

Year #	Expected	Earnings	Depr. Expense	**Net Cash Flows**	
	0			($490,000,000)	Note: This $490 mil = $600 mil bid minus
	1	36,500,000	3,500,000	40,000,000	$110 mil cash balance
	2	41,500,000	3,500,000	45,000,000	
	3	46,500,000	3,500,000	50,000,000	
	4	51,500,000	3,500,000	55,000,000	
	5	56,500,000	3,500,000	60,000,000	
	6	61,500,000	3,500,000	65,000,000	
	7	66,500,000	3,500,000	70,000,000	
	8	71,500,000	3,500,000	75,000,000	
	9	76,500,000	3,500,000	80,000,000	
	10	81,500,000	3,500,000	85,000,000	
	11	86,500,000	3,500,000	90,000,000	
	12	91,500,000	3,500,000	95,000,000	
	13	96,500,000	3,500,000	100,000,000	
	14	101,500,000	3,500,000	105,000,000	
	15	106,500,000	3,500,000	110,000,000	
	16	111,500,000	3,500,000	115,000,000	
	17	116,500,000	3,500,000	120,000,000	
	18	121,500,000	3,500,000	125,000,000	
	19	126,500,000	3,500,000	130,000,000	
	20	131,500,000	3,500,000	135,000,000	

IRR = 12.85%

Cell B26 is: =IRR(D4:D24)

THE COSMETICS INDUSTRY IN THE 2020S: A CASE STUDY

Ahmed Maamoun, University of Minnesota Duluth

INSTRUCTORS' NOTES

CASE DESCRIPTION

Many brick-and-mortar stores are facing the repercussions of the retail apocalypse as consumers opt to shop online rather than visit physical stores. While retailers such as Sears, Forever 21, and Barney's have resorted to filing for bankruptcy, others are thriving. The $25 billion specialty beauty industry has benefited from the changing retail landscape, as consumers have drifted away from department stores in favor of beauty, cosmetics, and fragrance stores to purchase their personal care products. Instructors will have plenty of opportunities to engage students and boost participation. This case is ideal for a junior or senior class on retailing, consumer behavior, marketing strategy, strategic management, or merchandising. It is designed to stimulate discussion about brick-and-mortar vs. online retailing, the future of retail, positioning, and psychographic segmentation.

This case is an excellent vehicle for demonstrating how retail strategies can be utilized by underdog and niche retailers to garner customer loyalty and growth. The case is designed to be taught in a 60-75 minute class, and is expected to require 3 hours of outside preparation by students.

CASE SYNOPSIS

Specialty beauty retailers, such as Ulta and Sephora, seem to be Amazon-resistant companies, immune to the downward spiral facing department stores. Millennials are increasingly electing to purchase products from beauty stores due to the stores' product expertise and incentivized loyalty programs. For instance, Ulta Beauty has continued to profit and grow due to the value and shopping experience it is able to offer its customers. The 1200-store chain has found a profitable niche in the intensely competitive beauty market, which was once dominated by department stores. Ulta offers a broad assortment of beauty products, cosmetics, and fragrances across the price spectrum in a low-pressure and relaxed fun environment. Thus, the specialty beauty retailer, that captures 26% of the market, caters to both casual customers looking for bargains and the sophisticated shoppers paying a premium for upscale brands; they then mix in salon services like hairstyling and brow tinting. Together, the mix makes Ulta Beauty a one-stop beauty shop—and one of the most amazing success stories in retail. Sales, profits, and stock price have tripled over the last six years. On the other hand, department stores are contending with powerful sources, like Amazon and trendy specialty stores

and discount players such as Ulta and Sephora, chipping away at their business. In 2019, more than 9,300 stores of all kinds closed their doors, a 60% jump from the previous year. The retail apocalypse is real, but some retailers are flourishing nonetheless.

SUGGESTED TEACHING STRATEGY

The instructor could start the case discussion by asking students to go to Ulta and Sephora's websites and spend a few minutes browsing the available merchandise. This approach triggers a conversation about branding, product mix, and marketing loyalty programs. Depending on the scope and time of the class, the instructor can list brick-and-mortar stores that did not survive the economic sledgehammer of recent years. This discussion should naturally lead to a debate about what physical retailers are doing right and why some are thriving while others are having a hard time staying afloat. Another approach that the author has found valuable in generating discussion is to poll students: "Do you shop at department stores? Do your parents? Why or why not?" or "What comes to your mind when you hear or see the Ulta brand?" or "What do you think of Mary Dillon?" This will get students to talk about their perceptions of both Ulta and its CEO. Students could also be asked to browse the websites of other major department stores and check the changes they are making in the beauty category. Or check on the performance of specific companies, such as JCPenney (JCP), Macy's (M), Kohl's (KSS), Nordstrom (JWN), and Dillard's (DDS). The instructor may also ask students to go online after the discussion and find updates on Ulta's market capitalization, number of stores, revenues, and profitability. Finally, since the case has shown that Ulta and Sephora are dominating the specialty beauty retail landscape, checking on how Sephora is doing would be appropriate.

