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INSTRUCTORS' NOTES

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Inge Nickerson, Barry University

Charles Rarick, Purdue University, Calumet

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LETTER FROM THE EDITORS

Welcome to the *Journal of the International Academy for Case Studies*, the official journal of the International Academy for Case Studies. The IACS is an affiliate of the Allied Academies, Inc. Both organizations are non profit associations of scholars whose purpose is to encourage and support the advancement and exchange of knowledge, understanding and teaching throughout the world. The purpose of the *JACS* is to encourage the development and use of cases and the case method of teaching throughout higher education. Its editorial mission is to publish cases in a wide variety of disciplines which are of educational, pedagogic, and practical value to educators.

The Instructors' Notes contained in this volume have been double blind refereed, and each was required to have a complete case companion before consideration. The acceptance rate for manuscripts in this issue, 25%, conforms to our editorial policies. The Cases for each Note in this volume will be published in a separate issue of the *JACS*.

If any reader is interested in obtaining a case, an instructor's note, permission to publish, or any other information about a case, the reader must correspond directly with the Executive Director of the Allied Academies: info@alliedacademies.org.

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Inge Nickerson, Barry University

Charles Rarick, Purdue University, Calumet

AN ELEMENT OF CONCERN IN NORTH AFRICA: THE CASE OF MOROCCO'S PHOSPHATE INDUSTRY

**Charles A. Rarick, Purdue University Calumet
Gideon Falk, Purdue University Calumet
Casimir C. Barczyk, Purdue University Calumet**

CASE DESCRIPTION

This case explores the geopolitical and human rights issues involved in the phosphate industry in Morocco. With an increasing global demand for phosphate, and the growing concentration of the industry in favor of Morocco, concerns over who controls the disputed territory of Western Sahara and how much power Morocco has over global sourcing have arisen. A secondary issue examined in this case is the ethical question as to whether a country has the right to maximize its prosperity at the expense of other nations. The case is written at a difficulty level of three, appropriate for junior level courses. It is designed to be taught in one class hour and is expected to require 2-3 hours of outside preparation by students.

CASE SYNOPSIS

Morocco is frequently envisioned as a mysterious and colorful place situated south of Spain on the African continent. It is a land rich in colors, cuisine, and culture – viewed by many Western tourists as a destination glimmering with sun and sand. The case examines another side of Morocco, which is capitalizing on the global demand for phosphate, an increasingly valuable natural resource. Approximately 85% of the world's phosphate reserves are found around Morocco, with much of it in Western Sahara, an occupied territory directly to its south. Morocco claims Western Sahara as its own, exerting dominance and control over this small impoverished no-mans-land. This case examines the economic, political, and ethical dimensions of the world's demand for phosphate.

INSTRUCTORS' NOTES

Recommendations for Teaching Approach

This short case can be used to show the importance of geopolitical conditions as they relate to international trade. The case also allows for a discussion of whether a nation has the right to pursue its own self development in a way that is not globally responsible and which may

conflict with a broader world view. In addition, it provides a basis for discussing why certain governments support human rights abuses for geopolitical and economic reasons.

Teaching Objectives and Target Audience

This case seeks to achieve a number of objectives. It allows students to explore the relationship between global politics and international business. International business is subject to political pressures which bring a variety of potential problems for firms doing business across borders. Interruption of supplies, consumer boycotts, economic sanctions, and other potential externalities may arise. Making students aware of the close relationship between world politics and international business/trade is a useful exercise. In addition, the case encourages students to think critically about economic development in terms of it being a zero or non-zero sum game. The case is positioned so that students can view the situation with Morocco as “zero sum” in the sense that rising phosphate prices help Morocco and hurt other developing countries. An objective of the case is to explore this proposition. Lastly, the case seeks to make students aware of a significant problem that receives little attention, yet may be the “sleeper issue” in coming decades. The depletion of phosphates in nearly all of the world’s reserves, except Morocco, is a very serious global concern. Not only does the strongly favorable shift in Morocco’s balance of power present greater political risk for international business, more importantly, it challenges global food production. The case is intended to be used in an undergraduate class setting. It is short and focused, and therefore more appropriate for undergraduate students. The case can be useful in classes in international business, international economics, international relations, economic development, and business ethics or social responsibility.

Teaching Approach and Strategy

The Element of Concern in North Africa case can be used in a variety of ways. It is appropriate for general class discussion, group project assignments, or as homework. The case is thought to be most useful when students work together to develop their analyses in small groups and then present their findings in an open forum. The case presents questions that are best explored through interaction with students having differing perspectives on geopolitical and ethical issues. A discussion of how other businesses in the global supply chain for phosphate should respond to Morocco’s actions, for example, can lead to a rich exchange of ideas.

Since world political events are rapidly evolving in the Middle East and other areas, it might be instructive to have students explore how the phosphate industry and situation in Morocco are changing since the case was written. An investigation of these changes could provide an opportunity for additional learning.

DISCUSSION QUESTIONS

1. Does a country, rich or poor, have the right to maximize its prosperity at the expense of other nations? Explain your answer.
2. What is the relationship between politics and international trade?
3. Human rights groups in some countries have proposed a ban on the import of Moroccan phosphate because of the political and human rights situation in Western Sahara. Do you feel your country should do business with a country that is in conflict with the rulings of both the United Nations and the International Court of Justice? Explain.
4. If you were an executive in either PotashCorp or the American-Australian-owned BHP Billiton, would you continue purchasing Moroccan/Western Saharan phosphates, which seems to ignore the plight of the Sahrawi people? What alternatives do you have?

ANALYSIS

The answers to the discussion questions are the recommendations of the authors. Instructors may eliminate or add to the discussion question list as they deem appropriate for their classes. Suggested answers to the discussion questions are found below. It should be remembered, however, that there are no truly right or wrong answers to these questions. Some answers are better than others, but the case material does not lend itself well to simplistic right or wrong responses.

- 1. Does a country, rich or poor, have the right to maximize its prosperity at the expense of other nations? Explain your answer.**

This is a difficult question to answer. We live in a world with scarce resources and every country seeks to increase its prosperity and the quality of life of its population by using the resources it has at its disposal. Natural resources possess a different perceived value in that some may see them as belonging to the world community. Unlike natural resources, such is not the case with human resources. For example, as the Japanese used their human resources to increase their prosperity after World War II, they were not perceived as exploiting others, even though they were able to capture major market share in certain consumer goods at the expense of other nations. In the case of Morocco, increasing phosphate prices and potentially decreasing global food production by raising the price of fertilizers may be seen as exploitative. Does a country have the right to maximize its prosperity at the expense of other nations? In general, the answer could be stated in the affirmative. It could be argued that leaders of countries not only have the right, but the duty as well, to increase the standard of living of their people with

the resources the country possesses. In cases where these gains come at the expense of human life the issue becomes more complex. If phosphate does become a very expensive commodity and causes a lowering of food output, at a time when the world needs greater output, ethical concerns can be raised. The situation in the case can and should be viewed as a non-zero sum game. As the case points out, the total world supply of phosphate is not a problem. The global supply is sufficient for hundreds of years. The problem is the concentration in just one country and a territory it annexed by force. As the global demand for phosphate increases, Morocco could maximize its prosperity by increasing output in order to stabilize prices at levels that would not cause major global difficulties. Morocco could reap long-term gains by employing this strategy and using the continuing revenue to diversify its economy. This could have the desired effect of improving the quality of life for the people of Western Sahara.

2. What is the relationship between politics and international trade?

The simple answer to this question is that global politics greatly influences international trade. International trade is strongly affected by public policy, which is manifested in a number of ways. Typically, issues such as trade barriers are mentioned including tariff and non-tariff barriers. Less commonly mentioned issues include economic sanctions, free trade agreements, and even military intervention. It is important to note that all international business activity can be influenced by international political activity. In cases like the Moroccan mining of phosphates in Western Sahara, politics plays a large part in business transactions, from a political decision to capture a near-monopoly position, to the public image and international political pressure to find a solution to a territorial dispute and its related human rights issues.

3. Human rights groups in some countries have proposed a ban on the import of Moroccan phosphate because of the situation with Western Sahara. Do you feel your country should do business with a country that is in conflict with rulings of both the United Nations and the International Court of Justice? Explain.

This question lends itself to a discussion that allows for differing opinions. Answers to the question allow students to advance different values. While many may propose that it is not right to do business with a country that violates supranational mandates, others may argue a more utilitarian viewpoint. There is no “right” or “wrong” answer to this question, but an answer should be well reasoned. Taking the position of human rights groups, one could argue that buying phosphate from Morocco encourages and supports the activities of a regime that is not treating fairly the Sahrawi people, who are powerless and disadvantaged. The activity does not advance the welfare of the least

advantaged members of society (John Rawls – Theory of Justice) and is therefore unethical. On the other hand, taking the side of those who would buy from Morocco, it could be argued that the consequences of a ban on Moroccan phosphate are enormous and not practical and have more negative consequences (Consequentialism), the most obvious being a reduction in global food production. Practically speaking, given Morocco's increasing market power in phosphate, it may be nearly impossible not to engage in business with that country. A "middle way" approach of engagement and pressure may be the most practical solution. It seems unlikely that Morocco will allow for the complete independence of Western Sahara at the moment. However, through greater power-sharing brought about by increasing pressure from the international community, movements in the right direction may be possible.

4. If you were an executive in either PotashCorp or the American-Australian-owned BHP Billiton, would you continue purchasing Moroccan/Western Sahara phosphates, which seems to ignore the plight of the Sahrawi people? What alternatives do you have?

As an executive at PotashCorp, it would be very difficult to discontinue buying phosphates from Morocco and Western Sahara. The company has buyers for its finished product and while the price of phosphate mined in Morocco or Western Sahara may be increasing because of the strategic maneuvers of the OCP, it is likely less expensive than from countries having less reserves. As such, it could be very costly to discontinue purchasing phosphate from Morocco, because the price may be higher if it were purchased from other nations. Notwithstanding this issue, I would search for suppliers in other countries that may be willing to sell their phosphate at a price competitive in the world market. I would also negotiate with Morocco to increase phosphate mining production so as to stabilize world prices. This would enable the OCP to achieve their desired revenues and maintain world phosphate prices at a reasonable level.

While it may be socially irresponsible to purchase phosphates from a nation that illegally occupies Western Sahara, this must be balanced against the need to satisfy the demand for phosphates by industries that produce fertilizers, food, and pharmaceuticals. Those industries have a clear impact on world hunger, health, and agro-economics.

As an executive at either PotashCorp or BHP Billiton, a company having an American connection, I would ask the Canadian and U.S. State Departments to increase their pressure on Morocco to abide by U.N. Resolutions. The Moroccan government should also be urged to improve the living conditions of the Sahrawi people. As a long term solution, I would search for additional sources of phosphates in the U.S., Canada, and other parts of the world. I would also foster research into substitute products for phosphate.

DOG EAT DOG WORLD: CHALLENGES OF AN ENTREPRENEURIAL START-UP

Daniel V. Holland, Utah State University
David Herrmann, Utah State University

CASE DESCRIPTION

The primary subject matter of this case concerns the stresses and challenges of an entrepreneurial start-up. Specifically, the case shows how start-ups often do not go as planned and how entrepreneurs must be resourceful in overcoming the challenges they face. For example, it gives students an opportunity to discuss potential bootstrapping techniques to scrape together much needed resources when financing falls through. Secondary issues include basic feasibility analysis and entrepreneurial ethics. The case is appropriate for junior and senior level business courses. The case is designed to be taught in one class hour and will require approximately two to three hours of outside preparation by students.

CASE SYNOPSIS

Fred Munk and Dwayne Clarke had developed significant experience and social capital in the Pet Supply industry in their region. When a large national chain purchased the company for which they worked, they deemphasized the customer service. The two nascent entrepreneurs were frustrated with the new direction of the company and recognized an opportunity to create a new competitive venture. Fred and Dwayne continued to work at the company as they tried to gather data about the viability of starting a new venture. They felt that there was potential but they were unsure about giving up the security of their employment, until their hand was forced.

With a new sense of urgency, Dwayne and Fred sought out potential financial partners, suppliers, and customers. They created a reasonably conservative plan that projected profitability in the first year. They worked hard to line up the necessary financing to execute the plan. They received pre-approval for a loan and started executing their plan. However, the promised loan was significantly reduced on signing day and Fred and Dwayne were left underfunded and overly stressed.

INSTRUCTORS' NOTES

Earning Purposes

The case enables instructors to provide the following primary learning opportunities.

- Generate a discussion on bootstrapping strategies that may be employed when a venture is underfunded.
- Expose students to the potential stresses and challenges of starting a new business.
- Provide an opportunity to conduct a basic feasibility analysis.
- Present potential ethical dilemmas in considering starting a competitive new venture while working at an existing firm.

Teaching Outline and Analysis

The case provides a rich learning opportunity for students across a number of different issues. First, the case introduces basic data about a new start-up that would allow students to perform a simple feasibility analysis. Students can look for significant red flags and determine whether the numbers look reasonable based on the data available. Second, the case presents a scenario where two entrepreneurs work at an existing firm and are considering starting a competitive venture. This scenario is not uncommon and enables the instructor to lead a lively discussion about what may be ethical and what may be unethical as they research their options. Finally, we believe that the most impactful learning opportunity from this case is the discussion on resourcefulness when faced with a crisis. Most entrepreneurs lack the needed resources when they start a new venture and it is important to learn the basic skills of how to find vital resources from a broad array of stakeholders. When they are faced with financial challenges, entrepreneurs must explore all options for ways to scrape together the needed resources. This case presents a pair of entrepreneurs who are reasonably comfortable that they have lined up the necessary financing to execute their plan. Suddenly the bank changes the amount of the loan and the entrepreneurs are in crisis mode. They have to become very resourceful in order to launch the business. This case helps students feel the stress that may accompany such a scenario. Students will have the opportunity to explore possible ways for the entrepreneurs to creatively finance a start-up beyond simply taking out a loan.

Below, we include potential discussion questions that could be asked and model answers that may be expected. Of course, the learning opportunities may vary depending on the readiness of the students. For example, to fully utilize learning opportunity 1, the students should have some basic accounting skills regarding income statements, cash flow, etc.

Learning Opportunity 1

1. **Given the five keys to successfully starting a new venture (access to market, access to suppliers, access to capital, industry experience, and accurate business plans), did Dwayne and Fred initially have a feasible business plan? Were any assumptions they made unreasonable? Any concerns about cash flow? Build a simple income statement for Dwayne and Fred's first year using the numbers in the case. Based on the first year's projected profit, is this business worth it? Why or why not? What additional information do you need?**
 - **Access to the Market:** One could assume that Dwayne, after 9 years as a salesman, and Fred, after 6 years with the business, including time as the General Manager, would know most of the potential accounts in the territory quite well. The case indicates that Dwayne previously accounted for one third (2 million of 6 million) of the total market's sales. And it appears that Fred had some sort of relationship with the other two thirds of the customers. It is reasonable to assume that they would at least have access to many of the key players in the market. There is not enough information to determine the number of accounts, the sales concentration amongst them, or the strength of the relationship between the most important customers and GCPS.
 - **Access to Suppliers:** Fred worked a number of years as a buyer before rising to the GM position. It appears that he has made an effort to form good relations with the supplier's agents. The fact that the most important vendor was willing to sell to the new company supports the assumption that they had access to suppliers. Nothing was mentioned about pricing or discounts. We do know there was "a backlash of support" due to the retaliatory practices of GCPS. It is unclear what type of support resulted. It would be helpful to get a clearer picture of the number of suppliers needed to be successful. If it is a fairly consolidated industry, they are probably in good shape with the number one supplier but if it is very fragmented, they may still be at a significant disadvantage.
 - **Access to Capital:** The entrepreneurs did not appear to have a significant amount of their own money to put into the business. They had some savings and equity in their homes but it is unclear how much. It is apparent that they needed external funding through a partner, angel investor, or the bank. They were able to find a partner who could help secure a loan. There is no mention of the overall value of the collateral offered relative to the \$300,000 loan request. On the one hand, it is impressive that a new business of this nature would even be considered by a bank

for a loan. They have no assets in the business and they have no proven income stream. Perhaps their previous experience in the industry was impressive enough for the bank to overlook the newness of the business. Yet, there may be some reason the Zinc bank got cold feet at the end. It does seem unusual that a bank would loan 100% of the needed capital. Did any of the founders have “skin in the game” other than their homes? Were there any other potential sources of money?

- **Experience:** This factor is an obvious strong point for the pair of entrepreneurs. They have a combined 15 years of experience in the exact market that they are targeting. Their experience is complementary, covering purchasing, selling, and overall management. It would be safe to assume that they have a solid knowledge about what works and what does not work in the industry. Furthermore, their experience has enabled them to form relationships with many of the key players in the industry.
- **Business Plan/Model:** The case provides somewhat limited information about the data used to develop the plan. We do not know much about the actual business model or how they will create a distinctive competitive advantage. The only significant competitor is presented in a negative light, having reduced their focus on customer service. It appears that Qualco will attempt to duplicate the key offerings of the competitor but focus on relationships and customer service. We do know that the entrepreneurs plan to capture one sixth of the total market size of \$6 million. Based on the experience and relationships of Dwayne and Fred and the fact that there is only one major competitor, it seems like a feasible projection. There is no mention of other potential competitive threats, the operations plan, or critical risk factors. Based on the data offered, the finances, particularly cash flows, seem to be the most significant red flag.
- **Cash Flow:** With the expectation that \$175,000 will be used for inventory and \$87,500 will be used for start-up expenses, if they received the whole \$300,000, only \$37,500 would be available for operating expenses (OE) and accounts receivable (AR). We do not know how quickly they expect to ramp up sales, the AR terms that would be offered, or the expected AR balances. But with monthly OE at \$22,000, it seems very likely that the business could quickly run out of cash if AR is not managed very closely. A cash flow projection would be very helpful to see expected inflows and outflows.
- **Income Statement:** A basic pro forma income statement may look like the following

Sales	1,000,000
COGs	<u>700,000</u>
Gross Profit	300,000
OE 12x22	<u>264,000</u>
Net Income	36,000

On the surface we can see that the projection is for \$36,000 in net income based on a \$300,000 investment, resulting in a 12% ROI. We would need to know something of the capitalization rates of the time to determine if this is good or not. On one hand it seems a little slight; on the other hand if the projections are accurate, a first year return of anything is typically not bad for a new start-up. Unfortunately, we have no projections beyond the first year. Students should realize that there is a tendency of most entrepreneurs to overestimate their projections even though they feel that they are conservative. Astute students will dig a little deeper into the OE and find that they have included principle and interest on the loan. We would have to make some assumptions as to term and interest rates but a conservative estimate would indicate that the mortgage payments are at least \$45,000/annum. If we remove that number from the OE we find that the ROI jumps to 27%. That is much more attractive if there is confidence that Dwayne and Fred can handle the market risks.

- **Additional Information:** Much more data would be helpful in truly assessing the feasibility of the venture. Students might include cash flow, itemization of expenses, monthly sales figures, human capital needs, verification of the margins and inventory turns, data to support why they may be able to increase turns, projected growth, a projection of sales for years 2 and 3 with justification, and so forth.

Learning Opportunity 2

- 2. What were the ethical issues facing Dwayne and Fred in contemplating starting their business? What suggestions would you make to properly research the opportunity while maintaining employment?**

Students should be able to develop a thoughtful answer that includes a number of potential ethical dilemmas. It is difficult to draw a strict line of when an employee should leave a company as they are considering starting a competitive venture. Yet, there are a number of interesting points that should be considered.

- Non-compete agreements should be honoured but what are the guidelines if no such contract exists?
- There is a danger in continuing to sell to customers when your motivation may be to make the current company look bad in the eyes of the customer while maintaining a positive personal relationship. Employees should be fair to the current employer and put them in the best light possible even if they plan to compete with them in the future.
- It is important for employees to be very careful not to use any resources owned by the current company to help prepare for the future business. For example, company cell phones or computers should not be used for research. Company time should not be used for preparing the business plan. The employee should not set up a travel or a particular work schedule that provides little value to the current employer but would be very beneficial in researching the potential new venture.
- What is the appropriate way to do research while working for the current company? Is it possible to ethically gather data, whether through hard research or conversation, while working for the current company? If a person is still undecided about starting a new venture, asking hard questions may lead to information that is just as useful to the current company as a potential new venture. Employees should consider sharing any unique data points with the current employer, particularly if it is discovered while working at the company. The entrepreneurs may want to consider hiring an outsider to do research, such as interviewing important customers and suppliers, to minimize conflicts of interest.
- What is rightfully owned by the employee and what is rightfully owned by the company? Knowledge and experience are owned by the employee but business relationships can get a little sticky. What are the ethical implications of taking the “rolodex” with you to the new venture? In particular, inside knowledge of the processes and plans of the company, including future strategies should be handled with care.

Learning Opportunity 3

- 3. What would you recommend that Dwayne and Fred do regarding the financial crisis at the end of the case? What are their options? List at least five specific ideas that they may be able to implement to help them resourcefully finance the business?**

There are a number of options that the entrepreneurs may consider:

- Quit before it gets any worse, sell their lease and trucks, and look for a job.

- Take the money that they do have and go to Las Vegas to see if they can double it.
- Use credit cards. They can play the game of applying for new 0% interest credit cards and trying to pay them off before the interest rate changes.
- Leave Zinc and look for another bank. There are a couple of challenges with trying to find another bank who might give them sufficient loan. First, time is of the essence. They have already incurred significant expenses and they don't have the time to wade through the application process. Second, there are no guarantees that another bank would be willing to give them the amount that they desired. It is likely that they had previously shopped around so they should have a good feel for the probability of success with this option.
- Take Zinc's money and look for additional financing. It is a risk to take on a loan when one knows that the business is underfunded. They could pursue additional moneys from friends, family or other investors. They may have a more attractive pitch if they are able to tout that they have significant financing from a bank. However, this option may take significant time and may dilute their equity in the business.
- Vendor financing. Many start-ups use vendors to help finance a new venture. They can seek very favourable terms on any purchases that they make and then work like crazy to sell it before they have to pay for it. It can be a challenge because vendors are often leery about extending terms to a new venture until they have proven themselves. Even asking for vendor financing can be precarious because seeking special consideration of extended terms sends a signal that the business might be underfunded and is therefore a risk. Some vendors may shy away from working with a new company in such a situation. New ventures can also "force" vendors to help by accepting the terms offered but delaying payments. That approach is particularly risky for a new business as it alienates key suppliers and destroys trust.
- Customer financing. New ventures can seek to have the customers help to finance the business by seeking early payments. This can often be accomplished by offering early pay incentives or preselling products. Incentives are typically needed to motivate early payment. Thus, such tactics result in lower margins but they can improve the cash flow.
- Increase inventory turns. The entrepreneurs can aggressively seek to increase the inventory turns. If they could double the turns, they would need half the inventory to achieve the same sales goal. Increased inventory turns may be accomplished by focusing on supplying the right products rather than all products. It can also be

assisted by offering retailers incentives to promote the products in the store through premium shelf space, point of sale displays, discounts, rebates, etc.

- Increase margins. Entrepreneurs may be resourceful in seeking lower costs from suppliers in order to increase margins. This may be accomplished by more effective purchasing. They should be very aware of discounts offered by vendors. They may have the opportunity to create bundled deals that lower overall cost.
- Look for other revenue streams. Resourceful entrepreneurs often look for opportunities to bring in additional sources of revenue. They may be able to sublease warehouse or office space. Perhaps, they could offer to provide delivery for another business to maximize the use of the trucks. They may see a market need and develop a product to fill the need. It is important that they are vigilant in looking for potential new revenue streams.
- Cut expenses. It is often necessary for new businesses to look for ways to minimize expenses. They might purchase a used forklift instead of a new one. They might build their own shelves in the warehouse out of materials that they scraped together. Oftentimes, they take a significant pay cut when things are tight. Entrepreneurs typically look for ways to drastically reduce expenses until the incoming cash flow has ramped up.

POSTSCRIPT

The case was prepared based on actual experiences of one of the authors. The names of the companies and the primary characters in the case have been changed to protect the participants. The entrepreneurs decided to take out the loan for \$175,000 and move forward. They employed many of the methods discussed in the bootstrapping options discussed above, including cutting expenses, vendor financing, seeking other loans, increasing inventory turns, and so forth. The company was very successful and became the dominant pet supply distributor in the region.

PAYMORE OR PAYLATER: INVENTORY VALUATION AND MATERIALITY

**Marc I. Lebow, Hampton University
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Janet Adeyiga, Hampton University**

CASE DESCRIPTION

The primary subject matter of this case concerns the accounting treatment of vendor rebates. Secondary issues examined include materiality, auditor's independence and audit risk. Addressing the primary and secondary issues require researching the accounting and/or auditing literature.

The case has a difficulty level of three for the accounting questions, appropriate for junior level courses (students in Intermediate Financial Accounting I or II) and a difficulty level of four for the auditing questions, appropriate for senior level courses (seniors in an Auditing class). The case is designed to be discussed in two class hours (one for the accounting questions and one for the auditing questions) and is expected to require approximately four hours of outside preparation by students for each part. The case may be assigned as a group assignment or as an individual project. It may be used as a basis for class discussion, or completed as a take-home assignment.

CASE SYNOPSIS

Among accounting scandals, the problem involving Ahold NV, a grocery store chain, was unique. It involved the question of where vendor rebates to a retailer should be recorded. Vendor rebates are cash payments from the wholesaler to the retailer in compensation for large purchases of a product. Many retailers, including Ahold, treated the rebates as a reduction of Cost of Goods Sold. The alternative is to record the rebates as a reduction of inventory. This case takes that issue and puts it into a form most Intermediate Financial Accounting, Advanced Financial Accounting, and Auditing students can understand. While working the case, the students will have to address the accounting treatment of the rebates by researching the accounting literature, discuss the materiality of the amounts, and explain their recommended treatment to an audit partner. Auditing students will also have to address the independence of their partner and the auditing firm and the issue of audit risk.

INSTRUCTORS' NOTES

Ahold NV's treatment of vendor rebates (Henry, 2003) provided the initial motivation for this case. Although some liberties were taken in the case to emphasize key points and to make it more accessible to undergraduate students, this case is designed to mirror the real world situation mentioned above.

CASE OVERVIEW

Much of the case involves researching and finding the correct accounting standard to address the issue. Other aspects of the case, especially the auditing issues, are more ambiguous and require the student to apply accounting concepts to a situation not specifically addressed by the rules. To complete the case, students will have to use both research and critical thinking skills.

CASE OBJECTIVES

The case is designed to address five main objectives:

1. To improve the student's ability to perform research using FASB's Accounting Standards Codification to determine the correct treatment for an accounting issue.
2. To expose students to real-world ethical dilemmas. This case helps demonstrate that the correct resolution of accounting issues might help or hinder the client's ability to achieve a desired goal. It allows the instructor to stress that these ethical issues need to be addressed in a manner that is in the best interests of the users of the financial statements.
3. To show students that some accounting and auditing concepts such as materiality and auditor independence are not always easy to determine and to apply in the real world.
4. To improve students' writing abilities, especially their ability to write a memo in a tactful and professional manner.
5. To help prepare students for both the CPA exam and the professional world. Both require researching the authoritative literature to determine the correct answer to an issue and communicating that information through a letter or memo.

RECOMMENDATIONS FOR TEACHING APPROACHES

The suggested requirements are designed to provide flexibility in assigning the case. Except for questions 1.b through 1.d, the other questions are independent, allowing the instructor to select all or part of the suggested questions. Similarly, although, we recommend a memo for the accounting requirements, another approach might be selected. The case may be assigned as a group project or as an individual project. It may be used as a basis for class discussion, or completed as a take-home assignment.