This case can be used in a class with a timeframe of 60 to 75 minutes (see Table 1).

Table 1
Teaching Plan Based on a 75-Minute Session

Case Overview	10 minutes
Evaluation of the role of retailers in society	15 minutes
Explaining how Ulta managed to come out on top	15 minutes
Discussion of pros and cons of online and brick-and-mortar retailing	10 minutes
Debating how the retail landscape will transform in the next 10 years	20 minutes
Update on the case	5 minutes

SUGGESTED ANSWERS TO DISCUSSION QUESTIONS

1. How has the U.S. retail landscape grown over the last several decades?

The retail landscape all began with local mom and pop stores within individual towns. As the suburbs began to grow, so did retailing with the first enclosed mall opening in 1956 in Minneapolis. Next came the category killers or those specializing in one particular type of merchandise such as Barnes and Noble, Home Depot, and Best Buy. The mom and pop shops could no longer match the large inventory and prices offered by category killers and department stores, so many of these small businesses began to close. This led to a major boom in retail space, which we are now seeing the impact of. Aside from holiday shopping, mall traffic is down

along with many retail giants closing their doors altogether (i.e. Toys 'R' Us and Sears). Although brick-and-mortar traffic may be on the decline, ecommerce is growing rapidly, especially major online retail giant Amazon. As of December 2019, there were over 150 million Amazon Prime members (up from 100 million in April 2018). And in March 2020, Amazon announced it is hiring 100,000 people amid the Corona virus outbreak to keep up with demand, while social distancing is likely to hurt physical stores (Mattioli, 2020).

2. Why do you think Ulta is growing rapidly and winning customers?

Mary Dillon, Ulta CEO, has set a roadmap to success and it has worked. Revenues, profits, market valuation, and number of stores are soaring. The roadmap includes:

- **Loyalty programs:** Its 32 million members cannot be wrong! Ulta's loyalty programs are designed to encourage repeat purchases, inciting consumers to turn to it more frequently than to other retailers (Loeb, 2019).
- **Personalization:** Just having products to sell in stores is not what today's sophisticated shoppers look for. Stores need brands that build an emotional connection with consumers. Ulta has created a beauty experience by implementing tester stations that allow consumers to physically sample the products.
- **Product assortment:** Ulta has increasingly concentrated on catering to millennial consumers. Shoppers can buy a broad range of cosmetics and get their hair styled on site. The products on their shelves range from hip private-label to stylish national brands. Over its 30 years in business, Ulta's strength has been its focus on being an all-in-one trendy and fun destination.
- **Store location:** Ulta avoids shopping malls and locates its stores mostly in strip malls with major vehicle and pedestrian traffic. Building stores outside of dying malls has proven to be a sensible strategy.
- **Celebrities:** Ulta utilizes celebrities and influencers such as Ariana Grande, Jessica Alba, Khloe Kardashian, and Kylie Jenner to project a youthful and outgoing image (Danziger, 2018). The new partnership to sell Kylie Jenner's makeup was particularly successful.
- **Supply chain strength:** Ulta is the market leader in its field. The company utilizes its large economies of scale to garner favorable contracts with upstream wholesalers and manufacturers.

In brief, everything the company is doing is generating more customers. Fast fulfillment, personalization, loyalty offerings, and rewards all add up to a successful operation. Ulta is changing the way people shop as it has allowed shoppers to buy both mass and prestige products, as well as get salon, brow and other beauty services that historically would have been done at multiple locations.

3. Does online retailing have an implied advantage over brick-and-mortar format? If yes, how so?

The number of traditional retailers that have filed for bankruptcy since 2017 is alarming. Examples include prominent names such as Avenue, Barney's, David's Bridal, Destination Maternity, Dressbarn, Forever 21, GameStop, Gander Mountain, Gymboree, Mattress Firm, Nine West, Payless ShoeSource, Pier 1 Imports, Sears/Kmart, Shopko, and Toys 'R' Us.

Having said that, the author believes physical stores are here to stay. The question is what type of physical stores. Department stores stock more fashionable merchandise and have to

reduce prices when they make a mistake in guessing what the popular styles will be. They also provide more personal sales service and have more expensive mall locations. This business model does not allow much flexibility. In contrast, discount stores appeal to customers who are looking for lower prices. These consumers are less interested in the costly services provided by department stores. Millennials are doing their brick-and-mortar shopping at extreme value retailers like dollar stores and discount racks. Department stores like Macy's and JCPenney are closing locations, while off-price stores like T.J. Maxx and Dollar General are growing their brick-and-mortar footprint.

Online retailing is booming. Most online stores, like Amazon, now have free shipping and liberal return policies, so shoppers can always return or exchange an item if they don't like it or if it didn't fit. Customers may also be able to legally avoid paying sales tax. I was recently shopping for a new TV and the main reasons I didn't even consider Best Buy or Walmart were: 1) How am I going to haul it to my house? and 2) Why should I pay sales tax? Buying online was the convenient and cost-effective way to go. It may have also been the greener choice! After all, the FedEx truck at my doorstep was likely in the neighborhood anyway, which means the incremental fuel used is a lot less than what I would use driving to and from the store. Amazon is even considering shipping to Prime members only once a week. The so-called "Amazon Day" service will be voluntary and targets customers who are troubled about their carbon footprint. Consolidating purchase deliveries will cut down on emissions associated with sending a delivery truck to the same customer multiple times a week and will result in grouping orders within a single package, thus reducing packaging. Customers can choose their preferred day of the week to receive shipments.

4. **While the rise of the Internet is certainly a large reason for the fall of brick-and-mortar retailers, what other potential factors have contributed to the "retail apocalypse"?**

Over the last few decades there has been an overexpansion of malls in the U.S., and now the market is seeking to correct itself by closing many physical retailers. In addition, many shopping areas have been plagued with high rents that stores are unable to pay, especially after the 2008 market recession. Rising costs of tariffs with respect to importing goods from other countries is another external contributor to the fall of many retailers. There are also many internal factors that affect a store's survival. Some stores may fail due its refusal to innovate or change in a time of increased competition in consumers' shopping choices. Mismanagement and poor strategic choices are also a large contributor to why stores are vulnerable to the retail apocalypse. Failure to personalize the shopping experience based on the individual's needs or building a sense of community through in-store events for loyal customers is another factor. In a time where stores are struggling to stay afloat, it is important for retailers to reexamine their strategies in order to survive the retail apocalypse.

5. **What can retailers do to battle the retail apocalypse?**

Amid all the liquidation and downsizing, the prevailing belief is that brick-and-mortar stores are out of fashion in the age of Amazon and online shopping. One intuitive option to avoid the retail apocalypse is to launch ecommerce initiatives to expand a store's presence beyond brick and mortar. For example, Walmart expanded into the online arena with its purchase of Jet.com.

Another survival tactic is through innovation of the shopping experience or servicescape. For example, Ulta is known for its pleasant shopping experience, unique product offerings, and helpful staff. In addition, retailers can enhance margins and purchasing decisions, improve customer service, leverage big data, and initiate creative marketing campaigns. There has also been the rise of lifestyle shopping centers where location and the surrounding stores offer great convenience to the shopper. For example, having a restaurant, gym, grocery and other goods store in near proximity may draw in shoppers. The key to staying in business is offering greater benefit over costs and providing customers with value they cannot receive from other stores or shopping online. Whether it be from the price, selection, or shopping experience, only stores that innovate to consistently capture customer needs and wants will survive the retail apocalypse.

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CULLOWHEE CONFECTIONARY COMPANY: A SERIES OF TEACHING CASES ON VALUING A FAMILY-OWNED BUSINESS

Marco Lam, Western Carolina University
Thomas D'Angelo, Independent
R. Douglas Parker, Western Carolina University
Nora Sugar, Independent

INSTRUCTORS' NOTE

CASE DESCRIPTION

This case is primarily concerned with developing criteria to evaluate a family business, the role of financial leverage and debt in developing a strategy, the role of family dynamics on business strategy, the use of financial and non-financial information to value family-owned businesses and evaluating a family-owned business in financial distress. Secondary issues include factors underlying growth, analyzing the business environment, and financing a buyout. The case has a difficulty level of three and is appropriate for junior level courses such as advanced managerial accounting, financial statement analysis or entrepreneurial strategy. Each case is designed to be taught in approximately 0.5 hours and should require approximately three hours of outside preparation by students.

CASE SYNOPSIS

This series of three short teaching cases cover two decades out of the history of Cullowhee Confectionary Company. Few accounting and finance cases deal with family owned (privately held) businesses. These cases address unique issues frequently encountered in family businesses.

The first case addresses the topic of valuing a privately owned family business and the difficulties of running a business when the owners have very different goals. The second case deals with creating a new strategy and the creation of balanced scorecard and identifying performance measures. Finally, the third case deals with valuing a family-owned firm in distress.