The first set of suggested requirements can be assigned in Intermediate Financial Accounting I (after or as part of the coverage of inventory). However, in that class, students might require more guidance due to some of the complexities of the case. Therefore, some instructors might prefer to use the case in Intermediate Accounting II, Advanced Accounting or Auditing. The suggested requirements for Auditing are designed to be assigned after audit opinions, audit risk and auditor ethics, including independence, have been covered.

1. Suggested requirements for Intermediate and/or Advanced Accounting:

Write a memo to Mr. Countem, addressing the following issues:

- a. Who are the users of last year's and this year's financial statements? What are the company's and auditors' responsibilities to the new users of the financial statements? How have the auditor's responsibilities changed with the new users?
- b. According to GAAP, how should the first \$100,000 rebate be handled?
- c. According to GAAP, how should the second \$50,000 rebate be handled? Has the rebate been earned as of December 31, 20X3?
- d. Are the amounts involved material? Show numbers and qualitative arguments to support your position.
- e. Should Paymore Grocery handle the rebates in the same manner as done previously because of consistency issues or handle them differently this year?

2. Suggested additional requirements for Auditing:

As you research the issues and prepare your memo as requested by Mr. Countem, you begin to have other questions. You decide to investigate them on your own. You want to be well informed to decide what your course of action should be. Answer the following questions (separately from the memo above):

- a. Is Mr. Countem independent with respect to Paymore Grocery Inc.? Is his independence compromised by his desire for the IPO to go well and by his past relationship with the founder of Paymore Grocery?
- b. Has Countem and Tickem, CPAs provided adequate supervision and an audit staff that has adequate competency for this audit?

- c. What is the effect on audit risk after discovering the way the company recorded the rebate?
- d. Were other rebates on other inventory purchases recorded in the same manner?

SUGGESTED DISCUSSION QUESTIONS

Suggested requirements for Intermediate and/or Advanced Accounting:

- 1. Who are the users of last year's and this year's financial statements? What are the company's and auditors' responsibilities to the new users of the financial statements? How has the auditor's responsibilities changed with the new users?**

In the past, the only outside users of the financial statements were the banks (p. 5). Now, the company is planning an Initial Public Offering. As a result, instead of just creditors (banks), now the users will also include investors, and the investment bank handling the IPO. Investors do not have an established relationship with Paymore and, as future owners of the entity, will assume greater financial risk if Paymore does not perform as they expect. This increases the audit risk and the responsibility of the auditors. As stated in Statement of Financial Accounting Concepts Number 1:

“The objectives stem primarily from the informational needs of the external users who lack the authority to prescribe the financial information they want from an enterprise and therefore must use the information that management communicates to them (Para No. 28).”

Regulatory responsibilities and oversight have also increased. The audited financial statements must now adhere to the regulations of and be filed with the Securities and Exchange Commission (SEC) in addition to the GAAS requirements. They will also be subject to the Public Company Accounting Oversight Board (PCAOB) regulations and to Sarbanes-Oxley rules with the SEC. This represents additional risk for the auditors. However, as stated in the case, the accounting firm has other publicly traded clients and is therefore familiar with SEC and Sarbanes-Oxley reporting requirements.

- 3. According to GAAP, how should the first \$100,000 rebate be handled?**

To answer this question, students will need to access FASB's Accounting Standards Codification available on FASB's website <http://asc.fasb.org/>. The discussion of accounting for cash consideration given to a reseller of a vendor's products is in paragraphs 605-50-25-10 through 25-12 and 605-50-45-12 through 45-15. The relevant standard for this question is FASB ACS 605-50-45-12 (*Customer's Characterization of Certain Consideration Received from a Vendor*).

605 Revenue Recognition

50 Customer Payments and Incentives

45 Other Presentation Matters General

12 Customer's Characterization of Certain Consideration Received from a Vendor

Although students might not initially think of browsing under the classification 'Revenue Recognition,' they can locate the relevant standard within FASB's Accounting Standards Codification in a number of ways, such as:

1. Browsing under Expenses -> Cost of Sales and Services -> Overall -> Recognition -> General -> Consideration Given to a Customer or Reseller [ACS705-10-25-10] will provide a link to 605-50-25-10 through 25-12 and 605-50-45-12 through 45-15.
2. Browsing under Assets -> Inventory -> Overall -> Subsequent Measurement -> General -> Customer or Reseller Accounting for Consideration Received from a Vendor [ACS 330-10-35-22] will provide a link to 605-50.
3. Using the 'Search' function and keying 'Cash Consideration.'
4. Browsing under 'Master Glossary' at 'cash consideration' will provide a link to several subsections of 605-50.

Based on the standard, the rebates should be treated as a reduction of the purchase price of the inventory and used to reduce the cost of sales only after the inventory qualifying for the rebate is recognized as sold under the FIFO Inventory Valuation System. Since Paymore Grocery has not yet sold the inventory (p. 4), the rebates should be recorded on the Balance Sheet as a reduction of the inventory and not (as currently recorded) on the Income Statement as a reduction of Cost of Goods Sold.

3 According to GAAP, how should the second \$50,000 rebate be handled? Has the rebate been earned as of December 31, 20X3?

The \$50,000 vendor discount will be earned when Paymore purchases another \$1,000,000 of inventory. The purchase, although likely, has not yet occurred as of December 31, 20X3. Therefore, until the additional purchase is made and the vendor discount earned, the \$50,000 rebate is not earned and should not be included in the 20X3 Financial Statements. The relevant standard for this question is FASB ACS 605-50-25-10 (*Customer's Accounting for Certain Consideration Received from a Vendor*). Some students used the Revenue Recognition and the Matching Principles as guidance for rejecting the recognition of the \$50,000 rebate in 20X3.

As a separate issue, the instructor might want to discuss (or have the students research) how the rebate would affect the vendor's (Fizzy Cola) financial statements. The vendor is offering Paymore a cash rebate redeemable only if a specified cumulative level of purchases is completed by a specific date. Therefore, the applicable standard for the vendor's recording of the rebate is FASB ACS 605-50-25 paragraphs 7-9 (*Vendor's Accounting for Consideration Given to a Customer - Contingent Sales Incentives*). ACS 605-50-25-7 states that: "The vendor shall recognize the rebate or refund obligation as a reduction of revenue based on a systematic and rational allocation of the cost of honoring rebates or refunds earned and claimed to each of the underlying revenue transactions that result in progress by the customer toward earning the rebate or refund."

If Fizzy Cola estimates that Paymore will purchase the additional \$1,000,000 of cola in time to qualify for the additional 2.5% rebate, it would record a reduction of revenues of \$150,000 ($\$2,000,000 \times 7.5\%$). It would also record a decrease in cash for the \$100,000 rebate paid to Paymore ($\$2,000,000 \times 5\%$) and an increase in liabilities (rebate obligation or volume discount liability) for the \$50,000 expected to be paid to Paymore in the future on the \$2,000,000 already sold.

4 Are the amounts involved material? Show numbers and qualitative arguments to support your position.

The numbers on the financial statement were specifically manipulated to make the answer to this question ambiguous. Mathematically, the numbers are very small: the \$150,000 total represents less than 1% (.175%) of sales and only 2.21% of corrected net income. They are meant to be deceptively small in the sense that relying on a quantitative benchmark (i.e., three percent) would lead to the wrong answer. This question leads students to address the issue of what materiality means.

Students should start with a definition of materiality. Statement of Financial Concepts No. 2 defines materiality as: "The magnitude of an omission or misstatement of accounting information that, in the light of surrounding circumstances, makes it probable that the judgment of a reasonable person relying on the information would have been changed or influenced by the omission or misstatement" (p. 10, Glossary of terms). SEC Staff Accounting Bulletin No. 99 (SEC 1999) provides another source of information dealing with materiality (SEC website: <http://www.sec.gov/interps/account/sab99.htm>) and states that reliance on quantitative benchmarks to determine materiality is not appropriate.

To answer this question, students will have to determine the impact of the correct reporting of the rebate on Paymore's financial statements. The correcting entry would be:

Cost of Goods Sold	\$150,000
Accounts Receivable	\$ 50,000
Inventory	\$100,000

Table 2: Horizontal Analysis of Financial Statements as Currently Reported					
Paymore Grocery Inc.					
Income Statement - Horizontal Analysis					
For years ended December 31, 20X3, 20X2 and 20X1					
(in thousands of dollars)					
	20X3	% change	20X2	% change	20X1
Sales	\$85,800.00	10.00%	\$78,000.00	7.59%	\$72,500.00
Cost of Goods Sold	<u>\$62,634.00</u>	14.72%	<u>\$54,595.00</u>	7.59%	<u>\$50,745.80</u>
Gross Profit	\$23,166.00	-1.02%	\$23,405.00	7.59%	\$21,754.20
Operating Expenses	<u>\$13,250.00</u>	-1.85%	<u>\$13,500.00</u>	9.53%	<u>\$12,325.00</u>
Operating Profit Before Taxes	\$ 9,916.00	0.11%	\$ 9,905.00	5.05%	\$ 9,429.20
Income Taxes	<u>\$ 2,974.80</u>		<u>\$ 2,971.50</u>		<u>\$ 2,828.76</u>
Net Income	<u>\$ 6,941.20</u>	0.11%	<u>\$ 6,933.50</u>	5.05%	<u>\$ 6,600.44</u>
Paymore Grocery Inc.					
Balance Sheet - Horizontal Analysis					
As of December 31, 20X3 and 20X2					
(in thousands of dollars)					
	20X3	% change	20X2		
Cash and Cash Equivalents	\$ 257.40		\$ 240.50		
Receivables	\$ 5,025.00	0.05%	\$5,022.50		
Inventory	\$ 5,500.00	144.44%	\$2,250.00		
Prepaid Expenses	<u>\$ 412.30</u>		<u>\$ 410.80</u>		
Total Current Assets	\$11,194.70	41.28%	\$7,923.80		
Property, Plant and Equipment (net of accumulated depreciation)	<u>\$33,584.10</u>		<u>\$23,771.40</u>		
Total Assets	<u>\$44,778.80</u>		<u>\$31,695.20</u>		
Current Liabilities	\$ 8,200.00		\$ 7,205.40		
Long-term Debt	\$18,866.17		\$11,977.30		
Owners' Equity	<u>\$17,712.63</u>		<u>\$12,512.50</u>		
	<u>\$44,778.80</u>		<u>\$31,695.20</u>		

Table 3: Restated Financial Statements					
Errors corrected					
Affected numbers in bold					
Paymore Grocery Inc.					
Income Statement - Horizontal Analysis					
For years ended December 31, 20X3, 20X2 and 20X1					
(in thousands of dollars)					
	20X3	% Change	20X2	% Change	20X1
Sales	\$85,800.00	10.00%	\$78,000.00	7.59%	\$72,500.00
Cost of Goods Sold	\$62,784.00	15.00%	<u>\$54,595.00</u>	7.59%	<u>\$50,745.80</u>
Gross Profit	\$23,016.00	-1.66%	\$23,405.00	7.59%	\$21,754.20
Operating Expenses	<u>\$13,250.00</u>	-1.85%	<u>\$13,500.00</u>	9.53%	<u>\$12,325.00</u>
Operating Profit Before Taxes	\$ 9,766.00	-1.40%	\$ 9,905.00	5.05%	\$ 9,429.20
Income Taxes	<u>\$ 2,974.80</u>		<u>\$ 2,971.50</u>		<u>\$ 2,828.76</u>
Net Income	<u>\$ 6,791.20</u>	-2.05%	<u>\$ 6,933.50</u>	5.05%	<u>\$ 6,600.44</u>
Paymore Grocery Inc.					
Balance Sheet - Horizontal Analysis					
As of December 31, 20X3 and 20X2					
(in thousands of dollars)					
	20X3	% Change	20X2		
Cash and Cash Equivalents	\$ 257.40		\$ 240.50		
Receivables	\$ 4,975.00	-0.95%	\$5,022.50		
Inventory	\$ 5,400.00	140.00%	\$2,250.00		
Prepaid Expenses	<u>\$ 412.30</u>		<u>\$ 410.80</u>		
Total Current Assets	\$11,044.70	39.39%	\$7,923.80		
Property, Plant and Equipment (net of accumulated depreciation)	<u>\$33,584.10</u>		<u>\$23,771.40</u>		
Total Assets	<u>\$44,628.80</u>		<u>\$31,695.20</u>		
Current Liabilities	\$ 8,200.00		\$ 7,205.40		
Long-term Debt	\$18,866.18		\$11,977.30		
Owners' Equity	<u>\$17,562.63</u>		<u>\$12,512.50</u>		
	<u>\$44,628.80</u>		<u>\$31,695.20</u>		
Selected Ratios					
Year	20X3				
Ratios:					
Current Ratio	1.35				
Acid test ratio	0.64				
Gross profit margin	26.83%				
Net profit margin	7.92%				

The corrections will increase Cost of Goods Sold by \$150,000, resulting in a \$150,000 decrease in both net income and owners' equity (ignoring a possible change in

income taxes). Similarly, accounts receivables will be reduced by \$50,000 and inventory by \$100,000 leading to a decrease in the current ratio.

To determine if the amounts involved are material, students might find it helpful to compare the financial statements before and after the corrections in light of Eugene Paymore's interpretation of the comment by the investment bank (Table 2 and Table 3). This included an increase in sales of at least ten percent and an increase in net income for the last three years (pp. 2, 5).

As shown in Table 2, before the corrections, sales increase by ten percent from 20X2 to 20X3 and net income increases in each of the three years. The increase in sales is not affected by the corrections. However, as displayed in Table 3, net income decreases by 2.05% from 20X2 to 20X3. Therefore, if Eugene Paymore's interpretation is correct, the amounts are material because they would influence potential investors' decisions about whether to invest in the company and how much to pay for the stock.

5. Should Paymore Grocery handle the rebates in the same manner as done previously because of consistency issues or handle them differently this year?

Statement of Financial Concepts No. 2 states "The consistent use of accounting methods ... is a necessary but not sufficient condition of comparability (Para 121)" and "Consistent use of accounting principles from one accounting period to another, if pushed too far, can inhibit accounting progress (Para 122)."

Consistency, while desirable, is not a sufficient reason to use a poor accounting principle when it does not serve the users' needs. Thus, Paymore Grocery should not record the rebates in the same manner as in the past. Consistency issues do not affect the answer to the prior questions and the correction should be made.¹

Suggested additional requirements for Auditing:

1. Is Mr. Countem independent with respect to Paymore Grocery Inc? Is his independence compromised by his desire for the IPO to go well and by his past relationship with the founder of Paymore Grocery?

The case was intentionally written with the intent that either position concerning independence can be supported. The analysis should start with the Second General Auditing Standard (AICPA, 2012b) stating that "The auditor must maintain independence in mental attitude in all matters relating to the audit" or with Rule 101 of the AICPA Code of Professional Conduct (2012a).

Based on the facts of the case and a review of the relevant standards of conduct, some students could identify circumstances which reasonable people might believe likely to influence independence"

(pg 59, AU §220.03).” The conclusion that “reasonable people might believe” is ambiguous. This affords the students an opportunity to discuss how this standard is applied in the “real world.” Several statements are made by Countem (p. 3) to generate discussion.

While the code specifically identifies many relationships that do impair independence, a search of the rules specified in the AICPA Code of Professional Conduct reveals no references to “godfather” compromising auditor independence. It should also be noted that the godfather/godson relationship was with the founder of the firm, who is now deceased (p. 3). Therefore, the compromising relationship, if any, no longer exists. Similarly, wanting the client to succeed does not, in itself, indicate lack of independence. It is doubtful that an accounting firm would want one of its clients not to succeed.

To determine whether the case made the issue sufficiently robust, drafts of the case were given to several academics and practitioners, including a partner in one of the ‘Big Four’ CPA firms. Generally, practitioners did not think that the independence of the firm was compromised while most academics and students thought that independence was compromised.

The issue therefore becomes whether the firm has compromised independence in appearance if not in fact. Those arguing that independence is impaired base their conclusion on the fact that a ‘reasonable person’ knowing the facts of the case would reach that conclusion. Those arguing against the impairment of independence base their argument on the lack of any specific rule being violated. In summary, independence may be impaired in appearance if not in fact.

In grading students’ papers, both arguments were accepted and the grade was based on the quality of the argument, not on the specific conclusion reached. In other words, either position can be accepted if the defense is well reasoned and presented. The discussion of this topic leads students to recognize that many accounting issues (such as independence) are hard to quantify and are not “black and white”.

Several readers questioned whether Mr. Countem had violated the “Objectivity” rule. Rule 102 of the AICPA Code of Professional Conduct (2012a) states that: “In the performance of any professional service, a member shall maintain objectivity and integrity, shall be free of conflicts of interest, and shall not knowingly misrepresent facts or subordinate his or her opinion to others.”

Obviously, the auditors did not misrepresent facts. In addition, unless the client refuses to accept the corrections for the rebates and the auditors accede to the client’s wishes, they have not subordinated their opinion to others. Other than wanting their client to succeed, they are also free of conflicts of interest. The question remains whether the auditors have maintained objectivity and integrity. If one concludes that the firm is not independent, then one should also conclude that it failed to maintain objectivity.

2. Has Countem and Tickem, CPAs provided adequate supervision and an audit staff that has adequate competency for this audit?

There are two questions here: (1) is the audit staff competent and (2) has the firm provided adequate supervision. These relate to two of the ten General Auditing Standards, the first general standard stating “The auditor must have adequate technical training and proficiency to perform the audit,” and the first standard of field work stating “The auditor must adequately plan the work and must properly supervise any assistants.” (AICPA, 2012b, AU §150.02).

As intended, there is some ambiguity as to whether the auditing firm has properly followed these two standards and Statement on Auditing Standards #108 which states that appropriate supervision includes “keeping informed of significant issues encountered, reviewing the work performed, and dealing with differences of opinion among firm personnel” (AICPA, 2009b, AU §311.28). By all appearances, both the staff accountant and Mr. Countem have met these requirements.

Much of the audit work was done before the staff was reassigned. Specifically, the fieldwork and most other audit tasks have already been performed. Additional audit steps have been taken to ensure that sales were not being booked early and that purchases and accounts payable were not recorded late. The remaining staff member has completed the audit and the audit work papers have been reviewed by Mr. Countem. The staff member identified the single area of controversy, the accounting for the vendor rebates. Mr. Countem stated that he was taking a more active role in the audit. There is little to indicate that the audit was inadequately supervised or that the staff lacked technical expertise in the area. Again, the authors would accept any answer from students that correctly stated the facts and the auditing standards, and analyzed them properly.

3 What is the effect on audit risk after discovering the way the company recorded the rebate?

Paragraph 4 of Auditing Standard (AS) No. 8 states that audit risk is a function of the risk of material misstatement and detection risk, expressed in mathematical form in the Audit Risk Model (AU §312.26) as: $\text{Audit risk} = \text{Risk of material misstatement (RMM)} \times \text{Detection Risk}$.

RMM is the product of inherent risk and control risk, therefore, the Audit Risk Model is restated as: $\text{Audit risk} = \text{Inherent Risk} * \text{Control Risk} * \text{Detection Risk}$

Inherent risk and control risk are initially assessed in the audit planning phase. However, as expressed in AS No. 12 (par. 74) “the auditor’s assessment of the risks of material misstatement, including fraud risks, should continue throughout the audit. When the auditor obtains audit evidence during the course of the audit that contradicts the audit

evidence on which the auditor originally based his or her risk assessment, the auditor should revise the risk assessment and modify planned audit procedures or perform additional procedures in response to the revised risk assessments.” Similar statements are found in other auditing standards (i.e., AS No.11, par. 11, AS No.9, par. 5 and 15).

The answer to case questions (1-b, 1-c and 1-d) established that Paymore’s recording of Fizzy Cola’s rebate was incorrect and had a material effect on the financial statements. Furthermore, statements made by Paymore (p. 4) imply that the misreported transaction was unusual in magnitude and timing. Based on AS No.12 and AS No.14, these facts indicate that the uncorrected misstatement is a significant previously unidentified risk and leads to the conclusion that inherent risk has increased. Control risk has also increased since Paymore’s accounting system did not prevent or detect the error. As shown in the audit risk model, higher than anticipated inherent risk and control risk, increase audit risk. As auditors have to reduce the audit risk to an appropriately low level (i.e., 5%), the higher perceived inherent and control risks would lead to a reduced detection risk. This, in turn, would mean additional substantive tests of rebates. AS No. 8, par. 11 states that “As the appropriate level of detection risk decreases, the evidence from substantive procedures that the auditor should obtain increases.”

The discovery of a material uncorrected misstatement would also lead the auditor to question whether the error was unintentional or intentional (fraud) (AS No.14, par. 20, 22 and 28). From Paymore’s comments (p. 4), it appears that the error was due to a misunderstanding and was not intentional. AS No.14, par. C-1 lists situations indicative of fraud; none match the fact of the case.

To answer this question thoroughly, students need to research and cite the relevant auditing standards, such as the Public Company Accounting Oversight Board’s (PCAOB) set of eight “risk assessment” auditing standards (AS Nos. 8 through 15) available on PCAOB’s website.

It should be noted that the misstatement was discovered during the audit suggesting that the audit procedures used were appropriate in uncovering misstatements. In addition, when planning the audit, the auditors have already taken into account changes in the company and its environment that contributed to increased risk in this year’s audit (i.e., increased competition, forthcoming IPO and change in the users of the financial statement) and have performed additional tests to deal with these issues (p. 2).

Alternatively, students could argue that this is the only material mistake that the audit tests have uncovered and therefore that it is a tolerable misstatement and does not increase audit risk; it is less than the percentage that would lead auditors to believe that their original assessment of inherent risk was too low. In grading the case, either position could be accepted if the arguments presented are well reasoned and supported by relevant citations from auditing standards.

Irrespective of whether audit risk was perceived to have increased, only if Paymore agrees to correct the error in its financial statements can the auditor express an unqualified opinion. If Paymore refuses to correct the error, which is unlikely due to the impending IPO, the auditor should express a qualified or adverse opinion (AS No.14 paragraphs 31 and 35).

4. Were other rebates on other inventory purchases recorded in the same manner?

E. Paymore's statement (p. 4) suggests that the company consistently records vendor rebates as reductions in cost of goods sold. Although this recording is incorrect, as long as the rebates are associated with goods sold during the year, the error does not result in misstated financial statements. It is only when the goods remain in inventory -or when the rebate is not yet earned- that the error results in misstatements. According to E. Paymore (p. 4), the Fizzy Cola purchase is the first such occurrence. Relying on his statement, the Fizzy Cola transaction is unusual and therefore the probability of finding other such misstatements is small. However, while the statement may be true, it needs to be corroborated by reliable audit evidence. More importantly, the knowledge that Paymore consistently records rebates in a way inconsistent with GAAP increases the risk of material misstatements. The prevalence of vendor rebates in the supermarket industry further increases that risk. AS No.13, par. 11 states that "For significant risks, the auditor should perform substantive procedures, including tests of details, that are specifically responsive to the assessed risks."

EPILOGUE

The case was validated in several steps. The case was assigned by three instructors at two different institutions and in three different classes (Intermediate Accounting II, Advanced Accounting and Auditing). In addition, after completion of the case, all three instructors administered a questionnaire to the students. The survey was designed by the authors to measure students' perception of the effectiveness of the case, using questions from Frucot et al.'s (2004) instrument. It consisted of nine questions measured on a 5-point Likert type scale, with higher values indicating more positive perceptions. For the Auditing class, a tenth question was added which was relevant to the additional requirement specific to that class. Table 4 displays the questions and descriptive statistics for each class separately and for the entire sample.

The survey results indicate that the students seemed to find the case a positive, useful learning experience. Overall, students strongly agreed with item 7 ("After working the case, I better understand how earnings can be manipulated by using different accounting principles.") After Enron and other accounting scandals, this is an important lesson for the students to learn.

Informal feedback from students also indicated that, in all classes where it was assigned, the case was well received.

Survey question	Intermediate Accounting II	Advanced Accounting	Auditing N = 19	Combined N = 52
1. My understanding of how to account for rebates and inventory was increased by working this case.	3.84 4.00 3-5	4.00 4.00 2-5	3.68 4.00 2-5	3.83
2. My understanding of materiality issues was increased by working this case.	3.79 4.00 3-5	4.21 4.00 3-5	4.32 4.00 3-5	4.10
3. My ability to write a professional memo to another business person improved by working this case.	4.05 4.00 3-5	3.57 3.50 1-5	3.79 4.00 2-5	3.83
4. My ability to research controversial accounting issues using the accounting literature was improved by working this case.	3.84 4.00 2-5	4.21 4.00 2-5	3.63 4.00 2-5	3.87
5. My understanding of the difficulties that arise when the correct application of accounting principles conflicts with the client's concerns was increased by working this case.	3.84 4.00 2-5	4.57 5.00 2-5	3.89 4.00 2-5	4.06
6. The discussion of this case was useful.	3.74 4.00 3-5	4.29 4.00 3-5	4.05 4.00 2-5	4.00
7. After working this case, I better understand how business earnings can be manipulated by using different accounting principles.	4.00 4.00 2-5	4.36 4.00 3-5	4.21 4.00 3-5	4.17
8. Overall, the learning experience from working this case was positive.	4.16 4.00 3-5	4.14 4.00 3-5	4.16 4.00 3-5	4.15
9. Overall, this case was one of the best accounting cases that I have been assigned.	3.53 3.00 2-5	4.14 4.00 3-5	3.61 4.00 2-5	3.73
10. My understanding of auditor independence was increased by working this case.	NA	NA	4.39 4.50 3-5	4.39

Where: 1 = strongly disagree ... 5 = strongly agree.

ENDNOTES

- ¹ Some students may argue that previously issued financial statements should be reissued with a correction. However, although, in the past, the auditors allowed Paymore to reduce Cost of Goods Sold for vendor rebates, conditions were probably different. Although not directly stated in the case, it is implied that, in prior years, purchases did not occur on the last day of the year, as they did in 20X3. Therefore, the inventory would have been sold before year-end and a reduction in Cost of Goods Sold would have been the appropriate treatment. In addition, the amounts of the rebates may have been immaterial in the past.

This is a fertile topic for class discussion in more advanced classes (i.e., Auditing or Advanced Accounting).