These cases are based on real events and publicly available data. However, because we have taken some artistic liberties with the way the story is told, modified available data, and added data where gaps in data availability existed, the names of the protagonists and company have been altered. We have taken great care to ensure that the changes made did not alter the actual dynamics and financial relationships for student analyses.

RESEARCH METHODS

These cases are based on real events and publicly available data. We also had the opportunity to interview several individuals with close ties to the real company. These individuals' stories and recollections have been combined with the public available information to tell the story from a narrator (i.e., authors) viewpoint. However, because we have taken some artistic liberties with the way the story is told, modified available data, and added data were gaps in data availability existed, the names of the protagonists and company have been altered. We have taken great care to ensure that the changes made did not alter the actual dynamics and financial relationships for student analysis.

TEACHING NOTES

Learning Outcomes

After successfully completing all parts of this case, students should be able to:
1. Develop criteria for evaluating a family-owned business.
2. Discuss alternative ways a small family-owned business can finance a buyout.
2. Discuss the role of financial leverage and debt in developing and deploying strategy.
3. Understand the role of family dynamics on business strategy for family-owned businesses.
4. Use (limited) financial and non-financial information to value family-owned businesses.
5. Evaluate family-owned businesses in financial distress.
6. Discuss factors underlying the growth with an industry
7. Analyze the business environment.

This case reviews three distinct time periods for the Cullowhee Confectionary Company. The instructor may opt to assign the entire case or choose to break the case into the individual acts. If you do break the case, it would be beneficial to supply all the financial information to students to assist in their decision-making process. The acts are named to reflect events that may be an indictor or issues with the sensitive cocoa tree and directly relates to each time-period in the confectionary company's life.

Suggested pre-work questions for Act One: Too Many Branches

1. Describe Cullowhee Confectionary's strategy.
2. Cullowhee's owners believe the company will be highly effective and can continue to grow in the next two years. Based on the data in Table 1, do you agree with their position?
3. What are the key factors underlying growth?
4. If the company decides to buyout the noninvolved family member heirs, what are the alternative ways the company can finance this buyout?

Answers and Additional In-Class questions (Act One: Too Many Branches)

1. What is Cullowhee's Strategy?

Cullowhee's strategy was to manufacture and sell chocolate and other confectionary products through the fundraising sales channel. After 2012, the company used a more diversified approach by trying to grow the company through product and sales channel development.

2. Based on the income statements provided in table 1, how likely is it in your opinion that the company can continue to grow over the next two years?

The income statements suggests that net income will be between $800K and $1M. Growth in administrative expenses (+15%) could be a concern.

3. What are the key factors underlying growth?

- high quality product
- competitors
- expansion
- new markets (international growth)

4. What are the alternative ways the company can finance a buyout of noninvolved family member heirs?

There are several ways the company may finance a buyout. These alternatives may include:

a. Personal funds of the involved members
b. Small business loans (SBA)
c. Seller financing – work out a payout structure with the noninvolved family members
d. Leveraged buyout – leverage some of the assets of the business to assist in the finance of the buyout. Normally this is done in combination with other methods, such as seller financing and/or SBA loans.

Provide an analysis of Cullowhee Confectionary's environment.

Porter's five forces

Buyers have significant power especially in the retail channel.

Suppliers. Cullowhee mainly uses commodity products. Individual suppliers have limited power.

Potential Entrants. For the chocolate and convention fundraising market, potential entrants include other producers of private label candies as well as national brands like Hershey and Mars.

Substitutes. In the fundraising market, Cullowhee faces competition from a variety of product offerings. See http://www.fundraising-ideas.org/location/ for an overview of fundraising alternatives.

Competitors. The fundraising market is very competitive. Cullowhee does face competition from other candy producers as well as other products.

The participating owners are interested in buying out the non-participating owners. What information would you like to have available to value the company?

Common answers include earnings, EBITDA, revenues. Common finance models are developed for publicly traded companies. An open question is how these models translate to privately held firms. These models typically use Earnings per Share (EPS), Dividends per Share (DPS), Free Cash Flows, etc.

How much is the company worth? How much should the participating owners offer the non-participating owners for their shares?

Because of the limited financial data that had been made available, students will have to make some assumptions.

There are several models one can use to value the company.

1. A multiple of revenues.

In practice it might be difficult to find similar firms. Noting that competitors like Hershey are publicly traded and therefore not necessarily a good comparison. EPS Diluted) for Hershey during the time of this case is 2.96 (2.93). Stock Price at December 31 was $67.44 and a P/E ratio of 22.8.

2. An alternative would be the use of free cash flows.

$$FCFE = Cash\ flow\ from\ operations - capital\ expenditures + net\ borrowing$$

Using operating profit as a proxy for cash from operations, assuming there are no new investments (the reason the participating owners are considering buying out the non-participating owners) and a required rate of return 10% with a growth rate of 0%, the equity would be valued at almost $6.3 million. When the growth rate is 5%, the value increases to $15.8 million.

Cullowhee Confectionary Company
($ in 000s except for shares outstanding and value per share)

Required rate of return	10%					
Growth rate	0%					
		2008	**2009**	**2010**	**2001**	**2012**
Cash from Operations		918	1,049	942	820	1,392
Cash Investments		-	-	-	-	-
Free Cash Flow		918	1,049	942	820	1,392
Discount rate		1.1000	1.2100	1.3310	1.4641	1.6105
PV of free cash flows		834	867	708	560	864
Total PV of free cash flows	3,833					
Continuing value	13,920					

(CV)	
PV of CV	8,643
Enterprise Value	12,476
Book Value of Net Debt	6,200
Value of Equity	6,276
Shares outstanding	1,000
Value per Share	$ 6,276

3. Using the earnings and dividends policy (pay-out 80% of earnings) in a residual earnings model, the firm would be valued at $7.7 million.

Cullowhee Confectionary Company

Future RE = constant

Required rate	10.0%					
		2008	**2009**	**2010**	**2011**	**2012**
Dividends		967.20	552.80	577.50	662.90	558.60
Earnings		1,210.00	691.00	825.00	947.00	798.00
Dividends reinvested			96.72	55.28	57.75	66.29
Cum dividend earnings			787.72	880.28	1,004.75	864.29
Normal earnings			1,329.90	760.10	907.50	1,041.70
Abnormal earnings growth			(542.18)	120.18	97.25	(177.41)
Discount rate			1.10	1.21	1.33	1.46
Present value of RE			(492.89)	99.32	73.07	(121.17)
Total PV of RE		(441.68)				
Total earnings to be capitalized		767.32				
Value per share		7,673.23				

Note that because all the owners are family, it is very important to arrive at a price that is "fair".

The next challenge is to find the resources to finance the buyout. How should the participating owners finance the buyout?

Ideally the owners would finance the buyout with a mixture of equity and debt. Because of the relatively large amounts involved, the participating owners had to use significant amounts of debt financing. How does this affect the company's strategy?

Because the firm is now highly leveraged, it limits the investment opportunities. The presence of debt covenants will restrict the owners' ability to purchase inventory, machinery, and spending on marketing and R&D.

Act Two: Falling Leaves Suggested pre-work assignments and questions.

1. Create a Balanced Scorecard and Strategy Map for Cullowhee Confectionary Company
2. Create pro-forma income statements for the next two years. Include your assumptions for growth/decline in revenues, gross margin percentage, and growth of SG&A expenses.
3. Is Cullowhee's growth sustainable?
4. Which marketing channel should Cullowhee pursue to reduce its dependency on fundraising sales? Why?

Answers and In-Class Assignments (Act Two: Falling Leaves)

1. Create a Balanced Scorecard and Strategy Map for Cullowhee Confectionary

Cullowhee's new strategy focusses on reducing its dependency on the fundraising channel.

Balanced Scorecard

- *Financial Perspective*: revenue growth in wholesale to retail market, revenue growth in direct retail market segment.
- *Customer perspective*: repeat orders, customer satisfaction,
- *Internal processes*: Change-over times, lead-times, employee turnover
- *Innovation & Growth*: # of new product launches, # of number of new retail outlets carrying the product.

2. Create pro-forma income statements for the next two years. Include your assumptions for growth/decline in revenues, gross margin percentage, and growth of SG&A expenses.

Answers will vary. Reasonable assumptions include small to no growth. Sensitivity analysis will aid a discussion on the challenges of valuation in general and especially evaluating family-owned businesses.

3. Is Cullowhee's growth sustainable?

Industry analysis shows that the market for candy has been increasing by an annual rate of about 5% but is expected to be stable for the next few years.

4. Which marketing channel should Cullowhee Confectionary Company pursue to reduce its dependency on fundraising sales? Why?

Students could perform Porter's 5 forces analyses for the various channels, margin analyses using industry averages, or use blue ocean strategy. Answers here will vary.

Provide an analysis of Cullowhee Confectionary Company's environment.

Suggested framework is PEST analysis:

- Political factors include taxation, tariffs, health education, and infrastructure.
- Economical factors include economic growth, interest rates, inflation
- Social factors include culture, health consciousness, population growth, age distribution,
- Technological factors include R&D, automation, and innovation.