REFERENCES

- American Institute of Certified Public Accountants (2006). *Statement on Auditing Standards #107, Audit Risk and Materiality in Conducting an Audit*. Retrieved June 19, 2012, from <http://www.aicpa.org/Research/Standards/AuditAttest/DownloadableDocuments/AU-00312.pdf>
- American Institute of Certified Public Accountants (2009a). *Statement on Auditing Standards #1, Independence*. Retrieved June 29, 2012, from <http://www.aicpa.org/Research/Standards/AuditAttest/DownloadableDocuments/AU-00220.pdf>
- American Institute of Certified Public Accountants (2009b). *Statement on Auditing Standards #108, Planning and Supervision*. Retrieved June 29, 2012, from <http://www.aicpa.org/Research/Standards/AuditAttest/DownloadableDocuments/AU-00311.pdf>
- American Institute of Certified Public Accountants (2012a). *Code of Professional Conduct*. Retrieved June 29, 2012, from <http://www.aicpa.org/RESEARCH/STANDARDS/CODEOFCONDUCT/Pages/default.aspx>
- American Institute of Certified Public Accountants (2012b). *Generally Accepted Auditing Standards*. Retrieved June 29, 2012, from <http://www.aicpa.org/Research/Standards/AuditAttest/Pages/SAS.aspx>
- Financial Accounting Standards Board (1978). *Objectives of Financial Reporting by Business Enterprises*. Statement of Financial Accounting Concepts No. 1. Stamford, CT: FASB.
- Financial Accounting Standards Board (1980). *Qualitative Characteristics of Accounting Information*. Statement of Financial Accounting Concepts No. 2. Stamford, CT: FASB.
- Financial Accounting Standards Board (2012). *Accounting Standards Codification*. Retrieved June 19, 2012, from <http://acs.fasb.org>.
- Frucot, V., L. G. Jordan and M. I. Lebow (2004). A & B Companies: Impairment of Goodwill. *Issues in Accounting Education*. (August), 369-376.
- Henry, D. (2003). Accounting Games in the Grocer's Aisle. *Business Week*, (April 14), 64.
- Public Company Accounting Oversight Board (PCAOB) (2010) Auditing Standard No. 8, *Audit Risk*. Retrieved June 19, 2012, from http://pcaobus.org/Standards/Auditing/Pages/Auditing_Standard_8.aspx
- Public Company Accounting Oversight Board (PCAOB) (2010) Auditing Standard No. 9, *Audit Planning*. Retrieved June 19, 2012, from http://pcaobus.org/Standards/Auditing/Pages/Auditing_Standard_9.aspx
- Public Company Accounting Oversight Board (PCAOB) (2010) Auditing Standard No. 11, *Consideration of Materiality in Planning and Performing an Audit*. Retrieved June 19, 2012, from http://pcaobus.org/Standards/Auditing/Pages/Auditing_Standard_11.aspx
- Public Company Accounting Oversight Board (PCAOB) (2010) Auditing Standard No. 12, *Identifying and Assessing Risks of Material Misstatement*. Retrieved June 19, 2012, from http://pcaobus.org/Standards/Auditing/Pages/Auditing_Standard_12.aspx
- Public Company Accounting Oversight Board (PCAOB) (2010) Auditing Standard No. 13, *The Auditor's Responses to the Risks of Material Misstatement*. Retrieved June 19, 2012, from http://pcaobus.org/Standards/Auditing/Pages/Auditing_Standard_13.aspx
- Public Company Accounting Oversight Board (PCAOB) (2010) Auditing Standard No. 14, *Evaluating Audit Results*. Retrieved June 19, 2012, from http://pcaobus.org/Standards/Auditing/Pages/Auditing_Standard_14.aspx
- Securities and Exchange Commission (1999). *Staff Accounting Bulletin No. 99 - Materiality*: Retrieved June 29, 2012, from <http://www.sec.gov/interp/account/sab>

ENTREPRENEURS AND THE FEDERAL DEFICIT GAP (MAKING THE CASE FOR EXPENDITURE CUTS AND/OR TAX INCREASES.)

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CASE DESCRIPTION

This case allows students, to assume the role of an owner/operator of a family owned construction company. From this vantage point, students will analyze and provide workable solutions for closing the United States Federal deficit gap for the fiscal year ended September 30, 2011. Students will also analyze macro and micro effects of their proposed solution including effects on families and the construction industry.

The case leads students through a process to close the Federal deficit gap by a combination of tax increases and government expenditure reductions. The tools provided to students when making expenditure reductions include estimated 2011 Federal expenditures for the following categories: Social Security, Medicare, Education, Defense, Welfare/Unemployment, Courts/Police, Transportation, General Operations, Interest, and Other. Also provided are explanations of what type of programs are encompassed by each category of expenditure and a five year trend analysis of these expenditures, identifying which areas have seen the greatest expenditure increases.

The tools provided students to be used when analyzing which income level or type of taxpayers should see tax increases (or decreases) in order to close the budget gap are equally robust. The case provides estimates of incremental tax revenue for a 1% increase in the Federal tax rate for the individuals in six different taxable income strata. Estimates of additional tax revenue from the following actions are also offered:

- *Increasing the Federal corporate tax rate by increments of 1%*
- *Increasing the FICA tax rate by increments of 1%*
- *Increasing the Social Security tax base (from \$106,800 in 2011)*

Students are directed to propose expenditure reductions and nominal percentage increases (or decreases) for each tax strata until the \$1.3 trillion gap is closed. There are no right or wrong answers. Additional probative questions are provided to allow instructor follow-up. These questions focus on micro and macro fallout from the proposed actions by the students. Consideration is also given to the entrepreneurs and related individuals in the case study.

The case is particularly timely given the difficulties of the U.S. construction industry and the eminent 2012 national elections. With candidates and Congress reluctant to make tough decisions to raise taxes or eliminate popular spending programs, the case provides students with workable estimates of Federal expenditures, separated into familiar categories.

CASE SYNOPSIS

You are evaluating the economic viability of Creative Construction, a small construction company struggling to survive following the 2008 economic downturn. The economic downturn inspired stimulus spending by the Federal government left in its wake a considerable Federal deficit. Estimated at \$1.3 trillion, the 2011 deficit pushed the overall U.S. Federal debt total above \$15 trillion, mobilizing Congress to raise the U.S. debt ceiling multiple times and leading to a downgrade in U.S. debt by Standard & Poors. Your task is analyze the 2011 Federal budget deficit and make recommendations for expenditure reductions (by Federal program) and for tax increases (by type and income level of taxpayer). Additional questions will be asked related to possible impacts of your proposal on Creative Construction, its employees and the U.S. as a whole.

INSTRUCTORS' NOTES

Case Objective

This case addresses the timely issue of the current (and ongoing) fiscal dilemma facing the U.S. government and U.S. taxpayers. Heightened interest in these issues always occurs in an election year. Reporters and commentators increasingly raise the subject of the rapidly increasing U.S. government debt level. The recent downgrade of the U.S. bond rating by Standard and Poors intensifies the importance of fiscal issues.

This case provides an opportunity for students to balance the Federal budget and stop the continual increase in the U.S. debt. Data provided for consideration facilitates this process for case participants. And, participants can proceed without regard to the concerns for reelection or obligations to special interest groups and constituents faced by members of the Congress.

Target Audience

This case is suited for a variety of venues. Students studying finance and/or accounting (tax) in an undergraduate business program should have enough knowledge to generate informed recommendations. MBA students with real world experience may approach the case from a very different perspective and come up with very different recommendations. Public policy students

or upper division students in a public administration program may consider the case from a political as well as a fiscal responsibility point of view.

This case can be used in either an individual or group process. Better, more thoughtful response may develop from a group setting. However, individually, all students would be required to give thought to the issues and the “free rider” problem can be avoided.

Learning Outcomes

Upon completion of this case students should be able to:

1. Explain the complexity of changing taxes and/or spending in a complex economy.
2. Recognize and explain that changes in taxes/spending have differing and potentially major impacts on diverse taxpayer groups and expenditure recipients.
3. Analyze the broad financial impact of taxation/spending policies in the United States and perhaps expand that to elsewhere in the world.
4. Recognize and list the diverse political and social assumptions that affect taxation and spending choices for a government.

Methodology

Prior to distribution of the actual case and depending on the background of the participants, the instructor may wish to raise awareness of issues related to the implications of various taxation /expenditure choices. Trial runs of this case by the authors indicate some background explanation of the U.S. tax system, including the Social Security/Medicare tax currently in place improves the student’s understanding. For example: Combined Social Security [SS] and Medicare [MC] tax rates for 2011 equal 6.2% of the first \$106,800 earned by each individual for SS and 1.45% of every dollar of salary and wages earned for MC. Employers match the amount of employee withholding by paying an additional amount of SS and MC tax equal to every dollar deducted from the employees’ salary and wages. Therefore a student’s suggestion to raise the SS and/or the MC tax percentage or increase the “wages taxed” limit for SS concomitantly increases the tax burden for employers by the same amount (because the employers have to match the increase). Students may also want to consider adjusting government expenditures for SS (or MC). In 2011 the maximum Social Security payment to retirees retiring at full retirement age was \$2,513/month. (Social Security Administration) Questions that may be posed in an introductory discussion (seed questions) could include the following:

1. In 2011 the U.S. government ran a current deficit of \$1.3 trillion. Essentially what does that amount mean to the U.S. economy?

2. What is the total U.S. accumulated debt at the end of 2011? [Over \$15,000,000,000] How does it affect the economy?
3. Which is a better solution to the U.S. deficit problem, increasing taxes or decreasing expenditures?
4. Should individual and business taxes be raised in a weak economy with relatively high unemployment?
5. Should Federal spending programs be curtailed in difficult economic times? Discuss the potential ramifications of cutting Federal spending?
6. When the economy is weak (high unemployment and very slow GDP growth) transfers payments such as social welfare payments and unemployment compensation soar. Can these payments be expected to decrease if we expect the economy to improve?
7. What is the historical government response to excess revenues when the economy improves? Spend the excess on existing or new programs or pay down accumulated debt?
8. Should the following personal dilemmas affect Jason's decisions to reduce or increase Federal expenditures?
 - a) Absent additional funding for unemployment compensation, Todd will soon be unable to collect unemployment benefits.
 - b) Absent additional funding for transportation, city bus service (relied upon by Todd) will have to be curtailed.
 - c) Absent additional funding for student loans, Todd will be unable to secure a loan to return to school.
 - d) Absent additional funding for defense, all branches of the armed service will continue downsizing, crippling Todd's chances to join the Navy.
 - e) Absent additional funding for Medicaid, Todd will see his health insurance premiums double.
 - f) Increased unemployment and poverty have fueled an increase in crime in Jason's town. The police force has had to layoff officers because of the loss of a Federal grant.

Application

For less experienced classes, following the initial discussion, the case may be addressed in three partial class sessions as follows. In session one request the class use the provided data and balance the budget using expenditure cuts only. Discuss the economic impact of employing only spending cuts and the effects on government programs and constituent groups. In session two, go back to the beginning and balance the budget using only tax increases of various types. A similar discussion of effects and constituent impacts could follow. In the final session, have

students balance the budget using their preferred methodology i.e. tax increases only; spending cuts only; a combination of tax increases and spending cuts balanced as students prefer.

Knowledgeable classes may proceed without seed questions if the instructor believes the students have an understanding of the issues. The case can be distributed with some discussion of procedures and then turned over to the students or groups.

This case has been used in undergraduate tax classes and in corporate executive training sessions. The resulting discussions and solutions vary significantly with the nature of the participants in the case study groups.

ANALYTICAL QUESTIONS

General questions

- 1) What do you think is the danger to the U.S. economy of continued budget deficits?
- 2) What economic impact would you expect from a further downgrade in U.S. bond ratings?
- 3) What economic impacts might arise from the ever increasing U.S. need to borrow to finance the status quo?
- 4) Are there potential alternative steps to take to balance the U.S. budget other than reducing spending and/or increasing tax rates?

Tax related questions

- 1) What impact will a tax increase produce on the bottom 50% of earners, i.e., those taxpayers earning the least? What is the fiscal gain from such an increase?
- 2) What impact will a tax increase cause for the top 1% of earners; those taxpayers earning the most? What is the fiscal gain from such an increase?
- 3) What is the effect of a tax increase in the tax rate on everyone else, i.e., the middle class?
- 4) Should the effect of a tax increase be spread proportionately across taxpayer groups or should one or more targeted groups of taxpayers bear the entire or disproportionate burden of a tax increase? Why?
- 5) What effect might you expect from an increase in the Social Security and/or Medicare tax on individuals? On businesses? On the economy?
- 6) Should tax changes be made immediately, “all at once”, or phased in over multiple years? Why?

Expenditure related questions

- 1) So called “entitlements” constitute a large portion of expenditures. These include Social Security, Medicare, social welfare and unemployment benefits. What impact might one expect from an immediate decrease in any of these transfer payments? (Transfer payments move money from one group of individuals to another group of individuals.)
- 2) What future issues, positive or negative, might arise from decreases in defense spending for the nation? For the economy?
- 3) The categories of courts/police, transportation, government operations, and interest paid on the debt are relatively small when compared to expenditures for programs such as defense or Social Security. Identify any impact foreseen from changes in spending in these areas.
- 4) Identify any other area, not listed, where you believe spending changes could have an important impact. Explain your choice.

Business decision issues

- 1) What impact might increasing FICA tax rates have on Jason’s decision to rehire his construction crew in the future?
- 2) Additionally, what impact might an FICA increase have on the recovery of the construction industry? [Consider employment effects and cost effects.]
- 3) What impact will a general income tax increase potentially have on recovery of the industry?
- 4) What will be the business impact of continuing or increasing unemployment benefits?

Ethics and economic theory questions

- 1) Is the consideration of the effects on Jason’s family as opposed to the effects on the economy/society as a whole supported by the ethical theory of utilitarianism or the theory of rights?
- 2) Should spending changes and tax increases be made immediately, “all at once” or “phased in” in over multiple years? What would be the expected economic effect of immediate implementation?

Potential Responses to Analytical Questions

The following includes possible although far from definitive responses to the questions posed for the case. Hopefully, an instructor can guide the discussion to relevant areas rather than influence the responses to coincide with his or her desired outcome. Remaining neutral as participants reason through outcomes is a daunting challenge.

General questions

1) What do you think is the danger to the U.S. economy of continued budget deficits?

The instructor may use the current crisis in Greece as an example of a comparable scenario. A discussion could also address concerns (or non-concerns) related to the large percent of U.S. debt held internationally in countries such as China.

2) What economic impact would you expect from a further downgrade in U.S. bond ratings?

Discuss the potential costs of further downgrading of bond ratings for U.S. debt issues in terms of increasing interest rates and decreasing borrowing capacity. The pros and cons of the high level of international holdings of U.S. debt are also suitable for discussion.

3) What economic impacts might arise from the ever increasing U.S. need to borrow to finance the status quo?

Weakening of the dollar internationally and domestic inflation are possible outcomes to discuss. Taxpayer resistance to continually paying more taxes simply to service the growing debt could be a topic raised here by case participants. Rising interest demands and inability to borrow are also potential topics. The leader may also discuss the contentious August 2, 2011 Congressional vote, increasing the U.S. debt limit, to address the economic impact of a U.S. default on its debt.

4) Are there potential alternative steps to take to balance the U.S. budget other than reducing spending and/or increasing tax rates?

A significant improvement in the U.S. economy would increase tax revenue. As long as additional spending does not offset the tax revenue, it could be used to pay down the debt. Students may propose a broad array of means to encourage this economic improvement (including reducing taxes). Alternatively, spending could be increased at a lower rate than the rate of revenue increase. In addition, rather than just altering tax rates, the income tax code could be changed in various ways (flat tax, rescind some or all tax credits, rescind some tax deductions) to change the incidence of tax on various taxpayer groups. (The variety of proposed changes to the tax code are beyond the scope of this case, but should be mentioned in response to this question.)

Tax related questions

1) What impact will a tax increase produce on the bottom 50% of earners, i.e., those taxpayers earning the least? What is the fiscal gain from such an increase?

A 1% increase on the lowest strata of wage earners generates the smallest increase in revenue even though this stratum contains as many taxpayers as all other groups combined. A 1% tax increase costs a \$50,000 earner an added \$500 per year. This has the potential to cause a significant amount of financial pain for taxpayers in this group without significantly changing the status quo.

- 2) What impact will a tax increase cause for the top 1% of earners; those taxpayers earning the most? What is the fiscal gain from such an increase?**

A 1% increase on the highest earning strata of taxpayers increases revenue by \$34.5 billion. An individual earning \$1,000,000 will experience a tax increase of \$10,000 each year which represents a 20 fold increase over what a \$50,000 earner would pay to reduce the deficit. This question, in conjunction with the prior question, can also be used when discussing the fairness of progressive tax methodologies which tax higher earners at a higher rate than lower earners. A discussion of the “flat tax” could also be included here.

- 3) What is the effect of a tax increase in the tax rate on everyone else, i.e., the middle class?**

A 1% increase for the middle class provides the government \$57.4 billion additional resources and costs a \$100,000 earner \$1,000. It can be assumed that the majority of individuals in these strata earn \$100,000 or less per year.

A comparative discussion of what a \$1 million earner vs. a \$100,000, vs. a \$50,000 earner might use the differential disposable income for should produce some thoughtful reasoning.

- 4) Should the effect of a tax increase be spread proportionately across taxpayer groups or should one or more targeted groups of taxpayers bear the entire or disproportionate burden of a tax increase? Why?**

The responses to these questions could depend significantly on the political bent of respondents. Particularly, a justification of why the increase should be spread (or not) may produce vehement comments and some potentially loud disagreement. A discussion of the concepts of horizontal and vertical equity could also result from the initial responses to the question.

- 5) What effect might you expect from an increase in the Social Security and/or Medicare tax on individuals? On businesses? On the economy?**

Discussion of this question should include the impact of both a rate increase and a tax base (income limit) increase or removal of the income limit altogether for social security taxes. The potential impact on businesses (the obligation to match all new Social

Security/Medicare taxes paid by employees) should be recognized as particularly onerous, especially for small business entities.

The potential economic impact could include a) a decrease in disposable income for individuals, b) reductions in resources for business growth and c) impacts on new hiring for all businesses. The potential for lay-offs for all businesses and possible business failures related to the increase in costs for small businesses are ripe for discussion.

6) Should tax changes be made immediately, “all at once”, or phased in over multiple years? Why?

Responses will differ for this question. Our expectation is that participants will defend their timing position with rational justifications.

Expenditure related questions

1) So called “entitlements” constitute a large portion of expenditures. These include Social Security, Medicare, social welfare and unemployment benefits. What impact might one expect from an immediate decrease in any of these transfer payments? (Transfer payments move money from one group of individuals to another group of individuals.)

Political position again will have a significant influence on responses. Answers can be evaluated on how well they are supported rather than on judging whether they are right or wrong from a political point of view. At a minimum, from a business and economic perspective some discussion should include the expected impact on spending for consumer goods and the well-off-ness of society as a whole.

2) What future issues, positive or negative, might arise from decreases in defense spending for the nation? For the economy?

A rational discussion should include the dangers of a lack of adequate defense but should also include issues related to what defense expenditures include, potential and actual waste, for example.

3) The categories of courts/police, transportation, government operations, and interest paid on the debt are relatively small when compared to expenditures for programs such as defense or Social Security. Identify any impact foreseen from changes in spending in these areas.

Decrease of spending in any area creates the potential for transfer to spending in others areas, additional pay down of the debt, or tax relief. This may be particularly interesting if the discussion ties reduction in interest payments to one or more of these uses.

Courts/police spending answers could include public safety, spending on prisons, etc. Transportation has a huge impact on state revenues. That issue should at least be raised by thoughtful responders.

- 4) **Identify any other area, not listed, where you believe spending changes could have an important impact. Explain your choice.**

This question may generate open ended and unexpected responses. Evaluation of answers should be on based on thoughtfulness and support of ideas rather than on judgments of correctness.

Business decision issues

- 1) **What impact might increasing FICA tax rates have on Jason's decision to rehire his construction crew in the future?**

For this question the instructor might suggest pay levels for Jason and his former employees. Then calculations can be made by students to determine the financial impact on a firm from FICA increases of both types – rate and limit changes. With numerical answers students can relate better to the absolute costs incurred by an entrepreneur and how the cost can affect decision making.

- 2) **Additionally, what impact might an FICA increase have on the recovery of the construction industry? [Consider employment effects and cost effects.]**

This is an economic price/demand question. Economic theory tells us that increased costs lead to increased prices or reduced profits or both for the firm. The increased cost of higher employment taxes can then be expected to further inhibit any recovery in the construction industry. A slow recovery or failure to recover for the industry will inhibit or prevent rehiring of workers further minimizing and absolute revenue recovery for the Federal government.

- 3) **What will be the business impact of continuing or increasing unemployment benefits?**

Extending or increasing unemployment benefit payments, while a laudable benefit to individuals who are out of work, puts an additional burden on already struggling business enterprises, particularly entrepreneurs with limited capital resources. As an example, in Kansas, experience ratings (the percentage of wages paid as unemployment taxes) has doubled or tripled for many business in the past year going from approximately 2% to up to 7% for some firms. Anticipation of this additional tax burden may prevent small firms from hiring new personnel or minimize the number of new hires.

Ethics and economic theory questions

- 1) **Is the consideration of the effects on Jason’s family as opposed to the effects on the economy/society as a whole supported by the theory of utilitarianism or the theory of rights?**

The reliance on utilitarianism as justification for consideration of individual family effects will be difficult to support. Portrayal of individual hardships as a microcosm of the society as a whole may be brought up as a basis for this justification. The reliance upon rights for justification will require inclusion of items such as health care, safety, education, employment, transportation, and employment as rights.

- 2) **Should spending changes and tax increases be made immediately, “all at once” or “phased in” in over multiple years? What would be the expected economic effect of immediate implementation?**

Responses will differ for this question. Our expectation is that participants will defend their timing position with rational justifications. Advocates of immediate implementation of expenditure reductions should be able to proffer opinions as to the likelihood of large scale economic contraction or expansion upon implementation. The last question by the leader in this section could be, “Your plan was just signed into law today. What did the stock market do?”

As should be obvious from the above, responses to some of these questions can initially be visceral. The discussion leader/case assigner must try to direct the process so that emotion is less evident and deliberation prevails. That charge will be difficult for these politically and socially charged issues.

VONAGE: AN OPPORTUNITY IN THE TELECOMMUNICATION INDUSTRY

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CASE DESCRIPTION

The primary subject matter of this case concerns the opportunities and challenges faced by one of the largest Voice over Internet Protocol (VoIP) providers, Vonage. Both the internal, external and SWOT analysis from the case help explain where the opportunities and challenges are. The case also selected appropriate business-level strategy by Vonage. Productions offered by Vonage included different calling plans- domestic, international and small business plans. Those plans also have different features such as visual voicemail, 411 calling, caller ID, call waiting, call forwarding, do not disturb, and many others. The levels of difficulty in this case are 4 – senior capstone classes and 5 - first year of graduate classes. The case is designed to be taught in 2 hours, and 4 hours of outside preparations by students.

CASE SYNOPSIS

Vonage is a Voice over Internet Protocol (VoIP) provider and a telecommunication industry leader. They offered the alternative to the traditional telephone industry to individual, small, large business and global internet connection. Vonage started its business in 2001 and the company was founded in Edison, New Jersey. The mission of Vonage was helping people communicate when, where and how they choose. In March of 2002, Vonage signed its first customers. During one year's time, calls completed over Vonage's network increased from 5 million to 107 million. Vonage became a market pioneer as offering the first ever VoIP service in the year of 2003. One year after, Vonage became a leader both domestically and internationally in the industry. Soon after its establishment the company realized rapid growth and expanded successfully. However, the telecommunication industry which Vonage involved needs new technology, requires broadband connection, and customer service. After much thought and consulting views, CEO Michael Snyder decided that certain percentage of income will use to improve the R&D and they will pay attention to increase the quality of the customer service. By this way, he hopes Vonage could attract more customers and keep the leading position in the industry.

INSTRUCTORS' NOTES

Teaching Objectives

Vonage case can expose students to the following key concepts

- ✧ Examine Vonage's competitive advantage in the telecommunication industry.
- ✧ Assess the opportunity for Vonage to transfer its core capabilities in related industries.
- ✧ Evaluate which corporate-level strategy should Vonage pay more attention to.
- ✧ Discuss what Vonage should do to improve its weakness.
- ✧ Suggest how could Vonage avoid the external threaten.
- ✧ Recommend some social responsibility programs to Vonage.

INFORMATION AVAILABLE IN CASE

External Environment

- Threaten
 - ✓ When looking at the external environment surrounding Vonage, there are both opportunities and threats surrounding the company. The first major threat would be that telecommunication and cable companies have begun to roll out VoIP and already use it for international calls and prepaid phone cards. Another threat would be regulatory factors. Though the current lack of regulation is an opportunity, the threat of future regulation is a certain threat.
- Opportunity
 - ✓ Vonage's opportunities are rather extensive. One opportunity is that Vonage depends on the public Internet and existing broadband access, which is growing exponentially. Another opportunity is that Vonage VoIP products offer solutions to growing phone service cost, poor service, and the feeling that the conglomerate companies are in total control.

Internal Environment

- **Strength**
 - ✓ Vonage's internal strengths are numerous, as would be expected with a leader in any market. They have been able to gain several strongholds over their competitors through their innovation. Their first strength is the price savings. Vonage's ability to offer virtual telephone numbers is also an advantage. The fact that Vonage is the leader in VoIP service in the United States is also a strength for Vonage. Another strength of Vonage is that they allow users to call with a standard phone, rather than through their computer like most competitors.
- **Weakness**
 - ✓ Vonage also has some weaknesses, many of which are associated with VoIP service in general, though they directly affect Vonage and its customers. The first weakness is that VoIP service is a new technology, which has been riddled with a few quality and reliability problems in its early stages. One more weakness this may create is that this should allow broadband providers to offer bundled broadband/VoIP service for a discount rate, taking away some of Vonage's customer base. Another weakness is its dependence on electricity. Another weakness is the pricing. Also, Vonage is unable to easily expand internationally.

Performance

- Consolidated Income Statement (Exhibit 1)
- Consolidated Profitability Ratio (Exhibit 2)
- Consolidated Liquidity Ratio (Exhibit 3)
- Consolidated Solvency Ratio (Exhibit 4)
- Consolidated Stock Price Chart (Exhibit 5)

QUESTION TO GUIDE THE DISCUSSION

1. What is the source of Vonage's competitive advantage?
2. What alternatives are available to enhance Vonage's core competence?
3. What factors should Vonage consider to avoid its internal weakness?
4. How does Vonage's Organization structure related with its business strategy?

CASE ANALYSIS

● ENVIRONMENT ANALYSIS

General External Environment

1. What factors should Vonage consider to keep the leading position in the telecommunication industry?

1. Opportunity

Vonage should catch the opportunity of the growth of Internet and broadband, and the large oversea markets. There are many countries that lack of VoIP technology. Vonage can open new business to new markets. Another opportunity is the public's willingness to accept lesser quality and reliability for better value, unlimited long distance, and free features. This migration will continue as wireless providers gain a larger share of the telephone market. Another opportunity is that Vonage VoIP products offers solutions to growing phone service cost, poor service, and the feeling that the conglomerate companies are in total control.

2. Threats

While Vonage experiences a price advantage over the traditional phone companies, other VoIP providers are offering packages at an even lower rate than Vonage. Packet-8, for example, offers unlimited residential services for \$20, which is close to half the rate that Vonage is charging. There is also the Voice over Net (VON) providers that offer free calling capabilities. Currently the VoIP services are unregulated by the FCC or state regulators, though there is growing pressure for regulation because of the popularity of the services.

3. Competitive Rivalry

Several of the companies that are getting into the VoIP market are much more established and respected companies than Vonage. These companies include the likes of AT&T, Time Warner, and Comcast. All of these companies have resources far in excess of Vonage, and the additional advantage of already having access to end users' houses, like being the cable provider, and being known entities that they have done business with in the past.

Task Environment: Industry Analysis: Porter's Five Forces

1. Rivalry among existing firms

When considering rivalry, Vonage's main rivals are AT&T, SBC Communications, Comcast, and Time Warner. Obviously these companies share the telephone market with Vonage so that is the primary reason for their rivalry. They also carry a large portion of the broadband service in the United States, which Vonage uses to operate its VoIP service.

2. Threat of substitutes

The threat of substitutes for Vonage is vast. There are currently over one thousand VoIP providers in the United States and this number is growing at a staggering rate. With that many direct competitors, the threat of losing potential customers to a substitute is a costly possibility.

3. Bargaining power of buyers

When looking at buyer power, it is difficult to analyze. Considering the vast amount of choices a buyer has when searching for telephone service, it would seem there is a high amount of buyer power. They have the choice and opportunity to use any telephone service provider they choose. They also have the choice of using a traditional phone service, cellular phone service, or going with VoIP service, again increasing their power as a buyer.