Political

New legislation pushing for healthier snacks in school has reduced the ability to generate sales through fund raising in schools.

Economical

The Candy Production industry produces and sells a range of non-chocolate confectionery products including soft candies, hard candies and chewing gums. The common input to all of these products is sugar which increased 1.7% between 2015 and 2020. Sugar cost and the development of new health-conscience products drove industry revenue over the past five years. Industry revenue increased 2.3% in the five years up to 2020 to total revenues of $9.9 billion; but any decline in future sugar pricing could have a negative impact on revenues.

While the demand for chocolate production declined 2.3% between 2015 and 2020, demand from confectionery wholesalers grew during this period as American households are demanding more non-chocolate confectionery products and there are many established brands that consumers purchase. As consumer demand for candy remains relatively stable, retailers such as grocery and convenience stores will demand industry products from confectionery wholesalers.

Social

In the past five years, however, there was a decline in per capita sugar and sweetener consumption as the media linked sugar consumption with diseases such as diabetes. More Americans became health-conscious during this time and reduced their consumption of confectionery products, hampering potential revenue growth. This presented a challenge to producers as they decided how to appeal to the growing number of health-conscious consumers.

Technological

In order to appeal to health-conscious consumers, producers started developing and marketing sugar-free and organic candies. Product innovation is expected to continue as consumers demand more sugar-free and low-calorie options. For example, sugar-free gums have become a mainstay on the shelves over the last 10 years. As of 2020, sugar-free gum accounted for 85% of the chewing gum market sales and almost 20% of revenue. For example, Wrigley a subsidiary of Mars, introduced *Orbit White* sugar-free chewing gum in 2016. Many sugar-free chewing gums have been awarded the American Dental Association's Seal of Acceptance because a study showed that chewing sugar-free gum for 20 minutes after eating stimulated saliva flow, reduced plaque acids and strengthening teeth. *Extra* is at the top of the market with approximately 528 million in sales in 2020.

Organics and natural products have also grown dramatically as ingredients such as high fructose corn syrup, preservatives, artificial colors have become a major concern with consumers. Sales of USDA certified organic products has increased in recent years. Gary Ricco, CEO of Mount Franklin Foods stated “there is a greater awareness and understanding of these

certifications among consumers …. They are looking for products with these certifications, even in their snacks and treats."

In addition to sugar-free gum, companies introduced new candies and flavors. For example, the Jelly Belly Candy Company created a beer flavored jellybean in 2019. The company also experienced a boost in revenue during these years. Companies have also moved towards more adult chewy candy, which includes granola. The chewy candy segment generates approximately 32% of the revenue for the candy industry in 2020. Many companies consistently introduce new candies and flavors to keep brand-loyalty consumers happy as well as attempt to attract new consumers. By introducing new candies and flavors, major players are able to grow their market share and make the industry more concentrated.

Act Three: Suggested pre-work questions (Act Three: The Drought)

By the end of 2020, Cullowhee is in financial trouble. The firm is highly leveraged due to the buyout of family members and the shift from fundraising market to other channels has not been successful. When Cullowhee emerges from Chapter 11, it is looking for an investor.

1. Based on the financial data in Table 2, what would be an appropriate valuation of the firm? How do you value a firm in financial distress, highly leveraged, with negative earnings?
2. Based on this information, would you invest in Cullowhee Confectionary Company? Support your answer.

Answers

1. Based on the financial data in Table 2, what would be an appropriate valuation of the firm? How do you value a firm in financial distress, highly leveraged, with negative earnings?

Traditional valuation models are based on the going concern assumption. In this case, the going concern assumption might be an issue. Hence, discounted cash-flows (DCF) valuation with the terminal value calculations will not be appropriate. Also, the use of relative valuation (i.e., comparing valuation to valuation of other i.e., healthy firms) would not be appropriate. Possible options for using the DCF include simulation, modified DCF valuation (using probability distributions), or use the DCF model but make an adjustment for the probability of distress and its impact. For a thorough review of valuing firms in financial distress see Damodaran (2012). The lower bound of the valuation would be the market value of the firm's net assets.

Other considerations may include attempts at the valuation of an established brand or brand equity. In addition, several new relationships and private branding opportunities have been developed but not financially realized. Considerations of Customer Lifetime Value may also be appropriate issues to consider in a valuation.

2. Based on this information, would you invest in Cullowhee Confectionary Company? Support your answer.

Answers will vary for this portion. Students should show clear support for their position if they would or would not invest in Cullowhee Confectionary Company. Inform students that in the end, the company was sold to outside investors. Today, the company is still operational;

however, the original family only holds a 15% ownership in the company is no longer active in the operations.