4. Bargaining power of suppliers

Supplier power is rather low. With more than one thousand competitors in the VoIP market, Vonage has very little power as a supplier. When the company first started, their power was vast, though the new entrants into the market have greatly diminished that power.

5. Threat of new entrants

The barriers to entrance into the market are moderate. While it would be difficult for a small upstart company to jump into the VoIP market, it is rather easy for a large telephone or broadband company to do the same. The technology is widespread and the access to the broadband service and telephone lines is already available to those companies. With their vast resources, it is just a matter of implementing the technology into their current service offerings.

● **INTERNAL ANALYSIS**

Business and Corporate Strategies

1. What is the source of Vonage's competitive advantage?

Business Level

At the very beginning, according to the market segments, Vonage's business strategy should be focus strategy. It shows from Vonage's products offering. Vonage has both residential and business plans. To enable each phone line to connect to the Vonage network, an adapter is plugged into the phone line that holds the identity of the phone number. Vonage does offer different plans, but these only change the number of minutes and types of minutes that are included.

Corporate Level

According to the income statement (*Exhibit 1*) of Vonage, over 95% of its revenue is from the telephone service and the rest comes from customer equipments and shipping. Vonage derives most of their telephone service revenue from monthly subscription fees that they charge their customers under their service plans. Vonage has both residential and business plans. To enable each phone line to connect to the Vonage network, an adapter is plugged into the phone line that holds the identity of the phone number. For that reason, it can actually be removed and plugged into a hotel's broadband connection, or moved to a new home and plugged into the broadband modem or router without any transfer fees or calls to Vonage to transfer the number to a new location.

Core Competencies: Tangible Resources

Finance

Over 95% of its revenue is from the telephone service and the rest comes from customer equipments and shipping. Vonage derives most of their telephone service revenue from monthly subscription fees that they charge their customers under their service plans. They also offer residential fax service, virtual phone numbers, toll free numbers and other services, for each of which they charge an additional monthly fee.

Research & Development

The product instantly appeals to many market segments including the Internet generation, those disaffected with traditional local and long distance phone companies, mobile young families and military populations, and those comfortable with technology. To enable each phone line to connect to the Vonage network, an adapter is plugged into the phone line that holds the identity of the phone number. Vonage does offer different plans, but these only change the number of minutes and types of minutes that are included.

Human Resource Management

The company culture of teamwork emphasized strong values and ethics. Vonage has expanded its size by employing more personnel domestically and internationally. Top managers were able to respond to environment opportunities and threats in a timely fashion due to the established notion of teamwork throughout the company.

Organizational Structure and Culture

Vonage Company has a functional structure. Vonage CEO Michael Snyder agreed to step down as Chief Executive Officer and resign from the company's Board of Directors. In his place, Chairman and Chief Strategist Jeffrey A. Citron will serve as Interim CEO. Different vice presidents control different functions. The CEO controls finance, technology, marketing, service, and product development. If Vonage decides to develop overseas markets, they should also have a divisional structure to support the new development.

Functional Capabilities: Value Chain

Information System

Vonage established an effective network of information system to gather data from multiple markets. The information system also enables the company to market and explain their products and services to customers.

Operations

Vonage is a Voice over Internet Protocol (VoIP) provider and a pioneer in telecommunication industry. They provide an alternative to the standard telephone industry to any person or small business with a broadband Internet connection. It allows the user to talk to anyone at any location by using their Internet connection rather than their standard telephone service. In 2003, Vonage began offering the first ever VoIP 911 call platform. In 2004, Vonage was offered in Circuit City stores nationwide, making it the first ever VoIP service available through retail locations. Vonage also successfully launched in Canada that year. In 2005, Vonage launched a Wi-Fi phone, allowing it to branch out into the mobile phone market. The V-Phone was launched in 2006, officially introducing Vonage to the mobile phone market. The year 2007, they launched a voicemail service, as well as their “Free to Compete” campaign. Vonage teamed up with Motorola to release an Internet telephone adapter with wireless router, as well as launch V-Access. Over 9 billion calls were completed last year.

NEW YORK DEPARTMENT OF REVENUE VS. QUALITY MARKETS OF AMERICA

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CASE DESCRIPTION

This case was written to be useful in finance, accounting, or taxation courses at Levels 2, 3, or 4 in the undergraduate curriculum. It is also appropriate for Level 5 graduate accounting, tax, or finance courses. The rigor and depth of material can easily be adjusted for the intended audience. The case works well with traditional class discussion based case approaches, but can also be easily adapted for role-playing or debate exercises in the class. Introductory finance or accounting classes (Levels 2 and 3) can use the case to explore the differences between debt and equity and the various shades of grey that sometimes exist between the two. More advanced finance classes (Levels 4 and 5) can use the case to explore signaling theory, capital structure theory, and how firm capital structures are influenced by state and federal tax considerations. Tax accounting courses (Levels 4 and 5) can use the case to explore the concepts and calculations of state franchise taxes.

CASE SYNOPSIS

In this instructional case, Quality Markets of America (QMA), a large and successful company, is being audited by the New York State Department of Revenue over its calculation of the state's franchise tax. QMA has historically borrowed a substantial amount of money from its subsidiaries. The state tax regulations indicate that undercapitalized firms must treat debt from affiliated parties, such as subsidiaries, similar to equity for the purposes of franchise tax calculations. QMA does not consider itself to be undercapitalized, while the state does – thus leading to differing interpretations on how the firm should compute its franchise tax obligations. This case explores a wide variety of issues around the franchise tax, capital adequacy, and the state's ability to influence firms' capital structures through the tax code and regulations.

INSTRUCTOR NOTES

Case Issues

There are many issues in the case. These range from the relatively simple issues to the more theoretical and complex. The simple issues include:

1. How exactly should we define debt and equity?
2. What exactly is related-party debt and how does it differ from third-party debt?
3. What is a franchise tax and how is it calculated?
4. How do financial statements (and ratios) change when we include data for subsidiaries?

The more complex issues include:

1. What does it mean to have “adequate capital?”
2. What are the implications of the state’s definition of adequate capital in Rule 25?
3. Are there legitimate reasons to use related-party debt?
4. Is there a “one size fits all” solution to capital structure questions?
5. Should accounting standards be “rules based” or “principles based?”

Based on the issues above, the case can be used in a variety of ways and in several different classes. The case is a composite and disguised case based on several court cases with similar fact sets in the state of Tennessee. Two of the case authors were engaged as expert witnesses in at least one of the cases. In each case the use of related-party debt was a key issue. The state Department of Revenue contended that related-party debt should be added to equity for purposes of franchise tax calculations, while the corporations in question asserted that only under-capitalized firms should include related-party debt in their tax basis.

At first glance, the case would appear to involve a relatively simple factual determination of whether certain debt actually qualified as equity. However, under the surface, certain complexities arose when examining the definition or application of such terms as:

1. Debt
2. Equity
3. Adequate or inadequate capital
4. Related-party debt
5. Franchise tax calculation

The case focuses on familiar topics in basic accounting and principles of finance courses, such as debt, equity, adequate capital, and other related terms and issues. For instructional

purposes we have separated these issues into “basic” issues that could be taught in any Level 2 or 3 accounting or finance class and “advanced” issues that are more appropriate for Level 4 or 5 classes.

BASIC APPROACH

The Basic Approach entails covering the first eight discussion questions at the end of the case. These questions should be suitable for students in Managerial Accounting or Introductory Finance courses. If pursuing the basic approach, you might segregate your case analysis into the following components:

1. Basic understanding of the franchise tax calculation, noting the effect of including or excluding affiliated debt
2. Examination of underlying attributes of debt and equity
3. Discussion of importance of clarity in standard-setting or rule-making
4. Responses to the eight basic questions at the end of the case

The case could be assigned as either an individual exercise or a group activity. Thorough preparation could easily require two or more hours of time, particularly if students are asked to compute the franchise tax liability for each year. Presentations or class discussion should generally require 45 minutes to 1 hour of in-class discussion time, either as a group presentation or discussion led by the instructor. The subject matter may also easily provide for group debate or role-play exercises.

ADVANCED APPROACH

The case presents eight advanced questions that are more appropriate for advanced undergraduate finance courses or finance courses at the graduate level. After discussing certain basic topics mentioned above, the advanced approach should also address the following issues:

1. Adequate and inadequate capital, and related calculations
2. Structuring debt and equity components of an enterprise, and effects on franchise taxes
3. Use of affiliated debt between related companies
4. Bond ratings and other factors impacting “adequate capitalization”
5. Responses to the eight advanced questions at the end of the case

The advanced approach covers a far broader range of issues with greater conceptual and computational difficulty than those in the basic approach. Instructors who wish to cover all of the advanced issues should allocate at least two hours of class time for lecture and discussion.

ANSWERS FOR THE END OF CASE DISCUSSION QUESTIONS

Basic Questions

- 1. If Company X advances funds to Company Y, and if Company Y does not sign an actual physical note, does Company Y have “equity” or “debt?” What are the common characteristics of debt and equity?**

Conceptually, liabilities have been defined as “probable future sacrifices of economic benefits arising from present obligations of a particular entity to transfer assets or provide services to other entities in the future as a result of past transactions” (Financial Accounting Standards Board, 1985). An underlying principle of liabilities is the “obligation” aspect, representing debt to another entity. These obligations include definite liabilities, such as accounts or notes payable; estimated amounts such as estimated warranties payable; contingent liabilities such as expected litigation settlements; or debt represented by off-balance sheet transactions such as long-term leases or variable interest entity consolidated debt. Debt generally includes these three attributes:

1. the present value of a future commitment,
2. an obligation that cannot be avoided, and
3. related to an event that has already occurred.

Stockholders’ Equity is generally understood to include two categories of transactions:

1. contributed capital transactions involving direct investments by owners or stockholders, and
2. earned capital transactions resulting generally from profits and losses.

From a broad perspective, stockholders’ equity might be viewed as the “residual” balance after deducting total liabilities from total assets. This “residual” concept seems more appropriate under current financial reporting standards since debt can include “off-balance sheet” financing vehicles, such as long-term commitments through leasing. Also, equity can include certain transactions, referred to as Other Comprehensive Income, such as Unrealized Holding Gains or Losses, when the objective is to avoid including these transactions as a part of corporate earnings. Equity is usually differentiated from debt due to its lack of an “obligation” characteristic. However, certain Preferred Stock that has mandatory redemption features should be disclosed as a liability.

2. Does the State prefer, for taxable revenue purposes, financial “claims” of a company to be classified as debt or equity? Discuss.

Assuming the state is interested in maximizing its tax revenue, the state will definitely prefer claims to be classified as equity. For states with income taxes interest on debt is tax deductible, thus reducing taxable income and tax revenue. For states with franchise taxes debt is typically omitted from the franchise tax base, thus reducing franchise tax revenue.

3. If a company is subject to additional tax based on the size of its stockholders’ equity, what can it do to avoid having debt re-classified as equity by a taxing authority?

Corporations that operate in states with franchise taxes are often subjected to closer scrutiny of possible equity attributes among its recorded non-consolidated debt. In order to avoid a re-classification of debt to equity, a company should maintain records that clearly show debt characteristics of all liabilities. These characteristics of debt include maintaining records showing due dates, interest rates, repayment transactions, detailed loan records, signed debt agreements, loan security details, and other disclosures that provide evidence of debt as is typical of a lender-debtor relationship.

4. Explain the difference in the consolidated and unconsolidated financial data for QMA. Why do we need both sets of numbers?

The consolidated numbers for QMA include all of the assets and debts of both the parent company and its subsidiary firms. The consolidated numbers are typically what are audited, disclosed to the public, and used to determine the “credit worthiness” of the firm. The firm’s stock price and bond rating are conceptually linked to the consolidated numbers.

The unconsolidated numbers are necessary in this case due to the particular language of the relevant section of the state tax code, which can be paraphrased as saying “If the capital stock of a corporation with debt from affiliates is inadequate for its business needs apart from the credit extended by affiliates then the debt from affiliates must be included in the tax base for purposes of computing the franchise tax.”

It is interesting to note that QMA’s debt to its subsidiaries has no net effect on the consolidated balance sheet. These debts will appear as liabilities for QMA, and as assets for the subsidiaries, on an unconsolidated basis, but will likely be eliminated in the preparation of consolidated financial statements.

For example, when Sub Co. loans \$30,000 to Parent Co, a receivable appears on the books of the Sub, and a liability on the books of Parent. If Parent owns more than

50% of the Sub, Parent generally must consolidate the financial statements, whereby the receivable and the payable will be offset (or eliminated) and the Cash of \$30,000 will appear on the books of Parent.

Franchise tax returns, for purposes of this case, include balance sheets of the taxpayer on an unconsolidated basis, which reflects the full liability due to subsidiaries or affiliated companies. The unconsolidated numbers do not include the assets of the subsidiaries or the third-party debt of the subsidiaries, but they do include the debt owed by QMA to its subsidiaries. This is an extremely conservative view of QMA's financial position. If QMA can demonstrate its capital is adequate based on this set of numbers it may have a good case in court.

5. In Exhibit 4, what do you think is intended by reference to “capital stock?” How does use of this term affect a response to the state?

When laws are written involving topics that require very specific technical language, extensive measures should be taken to ensure the language is consistent with the intent of the law or ruling. This case involves numerous examples where terms are either out-of-date or misused in terms of the current usage in business. The use of the phrase “capital stock” in Exhibit 4 is an example of this. Although typically used in state laws and regulations to represent Total Stockholders' Equity, accountants use the term specifically to refer only to the outstanding stock (either at par value or at contributed value) which omits retained earnings and other terms generally associated with stockholders' equity. This illustrates the risk taken by lawmakers when addressing highly technical areas without full understanding of all relevant terms. Significant misunderstandings and subsequent high cost of litigation could be avoided by taking additional care when writing laws and regulations.

Two other common examples of misuse of financial statement terms include the term “reserve” and the term “surplus.” Although not used in this case, these two terms are often misused by non-accountants in the analysis or discussion of financial reporting. A “reserve” might refer to restricted retained earnings, a restricted cash account, or an estimated liability account, such as estimated sales returns or estimated warranties. The term “surplus” sometimes is used to represent accumulated earnings rather than accumulated losses, often referred to as a “deficit.”

6. Use the template in Exhibit 3 to compute QMA's franchise tax liability assuming 5% of QMA's total business is in New York. The total tax liability should be a combined 3-year total for 2009, 2010, and 2011.
- Compute the tax as you think QMA would on its franchise tax return.
 - Compute the tax as you think the Department of Revenue would.
 - Compare your answers from a. and b.

Table TN 1: Tax Calculated By The New York Department Of Revenue			
	2009	2010	2011
SCHEDULE A: COMPUTATION OF FRANCHISE TAX			
Total net worth from Schedule B	668,090,500	662,334,750	778,521,000
Total real & tangible personal property, applicable to operations in state	455,018,000	450,461,000	584,450,750
Franchise tax (0.25% of greater of line 1 or 2)	1,670,226	1,655,837	1,946,303
SCHEDULE B: COMPUTATION OF NET WORTH			
Net worth (total assets less total liabilities)	5,436,364,000	5,228,065,000	4,078,136,000
Indebtedness to affiliated companies (if applicable)	7,925,446,000	8,018,630,000	11,492,284,000
Total	13,361,810,000	13,246,695,000	15,570,420,000
Ratio (percentage of business conducted in state)	5%	5%	5%
Total (Line 3 times Line 4)	668,090,500	662,334,750	778,521,000
Net Worth for franchise tax purposes			

Exhibit 3 in the case provides the worksheet for calculation of the franchise tax liability. The calculation generally follows the steps below:

- Follow each line of Case Exhibit 3, inserting numbers from Case Exhibit 7A on the appropriate line:
 - Total net worth or stockholders' equity (total assets less total liabilities)
 - Net plant assets
 - Loans from affiliates (indebtedness to affiliated companies)
- Assume 5% of operations are conducted in the state
- Assume 5% of "real and tangible personal property" (net plant assets) are involved in operations in the state
- Calculate the tax from two perspectives:
 - From perspective of the state auditor, with the calculation including the "loans from affiliates"
 - From perspective of QMA, omitting "loans from affiliates"
- Calculate the difference between the two calculations, with the result showing the additional tax due to the state

	2009	2010	2011
SCHEDULE A: COMPUTATION OF FRANCHISE TAX			
Total net worth from Schedule B	271,818,200	261,403,250	203,906,800
Total real & tangible personal property, applicable to operations in state	455,018,000	450,461,000	584,450,750
Franchise tax (0.25% of greater of line 1 or 2)	1,137,545	1,126,153	1,461,127
SCHEDULE B: COMPUTATION OF NET WORTH			
Net worth (total assets less total liabilities)	5,436,364,000	5,228,065,000	4,078,136,000
Indebtedness to affiliated companies (if applicable)	-	-	-
Total	5,436,364,000	5,228,065,000	4,078,136,000
Ratio (percentage of business conducted in state)	5%	5%	5%
Total (Line 3 times Line 4)	271,818,200	261,403,250	203,906,800
Net Worth for franchise tax purposes			

	2009	2010	2011
Franchise Tax, State Calculation (From Table TN 1)	1,670,226	1,655,837	1,946,303
Franchise Tax, QMA Calculation (From Table TN 2)	1,137,545	1,126,153	1,461,127
Additional Annual Franchise Tax Due to State, Per Department of Revenue	532,681	529,684	485,176
Additional Franchise Tax Due to State, Three Year Total	\$1,547,541		

7. What financial ratios could QMA calculate that would support its contention that QMA is well capitalized?

There are a wide variety of ratios that could be calculated. The most informative ratios would relate to the firm's debt levels and ability to cover its interest expenses, but since Rule 25 specifically references quick assets it would be helpful to calculate some liquidity ratios as well. Obviously QMA's position will be strengthened if the ratios indicate financial health. All else equal lower debt ratios are preferred, along with higher coverage ratios and higher liquidity ratios.

A select set of ratios for QMA and its peer firms is shown below in Table TN4. Obviously there are many other ratios that may also be informative about QMA's situation.

	WareMart	Bullseye	BigMart	QMA Consolidated	QMA Unconsolidated
Current Ratio	1.15	1.13	0.89	2.05	2.26
Times Interest Earned	6.13	21.54	11.50	21.49	6.82
Debt Ratio	66.09%	48.79%	62.87%	58.31%	79.71%
Total Asset Turnover	1.54	2.32	2.31	2.10	2.06
Return on Sales	4.12%	3.66%	5.30%	7.89%	36.07%
Return on Assets	7.13%	6.55%	8.79%	16.61%	7.32%
Return on Equity	18.95%	12.79%	22.90%	39.84%	36.07%
Moody's Bond Rating	A1	A2	Aa2	Aa2	N/A

It seems clear from Table TN 4 that on a consolidated basis QMA compares very favorably to its peer firms. QMA has the highest current ratio, is in a virtual tie for the highest coverage ratio, has the second lowest debt ratio, a comparable total asset turnover, and by far the highest profit margins. What may be surprising is that even based on the unconsolidated financials QMA looks pretty good. In fact the only area where the unconsolidated numbers look bad in comparison to the peer firms is in the debt ratio. This is obviously due to the fact that “unconsolidating” the financials leaves all of the related-party debt on QMA’s balance sheet, but removes all of the subsidiary assets that offset those debts when looking at the consolidated financials.

Also of note is the fact that even with the unconsolidated financials QMA retains a debt-to-equity ratio below the important 4.00 mark – just barely. (A debt ratio of 79.71% translates to a debt-to-equity ratio = $0.7971 / (1 - 0.7971) = 3.93$)

8. Discuss the dilemma of standard-setters – considering whether rules or laws should be “rules-based” or “principles-based.” Use facts and circumstances in this case as your illustration.

Standard-setters are constantly faced with the dilemma of knowing when to stop providing “principles” and begin with the “rules.” When writing federal tax laws, it is well understood that Congress passes a tax code (principle) which is usually very broad in scope, with the understanding that the Treasury Department will later issue Treasury Regulations and revenue rulings (rules) to interpret the code. Likewise, the Financial Accounting Standards Board (FASB) will issue codification standards which may later require additional interpretations or rules.

FASB standards, when compared to its counterpart (IASB) in the international environment, are generally understood to be much more “rules-based” than the international “principles-based” standards. At one end of the “principles-based” spectrum, a standard might require corporate management to adopt a financial reporting standard that is “fair,” with very little guidance. Or on the other end (a “rules-based” framework), a standard could be established for virtually every possible transaction. When detailed rules are established, sometimes a question arises when a certain financial event or transaction is NOT addressed - does “silence” provide consent or a prohibition?

As a general rule, regulators and stock analysts believe an emphasis on rules provides a better measure of comparability of financial results between companies and between different periods of the same company.

This raises a good question: “How detailed should laws and standards be?”
“Can all confusion be removed?”

ADVANCED QUESTIONS

9. How does this state define “inadequate capital” for firms with debt from related parties? Be specific. What are the implications of this definition?

The state’s position is that firms with related-party debt only have adequate capital if they pass both “tests” in Rule 25.

1. The first test is a quick assets test. If the amount of related-party debt exceeds the firm’s quick assets, the excess is added to the firm’s equity to determine the base of the franchise tax. So only firms with Quick Assets > related-party debt are deemed to have adequate capital.
2. The second test is a capital assets test. If the amount of capital assets (long-term assets + inventory) exceeds the firm’s net worth (total equity), the excess is added to the firm’s equity to determine the base of the franchise tax. So, only firms with Total Equity > Capital Assets are deemed to have adequate capital.

Table TN 5 shows how QMA measures up against the quick assets and capital assets test on both a consolidated and unconsolidated basis.

Table TN 5: QMA and the Rule 25 Tests				
All Numbers in Millions				
Quick Assets Test		2009	2010	2011
	Related Party Debt	\$7,925	\$8,019	\$11,492
Consolidated	Quick Assets	\$7,487	\$6,936	\$5,996
	Pass/Fail	FAIL	FAIL	FAIL
Unconsolidated	Quick Assets	\$4,567	\$4,231	\$3,726
	Pass/Fail	FAIL	FAIL	FAIL
Capital Assets Test				
Consolidated	Capital Assets	\$16,401	\$16,259	\$20,994
	Total Equity	\$13,517	\$13,229	\$13,528
	Pass/Fail	FAIL	FAIL	FAIL
Unconsolidated	Capital Assets	\$10,151	\$10,063	\$12,995
	Total Equity	\$5,436	\$5,228	\$4,078
	Pass/Fail	FAIL	FAIL	FAIL
Quick Assets = Cash + Receivables				
Related Party Debt is the same for both the consolidated and unconsolidated financials (though the debt is all “hidden” in the consolidated financials). The firm fails the Quick Assets Test if Quick Assets < Related Party Debt.				
Capital Assets = Net Plant Assets + Inventory				
The firm fails the Capital Assets Test if Total Equity < Capital Assets				

As shown in Table TN 5, QMA does not look good at all according to Rule 25. The firm fails both the quick assets and capital assets in every year. This is true for both the consolidated and unconsolidated financials – though it is likely the state only cares about the unconsolidated financials in this case. If Rule 25 is a valid way to determine capital adequacy, then QMA certainly appears to be undercapitalized.

The implications of Rule 25 are quite far reaching for firms with related-party debt. Note that there are no absolute limits on related-party debt in Rule 25. The limits are only on how this debt relates to other items on the balance sheet.

IMPLICATIONS OF THE QUICK ASSETS TEST

The net effect of the quick assets test is that firm's may use affiliated debt (without penalty) for the sole purpose of financing quick assets. As long as the borrower keeps all related-party debt in quick assets (and there is one other dollar in quick assets from some other source) then the borrower will pass the quick assets test. Since quick assets are cash and near-cash assets, this is equivalent to telling firms that they can borrow (in unlimited amounts) from related parties as long as they don't spend the money (the borrowings must be held as cash or near-cash assets). Since quick assets typically have very low rates of return, it is very unlikely that borrowing to invest solely in quick assets will be a profitable endeavor.

IMPLICATIONS OF THE CAPITAL ASSETS TEST

The only possible way for a firm with related-party debt to pass the capital assets test is if all capital assets are financed with equity. Note that this precludes not just related-party debt from financing capital assets, it precludes any debt at all from financing capital assets. So firms with related-party debt that wish to "pass" the capital assets test cannot use ANY source of debt to finance factories, office buildings, computer systems, or any other capital asset.

10. How does Rule 25 relate to the maturity matching principle of finance?

Keep in mind that Rule 25 was written in 1910 – long before many of our "modern" concepts of corporate finance had been developed. The Capital Assets test appears to be based on a fundamental misunderstanding of the maturity matching principle of finance. Unlike the accounting matching principle, which is a conceptual basis for much of the accrual accounting system, the maturity matching principle is simply a basic rule of thumb in finance. This rule of thumb says that short-term assets should be financed primarily with short-term sources of funds and that long-term assets should be financed with long-term sources of funds. Following these guidelines will help minimize the financing risk of the firm. The maturity matching principle is sometimes

stated as “permanent assets should be financed with permanent sources of funds.” Describing an asset as “permanent” is more subtle and descriptive than describing it as simply short-term or long-term. It is possible that some short-term assets will be “permanently” needed by the firm (such as the minimum amount of cash needed to operate the firm), and thus should be financed with long-term sources of funds. It appears that Rule 25 is based on a misinterpretation of this notion of permanence. In the world of Rule 25, capital assets are “permanent assets” and the only valid source of funds for financing them is equity – since in theory equity is “permanent.” According to this line of thinking debt cannot be a permanent source of capital since it must eventually be repaid. This represents a fundamental misunderstanding of “permanence” on the balance sheet.

Individual assets on the balance sheet are rarely permanent. Buildings deteriorate, computers become obsolete, and patents expire. However, firms do have “permanent” asset bases because it is understood that old buildings will be replaced with new ones and obsolete computers will be upgraded or replaced. Likewise, individual debts of the company are not permanent. All debts owed by solvent companies are repaid over time. However, debts being retired are usually replaced with new debts. Thus, debt can be a permanent source of funds even though individual debts are continually being repaid.

Consider the case of an oil refiner that needs 1,000 oil tanker trucks to deliver gasoline to local gas stations nationwide. Each of these trucks has an expected life of 10 years, a cost of \$100,000, and will be depreciated using the straight-line method over the truck’s life. For simplicity, we will assume the cost of tanker trucks never increases. We will also assume that the oil refiner has staggered its purchases of trucks over the years so that in any given year it only needs to replace 100 of its trucks. In other words this year 100 trucks will expire and need to be replaced. Next year another 100 will expire and be replaced, and so forth. Finally, assume that the purchase of the trucks is financed with 0% interest debt from the dealer that will be repaid in equal annual installments over ten years (\$10,000 per truck per year). Given all of these assumptions, we reach a fascinating conclusion. Each and every year the balance sheet of the oil refiner will show \$55,000,000 in assets related to the truck fleet and \$55,000,000 in debt related to financing the truck fleet.¹ This result holds even though 10% of the trucks are being replaced every year and 10% of the debt is being retired every year. The point is that debt can be a permanent source of funds even though it is being continually repaid, just as assets can be permanent even though they are being continually replaced.

The notion that capital assets should be financed with permanent sources of funds is actually an oversimplification of the maturity matching principle. This approach calls for matching the maturity of the asset to the maturity of the source of funds used to finance the asset purchase. So, sources of funds that exist for as long as the assets they finance are considered permanent. Following the maturity matching principle

increases the likelihood that the firm will be able to pay its debts as they mature and minimizes the firm's risk from refinancing. For example, the oil trucks described above create economic benefits (cash flows) for the firm for 10 years. They should therefore be financed over the same ten-year period. For further illustration, consider this quote from a popular intermediate finance textbook by Brigham and Gapenski (1993, 772-774)

At the limit, a firm could attempt to match exactly the maturity structure of its assets and liabilities. Inventories expected to be sold in 30 days could be financed with a 30-day bank loan; a machine expected to last for 5 years could be financed with a 5-year loan; a 20-year building could be financed with a 20-year mortgage bond; and so forth. Actually, of course, two factors prevent this exact maturity matching: (1) there is uncertainty about the lives of assets, and (2) some common equity must be used and equity has no maturity... In practice, firms don't finance each specific asset with a type of capital that has a maturity equal to the asset's life. However, academic studies do show that most firms tend to finance short-term assets from short-term sources and long-term assets from long-term sources.

It is ironic to see that Rule 25 seems to endorse a version of maturity matching as the reason that capital assets must be financed only with equity, while Brigham cites the need to use equity financing as one of the reasons maturity matching cannot be perfectly implemented.

Maturity matching is a common topic in business school case studies. Bierwag, Kaufman and Toevs (1983) developed a typical maturity matching model used in instructional cases. Barclay and Smith (1995, 1996) argued that the timing of cash inflows should determine the maturity structure of debt. Stohs and Mauer (1996) showed that companies with longer asset lives typically have longer debt maturities. For further discussion on the topic of maturity matching, see the literature review in the Jun and Jen (2005) study.

11. Rule 25 applies only to companies with related-party debt. The state apparently has different standards for determining whether firms without related-party are well capitalized. Why is this? Is it “fair?”

As mentioned above, Rule 25 only applies to firms with related-party debt. The state rarely has cause to investigate the capital adequacy of non-financial firms without related-party debt. However when this issue has been explored in the past the state has generally used the “one size fits all” rule that any firm with a debt-to-equity ratio less than 4.00 is well capitalized.

It seems to be implicit in the state's tax code and regulations that the use of related-party debt is simply a strategy for avoiding taxes. The classic example of this is the struggling subsidiary teetering on the edge of bankruptcy. If it is clear to the parent company that the subsidiary needs a capital infusion to survive, the parent would be

tempted to “loan” the subsidiary money, with the understanding that no repayment would be required. This would save the subsidiary from bankruptcy and simultaneously avoid increasing its franchise tax base, since no “equity” was added to the firm’s balance sheet. Since it is possible to use related-party debt as a franchise tax avoidance strategy the state has an incentive to place rigid limits on its use.

While it is certainly possible to use related-party debt in this manner, the concern over this has led to treating related-party debt in a fundamentally different way than third-party debt. Labeling the different treatment “unfair” is certainly a judgment call that might lead to some lively classroom debate – but there is no doubt that the state treats related-party debt as being fundamentally different than third-party debt.

For example, consider three firms, generically named Firm A, Firm B, and Firm C. Assume that all three firms are in the same industry and that all three firms have approximately the same risk level inherent in their operations. The firms have essentially identical assets, but have chosen to finance themselves in different ways. Balance Sheet information for these firms is presented below in Table TN 6.

BALANCE SHEET	FIRM A	FIRM B	FIRM C
Quick Assets	20	20	20
Capital Assets	80	80	80
Total Assets	100	100	100
Current Liabilities	10	10	10
Related-Party Debt	20	0	70
Third-Party Debt	0	50	0
Equity	70	40	20
Total Liabilities and Equity	100	100	100
Capital Assets – Equity	10	0	60
Tax Base for Franchise Tax = Equity + (Capital Assets – Equity)	80	40	80

Firm A obviously has the most conservative capital structure of the three, with a total debt ratio of 30%. Firm C is the most aggressively financed, with a total debt ratio of 80%. Firm B has an intermediate position, with a total debt ratio of 60%. Using the total debt ratio as a proxy for capital adequacy, Firm A is the best capitalized, followed by B and C. Firm A and Firm C both fail the capital assets test of Rule 25, due to their use of related-party debt to finance capital assets. Firm B is not subject to the test of Rule 25 since it does not use related-party debt. The irony of this situation is that Firm A, the most adequately capitalized firm, ends up with the same tax base as Firm C, the least

adequately capitalized firm. Further, Firm A's tax base is twice that of Firm B, which is also less adequately capitalized.

If the motivation of Rule 25, and the capital assets test in particular, is to discourage the use of debt then it is probably ineffective. However, Rule 25 does appear to be an effective means of discouraging the use of related-party debt.

12. The entire purpose of Rule 25 seems to be to limit the use of related-party debt. Are there legitimate reasons firms might want to use related-party debt? Explain.

Of course, tax avoidance can be a powerful economic motivator, but there are other legitimate reasons for the use of related-party debt. The use of related-party debt may in fact be economically efficient in many cases. There are several valid reasons for related-party debt. These include:

1. Cost minimization
2. Maintaining managerial control
3. Minimizing damaging signals sent to the marketplace

Cost Minimization

The first possible motivation for using related-party debt is cost minimization. Firms borrowing from third parties are frequently forced to pay a variety of costs, both explicit and implicit, in addition to interest on the debt. A few examples of these costs are commitment fees, the maintenance of compensating balances, underwriting fees, and the establishment of a sinking fund to repay the principal of the debt. These costs and fees are for one of two purposes: to compensate the lender for expenses it incurs or to protect the lender from the credit risk of the borrower. Since related-party debt is by definition borrowed from someone closely related to the firm, it is likely that these costs and fees can be minimized or eliminated altogether. This does not mean the related-party borrower is getting a "sweetheart deal" from the related-party lender. It simply means the related-party lender does not have to incur all of the costs of a third party lender (due to its relationship to the borrower) and has a better understanding of the credit risk involved (due to its relationship to the borrower).

There are many financial studies about the cost of corporate borrowing. For recent cost of debt studies, see Booth and Booth (2006), Zou and Adams (2008), and Ghosh and Moon (2010).

Managerial Control

A second motivation for the use of related-party debt relates to managerial control. In third party debt contracts it is very common for the lender to impose restrictions on the behavior of the borrower. Thus, the management of the firm gives up some portion of its control over the firm when it borrows from a third party. These restrictions, called protective covenants, may take many forms, but all have the same purpose of minimizing credit risk for the lender. Frequently seen protective covenants include limitations on dividends paid to shareholders, limitations on asset sales, prohibitions against further long-term borrowing, and prohibitions on merging with another firm. Violation of a protective covenant puts the loan into technical default. This default could be resolved out of court through renegotiation (frequently involving a cash payment to the lender - the borrower buys the right to violate the covenant) or through more formal legal means. In any case, adhering to covenants imposes restrictions on managerial behavior while violating covenants imposes various costs on the firm. Due to the close relationship between borrower and lender, it is possible that related-party debt has fewer, and less restrictive, protective covenants than third party debt.

Signaling Theory

A third motivation for the use of related-party debt relates to signaling theory. The basic premise of signaling theory is that every visible action taken by the firm conveys information (a signal) to investors and the financial marketplace. Signaling theory builds upon the work of Miller and Modigliani (1961) and has been studied in many articles by multiple researchers. Many signaling studies relate to the information value of dividends (John and Williams, 1985) and of dividend policy (Bhattacharya, 1979). Other applications of signaling theory involve the firm's capital structure and the appropriate level of debt and equity (Lee, Thakor, and Vora, 1983). John and Lang (1991) also proposed a multiple-signal theory for the informational value of dividends.

The most common application of signaling theory relates to the decision of when a firm should sell common stock (Grullon and Michaely, 2002). Imagine a firm that needs to raise capital in order to expand. The firm's stock price is currently \$30 per share. However, the firm's board of directors believes the "fair" price of the stock is \$40 per share. This firm will almost certainly refrain from selling stock at the present time since it believes it would be "giving away" \$10 of value to the new shareholders. In this circumstance the firm would have to find some other way to raise capital.

Now consider the same firm, but this time the board of directors believes the "fair" price of the stock is \$20. The firm is almost certain to sell stock in this case since it believes the stock price is too high, resulting in large "gains" for current shareholders.

The decision by the board to sell stock will send a very specific signal to the financial markets. Specifically, the decision to sell stock will be interpreted by investors as a proclamation from the board that the stock price is too high. Once this has been realized the stock price will actually fall.

This is just one example of signaling theory. The underlying point to signaling theory is that firms must be very careful about any public action, such as raising capital, because investors will draw inferences from every signal sent. Signaling theory also relates to the pecking-order theory of raising capital. The pecking-order theory (Myers, 1984) says that when firms need to raise capital they will always attempt to raise it internally first, through retained earnings or related-party debt for example. Private transactions such as these are generally not visible to the financial markets. Thus, private transactions send no negative signals to investors. In addition, any signal that may be sent by a private transaction is likely to be interpreted in a positive manner by the financial markets (Baskin, 1989). For example, if the firm raises money through related-party debt, the financial markets may react positively since the firm is likely minimizing its costs.

Only when these internal sources are exhausted will firms turn to external sources. Once the firm is forced to use external sources of capital it should do so by selling the safest security possible (non-convertible bonds or loans are the safest security, followed by convertible bonds, preferred stock, and common stock). If the firm raises capital through selling riskier securities, the signal sent to the markets will be more damaging. Since common stock is the riskiest of the traditional securities used to raise capital, it should be sold only as a last resort. In this way firms minimize the damaging signals they send the financial market.

13. Does the state’s definition of “inadequate capital” coincide with the general usage of the term “inadequate capital” or “under-capitalization?”

Unfortunately, the term “adequate capital” or conversely “inadequate capital” is not commonly used in the finance literature. In fact, *Barron’s Finance and Investment Handbook, 7th ed.* (Downes & Goodman, 2006), a commonly used dictionary of finance terms, contains no definition for adequate or inadequate capital. This is even more curious when one considers that the Handbook lists many other definitions related to capital, ranging from “capital asset” to “capital turnover.”

The only area of finance where terms related to capital adequacy are commonly used is in the regulation of banks and other financial institutions (Weber & Darbellay, 2008). Historically, in this area, a bank was considered to have “adequate capital” if its

leverage ratio (equity capital/ total assets) met certain requirements (Alexander, 2004). Consider this quote from a popular Financial Institutions textbook.

Bank capital requirements take three forms. The first type is based on the so-called leverage ratio...To be classified as well capitalized, a bank's leverage ratio must exceed 5%; a lower leverage ratio, especially one below 3%, triggers increased regulatory restrictions on the bank. Throughout most of the 1980s, minimum bank capital in the United States was set solely by specifying a minimum leverage ratio (Mishkin and Eakins, 2000, 520).

Though the leverage ratio is the specific ratio mentioned in the regulations, an identical effect could have been accomplished by setting restrictions on other ratios such as the debt-to-total-assets ratio or the debt-to-equity ratio. Consider the case of a small bank with the following balance sheet characteristics:

Total Assets	\$100	Debt	\$ 95
		Equity	\$ 5
		Total Debt and Equity	\$100

This bank has adequate capital by the regulatory standard since its leverage ratio is 5% (equity capital/ total assets = $5/100 = 5\%$). We could express essentially the same information by looking at the debt-to-total-assets ratio (total debt/total assets = $95/100 = 95\%$) or the debt-to-equity ratio (total debt/equity = $95/5 = 19$). Thus a leverage ratio of 5% is mathematically equivalent to a debt-to-total assets ratio of 95% and both are equivalent to a debt-to-equity ratio of 19. Thus, the selection of the leverage ratio in particular as the target of regulation is largely arbitrary. An identical effect could have been achieved by regulating either of the other ratios. It should be noted that the banking industry, by its very nature has very high debt levels (customer deposits are debt for the bank). Therefore, a non-banking firm with a debt-to-equity ratio of 19 would most likely not be considered "well-capitalized."

Though the banking industry appears to be one example where the notion of capital adequacy is clearly and simply defined, this simplicity has been largely lost since 1992. At that time the industry (and its regulators) began phasing in a much more complicated notion of capital adequacy. This new system acknowledges that not all banking activities (assets) are equally risky. Each bank's capital requirements are now tied to the risk level of its activities. Banks with riskier activities therefore end up with greater capital requirements than banks with safer activities. In other words, the regulators have abandoned the "one size fits all" strategy of focusing on the leverage ratio alone.

It must be understood that the purpose of bank capital regulation is to minimize the probability of bank failures. Adequate capital is thought to greatly reduce the

probability of failure. This leads to the related thought that any firm, not just banks, with adequate capital must have a low probability of failure. Conversely, any firm with a low probability of failure probably has adequate capital. Fortunately the notion of probability of corporate failure has been explored at some length by the finance industry and finance researchers.

14. **It is unlikely that QMA can use its bond rating as evidence of adequate capitalization. What other types of evidence or analysis could QMA produce that might be helpful in its case?**

This is obviously a broad question that can be answered in many different ways. The ratio analysis and peer comparisons discussed above would certainly be part of the answer.

Two types of analysis the instructor might want to introduce in more advanced classes are statistical bond rating estimation techniques (the Kapan & Urwitz model in particular) and the Altman's Z score.

Bond Ratings

In the finance industry, bond ratings are commonly used indicators of the ability of borrowers to repay debts sold to the public. High bond ratings indicate the firm has a low probability of bankruptcy and is likely to repay its obligations while low bond ratings indicate a higher probability of bankruptcy and a lower likelihood of repaying obligations. Bond ratings are assigned by independent rating agencies. Moody's and Standard and Poor's (S&P) are the largest of these credit agencies. The actual method the rating agencies use to determine bond ratings is proprietary to these firms, so is not publicly known. However, the method is known to consider a wide variety of factors ranging from balance sheet strength to cash flow to profitability.

It should be noted that following the financial crisis of the late 2000s there was quite a bit of public skepticism about the value and accuracy of bond ratings. The ratings on many types of securitized mortgage debt were believed to have been much too high based on the underlying quality of the assets that collateralized the bonds. However, there is quite a bit of difference in assigning a bond rating to a single company versus assigning a bond rating to an engineered or securitized financial instrument. The financial literature has consistently found that company bond ratings (on average) are informative and linked to market perceptions of risk (Elayan, Hsu & Meyer, 2003). Holthausen and Leftwich (1986) found a link between bond rating downgrades and lower short-term stock prices. Kim and Nabar (2003) demonstrated that bond ratings provide significant information to investors.

A summary of bond ratings and their interpretations for Moody's and S&P can be found in Table TN 7. Note that all ratings above Baa3 on Moody's scale and BBB- on S&P's scale are considered "investment grade." In a general sense, bonds granted these ratings or better are considered "safe" for most investors. In other words, the firms issuing investment grade bonds are considered to have an adequate capacity to repay the debt. A more particular meaning of the phrase "investment grade" can be traced to regulations affecting the banking and insurance industries. Historically, these industries have been permitted to own an unlimited number of investment grade bonds, but have had restrictions on the purchase of non-investment grade (or "junk") bonds. Since regulated financial institutions can purchase investment grade bonds without restrictions, the firms selling these bonds can almost always find buyers. In other words, companies with investment grade ratings have excellent access to the capital markets. They can borrow almost any time they want as long as they are willing to pay the going interest rate.

Table TN 7: Bond Rating Interpretation		
MOODY'S	S&P	INTERPRETATION
Aaa	AAA	Highest Quality
Aa1	AA+	
Aa2	AA	High Quality
Aa3	AA-	
A1	A+	Strong Payment Capacity
A2	A	
A3	A-	
Baa1	BBB+	Adequate Payment Capacity
Baa2	BBB	
Baa3	BBB-	(Investment Grade Cutoff)
Ba1	BB+	Likely to fulfill obligations;
Ba2	BB	Ongoing Uncertainty
Ba3	BB-	
B1	B+	
B2	B	High Risk Obligations
B3	B-	
Caa and below	CCC+ and below	Current vulnerability to default or already in default

One manner of determining the adequacy of QMA's capital would be to look at its credit ratings from Moody's and/or S&P. Unfortunately, the rating agencies do not maintain a credit rating for QMA individually. Rather, the ratings are based on the pooled assets and income of QMA and its subsidiaries. Since the state tax code in question calls for determining capital adequacy apart from affiliates, the published QMA bond ratings are of little use. However, there are several well-known techniques in the

finance literature for estimating bond ratings when the actual ratings are not known. All of these techniques were developed by performing statistical analysis of bond ratings to determine the variables that appear to be most influential in determining the ratings. Once the variables were identified, a second statistical procedure is used to identify the exact combination of variables that best predicts the rating (the “secret formula” as it were). All of the published techniques for estimating bond ratings can accurately predict roughly 2/3 of bond ratings. In addition the models predict almost all bond ratings to within one letter grade. For example, if a model predicts a rating of ‘A’ for a bond, it has about a 67% chance of being correct. If the ‘A’ rating is not correct, the actual bond almost certainly has a rating of ‘AA’ or ‘BBB’ (the rating categories on either side of ‘A’). The various models differ mainly in the choice of which financial variables to use. Popular bond rating models include Altman’s Z-score and its variations (1968 & 2000) and the Kaplan and Urwitz (1979) model.

It may be useful to demonstrate to the class the procedure for estimating QMA’s bond rating for the years in question using the Kaplan and Urwitz (1979) model. This particular model was chosen due its reliance on accounting data that is available in the case. The exact specification of the model and the calculations for QMA can be found in Table TN 12 at the end of this note. This model predicts the following ratings for QMA over the years in question. The results of the Kaplan and Urwitz model for QMA can be seen in Table TN 8 below.

	2009	2010	2011
Predicted Bond Rating Based on Consolidated Financials	A	A	A
Predicted Bond Rating Based on Unconsolidated Financials	BBB	A	BBB

As seen in the table above, the Kaplan and Urwitz model predicts an investment grade bond rating for QMA for every year in question. This is true even for the extremely conservative (unconsolidated) view of the firm mandated by Rule 25. This means it is very likely that QMA is adequately capitalized and would have been able to borrow from a third-party lender if it had tried.

Altman’s Z-Score

Another analytical method that may shed some light on the issue of QMA’s capital adequacy is a “credit scoring” or “credit grading” model. Models of this type attempt to directly estimate the probability of bankruptcy. More financially stable firms (those with more adequate capital – among other things) have a lower probability of bankruptcy. The best known model of this type is Altman’s Z-score, developed by

Edward I. Altman. The Z-score was developed as a method to predict corporate bankruptcy over the near term (about the next two years). Companies with low Z-scores are very likely to enter bankruptcy in the near future. Companies with high Z-scores are very unlikely to enter bankruptcy in the near future (in other words they are good credit risks). The one weakness of Altman's model is that it cannot predict the future of firms with intermediate Z scores. Altman called this region of scores the "zone of ignorance." Altman's Z-score has been shown to predict bankruptcy and non-bankruptcy with between 80% and 90% accuracy depending on the sample tested (Altman, 1968 & 2000).

Altman and his associates have developed several variations of the Z-score. It is probably most appropriate to estimate QMA's probability of bankruptcy with the Z''-model. The Z''-model is the able to predict bankruptcy for a wide variety of firms. According to one current financial analysis textbook:

The original Z-score had as one of its variables the asset-turnover ratio. As this variable is industry sensitive, the Z''-model, which omitted this variable, was developed. This model is applicable to (public and private) firms in the manufacturing, merchandising, and service (excluding financial) sector (White, Sondhi, & Fried, 1997, 996).

The exact specification of the Z''-model and the calculations for QMA are given in Table TN 13 and the end of this note. QMA's Z''-scores for the years in question are given in Table TN 9 below.

	2009	2010	2011
Z'' Score Based on Consolidated Financials	5.12	5.43	4.87
Z'' Score Based on Unconsolidated Financials	3.18	3.40	2.70
All scores greater than 2.60 indicate bankruptcy is very unlikely			

According to the Z''-model, scores above 2.60 indicate a very low probability of bankruptcy in the near future. In other words, firms with scores over 2.60 are good credit risks. QMA earns scores above 2.60 in every year on both a consolidated and unconsolidated basis. Given this information it is very probable that QMA could have borrowed from a bank or other third-party lender during the years in question. These scores would certainly strengthen QMA's argument that it has adequate capital.

Z''-scores have also been used to predict bond ratings for firms that do not have published ratings from credit agencies. In order to predict a rating, 3.25 is added to the original Z''-score (this eliminates the possibility of negative scores), then this modified Z''-score can be compared to average Z''-scores of firms with published bond ratings. A

complete list of average Z'' -scores and corresponding bond ratings can be found in Table TN 14 at the end of this note. QMA's modified Z'' -scores and implied bond ratings for the years in question are shown in Table TN 10 below. QMA's implied bond rating was found by comparing QMA's modified Z'' -score to the Z'' -scores for each rating. QMA was assigned the rating with the closest Z'' -score.

Table TN 10: Implied Bond Ratings from the Altman Z'' Scores by Year			
	2009	2010	2011
Consolidated			
Modified Z'' Score ($Z'' + 3.25$)	8.37	8.68	8.12
Implied Bond Rating	AAA	AAA	AA+
Unconsolidated			
Modified Z'' Score ($Z'' + 3.25$)	6.43	6.65	5.95
Implied Bond Rating	A-	A	BBB

As in the Kaplan and Urwitz model above, all of the QMA ratings are investment grade. This is further evidence that QMA was a good credit risk during the years in question. It is very likely that QMA could have borrowed from a third party at any time over this period.

15. How does the issue of “adequate capital” relate to the issue of “optimal capital structure” from finance theory?

One of the main issues considered in finance research over the last fifty years has been the determination of optimal capital structure for the firm. This research explores the factors that influence a firm's decision on how to finance its long term or capital assets. The goal of the research is to explain how firms can achieve the optimal blend of debt and equity financing for long-term purposes. If finance theory agreed with the state's position that all capital assets must be financed with equity then the literature on capital structure theory would be short and simple. However, capital structure theory does not agree with this point. In fact, one of the primary conclusions of capital structure theory is that firms that pay taxes should finance some portion of their capital assets with debt. Firms that finance capital assets entirely with equity do not take advantage of the tax deductibility of interest payments built into the federal tax code. Therefore, firms that finance capital assets entirely with equity are faced with higher financing costs than firms that use a combination of debt and equity.

Another major conclusion of capital structure theory is that there is no general solution for determining the optimal capital structure of all firms. In other words, there is no “one size fits all” method for figuring out optimal debt and equity levels. One of the

most famous ideas in this area is the trade-off theory of capital structure (Kraus and Litzenberger, 1973). This theory asserts that there are two primary forces that drive optimal debt levels. The first is the tax deductibility of interest payments. The second is the increased firm risk that comes from higher debt levels. The optimal debt level is determined by balancing or trading-off these two forces against each other.

Imagine a profitable, tax-paying firm that currently finances its capital assets entirely with equity. If this firm decides to finance a small portion of its capital assets with debt, its average financing cost should fall due to the tax-deductible interest payments. The firm might then decide to add more debt to its capital structure in order to further lower costs. Costs will continue to fall for some level of additional debt, but at some point the firm will become sufficiently risky that increases in the debt level actually increase its average costs (due to higher interest rates, restrictive covenants, and other factors). This pattern is described as the saucer-shaped cost of capital curve (costs gradually fall over some range of increased debt, then gradually rise as further debt is added). The trade-off theory says that the optimal debt level will result in the lowest average financing costs for the firm. The problem is that costs fall and rise at different rates for different industries and different firms. Therefore there is no general solution to the question of optimal debt levels. The state has taken the position, through Rule 25, that the optimal debt level is zero for all firms with related-party debt. (Remember that capital structure theory is concerned with debt and equity for financing capital assets. Current liabilities are excluded from this discussion.)

If we assume that all firms are trying to maintain their optimal debt levels at all times, it is interesting to note the dramatic differences in capital structures from one industry to another. Consider the following quote from a popular textbook. (Ross, Westerfield, Jaffe & Jordan, 2010, 479).

There are very significant interindustry differences in debt ratios that persist over time. ...debt ratios tend to be very low in high growth industries with ample future investment opportunity such as the drugs and electronics industries...Industries such as air transport and paper, with relatively few investment opportunities and slow growth, tend to use the most debt.

A table from this text (Ibbotson Associates, 2008) with data from several industries is reproduced in part below. Debt in this table is the sum of short-term and long-term debt. Values are medians for the industry. Note that the table expresses debt as a percentage of market value, not book value. So these debt ratios will not be directly comparable to those of QMA or its peers in the case.

Table TN 11: Debt Levels by Industry	
Industry	Debt as a Percentage of Market Value of the Firm
High Leverage	
Air Transport	57.91%
Hotels and Lodging	44.16%
Building Construction	40.38%
Communication	33.57%
Paper	25.06%
Low Leverage	
Educational Services	7.81%
Drugs	6.76%
Biological products	5.89%
Electronics	3.29%
Computers	1.60%

Clearly there are dramatic differences in the use of debt among various industries. One conceptual check firms frequently use to make sure they are not making irrational capital structure decisions is to compare their capital structure to that of their peer firms. We know from the peer comparisons in the case that QMA's capital structure is similar to that of its peer firms. The only significant difference is that QMA uses related-party debt instead of third party debt.

16. Which party do you think prevailed in this case – QMA or the State? Why?

This is a composite (and disguised) case based on several incidents with similar fact sets in the state of Tennessee. In those cases the corporations prevailed against the state. The courts determined that the state was enlarging the scope of Rule 25 by applying it to firms that were not undercapitalized, thinly capitalized, or inadequately capitalized. In short, the court found that Rule 25 should only be applied to firms with related-party debt that were undercapitalized, but that the "tests" in Rule 25 were not designed to determine whether or not a firm was undercapitalized. The court did not specify a method for determining adequate capital in cases such as this.

Table TN 12: Specification of the Kaplan and Urwitz Bond Estimation Model			
Kaplan Urwitz Estimated Bond Rating = $4.41 + (.0012 \times \text{Total Assets, in billions}) - (2.56 \times \text{Subordination (=1 if bond is subordinated, 0 if bond is senior)}) - (2.72 \times \text{Long Term Debt Ratio}) + (6.40 \times \text{Return on Assets}) - (0.53 \times \text{Coefficient of Variation in Net Income}) + (0.006 \times (\text{Cash Flow Before Interest and Taxes/Interest Expense}))$			
Selected Financial Information	2009	2010	2011
Interest Expense	\$354,720	\$398,160	\$420,960
Long-Term Debt Ratio	52.52%	53.76%	67.28%
Cash Flow Before Interest and Tax	\$2,316,250	\$3,184,097	\$3,457,042
Return on Assets	5.09%	7.99%	7.32%
Mean Net Income	1,258,723.78	1,258,723.78	1,258,723.78
Std Dev Net Income	309,249.98	309,249.98	309,249.98
Coefficient of Variation (CV) of Net Income	0.2457	0.2457	0.2457
Assets in Billions	17.75	17.55	20.10
2009: $4.41 + (0.0012 \times 17.75) - (2.56 \times 0) - (2.72 \times 0.5252) + (6.40 \times 0.0509) - (0.53 \times 0.2457) + (0.006 \times (2,316,250 / 354,720)) = \mathbf{3.24}$			
2010: $4.41 + (0.0012 \times 17.55) - (2.56 \times 0) - (2.72 \times 0.5376) + (6.40 \times 0.0799) - (0.53 \times 0.2457) + (0.006 \times (3,184,097 / 398,160)) = \mathbf{3.40}$			
2011: $4.41 + (0.0012 \times 20.10) - (2.56 \times 0) - (2.72 \times 0.6728) + (6.40 \times 0.0732) - (0.53 \times 0.2457) + (0.006 \times (3,457,042 / 420,960)) = \mathbf{2.99}$			
Kaplan Urwitz Model	2009	2010	2011
Kaplan Urwitz Score	3.24	3.40	2.99
Kaplan Urwitz Implied Rating	BBB	A	BBB

In predicting QMA's ratings, it is assumed that the firm has senior debt. Thus, the subordination variable in the model above takes a value of 0. Because there are only three years, the calculation includes the same mean, the same standard deviation, and the same coefficient of variation (CV). The bond score is translated into a letter rating using the following scale.