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SHOULD APPLE REPATRIATE ITS INTERNATIONAL EARNINGS?

Jeffrey A. Mankin, Lipscomb University
Jeffrey J. Jewell, Lipscomb University
Julio A Rivas, Lipscomb University

CASE DESCRIPTION

The primary subject matter of this case involves international taxation of U.S. multinational corporations. Secondary issues include tax policy, corporate responsibility, macroeconomics, and public policy. The case has a difficulty level of two or higher. Business students at the sophomore, junior, or senior level can successfully complete this case. The case is appropriate for undergraduate courses in macroeconomics, microeconomics, international economics, tax, corporate tax, or corporate finance. The case is designed to be taught in 1-2 class hours and is expected to require up to 2 hours of outside preparation by students.

CASE SYNOPSIS

The case focuses on the strategic decision made by Apple and many other U.S.-based multinational firms to hold large cash balances offshore. In April 2017, Apple held approximately $230 billion cash offshore (90% of its $256 billion cash balance). Many other large, U.S.-based multinational firms also held tens of billions of dollars offshore, with some estimates putting the total cash held internationally by U.S. firms at approximately $2.5 trillion. The case explores the potential reasons for this strategic decision, focusing on the worldwide tax system used by the U.S., wherein corporations are taxed on income wherever it occurs in the world. This tax, however, is not triggered until U.S. firms bring foreign earnings back home, thus creating a perverse incentive not to repatriate foreign earnings.

The case presents the idea that Apple (and other firms pursuing similar strategies) are "unpatriotic" for taking advantage of the legal tax strategy of avoiding U.S. income taxes on foreign earnings by leaving those earnings overseas. The case also presents the idea that Apple is making prudent business decisions, consistent with its fiduciary responsibility to its shareholders, by delaying repatriation until tax rates are more favorable. Students are left to assess the arguments and form a conclusion.

INSTRUCTORS' NOTE

LEARNING OUTCOMES

The information contained in the case came solely from secondary public sources. Nothing in the case has been disguised. In completing this assignment, students should be able to:

1. Describe and evaluate U.S. corporations' legal and ethical tax requirements.
2. Describe and evaluate the fiduciary relationship between a corporation and its shareholders.
3. Evaluate and assess the pros and cons of repatriating earnings, given the 2017 U.S. tax environment.
4. Evaluate and assess how tax policy affects economic activity and growth within a tax jurisdiction.
5. Describe and evaluate the concepts of tax avoidance and tax evasion.

DISCUSSION QUESTIONS

1. Does Apple have a moral, legal, or patriotic duty to repatriate its earnings given the 2017 tax environment in the U.S.? (LO1)
2. How does Apple's decision to repatriate its foreign earnings relate to its fiduciary responsibility to its shareholders? (LO2)
3. Does holding cash overseas mean that cash loses its "usefulness" for Apple? To what extent does holding cash overseas rather than domestically hamper Apple's business operations or strategy? What options does Apple have? (LO3)
4. Evaluate and assess the effect of tax policies (worldwide vs. territorial) and tax rates have on economic activity and economic growth? (LO4)
5. Describe and evaluate the differences between tax avoidance and tax evasion. What are the ethical and legal issues? (LO5)

ANSWERS TO DISCUSSION QUESTIONS

1. Does Apple have a moral, legal, or patriotic duty to repatriate its earnings given the 2017 tax environment in the U.S.? (LO1)

Apple clearly does not have a legal obligation to repatriate its earnings. The tax law in this regard is very clear, and Apple is in full compliance with the tax law. This is not in dispute. The better question is why the U.S. tax code creates an incentive for firms not to repatriate their foreign earnings. This will be addressed in a later question.

It is also well established in U.S. case law that firms have no duty, patriotic or otherwise, to pay more than the legally required minimum tax bill. Judge Learned Hand had two well-known quotes that relate to legal and moral tax obligations:

> Any one may so arrange his affairs that his taxes shall be as low as possible; he is not bound to choose that pattern which will best pay the Treasury; there is not even a patriotic duty to increase one's taxes. ("Gregory v. Helvering" 1934)
>
> *Over and over again courts have said that there is nothing sinister in so arranging one's affairs as to keep taxes as low as possible. Everybody does so, rich or poor; and all do right, for nobody owes any public duty to pay more than the law demands: taxes are enforced exactions, not voluntary contributions. To demand more in the name of morals is mere cant. ("Commissioner v. Newman," 1947)*

The question of whether Apple has a moral obligation to repatriate its earnings will probably create some debate among students. Our position is that this is not a moral question. It is the duty of Congress to write the tax code, which can reflect whatever morality that Congress and its constituents deem appropriate. It is the duty of corporations to then comply with the relevant tax code.