Score > 6.76	Rating = AAA
6.76 > Score > 5.19	Rating = AA
5.19 > Score > 3.28	Rating = A
3.28 > Score > 1.57	Rating = BBB
Score < 1.57	Rating = BB or below

This system predicts separate ratings for each investment grade category (BBB and better) and lumps all "junk" bonds into the same category. Kaplan and Urwitz actually developed several bond estimation models. The model presented here is known as Kaplan and Urwitz Model 2.

Table TN 13: The Z''-Model			
Altman's Z'' Score =			
$6.56 * (\text{Working Capital} / \text{Total Assets}) + 3.26 * (\text{Retained Earnings} / \text{Total Assets}) + 6.72 * (\text{Earnings before Interest and Taxes} / \text{Total Assets}) + 1.05 * (\text{Book Value of Equity} / \text{Book Value of Debt})$			
Selected Financial Information	2009	2010	2011
Working Capital	\$3,351,953	\$3,145,403	\$3,136,505
Retained Earnings	4,206,114	3,932,815	2,783,386
Earnings Before Interest and Taxes (EBIT)	1,861,232	2,733,636	2,872,592
Total Assets	17,752,160	17,546,958	20,095,400
Total Equity	5,436,364	5,228,065	4,078,136
Total Liabilities	12,315,796	12,318,893	16,017,264
2009: $(6.56 * (3,351,953 / 17,752,160)) + (3.26 * (4,206,114 / 17,752,160)) + (6.72 * (1,861,232 / 17,752,160)) + (1.05 * (5,436,364 / 12,315,796)) = 3.18$			
2010: $(6.56 * (3,145,403 / 17,546,958)) + (3.26 * (3,932,815 / 17,546,958)) + (6.72 * (2,733,636 / 17,546,958)) + (1.05 * (5,228,065 / 12,318,893)) = 3.40$			
2011: $(6.56 * (3,136,505 / 20,095,400)) + (3.26 * (2,783,386 / 20,095,400)) + (6.72 * (2,872,592 / 20,095,400)) + (1.05 * (4,078,136 / 16,017,264)) = 2.70$			
Altman's Z'' Score	3.18	3.40	2.70
Z'' > 2.60 = Good Credit	Good Credit	Good Credit	Good Credit
Z'' + 3.25	6.43	6.65	5.95
Implied Z'' Rating	A-	A	BBB

The critical values and indications of the Z''-score are:

<u>Z''-score</u>	<u>Indication</u>
Z'' < 1.10	Bankruptcy very likely
1.10 < Z'' < 2.60	Gray area (the "zone of ignorance")
Z'' > 2.60	Non-bankruptcy very likely

Table TN 14: The Relationship Between Bond Ratings and Modified Z'' Scores	
To create the modified Z''-score simply add 3.25 to the original Z''-score. The purpose of this is to eliminate negative scores and to standardize bonds in default to a score of 0.	
Bond Rating	Average Modified Z''-score
AAA	8.15
AA+	7.60
AA	7.30
AA-	7.00
A+	6.85
A	6.65

Table TN 14: The Relationship Between Bond Ratings and Modified Z'' Scores	
To create the modified Z''-score simply add 3.25 to the original Z''-score. The purpose of this is to eliminate negative scores and to standardize bonds in default to a score of 0.	
Bond Rating	Average Modified Z''-score
A-	6.40
BBB+	6.25
BBB	5.85
BBB-	5.65
BB+	5.25
BB	4.95
BB-	4.75
B+	4.50
B	4.15
B-	3.75
CCC+	3.20
CCC	2.50
CCC-	1.75
D (default)	

ENDNOTES

- ¹ This special result is of course due to the assumptions. The debt is being repaid at the same rate the trucks are being depreciated (10% per year). Further, the newly purchased trucks are shown on the balance sheet at their full purchase price (\$100,000 x 100 trucks = \$10,000,000), the trucks purchased last year reflect one year's depreciation (book value = \$9,000,000) and so on. Though the example is somewhat contrived, the main point still holds. Debt can be a permanent source of funds even though being continually repaid, just as assets can be permanent even though continually being replaced.

REFERENCES

- Alexander, S. K. (2004). Why banks hold capital in excess of regulatory requirements: The role of market discipline. *Journal of International Banking Regulation*, 6, 6-9.
- Altman, E. I. (1968). Financial ratios, discriminant analysis and the prediction of corporate bankruptcy. *Journal of Finance*, 23, 589-609.
- Altman, E. I. (2000). Predicting financial distress of companies: revisiting the z-score and the zeta models. July. Working Paper.
- Barclay, M. & Smith, C. (1995). The maturity structure of corporate debt. *Journal of Finance*, 50, 609-631.
- Barclay, M. & Smith, C. (1996). On financial architecture: leverage, maturity, and priority. *Journal of Applied Corporate Finance*, 8, 4-17.
- Baskin, J. (1989). An empirical investigation of the pecking order hypothesis. *Financial Management*, 18, 26-35.
- Bhattacharya, S. (1979). Imperfect information, dividend policy, and 'the bird in the hand' fallacy. *Bell Journal of Economics*, 10, 259-270.

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- Bierwag, G. O., Kaufman, G. G., & Toevs, A. (1983). *Innovations in bond portfolio management: duration analysis and immunization*. Jai Press, Inc.
- Booth, J. R. & Booth, L. C. (2006). Loan collateral decisions and corporate borrowing costs. *Journal of Money, Credit & Banking*, 38, 67-90.
- Brigham, E. F. & Gapenski, L. C. (1993). *Intermediate Financial Management*, 4th ed. Dryden Press.
- Downes, J. & Goodman, J. E. (2006). *Barron's Finance and Investment Handbook*, 7th ed. Barron's Educational Series.
- Elayan, F. A., Hsu, W. H., & Meyer, T. O. (2003). The informational content of credit rating announcements for share prices in a small market. *Journal of Economics and Finance*, 27(3), 337-356.
- Financial Accounting Standards Board. (1985). *Elements of Financial Statements of Business Enterprises*, "Statement of Financial Accounting Concepts No. 6.
- Ghosh, A. & Moon, D. (2010). Corporate debt financing and earnings quality. *Journal of Business Finance & Accounting*, 37, 538-559.
- Grullon, G. & Michaely, R. (2002). Dividends, share repurchases, and the substitution hypothesis. *Journal of Finance*, 57, 1649-1684.
- Holthausen, R. W. & Leftwich, R. W. (1986). The effect of bond rating changes on common stock prices. *Journal of Financial Economics*, 17, 57-89.
- Ibbotson Associates. (2008). *Cost of Capital Quarterly, 2008 Yearbook*.
- John, K. & Lang, L. (1991). Insider trading around dividend announcements: theory and evidence. *Journal of Finance*, 46, 1361-1389.
- John, K. & Williams, J. (1985). Dividends, dilution, and taxes: a signalling equilibrium. *Journal of Finance*, 40, 1053-1070.
- Jun, S. & Jen, F. C. (2005). The determinants and implications of matching maturities. *Review of Pacific Basin Financial Markets and Policies*, 8, 309-337.
- Kaplan, R. S., Urwitz, G., (1979), Statistical models of bond ratings: a methodological inquiry, *The Journal of Business*. 52, 231-261.
- Kim, Y., & Nabar, S. (2003). Why do stock prices react to bond rating downgrades? *Managerial Finance*, 29, 93-107.
- Kraus, A. & Litzenberger, R.H. (1973). A state-preference model of optimal financial leverage. *Journal of Finance*, 911-922.
- Lee, W. L., Thakor, A. V. & Vora, G. (1983). Screening, market signaling, and capital structure theory. *Journal of Finance*, 38, 1507-1518.
- Miller, M. & Modigliani, F. (1961). Dividend policy, growth, and the valuation of shares. *Journal of Business*, 34, 411-433.
- Mishkin and Eakins. (2000). *Financial Markets and Institutions*, 3rd ed. Addison Wesley.
- Myers, S. C. (1984). The capital structure puzzle. *Journal Of Finance*, 39, 575-592.
- Myers, S. C., & Majluf, N. S. (1984). Corporate financing and investment decisions when firms have information that investors do not have. *Journal of Financial Economics*, 13, 187-221.
- Stohs, M. & Mauer, D. (1996). Determinants of corporate debt maturity. *Journal of Business*, 69, 279-312.
- Ross, Westerfield, Jaffe and Jordan. (2010). *Corporate Finance: Core Principles & Applications*, 3rd ed. McGraw-Hill.
- Weber, R. H., & Darbellay, A. (2008). The regulatory use of credit ratings in bank capital requirement regulations. *Journal of Banking Regulation*, 10, 1-16.
- White, Sondhi, and Fried. (1997). *The Analysis and Use of Financial Statements*, 2nd ed. Wiley.
- Zou, H. & Adams, M. B. (2008). Debt capacity cost of debt, and corporate insurance. *Journal of Financial & Quantitative Analysis*, 43, 433-466.

PANDORA INVESTMENTS WURUNDI, INC.

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CASE DESCRIPTION

Ever wished you had a case to sensitize students to some of the legal and/or ethical challenges faced by multinational businesses and businesspeople in developing markets like the BRICs (Brazil, Russia, India, and China)? While this case is not from one of the BRIC countries, it does take place in a large developing world country, and it does illustrate very clearly some of the legal and/or ethical dilemmas faced by multinational businesspeople and companies (especially U.S. and/or U.K. companies and businesspeople) in developing world markets. The case is appropriate for senior-level undergraduates as well as students in MBA and Executive Development programs. It is designed to be taught in a one hour and a half class session, and is likely to require at least a couple hours of preparation by students.

CASE SYNOPSIS

Mr. Mike Adams is Vice President and General Manager of Pandora Investments Wurundi Inc., the Wurundian subsidiary (Wurundi is a real country in Africa and Pandora is a real company; for purposes of this case study, however, both the country and the company must remain disguised) of a New York Stock Exchange (NYSE) listed U.S. multinational company called Pandora Investments Group, Inc. While it is listed on the NYSE, Pandora Investments Group has very substantial operations in the UK. Pandora Investments Wurundi, Inc. (hence, PIWI) recently completed (under a contract valued at approximately \$2,000,000) a gas transportation network code for the parastatal company in Wurundi called Gasco Wurundi Ltd. (hence, GWL). GWL's role in Wurundi includes creating the hard and soft infrastructure needed to move natural gas around the country. While all the key stakeholders (management of GWL, management of PIWI, etc.) agree that PIWI has successfully completed the gas transportation network code project and that all the work done by PIWI and its consultants has been truly world-class, GWL has not yet paid PIWI for its work. Earlier today, a senior executive at GWL (his name is Mr. Jonas Adorande) indicated to Adams that before he (that is, Adorande) signs off on the project (one of the required steps in GWL's payment process), Adams will need to give him (in unmarked bank notes) approximately \$50,000.

Additional data and information in the case include:

- 1. Regarding the project: an explanation of what a gas transportation network code is, and why a country having natural gas needs one.*
- 2. Regarding the company (PIWI): Because PIWI has in the past operated extremely successfully in a very challenging developing world market (that is, Wurundi),*

- information is provided on PIWI's business model plus the company's past and current performance and factors impacting that performance over the years.*
3. *Regarding the Wurundian parastatal (that is, PIWI's customer): Background information, current performance, and factors impacting that performance.*
 4. *Regarding Wurundi: Like China and India and some other developing world markets, even during the current economic crisis, the economy of Wurundi has continued to grow vigorously. To give students a sense of the opportunities available in the developing world, a bit of information is provided on the country disguised as Wurundi and the performance of that country's economy over the last several years.*
 5. *Regarding US and UK laws regarding the overseas behavior of US and UK corporations and executives: Summaries of the Foreign Corrupt Practices Act (FCPA) and the UK Bribery Act, plus implications of those acts for U.S and U.K. companies and businesspeople operating overseas, are provided. In addition, a discussion is provided regarding the difference between actions which are legal (or illegal) and actions which are ethical (or unethical).*

INSTRUCTORS' NOTE

As indicated in the case, the situation faced by Mr. Mike Adams, Vice President and General Manager of Pandora Investments Wurundi, Inc. (PIWI) is that he needs to collect the money PIWI is owed for the world-class gas transportation network code it prepared for Gasco Wurundi Ltd. (GWL). As regards lessons and/or information students should learn from this case, at least four points can be made:

1) At the beginning of the case, students will need to consider the extent to which developed-world models and conceptual frameworks can be applied to challenges and opportunities in the developing world. By the end of the case discussion, they will have discovered that some conceptual frameworks (for example, the steps in the process of getting paid by a client for work which has been completed) can be useful guides to managerial action in both the developed and the developing world; however, they are also likely to have discovered that the effectiveness of actions taken by managers in the developing world may be quite different than the effectiveness of those actions when taken in the developed world.

2. As they work through the case, students are exposed not only to a bit of information on an economic sector (natural gas) which is very key to a number of economies in the developing world, but also to some of the problems (for example, totally inadequate amounts of electric power) which are characteristic of many developing world countries.

3. As they work through the case, students will be exposed to the U.S. Foreign Corrupt Practices Act, the UK Bribery Act, and some of the ethical and legal dilemmas which U.S. and/or UK businesspeople and corporations operating in developing world markets are likely to encounter. They will also (in the "Evaluative and Elaborative Comments" section of this

teaching note) be exposed to a solution suggested by a very experienced multinational executive to the sort of ethical and/or legal dilemmas faced (and described in this case) by multinational companies and/or executives operating in developing world markets.

DISCUSSION QUESTIONS

I often select one student to lead the discussion. Another approach would be to solicit input from various students at various stages of the analysis. Either way, my usual approach to this case is threefold:

1. Solicit from many students the details of the case, including information on the environment in Wurundi, information on the company; information on the customer for whom the company prepared the gas transportation network code, information on the importance of the gas transportation network code itself, information on the Foreign Corrupt Practices Act and the UK Bribery Act, and so on. Usually, I write much of this information on the board, so that if questions on “facts of the case” arise, I will have much of that information in front of us.
2. Ask an individual student or the class as a whole to address a very specific series of questions. Those questions, and comments relating to two alternative approaches to the case, are as listed below:

1) What is the main problem?

Students usually conclude that Mr. Mike Adams needs to collect (from Gasco Wurundi Ltd., or GWL) the money which GWL owes PIWI. I reinforce the idea that this is a reasonable statement of the challenge Mr. Mike Adams faces.

2) What kind of problem is this?

Instructors should not be surprised if there are as many answers to this question as there are students in the class. Clearly, there is no one “right” answer. However, two alternative approaches, each of which seems quite relevant to the situation, are as indicated below:

1. Ethical and/or legal problem.
2. Negotiation problem

3) For the kind of problem selected, what are the key variables and which expert says so?

For students concluding that the main problem is an ethical or legal problem, the 7 step “applied ethics” model proposed by Davis (1997) seems very relevant; the steps

in that model include:

- 1) State the problem faced by the decision maker;
- 2) Check facts (making sure they are correct);
- 3) State specifications (that is, objectives which need to be met, constraints which need to be observed, etc.);
- 4) Develop a list of at least 5 alternatives;
- 5) Test each option, using the following tests:
 - a. **Harm test**—does this option do less harm than any alternative?
 - b. **Publicity test**—would I want my choice of this option published in the newspaper?
 - c. **Defensibility test**—could I defend my choice of this option before a Congressional committee, a committee of my peers, or my parents?
 - d. **reversibility test**—would I still think the choice of this option good if I were one of those adversely affected by it?
 - e. **Virtue test**—what would I become if I choose this option *often*?
 - f. **professional test**—what might my profession's ethics committee say about this option?
 - g. **colleague test**—what **do** my colleagues say when I describe my problem and suggest this option as my solution?
 - h.. **Organization test**—what **does** the organization's ethics officer or legal Counsel say about this?
- 6) Make a tentative decision;
- 7) Make a final choice.

For students believing that the main problem is “negotiation,” the negotiation process model developed by Ury (1991) seems very relevant. According to Ury (ibid), the steps in the negotiation process include:

- 1) Go to the balcony (that is, instead of reacting to challenges and/or problems identified by the other party, step back, collect your thoughts, evaluate the situation objectively, etc.);
- 2) Step to their side (that is, listen to the other party, understand their concerns, and agree where you can);
- 3) Reframe the argument (that is, see if it is possible to identify a win-win solution);
- 4) Build them a golden bridge (that is, make it easy for the other party to say “yes”); and
- 5) Use power to educate (make it hard for the other party to

4) What data from the case relate to the key variables?

As implied above (and this is one of the key learning points of the case), the data students present will depend on the main problem they identify. Students believing the main problem is ethics/ legal-related will focus on the key variables identified by Davis (1997), that is: 1) State problem; 2) Check facts; 3) State specifications; 4) Develop list of at least 5 alternatives; 5) Test options; 6) Make a tentative decision; and 7) Make a final choice; Appendix 5 overviews the data from the case associated with these variables. Students believing the main problem is “negotiation” will focus on the five key variables identified by Ury (1991), that is, 1) Go to the balcony; 2) Step to their side; 3) Reframe the argument; 4) Build them a golden bridge; and 5) Use power to educate; Appendix 6 overviews the data from the case associated with these variables.

5) What alternative solutions can be identified?

Because research suggests we make better decisions if we identify alternatives and then chose one, I require students to identify at least two alternatives. Of course, students having difficulties coming up with a second alternative can be reminded that one possible solution is to “do nothing.”

6) Which one alternative does the class/student recommend, and why? “

Doing nothing” is unlikely to help Mr. Mike Adams achieve his objective, that is, to get paid for the gas transportation network code which PIWI developed for GWL. Thus, students believing the main problem is ethical or legal could recommend an approach which utilizes the 7 steps of the process identified by Davis (1997). Students believing the main problem is “negotiation” could recommend an approach which focuses on the five key steps in the negotiation process identified by Ury (1991).

7) What negatives are associated with the alternative selected by the class leader and/or other members of the class?

Very few solutions are risk and/or problem-free. Negatives associated with the solution proposed by the class leader and/or other members of the class could include the following: The chosen alternative, if it requires PIWI to acquire specialized equipment and/or skills which the organization doesn’t currently possess, could be expensive both in terms of time and money. Also, because the case probably doesn’t provide all the data a decision maker would need (in other words, it is likely that some important data is missing), it could be that some of the assumptions made are incorrect. If so, the proposed solution might be inappropriate.

The third and final step in discussing a case with students is to share with them what actually happened and to discuss with them the implications of that outcome. As he considered how to tackle the challenge of getting paid by GWL, Mr. Adams' thought process was very close to the approach to "negotiations" recommended by Ury (1991):

- 1) Go to the balcony: Adams did not respond immediately to Adorande's demand for \$50,000 in unmarked bills; rather, he gave himself time to think about that demand
- 2) Step to their side: As already indicated, Adams realizes that it is very likely that part of the money being demanded will go to Adorande's bosses. In other words, Adorande's bosses are "in on the game" and are expecting Adorande to deliver.
- 3) Reframe the argument: As indicated above, Adams' primary objective is to ensure that PIWI is paid for the gas transportation network code which the company has prepared for GWL. A secondary (but also very important) objective is to maximize the probability that PIWI will be able to compete for (and win, and be paid for) additional projects from GWL.
- 4) Build them a golden bridge: Adams' decision was that he would offer Adorande ; \$30,000 for his help in getting PIWI paid (in a timely manner) for the gas transportation network code project; in addition, Adams indicated to Adorande that he is willing to make additional payments if and when Adorande is able to help PIWI compete for, win, and be paid for additional projects from GWL.
- 5) Use power to educate: Adams reminded Adorande that the gas transportation network code project was a small project (only \$2,000,000) and that if Adorande can help win bigger projects from GWL, the amounts of money for Adorande (and his bosses) could be much larger. In the end, Adorande agreed that upon receipt of \$30,000 in unmarked bills, he would facilitate payment of the \$2,000,000 which GWL owes PIWI for the successfully-completed gas transportation network code project.

EVALUATIVE AND ELABORATIVE COMMENTS

Students believing that with this decision Adams has violated at least the UK Bribery Act (and probably the Foreign Corrupt Practices Act as well) are correct. Regarding the UK Bribery Act, observations which can be made based on the information included in Appendix 3 and Appendix 4 include:

- 1) The act applies not only to UK firms, but also to foreign firms with operations in the UK.
- 2) Under the UK Bribery Act (see Appendix 4) “facilitation payments, which are payments to induce officials to perform routine functions they are otherwise obligated to perform, are bribes.”
- 3) Individuals convicted of violating the act face up to 10 years in prison; both individuals and companies can be assessed unlimited fines as well.

Regarding the Foreign Corrupt Practices Act (FCPA), observations which can be made based on the information included in Appendices 1 and 2 include:

- 1) The FCPA explicitly “prohibits the giving or promising to give anything of value to foreign officials or foreign political parties to influence any act within their “official capacity” or to induce foreign officials to violate their “lawful duty.”
- 2) However, “the FCPA provides a number of exceptions or affirmative defenses to its prohibition on illicit payments. 1) If the purpose of the payment is to expedite routine governmental action, which is defined as an activity ordinarily and commonly performed by a given foreign official. In other words, a U.S. company is permitted to pay a local official to do something that the official must do anyway.”
- 3) As indicated in the case (and at greater length in Appendix 2), Grime et al (undated pdf file) indicated that the U.S. Department of Justice and the U.S. Security and Exchange Commission have “pressed a narrow view of the exception” and that “companies that permit facilitating payments face an increased risk of FCPA liability in today’s enforcement environment.”

As indicated above, the decision Adams has made puts him at risk (certainly under the UK Bribery Act, and probably under the FCPA as well) not only of financial penalties but also time in prison. Why would Adams put himself in such a position?

In the author’s opinion, there are at least two possible answers to the above question:

- 1) As the case indicates, Adams has worked in Wurundi for a very long time. In addition, the case indicates that Adams has already experienced a situation where he and PIWI had invested a lot of time, energy, and money in a project for which they have never been paid. Finally, and as the case also mentions, Wurundi has been classified by Transparency International as one of the more corrupt places in the world. In other words, it is possible that Adams has not only suffered (in the past) from the very corrupt business environment but has also become come to believe that the only way forward in situations such as the one described in the case is to pay.
- 2) A second possibility is that as Adams wrestled with this decision, he used a “less than ideal” decision framework. As indicated earlier in this note, it

is possible to see this case either as a problem in “negotiation” or as a “legal/ethical” problem. It seems possible that if Adams had used the legal/ethical framework suggested by Davis (1997), he might have made a different decision.

At this point, the interesting question becomes: If Adams had used the Davis (1997) “legal/ethical” framework instead of the Ury (1991) negotiation framework, what might his analysis of the situation have looked like, and might a better solution have emerged? Working through the Davis (1997) model step by step could lead to the following sort of analysis:

- 1) Problem faced by the decision maker; Adorande has told Adams that if he wants to be paid anytime soon the \$2,000,000 for the gas transportation network code that PIWI has prepared for GWL, he (Adams) must give Adorande \$50,000 in unmarked bills.
- 2) Check facts: the above is a correct statement of the facts.
- 3) State specifications (that is, objectives and/or constraints): One of Adams’ objectives is to be paid in a timely manner the \$2,000,000 which GWL owes PIWI; another of his objectives is to be able to compete for, win, and be paid for additional projects from GWL. A third and final objective is (or at least should be) to achieve the first two objectives without violating either the Foreign Corrupt Practices Act or the UK Bribery Act. As indicated in Appendices 3 and 4, violation of one and/or both of the above acts could land Adams in prison and/or generate financial penalties as well.
- 4) Develop a list of at least 5 alternatives: The alternatives which come to mind include:
 - a. Pay Adorande part of the money he has demanded (Please note: this is of course the decision that Adams reached, when he used an approach very similar to the negotiations model suggested by Ury (1991).
 - b. Pay Adorande the \$50,000 he demanded.
 - c. Refuse to pay Adorande anything
 - d. Report Adorande to the authorities
 - e. Solicit suggestions from old friends who may have deeper knowledge of GWL and its people, may have other viewpoints and/or suggestions which could be useful, etc.\
- 5) Test each option, using the following tests: harm, publicity, defensibility, reversibility, virtue, professional, collegial, and organizational:

Option A (pay Adorande part of the money he has demanded): this option completely fails many of the tests, including publicity, defensibility, virtue, professional, and organizational.

Option B (pay Adorande all of the money he has demanded): this option completely fails the same tests as Option A.

Option C (refuse to pay Adorande anything): while this option passes many of the tests (defensibility, virtue professional, organizational, etc.) it might result not only in the non-payment of the money GWL owes PIWI but also might mean that PIWI would be unable to compete for, win, and be paid for any other contracts from GWL. In other words, the financial harm (short and long term) of this option to PIWI could be very substantial.

Option D (report Adorande to the authorities): while this option passes many of the tests (defensibility, virtue professional, organizational, etc.) it might result not only in the non-payment of the money GWL owes PIWI but also might mean that PIWI would be unable to compete for, win, and be paid for any other contracts from GWL. In other words, the financial harm (short and long term) of this option to PIWI could be substantial. In addition, there is the very practical question of figuring out which authorities Adorande could be reported to.

Option E (Solicit suggestions from old friends who may have deeper knowledge of GWL and its people, may have other viewpoints and/or suggestions which could be useful, etc.): at the initial stage (that is, the solicitation of advice from old friends), this option passes all of the tests.

- 6) Make a tentative decision: using the Davis (1997) framework, and evaluating the options set forth above, it seems that Option E (that is, solicit suggestions from old friends who may have deeper knowledge of GWL and its people, may have other viewpoints and/or suggestions which could be useful, etc.) is the best choice.
- 7) Make a final choice: Having worked through the Davis (1997) framework, the author believes that Option E is indeed the best choice. As a follow-up, the author described this situation to a very senior executive at a multinational company who is very familiar with Wurundi and the Wurundian business environment. This executive's response was that the best option in cases like this is to have direct and personal access to people in the country who are so senior

and/or influential (on a very major issue, the executive indicated that his company speaks with presidents, prime ministers, and/or ministers of government) that those individuals are able to put a stop to the sort of problem Adams has encountered.

LEGAL VS ETHICAL CONSIDERATIONS: DIFFERENCES PLUS IMPORTANCE (IN THIS CASE STUDY) OF THOSE DIFFERENCES

As some readers will have noticed, while the focus of the Davis (1997) framework is on ethics and ethical decision-making, the situation faced by Adams appears to be more of a legal dilemma. The interesting question this issue raises is of course the relationship between (on the one hand) ethical considerations and (other the other hand) legal considerations. Because not all decisions which are legal are ethical, and not all decisions which are ethical are legal, it seems worth discussing briefly the relationship between ethical and legal considerations.

Anstead (1999) provides the following definitions for (on the one hand) “laws” and (on the other hand) “ethics:”

“Law can be defined as a **consistent** set of **universal** rules that are widely **published**, generally **accepted**, and usually **enforced**. These rules describe the ways in which people are required to act in their relationships with others in a society. . . . Since the government establishes law, the government can use police powers to enforce laws.”

“The word ethics is derived from the Greek word ethos (character) and from the Latin word mores (customs). Together they combine to define how individuals “choose to interact with one another. In philosophy, ethics defines what is good for the individual and for society and establishes the nature of duties that people owe themselves and one another. . . . Ethics involves learning what is right and wrong, and then doing the right thing.”

Regarding the relationship between (on the one hand) laws and (on the other hand) ethics, Anstead (1999) makes the following observations and gives the following examples:

- 1) “Though law often embodies ethical principles, law and ethics are far from coextensive.”
- 2) “The law does not prohibit many acts that would be widely condemned as unethical. . . examples provided by Anstead (1999) include:
 - a. At a time when labor groups were estimating that a living wage in Southeast Asia was a bit more than \$4.00 per day, Nike was paying its entry-level workers in Southeast Asia a bit more than \$2.00 a day.
 - b. Lying to or betraying a friend
- 3) “The law also prohibits acts that some groups would perceive as ethical;” examples provided by Anstead (1999) include:
 - a. A worker takes company office supplies home for personal use: technically this is theft, but few people perceive this behavior as unethical.

- b. A worker installs a copyrighted software program on several computers: technically this is illegal but many individuals and organizations view this behavior as ethical.
- c. Driving faster than the speed limit is illegal but very few people perceive this behavior as unethical.

Have provided both definitions (of law and ethics) and examples of behaviors which would be perceived by many groups as legal (but not ethical) or illegal (but ethical), one can now consider the relevance of this issue to this case study. Points which can be made include:

- 1) the decision which Adams made (that is, to pay Adorande \$30,000 in unmarked bills) clearly violates the UK Bribery Act and probably (especially in today's enforcement environment) the FCPA as well. In other words, this decision by Adams is clearly illegal. As indicated earlier, Adams has exposed himself to the risk not only of financial penalties but also to the possibility of time in prison.
- 2) As indicated earlier, the decision which Adams made (that is, to pay Adorande \$30,000 in unmarked bills) fails many of the tests set forth in the Davis (1997) model, including publicity, defensibility, virtue, professional, and organizational.
- 3) The bottom line here is that the decision made by Adams (that is, to pay Adorande \$30,000 in unmarked bills) is both illegal and unethical.
- 4) It appears that there might have been a better way. If Adams had been able to go to someone at the very top of the political and/or power elite, perhaps that individual would have been able to resolve this situation in a way which would have accomplished Adams' objectives (get paid, and position himself for additional business from GWL) without having put himself at risk of prison and financial penalties for his company and himself.

CONCLUDING COMMENTS

At this point, it seems useful to review briefly the lessons which can be learned from this case. In the opinion of the author, those lessons include:

- 1) Rates of growth in developing world markets can be far higher than in developed world markets, especially in times of economic downturns. Also, rates of return in developing world markets (especially Africa) can be high.
- 2) Competing for, winning, and getting paid for projects in developing world markets can be a very tough business. Challenges relating to people (that is, finding the human capital required to do the work), supplies and equipment (that is, challenges relating to the procuring, operating, and maintaining of equipment), and infrastructure (access to reliable power, water, transportation, etc.) can be huge.
- 3) Over and above the business-related challenges, developing world markets can present multinational companies with serious legal and/or ethical challenges as well. While the company involved in the case was a US multinational with very substantial operations in the UK, developing markets are likely to offer serious legal and/or ethical challenges for

all multinational companies where codes of ethics exist and senior managers are expected to enforce those codes of ethics.

- 4) While developing world markets can be full of ethical and/or legal challenges, companies with access to individuals at the very top of the political and/or power structure may be able to resolve the challenges without violating internal codes of ethics and/or putting themselves at risk of violating home country rules and regulations. In fact, for a multinational in developing country markets, having access to individuals at the very top of the local political and/or power structure may be the only way to avoid having to violate internal codes of conduct and/or external rules and regulations. To put it another way: although many developing world markets offer attractive opportunities and high rates of return, if a multinational does not have access to people at the very top of the political and/or power structure, pursuing developing world opportunities may not be in the best interests of the multinational and its managers.

APPENDIX 5: DATA FROM THE CASE RELATING TO DAVIS (1997) MODEL OF ETHICAL/LEGAL DECISIONMAKING

- 1) State problem: Adams must collect the \$2,000,000 which GWL owes PIWI; in addition, he wants to position PIWI to compete successfully for additional contracts from GWL. Finally, Adams must try to accomplish the above objectives without violating the provisions of the FCPA and the UK Bribery Act.
- 2) Check facts:
 - a. the senior GWL manager (Adorande) has demanded a bribe of \$50,000 to assist PIWI in collecting the \$2,000,000 from GWL.
 - b. Adams believes that Adorande's bosses are "in on the game," that is, they know he has demanded a bribe and they themselves expect to receive a portion of the money which Adorande has demanded.
 - c. Adorande has suggested that on the basis of its very successful performance on the gas transportation network code project, PIWI should be able to win (and be paid for) additional large contracts from GWL.
- 3) State specifications: the objectives and constraints under which Adams is working include:
 - a. He needs to collect the \$2,000,000 which GWL owes PIWI
 - b. He wants to position PIWI for additional business from GWL
 - c. He should attempt to achieve the above objectives without violating either the FCPA or the UK Bribery Act.
- 4) Develop list of at least 5 alternatives: the case did not specify the alternatives which Adams might consider.
- 5) Test options: the case did not specify either the options which Adams might consider or the tests which he might use to test those options/alternatives.
- 6) Make a tentative decision: at the time of the case, Adams had not yet made a tentative decision.

- 7) Make a final choice: at the time of the case, Adams had not yet made a final decision.

APPENDIX 6: DATA FROM THE CASE RELATING TO URY (1991) NEGOTIATION MODEL

- 1) Go to the balcony: The case indicates that Adams did not respond immediately to Adorande's request for a bribe; rather, Adams removed himself from the situation and gave himself time to consider the request and its implications.
- 2) Step to their side: The case indicates that Adams suspects that Adorande's superiors are "in on the game," that is:
 - a. they know he has demanded a bribe of \$50,000 and
 - b. they themselves expect to receive a portion of the bribe
- 3) Reframe the argument: At the time of the case, Adams had not yet attempted to reframe the argument
- 4) Build them a golden bridge: At the time of the case, Adams had not yet attempted to build a golden bridge.
- 5) Use power to educate: At the time of the case, Adams had not yet attempted to use power to educate.

BIBLIOGRAPHY

- Anstead, S.M. (1999), "Law Versus Ethics in Management," <http://ansteadsue.tripod.com/ethics.htm>
- Davis, M. (1997), "Developing and Using Cases to Teach Practical Ethics", *Teaching Philosophy*, Volume 20, December, pp. 353-385.
- Roxburgh, C. et al (2010). *Lions on the Move*. Washington, D.C., McKinsey Global Institute
- Ury, W. (1991) *Getting Past No*. New York: Bantam Books.

HEDGING WITH FOREIGN CURRENCY FUTURES AT TRANSCEND INC

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CASE DESCRIPTION

The primary subject matter of this case is hedging foreign currency exchange rate risk using foreign currency futures contracts. Secondary issues examined include assessing transaction exposure and estimating profit margin exposure. The case requires students to have an introductory knowledge of accounting, statistics, finance and international business thus the case has a difficulty level of four (senior level) or higher. The case is designed to be taught in one class session of approximately 3 hours and is expected to require 4-5 hours of preparation time from the students.

CASE SYNOPSIS

Transcend Inc is a US based company specializing in corporate travel services. Recent product line additions have exposed the company to more significant foreign currency exchange rate risks. In addition, the unique structure of Transcend's business model has led the company president, Mike Travis, to consider using foreign currency futures contracts in addition to traditional forward currency hedges. Transcend would like an evaluation of the company's increased foreign currency exposure and a proposed strategy for eliminating unwanted exchange rate risk before the next earnings conference call.

INSTRUCTORS' NOTE

Case Overview

Transcend Inc is an Atlanta based company specializing in corporate travel services and has two main divisions. The corporate event group is a higher volume/lower margin division that specializes in large group travel outings, such as training seminars, conferences, and annual meetings. The incentive travel group is a lower volume/higher margin division that provides

travel packages mostly associated with sales contests, customer loyalty programs, and other reward based promotions.

The incentive travel group has been working for the last 2 months with Brazilian hotel operators and tour guides on travel packages that cover the Rio de Janeiro Carnival in Brazil. With the recent announcements of the 2014 World Cup and 2016 Summer Olympics in Brazil, Transcend is hoping to develop relationships with Brazilian hospitality companies to include additional travel packages in the near future. Transcend would like to include a package that includes the Brazil Carnival in 2013 and later add World Cup options in 2014 and eventually Summer Olympics in 2016. One of the main concerns Transcend has is foreign currency exchange rate risk. Award recipients who choose Brazil as a travel destination implies that Transcend will receive payment in US dollars, but incur costs in Brazilian real at a later point in time. If the Brazilian trips turned out to be as popular as Transcend envisions, Transcend would face significant exchange rate risk. The unique nature of how the trips are sold creates a multiple exchange rate exposure period of 300 and 360 days. Because the incentive travel group is a low volume/high margin division, the management team is worried about adverse movements in the value of the currency. Transcend would like to offer a travel package in the upcoming 2012 catalog with a destination including the Brazil Carnival in 2013. They are looking at using foreign currency futures contracts to hedge the exchange rate risk associated with the Carnival destination.

Recommendations for Teaching Approaches

- 1) **Calculate a probability distribution of the potential US\$ cost per trip associated with the Brazil Carnival trip in the upcoming catalog. Incorporate the following assumptions:**
 - The current exchange rate as of January 1, 2012 is \$0.53/1BRL.
 - The anticipated cost per trip is 4,000 BRL.
 - One half of the cost will be paid on October 31st, 2012 (in 300 days) and the remainder will be paid on December 31st, 2012 (in 360 days). Assume a 360 day year.
 - The percentage change in the BRL/USD (indirect quote) exchange rate follows a normal distribution.
 - The expected percentage change between the current spot rate (January 1, 2012) and the spot rate on October 31st, 2012 is assumed to be 0%, but the annualized volatility is assumed to be 16%.
 - The expected percentage change between the current spot rate (January 1, 2012) and the spot rate on December 31st, 2012 is assumed to be 0%, but the annualized volatility is assumed to be 16%.

The current exchange rate on January 1, 2012 is \$0.53/1BRL and the estimated cost per trip is assumed to be 4,000 BRL. One half of the cost will be paid in 300 days, and the remaining amount is due in 360 days. If the expected percentage change in the spot rate in 300 days has a mean of 0%, then the spot rate in 300 days is expected to be \$0.53/1BRL. Therefore, the expected payment in 300 days is equal to [(2,000 BRL * (\$0.53 / 1 BRL)] \$1,060. However, the percentage change in the exchange rate has an annualized standard deviation of 16%. Because the exposure is for 300 days, an adjustment to the annualized standard deviation is required to account for the 300-day period. The periodic standard deviation is equal to the annualized standard deviation divided by the square root of the number of periods. In this case, there are 1.2 300-day periods in a year (360/300). Therefore, the periodic standard deviation is equal to 14.6% (calculated as [16%/sqrt(1.2)]). The probability distribution for the spot rate in 300 days and the corresponding range of payments on October 31st, 2012 would be as follows:

USD/BRL Probability distribution for spot rate in 300 days					
	-2 Stdev	-1 Stdev	Expected	+1 Stdev	+2 Stdev
% Change	-0.292	-0.146	0.0	+0.146	+0.292
BRL/USD	<=\$0.3752	<=\$0.4526	\$0.53	>=\$0.6074	>=\$0.6848
Probability	<u>0.025</u>	<u>0.16</u>		<u>0.16</u>	<u>0.025</u>
US\$ trip	<=\$750.40	<=\$905.20	\$1060.00	>=\$1,214.80	>=\$1,369.60
Deposit (Oct. 31 st)					

There is a 68% probability the BRL/USD exchange rate in 300 days will be between \$0.4536/1BRL and \$0.6074/1BRL corresponding to an October 31st, 2012 deposit payment in US dollars of between \$905.20 and \$1,214.80 per trip. There is a 95% probability that BRL/USD exchange rate in 300 days will be between \$0.3752/1BRL and \$0.6848/1BRL corresponding to an October 31st, 2012 deposit payment in US dollars of between \$750.40 and \$1,369.60 per trip.

The current exchange rate on January 1, 2012 is \$0.53/1BRL and the estimated cost per trip is assumed to be 4,000 BRL. One half of the cost will be paid in 300 days, and the remaining amount is due in 360 days. If the expected percentage change in the spot rate in 360 days has a mean of 0%, then the spot rate in 360 days is expected to be \$0.53/1BRL. Therefore, the expected balance payment in 360 days is equal to [(2,000 BRL * (\$0.53 / 1 BRL)] \$1,060. However, the percentage change in the exchange rate has an annualized standard deviation of 16%.

USD/BRL Probability distribution for spot rate in 360 days					
	-2 Stdev	-1 Stdev	Expected	+1 Stdev	+2 Stdev
% Change	-0.32	-0.16	0.0	+0.16	+0.32
BRL/USD	<=\$0.3604	<=\$0.4452	\$0.53	>=\$0.6148	>=\$0.6996
Probability	<u>0.025</u>	<u>0.16</u>		<u>0.16</u>	<u>0.025</u>
US\$ trip	<=\$720.80	<=\$890.40	\$1060.00	>=\$1,229.60	>=\$1,399.20
Final payment (Dec. 31 st)					

There is a 68% probability the BRL/USD exchange rate in 360 days will be between \$0.4452/1BRL and \$0.6148/1BRL corresponding to a December 31st, 2012 final payment in US dollars of between \$890.40 and \$1,229.60 per trip. There is a 95% probability that BRL/USD exchange rate in 360 days will be between \$0.3604/1BRL and \$0.6996/1BRL corresponding to a December 31st, 2012 final payment in US dollars of between \$720.80 and \$1,399.20 per trip.

The expected cost of the trip is \$2,120.00 with the probability distribution for the total cost of trip shown as:

	-2 Stdev	-1 Stdev	Expected	+1 Stdev	+2 Stdev
Probability	<u>0.025</u>	<u>0.16</u>		<u>0.16</u>	<u>0.025</u>
Total Cost	<=\$1,471.20	<=\$1,795.60	\$2,120.00	>=\$2,444.40	>=\$2,768.80

2) Use the probability distribution estimated from above to show the effect of exchange rates on Gross Margins.

- Assume that each trip will generate \$3000 in revenues and the cost associated with the trip will be 4,000 BRL.
- One half of the cost will be paid on October 31st, 2012 (in 300 days) and the remainder will be paid on December 31st, 2012 (in 360 days). Assume a 360 day year.

Gross Margins are calculated as Gross Profit / Revenues. Gross profit is calculated as Revenues-Cost of Goods Sold. For the Brazil Carnival trip, the revenues are assumed to be \$3,000 and the costs are estimated to be 4,000 BRL. However, the US dollar cost is a function of the spot exchange rate between the US dollar and the Brazilian Real at the time the payment is due. The exchange rate is assumed to follow a normal distribution with an expected change of 0% and an annualized standard deviation of 16%. The expected Gross Profit per trip is \$880.00 and the expected Gross Margin is 29.33%. Based on the assumptions given, there is a 95% probability that Gross Profits will range from \$231.20 per trip to \$1,528.80 per trip with corresponding Gross Margins ranging from 7.7% to 50.96%. There is a 68% probability that Gross Profits will range from

\$555.60 to \$1,204.40 with corresponding Gross Margins ranging from 18.52% to 40.15%.

	-2 Stdev	-1 Stdev	Expected	+1 Stdev	+2 Stdev
Probability	<u>0.025</u>	<u>0.16</u>		<u>0.16</u>	<u>0.025</u>
Revenues	\$3,000.00	\$3,000.00	\$3,000.00	\$3,000.00	\$3,000.00
Total Cost	<u><=\$1,471.20</u>	<u><=\$1,795.60</u>	<u>\$2,120.00</u>	<u>>=\$2,444.40</u>	<u>>=\$2,768.80</u>
Gross Profits	<=\$1,528.80	<=\$1,204.40	\$880.00	>=\$555.60	>=\$231.20
Gross Margins	<=50.96%	<=40.15%	29.33%	>=18.52%	>=7.71%

3) Describe the specific details of a Brazilian Real futures contract that is traded on the Chicago Mercantile Exchange.

A BRL/USD futures contract is a standardized contract between two parties to buy or sell 100,000 BRL (priced in US dollars) on a specified future date (known as the delivery date). The contracts are negotiated at the futures exchange through an open outcry system or traded on an electronic exchange (Globex). The exchange acts as the intermediary between the two parties. In order to trade in the futures market, the client must open and maintain a margin account with the broker. In order to trade BRL/USD futures contracts on the Chicago Mercantile Exchange (CME) the client must post an initial margin of \$5,600 per contract and each contract requires a maintenance margin of \$4000. In addition, the broker will charge a commission on all transactions. The BRL/USD future contracts traded on the CME exchange are listed in consecutive months with the settlement day occurring on the first trading day of the month. For example, a September 2012 BRL/USD futures contract would have a settlement day of September 4, 2012 and an October 2012 futures contract would have a settlement day of October 1, 2012. The last day of trading in these contracts would occur on the final trading day of the month preceding. For example, the final trading day for a September 2012 BRL/USD futures contract would be August 31, 2012. Buying a BRL/USD futures contract implies a long position in the Brazilian Real and selling a BR/USD futures contract implies a short position in the Brazilian Real.

4) Propose a Brazilian Real futures contract hedging strategy that can be used to eliminate the exchange rate risk associated with Brazil Carnival offering.

By offering the Brazil Carnival trip package, Transcend will need to purchase 2,000 BRL per trip redeemed in approximately 300 days and 2,000 BRL per trip in approximately 360 days. Because the spot exchange rate in 300 and 360 days is not

known today, the transaction has created a “natural short” position in the Brazilian real. With approximately 400 trips expected to be redeemed over the course of the year, the total exposure is approximately 800,000 BRL for 300 days and 800,000 BRL for 360 days. In order to remove the exchange rate risk, Transcend must enter into a “long hedge” position in the BRL of equal value.

Buying a futures contract implies a long position and selling a futures contract implies a short position. As protection against margin erosion from currency fluctuations, Transcend would buy a sufficient number of futures contracts to create the long hedge. When the hedge position is no longer needed, but before the futures contract reaches the settlement date, the futures contracts can be sold. If the BRL strengthens over the time period, the cost per trip in terms of US dollars will be more than the expected cost. However, the futures contracts position will profit from the strengthening BRL. The net cost will be close to that which is established today. In order to fully hedge the estimated 400 trips sold, Transcend would buy 8 November 2012 BRL/USD futures contracts and 8 January 2013 BRL/USD futures contracts to establish a long hedge position. Because the trip deposit will be paid on October 31st, 2012, the November 2012 futures contract will be used to hedge the deposit. The contract has a settlement day of November 1st and a final trading day of October 31st. Any profit on the futures trade resulting from a strengthening of the Brazilian real over the next 300 days would offset a higher US dollar price paid for the BRL needed to make the deposit. Any loss on the futures trade resulting from a weakening of the Brazilian real over the next 300 days would be compensated by a lower US dollar price paid for the BRL needed to make the deposit. Because the final payment for the trip will be paid on December 31st, 2012, the January 2013 futures contract will be used to hedge the final payment. The contract has a settlement day of January 2, 2013 and a final trading day of December 31st, 2012. Any profit on the futures trade resulting from a strengthening of the Brazilian real over the next 360 days would offset a higher US dollar price paid for the BRL needed to make the final payment. Any loss on the futures trade resulting from a weakening of the Brazilian real over the next 360 days would be compensated by a lower US dollar price paid for the BRL needed to make the final payment. The net result will be that the US dollar cost of the trip is established at the time the catalog is released.

- 5) **Calculate the profit margin on the Brazil Carnival offering with a futures contract hedge in place under a scenario where the Brazilian real strengthens to \$0.61/1BRL on October 31st, 2012 and \$0.62/1BRL on December 31st, 2012. Ignore the transaction costs of broker commissions and the opportunity cost of the margin deposit requirements. Assume the following information:**

-The current exchange rate as of January 1, 2012 is \$0.53/1BRL.

-The following futures contracts are available as of January 1, 2012:

February 2012	\$0.5278
March 2012	\$0.5245
April 2012	\$0.5184
May 2012	\$0.5155
June 2012	\$0.5111
July 2012	\$0.5086
August 2012	\$0.5042
September 2012	\$0.5012
October 2012	\$0.4978
November 2012	\$0.4945
December 2012	\$0.4913
January 2013	\$0.4879

In order to establish a long futures hedge, Transcend would buy 8 November 2012 futures contracts and 8 January 2013 futures contracts on January 1, 2012. As the buyer of the futures contracts, Transcend now has a contract to purchase 800,000 \$R on November 1st, 2012 at the specified price of \$0.4945/1BRL and a contract to purchase 800,000 \$R on January 1st, 2013, regardless of what happens to the spot price between January 1st, 2012 and the specified dates in the future. Because Transcend needs to make a purchase of Brazilian real on October 31st, 2012, they will not take physical delivery of the Brazilian real on November 1st, 2012, but instead close their Futures position out and cash settle the difference. The last trading day for the November 2012 futures contracts occurs on October 31st, 2012. The futures price for a currency pair is a function of the spot price, the time to settlement and the difference in interest rates between the two currencies, shown as; $Futures = Spot * \exp[(Interest\ rate\ US - Interest\ rate\ Brazil) * time]$. Because the time to settlement is only one day, the spot rate and futures price will be very nearly identical.

Under the scenario that the Brazilian real strengthens to \$0.61/1BRL on October 31st, 2012, the purchase of 800,000 real at the prevailing spot price will result in a cost of \$488,000. However, the November 2012 futures contract can be sold on October 31st, 2012 and the difference cash settled. The November 2012 futures contract was purchased on January 1, 2012 with a price of \$0.4945, and due to the strengthening of the real, the November 2012 futures contract will have a price of something very close to \$0.61/1BRL on October 31st, 2012. To close the futures hedge out, Transcend will sell the 8 November 2012 futures contract on October 31st, 2012 and cash settle the difference. The resulting profit from the futures position will be (\$0.61 -

$\$0.4945 \times 800,000 = \$92,400$. The net cost of the deposit with the futures hedge in place is calculated as $\$488,000 - \$92,400 = \$395,600$.

As the buyer of 8 January 2013 futures contracts on January 1st, 2012, Transcend now has a contract to purchase 800,000 \$R on January 2, 2013 (the settlement date) at the specified price of \$0.4879. Because Transcend needs to make a purchase of Brazilian real on December 31st, 2012, they will not take physical delivery of the Brazilian real on January 2, 2012, but instead close their Futures position out and cash settle the difference. The last trading day for the January 2013 futures contracts occurs on December 31st, 2012.

Under the scenario that the Brazilian real strengthens to \$0.62/1BRL on October 31st, 2012, the purchase of 800,000 real at the prevailing spot price will result in a cost of \$496,000. However, the January 2013 futures contract can be sold on December 31st, 2012 and the difference cash settled. The January 2013 futures contract was purchased on January 1, 2012 with a price of \$0.4879, and due to the strengthening of the real, the January 2013 futures contract will have a price of something very close to \$0.62/1BRL on December 31st, 2012. To close the futures hedge out, Transcend will sell the 8 January 2013 futures contract on December 31st, 2012 and cash settle the difference. The resulting profit from the futures position will be $(\$0.62 - \$0.4879) \times 800,000 = \$105,680$. The net cost of the final payment with the futures hedge in place is calculated as $\$496,000 - \$105,680 = \$390,320$.

In total, with the hedge in place, expected revenues from the sale of 400 trips at \$3,000 is \$1,200,000. Total costs include the deposit plus final payment equal to $\$395,600 + \$390,320 = \$785,920$. This would imply a gross margin equal to 34.5%. (For simplicity, the transaction costs associated with the futures hedge are not calculated but the impact of the transaction costs would lower the gross margin slightly).

6) Briefly describe the impact on gross margins if Transcend adopts a futures contract hedging strategy and the actual number of trips sold is less than expected (consider both a stronger Real scenario and a weaker Real scenario).

In a perfect hedge, the notional amount of the natural position would be equal to the notional amount of the hedged position. Consider a perfect hedge, 10% rise in the value of the currency scenario, with a natural short position. The natural transaction position would exhibit a 10% increase in price due to a rise in the value of currency needed for purchase. However, this increase in cost would be exactly offset by a 10% rise in the value of the hedged contracts with an equal notional amount. The net effect would be completely offset and the exchange rate risk completely eliminated (ignoring transaction costs associated with the hedge).

One downfall of Transcend's catalog business model is that the actual number of trips sold will not be known until a later point in time. If the actual number of trips sold is less than expected, Transcend will be in an "over-hedged" position. This means that the notional amount of BRL contracted to purchase will exceed the actual amount of currency needed for the transaction. Since the long futures position exceeds the natural short position, gross margins will be higher if the currency strengthens and lower if the currency weakens. The dominant position will be the hedge position in the case of "over-hedging" and the hedge position increases in value when the currency strengthens.

- 7) **Briefly describe the impact on gross margins if Transcend adopts the futures contract hedging strategy and the actual number of trips sold is more than expected (consider both a stronger Real scenario and a weaker Real scenario).**

If the actual number of trips sold is more than expected, Transcend will be in an "under-hedged" position. This means that the notional amount of BRL contracted to purchase will be less than the actual amount of currency needed for the transaction. Since the long futures position is less the natural short position, gross margins will be higher if the currency weakens and lower if the currency strengthens. The dominant position will be the natural position in the case of "under-hedging" and the natural position results in a lower cost as the currency weakens and a higher cost as the currency strengthens.

DEMAND MEDIA, INC.

J. Richard Anderson, Stonehill College
Gary Blumenthal, Adlife Marketing & Communications Co., Inc.

CASE DESCRIPTION

The primary subject matter of this case concerns the corporate financial reporting policy of a company as it approaches its initial public stock offering. The case has a difficulty level of three: appropriate for college juniors and above. The case is designed to be taught in one to one and one-half class hours and is expected to require two hours of outside preparation by students.

CASE SYNOPSIS

As Demand Media, Inc. approaches its initial public stock offering, analysts begin to raise questions about its accounting for Media Content Costs, which are the small fees it pays to independent contractors to write or film the millions of “how to” articles and videos that form the basis of the company’s numerous websites. Unlike some of its competitors, Demand Media has chosen to capitalize these costs and amortize them over a five-year life. The student is asked to debate the relative merits of capitalization versus expensing these costs, and then is encouraged to discover the importance of this single accounting decision in understanding recent trends in the company’s net income, cash flow from operations, and its own internally-developed non-GAAP measure of performance. Then students are presented with an unusual development: a decision by Google to change its search engine algorithm which causes an immediate sharp decline in the number of visitors to Demand Media’s sites, and thus triggers possible declines in the economic value of its massive library of articles and videos. This new event can then lead to a discussion about the possible impairment of their large Media Content asset. Instructors who wish to go further can then provide (or require students to provide) updates on the company’s fortunes after its public offering.

INSTRUCTORS’ NOTES

Teaching Objectives and Possible Uses of the Case

The major objective of this case is to allow students to see the importance that a single accounting decision has on the financial statements of a corporation, particularly in the sensitive period just before an initial public stock offering. It also provides an opportunity to discuss the basic capitalization vs. expensing decision in an environment in which there is no clear right or

wrong answer, but where there is an industry standard established by major competitors in the same industry.

Companies have long struggled with the capitalization decision for expenditures that fit into the gray area between the extremes of a clear new asset acquisition and money obviously spent to benefit the current financial statement period. Well-known previous cases in this area include:

America On-Line's choice to capitalize and amortize the cost of sending direct-response marketing materials to millions of potential customers for its on-line services.

Waste hauler Chambers Development's attempt to capitalize the cost of dumping its trash at a competitor's landfill site while its own dumpsite was closed for expansion and re-permitting.