2. How does Apple's decision to repatriate its foreign earnings relate to its fiduciary responsibility to its shareholders? (LO2)

Public corporations have a legal obligation to act as fiduciaries for their shareholders. One of the primary elements of this fiduciary responsibility is the "duty of care", which requires the firm and its directors to exercise good business judgment when making decisions. The standard of care requires that the directors of the firm exercise the same degree of prudence and care that a reasonably prudent person would in the same situation. Thus, if a reasonable person would not pay an additional voluntary tax of 40% to move money from one country to another, then the firm also should not pay.

It is important to note that this standard of care is not just a business theory. The fiduciary responsibility to shareholders is the law in all 50 states, though some states do allow the responsibility to shareholders to be tempered by responsibilities to other stakeholders as well. If shareholders have a good reason to believe that a firm is not acting in the best interest of its shareholders, then they may file a lawsuit against the firm seeking financial damages.

3. Does holding cash overseas mean that cash loses its "usefulness" for Apple? To what extent does holding cash overseas rather than domestically hamper Apple's business operations or strategy? What options does Apple have? (LO3)

Cash held overseas can be used overseas with no penalties or additional taxes. So, Apple could use its overseas cash to pay foreign employees, repay debt borrowed from foreign lenders, build foreign factories, acquire foreign firms, etc. However, foreign cash is not as useful in some ways as domestic cash since it cannot be used to repurchase shares, pay dividends to shareholders, pay domestic employees, or invest in domestic operations.

So, failing to repatriate the earnings may hamper domestic operations in some ways, but for large well-funded firms those inconveniences are probably minor and easily overcome. For

example, if Apple wanted to fund a major U.S. operation and did not have enough domestic cash, it could borrow domestically at very low rates using the foreign cash as collateral. Since the interest rate on this borrowing would be far below the 40% tax rate on repatriating, borrowing would probably be a good business decision in this situation.

Firms choosing to delay repatriation have essentially made the decision that giving up some of the "usefulness" of cash is a fair price to pay to avoid the incremental taxation.

4. Evaluate and assess the effect of tax policies (worldwide vs. territorial) and tax rates have on economic activity and economic growth? (LO4)

The most important effect of the worldwide tax system is that it encourages a domestic company to hold cash outside the country, called the "lockout effect." Thus, the United States is discouraging the repatriation of assets because of the 40% income tax rate. The U.S. has one of the highest tax rates in the world, but many corporations choose not to pay U.S. tax on foreign income. So, this reduces the revenues of the U.S. and it reduces the assets that are moved to the U.S. If a country uses the territorial system, there is no lockout effect and the assets may freely flow back to the home country.

Taxpayers, both individual and corporate, have an incentive to legally reduce their tax burden. So, money and investments flow to countries with lower tax rates and smaller tax bases. Ireland is more competitive because of a low tax rate and a smaller tax base (the territorial system) than the U.S. with its higher tax rate and larger tax base (worldwide system). Ireland has effectively lowered the cost of doing business in Ireland versus other countries, especially compared to the U.S.

5. Describe and evaluate the differences between tax avoidance and tax evasion. What are the ethical and legal issues? (LO5)

Tax evasion is the illegal underpayment of taxes. It is illegal and unethical. It can carry stiff penalties and imprisonment.

Tax avoidance is the use of legal measures to reduce tax. It is legal and ethical to avoid paying tax or to delay tax by legal means. There is no requirement to pay more than legally obligated. Tax avoidance is following the available tax rules and laws. Critics sometimes call these legal rules "loopholes" but they are available to all taxpayers.

One of the basic tenets of taxation is that everyone wants to pay less on their own taxes but they want everyone else to pay more. So, a legal deduction for one company is a loophole for its critics. A company can arrange its tax affairs legally to reduce its tax liability and that is within the rules. It is both ethical and legal and is acceptable.

EPILOGUE

In December 2017, the Tax Cuts and Jobs Act was passed by Congress and signed by the president. This law included a tax holiday that reduced the repatriation tax to 15.5% on cash and cash equivalents. The bill also reduced corporate tax rate from a maximum of 35% to a flat 21%

beginning in 2018. The new law also converted the U.S. income tax to a territorial system from the worldwide system (Ren, Sankara & Trimble, 2020).

Apple announced plans to pay a one-time $38 billion tax on its overseas cash. This would be the single largest tax payment in history (Mickle, 2018).

Apple reported total cash and marketable securities of $195 billion in the first quarter of 2021 (Apple, 2021).

ADDITIONAL READING

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