Georgia Power's decision to capitalize or expense power supply materials stockpiled for use in its plants as part of its application for regulatory approval of proposed electricity rate increases.

WorldCom's capitalization of operating costs incurred for the short-term lease of other telecommunications company's phone lines to improve service and call-carrying capacity.

The case is appropriate for undergraduate or graduate-level courses in Corporate Financial Reporting, Intermediate Accounting, or even introductory Financial Accounting. It can be done as an in-class exercise or it may be assigned to students as an outside assignment to be submitted for credit.

TEACHING STRATEGY

Probably the best way to begin this case is to make sure that students understand what Demand Media does and how they do it. The instructor can do this with an opening monologue, but a more effective approach is to go online with a home improvement question. For example, if the search term is "How to Paint a Room," DM's *e-How* site will appear among the top-10 web pages picked by the Google search algorithm. Clicking on the *e-How* site will produce an article about room painting and a number of ads by Home Depot, as well as opportunities to click through to explore other sites. As this is going on, the instructor should point out:

How important it is to be among the top websites picked by the search engine

How simple and straightforward the articles or videos are – they could have been (and probably were) written by an informed amateur

How long-lived the articles are – an article about room-painting could be displayed for a number of years without looking dated or losing its usefulness

How effective the advertising can be, since the readers are very likely to be in the market for paint and painting accessories.

How easy it is to track the effectiveness of the site in drawing interested viewers and in calculating the proportion of viewers that actually clicked on the Home Depot advertisement.

Through this brief exercise, students are visually exposed to the material that DM calls “Media Content,” can understand the concept of writing articles primarily to attract readers to advertising pages, and can appreciate how critically important it is to figure out how to have your web page come to the top of the Google listing (called Search Engine Optimization, or SEO.) Students should also be reminded of how big the playing field is: there are literally millions of questions that consumers can ask, and DM’s ability to cover all these bases with articles and advertising improves its performance, since agreements with advertisers call for DM to earn revenue every time a consumer is directed to one of its web pages.

Once students clearly understand what “Media Content” is and how DM uses a literary assembly-line to produce it, the discussion can then move to the accounting for these costs and to a consideration of the student assignment questions.

STUDENT ASSIGNMENT QUESTIONS

1. Try to draft your own answer to the SEC’s question quoted above. While it has been traditional for other internet-related companies like AOL to immediately expense all media content costs, does Demand Media have solid accounting support for its decision to capitalize these costs?

2. Using Exhibit 5, recalculate Demand Media’s profit or loss for 2009 and 2010 if they had chosen to expense Media Content Costs immediately.

	<u>2009</u>	<u>2010</u>
Net Profit or Loss, as Reported		
Add: Amortization of Media Content Costs		
Deduct: Spending on Acquisition of new Media Content		
Net Profit or Loss, as adjusted for change in accounting method		

3. New company analysts are always very interested in their ability to produce positive operating cash flows, and whether these cash flows are increasing over time.

- a. Find Demand Media’s recent operating cash flows and put them into the table below
- b. Since Demand Media has chosen to treat spending on media content costs as the purchase of an intangible asset, verify from the cash flow statement that this cash outflow has been treated as an investing event and that only the amortization of previously-incurred media content costs appears in the calculation of operating cash flows.
- c. Using the information about Spending on Acquisition of New Media Content that you found in Question 2, use the table below to adjust Demand Media’s operating cash flows to what they would have been if they had chosen to treat Media Content Costs as an immediate expense.

	<u>2009</u>	<u>2010</u>
Operating Cash Flow, as Reported		
Deduct: Spending on Acquisition of new Media Content		
Operating Cash Flow as adjusted for change in accounting method		

- d. If the company had followed the traditional accounting policy of expensing Media Costs as incurred, would they have shown sharply increasing operating cash flows in 2010?

4. Companies who are unable to produce positive net incomes using GAAP often create other “pro-forma” or “non-GAAP” approaches to calculating profit. Since this measure usually removes depreciation, amortization, and stock compensation costs from expenses, it usually produces attractive-looking profits or significantly reduces unsightly losses.

In Footnote 4 Demand Media presents its calculation of “Adjusted OIBDA” (Adjusted Operating Profit before Depreciation and Amortization,) which shows a healthy 68% increase from 2009 to 2010.

Use the following table to show how OIBDA would change if Demand Media had chosen to expense Media Content Costs as incurred:

	<u>2009</u>	<u>2010</u>
Adjusted Operating Profit before Depreciation and Amortization	\$ 36,813	\$ 62,005
Deduct: Spending on Acquisition of new Media Content		
OIBDA as adjusted for change in accounting method		

What can you conclude from these re-calculations?

5. What effect, if any do you think the change in the Google algorithm should have on the carrying value of the intangible asset Media Content in Demand Media’s balance sheet? What additional information might you need to calculate the effect of this change?

DISCUSSION OF STUDENT ASSIGNMENT QUESTIONS

1. ***Try to draft your own answer to the SEC’s question quoted above. While it has been traditional for other internet-related companies like AOL to immediately expense all media content costs, does Demand Media have solid accounting support for its decision to capitalize these costs?***

The major arguments on both sides of the issue follow:

Media Content is an Asset:

1. They have very extensive data indicating that its articles directly produce advertising revenue – in some cases, DM even shares the ad revenue with the article’s author, which makes it much like a royalty payment on an intangible asset. Their media content clearly seems to meet FASB Concepts Statement #6’s definition of an asset: a probable future economic benefit owned or controlled by the company as a result of past transactions or events. IFRS rules also allow for the capitalization of purchased intangibles that are separately identifiable and promise future cash inflows that are under the entity’s control-conditions that are certainly met by Media Content costs. In this case, the tie between the investment in an intangible and the probable production of future cash inflows is much tighter than for many other assets commonly shown on balance sheets.
2. While the \$20 per article price is small, it still represents the purchase of an intangible from an outsider, not the internal development of an intangible. DM is not taking costs that would normally appear in the income statement as salaries expense and converting them into assets. After an initial hard-line approach to R&D expensing in SFAS 2, the FASB began to allow capitalization of certain computer software costs once technological feasibility had been established (SFAS 86). It could be argued that the mass production of media articles is a form of R&D carried on by independent contractors in which Demand Media does not make any cash payments until technological feasibility is established, i.e. an article is finished and subjected to DM’s algorithm which proves that it will generate a sufficient number of search engine hits to be profitable.
3. Their careful avoidance of topical articles means that the media content they purchase has enduring value (in DM’s parlance, they have a “long tail”.) The vast majority of the articles they’ve purchased in the past have been proven to produce revenues for more than a year, which justifies capitalization.

Media Content is not an Asset:

Industry practice has traditionally treated media costs as an expense. For example, in footnotes to their financial statements, AOL says:

Research and Development

Research and development costs related to the Company’s software development efforts, which are expensed as incurred, are included in costs of revenues and totaled \$41.9 million, \$63.2 million and \$68.8 million for the years ended December 31, 2010, 2009 and 2008, respectively. These costs consist primarily of personnel and related costs that are incurred related to the development of software and user-facing Internet offerings that do not qualify for capitalization.

Intangible Assets

AOL has a significant number of intangible assets, including acquired technology, trademarks and customer relationships. AOL does not recognize the fair value of internally generated intangible assets.

The two main distinctions between AOL and Demand Media are that:

- AOL's Media Content is usually internally produced by employees, and
- AOL's content is primarily topical in nature, with very short useful lives

Their ability to produce future ad revenues from their articles will decline alarmingly if the major search engines relegate DM's articles to a lower tier of searchable matter. The impact of Google's algorithm changes on traffic visiting the *e-How* site raises serious questions about the ability of their media content to continue to generate long-run economic benefits. However, this may more appropriately be thought of as an asset impairment, rather than an argument against capitalization.

- 2. Using Exhibit 5, recalculate Demand Media's profit or loss for 2009 and 2010 if they had chosen to expense Media Content Costs immediately.**

<i>Dollars in Thousands</i>	<u>2009</u>	<u>2010</u>
Net Loss, as Reported	\$ (22,471)	\$ (5,325)
Add: Amortization of Media Content Costs	6,932	14,895
Deduct: Spending on Acquisition of new media content	<u>(11,981)</u>	<u>(42,812)</u>
Net Loss, as adjusted for change in accounting method	\$ (27,520)	\$ (33,242)

The major point to make here is that if media costs had been expensed as incurred, DM's net loss in 2010 would have been \$5.7 higher than in 2009. Their decision to capitalize media content costs makes it appear that they are improving as they approach their IPO, but this "moving toward profitability" is strictly a function of the accounting method chosen.

- 3. New company analysts are always very interested in their ability to produce positive operating cash flows, and whether these operating cash flows are increasing over time.**
- a. Find Demand Media's recent operating cash flows and put them into the table below**
 - b. Since Demand Media has chosen to treat spending on media content costs as the purchase of an intangible asset, verify from the cash flow statement that this cash outflow has been treated as an investing event and that only the amortization of previously-incurred media content costs appears in the calculation of operating cash flows.**
 - c. Using the information about Spending on Acquisition of New Media Content that you found in Question 2, use the table below to adjust Demand Media's**

operating cash flows to what they would have been if they had chosen to treat Media Content Costs as an immediate expense.

- d. If the company had followed the traditional accounting policy of expensing Media Costs as incurred, would they have shown sharply increasing operating cash flows in 2010?**

While cash flow statements identify all the cash flowing into and out of the business, many analysts focus almost exclusively on operating cash flows in evaluating young businesses. This question allows students to see that while DM's decision to capitalize media content costs does not affect total cash flows, it has a major impact on how operating cash flows are reported. When students complete parts a, b, and c, their table should appear as follows:

<i>Dollars in Thousands</i>	<u>2009</u>	<u>2010</u>
Operating Cash Flow, as Reported	\$ 39,231	\$ 61,624
Deduct: Spending on Acquisition of new media content	<u>(11,981)</u>	<u>(42,812)</u>
Operating Cash Flow as adjusted for change in method	\$ 27,250	\$ 18,812

Capitalizing media content costs makes them into an investing cash outflow, rather than a component of operating cash flows. This allows them to report that operating cash flows increased 57% from 2009 to 2010, whereas if media content costs had been treated as an operating expense, operating cash flows would have fallen 31% from last year. Regardless of how students feel about the appropriateness of DM's accounting method, it clearly has improved the look of their financial statements as they approach their initial public stock offering.

- 4. Companies who are unable to produce positive net incomes using GAAP often create other “pro-forma” or “non-GAAP” approaches to calculating profit. Since this measure usually removes depreciation, amortization, and stock compensation costs from expenses, it usually produces attractive-looking profits or significantly reduces unsightly losses.**

In Footnote 4 Demand Media presents its calculation of “Adjusted OIBDA” (Adjusted Operating Profit before Depreciation and Amortization,) which shows a healthy 68% increase from 2009 to 2010.

Use the following table to show how OIBDA would change if Demand Media had chosen to expense Media Content Costs as incurred.

Completing this exercise will produce the following results:

<i>Dollars in Thousands</i>	<u>2009</u>	<u>2010</u>
Adjusted Operating Profit before Depreciation and Amortization	\$ 36,813	\$ 62,005
Deduct: Spending on Acquisition of new Media Content	(11,981)	(42,812)
OIBDA as adjusted for change in accounting method	\$ 24,832	\$ 19,193

As an interesting side-note, DM's amended S-1 filing with the SEC reports that management bonuses are calculated based on OIBDA; since Media Costs are being capitalized and OIBDA excludes intangible asset amortization, management's bonus pool is thus totally unaffected by how much it spends on acquiring new articles or videos. This is equivalent to establishing a bonus system in a manufacturing company based on profits and excluding cost of goods sold from the calculation.

What can you conclude from this re-calculation?

These three recalculations are summarized below:

	If Media Content is Capitalized	Change from 2009	If Media Content is Expensed	Change from 2009
Net Income/ (Loss)	\$ (5,325)	-76%	\$ (33,242)	+21%
Operating Cash Flow	61,624	+57%	18,812	-31%
OIBDA	62,005	+68%	19,193	-23%

The obvious conclusion is that irrespective of the theoretical merits of capitalization vs. expensing of Media Content costs, DM's decision to capitalize these costs significantly improved the look of their financial statements in the year just before their IPO: A 21% increase in their net loss was converted into a 76% decrease, a 31% decline in operating cash flows was transformed into a 57% increase, and a 23% decline in OIBDA became a 68% increase. Such a dramatic improvement in these statistics certainly made it a lot easier for investors to justify paying the \$17 per share IPO price.

5. What effect, if any do you think the change in the Google algorithm should have on the carrying value of the intangible asset Media Content in Demand Media's balance sheet? What additional information might you need to calculate the effect of this change?

This question encourages students to consider whether a change in the outside environment could cause the Media Content intangible to become impaired. The company addresses this issue in Footnote of its recent quarterly report:

“ The Company evaluates the recoverability of its long-lived assets with finite useful lives for impairment when events or changes in circumstances indicate that the carrying amount of an asset group may not be recoverable. Such trigger events or changes in circumstances may include...significant adverse changes... in the business climate, including ... significant adverse deterioration in the amount of revenue or cash flows we expect to generate from an asset group, Through June 30, 2011, the Company has identified no such impairment loss.

From February 2011 through June 2011, Google deployed at least three significant changes to its global English language search engine algorithms. The Company has experienced a substantial reduction in the total number of search referrals to its owned and operated websites primarily as a result of these Google algorithm changes. To date, the recent changes in Google’s search engine algorithms have not had a material adverse impact on the carrying value or intended use of the Company’s long-lived assets, including its media content. However, there can be no assurance that these changes or any future changes that may be made by Google or any other search engine to their algorithms and search methodologies might not adversely impact the carrying value, estimated useful life or intended use of the Company’s long-lived assets, including its media content. The Company will continue to monitor these changes as well as any future changes and emerging trends in search engine algorithms and methodologies, including the resulting impact that these changes may have on the economic performance of the Company’s long-lived assets and in its assessment as to whether significant changes in circumstances might provide an indication of potential impairment of its long-lived assets.”

Why has Google’s algorithm change not caused DM to book an impairment loss? The answer probably lies in the very large profit margin that they enjoy on Media Content costs. According to their answer to an SEC inquiry letter, the average article that they commission generates an impressive 79% internal rate of return. For the Media Content portfolio as a whole, the \$96.4 million cumulatively invested in articles and videos over the past four years returned \$152.9 million of Media Content revenue in 2010 alone. If we accept DM’s estimated useful Media Content life of five years, estimated advertising revenue would have to decline by at least 80% before their cost would be unrecoverable and trigger an asset impairment loss.

The question of useful life and amortization policy is a difficult one. While DM has assigned a useful life of over 5 years to these articles and videos, the company has not been in business long enough to prove that the majority of articles will be successful in generating advertising revenue for that long. Google’s algorithm changes may well shorten the useful life of DM’s content, but it is more likely to make many more articles “non-starters” – unable to attract enough viewers to produce any ad revenue at all (the online equivalent of a “dry hole” in the oil & gas industry.) As some analysts have pointed out, the company has not provided any information about the pattern of revenue that its articles produce; is the revenue fairly constant over a long period, or is it front-end loaded toward the beginning of the article’s life, which would suggest that an accelerated amortization method is more appropriate.

EPILOGUE

It is tempting for students to attribute DM's recent 74% decline in stock price to investors finally deciphering the impact of capitalizing media content costs on the trend of profits and cash flows, but this is probably not a fair attribution. Students should be encouraged to consider the following points:

1. Mid-2011 was a very tumultuous time in the capital markets and many stocks exhibited wide fluctuations in market price.
2. Initial investor enthusiasm for an interesting new internet company pushed the stock price from a targeted \$13-15 per share to \$17 at the actual IPO and to \$27 a few days later, but the price retreated fairly quickly back to the mid-teens as the clamor died down.
3. Google's algorithm change probably had a marked negative impact on investor perceptions of the company, especially its extreme vulnerability to its environment. The whole operating strategy of the company was to take advantage of the way that search engines steered consumers to various websites; investors are now realizing that those search engines can be changed in ways that are detrimental to DM and that DM has little or no control over the process.
4. While DM chose the unorthodox approach of capitalizing media content costs, they very clearly disclosed this decision in their S-1, which allowed investors to easily convert their income statement and cash flow statement to reflect media costs as expenses if they chose (as was done in this case.) In an efficient capital market, their choice of accounting method if fully disclosed should not have had an impact on their stock price at their public offering.

AN ACCOUNTING CHANGE AT AMERICAN ROCK SALT COMPANY

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Brad J. Reed, Southern Illinois University Edwardsville
Gregory E. Sierra, Southern Illinois University Edwardsville

CASE DESCRIPTION

This case explores the events of an accounting change. The case involves American Rock Salt Co.'s (ARSC) accounting change as documented in filings with the Securities and Exchange Commission (SEC). Students examine the process for a change in accounting principles, estimates, and error corrections. Standard filings by the ARSC provide relevant information as do correspondence between the ARSC and the SEC. The student will produce a memo presenting answers to questions regarding accounting changes. The case is appropriate for a junior or senior level financial accounting course. This case has a difficulty level of three out of five.

CASE SYNOPSIS

A change in accounting method is treated as a change in accounting principles if the change is made from one acceptable principle to another. The application of an accounting principle sometimes involves the estimation of certain parameters such as the useful life of assets. In this case ARSC changed from the straight-line method of accounting for depreciation on mine-improvements to the units-of-production method for a year in which the annual report had already been filed with the SEC. Of added interest, the FASB had issued SFAS 154: Accounting Changes and Error Corrections- a replacement of APB Opinion No. 20 and FASB statement No. 3, which became effective for accounting changes and corrections of errors made in fiscal years beginning after December 15, 2005.

The student is put in the position of an accountant at a company that is considering acquiring ARSC. The student is then asked to respond to a series of questions to help gain an understanding of the financial statements and accounting changes at ARSC.

INSTRUCTORS' NOTES

Questions

1. **Make a table of the correct accounting treatments according to SFAS 154 of 1) A transition to a new accounting standard, 2) a voluntary change in accounting principle, 3) an error correction and 4) a change in estimate.**

Types of Change?	Transition to a New Accounting Standard	Voluntary Changes in Accounting Principles	Error Corrections	Changes in Estimate
Transition Accounting Method?	Cumulative Adjustment to Income	Cumulative Adjustment to Beginning Retained Earnings for Direct Effects ----- Cumulative Adjustment to Income for Indirect Effects	Cumulative Adjustment to Beginning Retained Earnings with no distinction between direct and indirect effects. This is journal entry is called a prior period adjustment.	No Cumulative Adjustment (The Change only Affects the Current Period Forward)
Change Prior Years Numbers on Comparative Columns?	Only Pro Forma As-If Disclosures are presented. Prior-year numbers in the Comparative Columns are not changed.	Yes! However, the word restatement is not used to describe the changes to prior year numbers.	Yes! This is part of the restatement of prior year numbers. The word restatement is only used for error corrections.	No!
Disclosures Required?	Yes	Yes	Yes	Yes

2. **Discuss which type of accounting change treatment matches ARSC's accounting for the change in the Amended September 30, 2005 Annual Report. Also discuss the circumstances of the accounting change that ARSC made to the September 30, 2005 amended 10-K.**

Under SFAS 154, ARSC's adjustment to beginning retained earnings can only be used for an error correction or a voluntary change to an accounting principle. In addition, the change is characterized by ARSC as restating numbers, which is a term that SFAS 154 restricts to discussions of error corrections. ARSC also describes the change in the

amended 2005 Annual Report as a change in estimate. Under SFAS 154 a change in depreciation method is accounted for as a change in estimate, not as a voluntary change in accounting principle. SFAS 154 mandates that a change in estimate be accounted for in the current year forward, and not accounted for with a cumulative adjustment to retained earnings, nor a restatement of prior-year numbers. Under APB Opinion No. 20., which was in effect prior to SFAS 154, a change in depreciation was treated as a voluntary change in accounting principle.

The change made to the September 30, 2005 10K/A was an error correction. The error was in using a 20 year life for the mine development costs when mine development costs should have been depreciated over proven and probable reserves via units-of-production. The proven and probable reserves were expected to last 70 more years as of September 30, 2005.

3. Was it appropriate for ARSC to apply SFAS 154 to the accounting period beginning October 1, 2005; which is before SFAS 154 became effective?

Yes, it was appropriate for ARSC to apply SFAS 154 to a fiscal year that began October 1, 2005 even though SFAS 154 became effective on December 15, 2005. SFAS 154 states that “early adoption is permitted for accounting changes and corrections of errors made in fiscal years beginning after the date this Statement is issued.” SFAS 154 was issued May 2005 and, therefore, it is appropriate to apply SFAS 154 to a fiscal year beginning October 1, 2005.

4. Does ARSC’s income increase or decrease with a change from the straight-line depreciation method with a twenty-year useful life to the units-of-production method, given full production?

ARSC’s income increases with the new change, because the mine development assets are being effectively amortized over a longer useful life. Originally the mine development costs were being depreciated over a 20 year life using the straight-line method of depreciation. Changing to the units-of-production method effectively lengthened the useful life of the mine development costs to include the remaining 70 years of proven and probable reserves. As noted in Table 1 there was a decrease in annual depreciation expense of approximately \$2 million (\$6.3 million in 2003 to \$4.1 million in 2004 as restated on a comparative basis).

5. Do you think a retroactive adjustment to ARSC's income is appropriate in this circumstance? What is a possible motivation for ARSC to treat the change in this manner?

ARSC erred originally in choosing to depreciate its mine development costs over a 20 year useful life, regardless of the specific depreciation method. Normally, a change in the estimated life of an asset is treated as a change in estimate, however if the original estimate was so dramatically wrong, it could be considered an error. Once this error was discovered, ARSC had no option, but to treat the change as an error correction. A change in an estimated life is usually not treated as an error, but rather as a change in estimate with no retroactive adjustment. By treating the change correctly as a correction of an error, ARSC was able to significantly increase its retained earnings and thereby allow the company to significantly increase its dividend. As noted in Table 2 the cumulative effect of the change was an increase of \$900,000 to equity.

6. What did ARSC mean when it wrote the following with respect to the September 30, 2005 amended 10-K?

The Company has adopted Statement of Financial Accounting Standards No. 154 ("FAS 154"), effective as of October 1, 2005, and in accordance therewith, retrospectively applied the change in amortization approach as a change in accounting principle to the financial statements included in this Form 10-K/A. (ARSC p. 2, 2006)

It appears that ARSC was disclosing the error correction by issuing an amended September 30, 2005 10-K. Because ARSC stated that it was retrospectively applying SFAS 154 to the September 30, 2005 10-K/A; ARSC was in effect restating comparable column numbers in advance of issuing the September 30, 2006 10-K, by issuing an amended (restated) September 30, 2005 10-K.

7. What is your opinion of the explanatory notes to ARSC's 10-K/A as presented on page four?

The explanatory notes in the September 30, 2005 10K/A fail to explicitly describe the error correction as such; which would have been helpful to the reader. A change in depreciation method under SFAS 154 is classified as a change in estimate which is effected by a change in principle and is treated as a change in estimate. A change in useful life is likewise treated as a change in estimate under SFAS 154. A change in estimate under SFAS 154 is a prospective change, not a retrospective change.

A change in principle under SFAS 154 is treated as a retrospective change. The description of the change in the amended September 30, 2005 10-K would have better served investors and lenders by describing the change explicitly as an error correction. Remember, this restatement occurred when the accounting standard for changes was in transition due to SFAS 154. Investors and lenders would have been better able to decipher the change in 2005 had the type of change been explicitly stated in the explanatory notes of the 10K/A.

DESIGN PROTOTYPES INC. PROJECT MANAGEMENT (A): SELECTION OF THE PROJECT TEAM

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CASE DESCRIPTION

The primary subject matter of this case concerns project management. A secondary issue examined is office politics. This case can be used in Project Management, Operations Management, or Quality Management courses. The case has a difficulty level of three. The case is designed to be taught in two class hours and is expected to require four hours of outside preparation by students.

CASE SYNOPSIS

Raef Conley has just been assigned his first major project. Having worked on several small projects since joining Design Prototypes Inc., 9 years ago, Raef has never taken on a major project. This is a significant opportunity for him, one that could advance his career in many ways. Although he is excited about the opportunity, he is also somewhat anxious. As while there is the potential for career advancement, he is also cognizant of the fact that failure could mean the end of his career at Design Prototypes. Raef's first task is to assemble a project team. Raef needs to assemble a team of seven individuals selected from a pool of eleven. While all of the candidates have strengths, some appear to be better suited to the project than others. Three of the candidates have political connections which could influence their selection. Another candidate has a strong personal connection to Raef. While uncertain about his actual motives, Raef has a feeling that his boss has clear preferences toward two of the candidates. The case revolves around the questions of: How does Raef weigh technical competence with personal and political considerations? Who should Raef select for the team?

INSTRUCTORS' NOTES

Recommendations For Teaching

This case, the first in a series of cases on project management, provides an opportunity for students to examine the unique nature of selecting the members of a project team. Students are challenged to apply somewhat subjective criteria to the process of selecting the members of a

team. In order to select team members, students will have to weigh technical competence against personal and political considerations in making the selection. These instructor notes include information that will be useful to the discussion leader in guiding students through the process of analyzing the decision and examining the potential impact of the decisions.

The preferred teaching strategy for this case includes student assignments and class discussion. After assigning the case for reading ask the students to prepare written responses to the questions listed below in the “discussion questions” section.

In order to frame the issues, instructors may wish to assign a video for students to view. Two excellent videos are available. The first is Project management 2, Planning a project and building your project team (Instrument Society of America & De Luca, 1987). This 30 minute video covers the process of project management including the elements of the planning process, making a project definition statement, project phases, selection of a project team, communication formats, and initial team meeting.

The second is 38 minute video entitled Selecting the perfect team (Video Arts & Garden, 2000). Based on the work of Meredith Belbin, this video dramatizes the pitfalls awaiting organizations that approach hiring and team-building from the wrong angle. It illustrates a successful process for assembling a team and then working effectively as a group.

Note that the decision point in this case is very apparent; Conley must select the members of his project team. To make the decision, students must apply subjective criteria to the selection process; in so doing they must weigh technical competence along with personal and political considerations.

This case will allow the instructor to meet the following objectives: To:

1. To develop students’ understanding of the specific elements related to the selection of an effective team.
2. To identify the political nuances that might accompany a ‘rational’ decision in the selection of a team.
3. To allow students to weigh the advantages and disadvantages of each potential team member and justify their decisions.

Case Overview

This case revolves around the decision of who should be selected as members of the project team. Technical competence, personal and political considerations affect the decision making process. The strength of the case lies in demonstrating the subjective nature of “objective” selection criteria. Students must realize that decisions regarding team member selection are subjective in nature and therefore are not clearly evident. The role of office politics is clearly exemplified.

DISCUSSION QUESTIONS

1. What are the key factors for Raef to make his decisions?

While the selection criteria are not absolute, offering numerous interpretations, there are at least four factors to be considered. First, the case clearly identifies one somewhat objective selection criteria: “3 members need technical engineering experience required for the project.” This criteria is “somewhat objective” as it is still a subjective judgment as to what engineering experience is required for the project (i.e. civil, electrical, mechanical), and does working in “Electronics Assembly” or “Environmental Quality” qualify as “technical engineering experience?” This issue can serve as a source of debate as to how “objective” the criteria actually are. Second, determining prior project experience, while easier to identify, is only a preference, so its role in the selection process is also not clear cut. The final stated criterion was team diversity. While having a variety of different types of individuals as part of the team is clear, what actually constitutes those differences is again a subjective judgment. In addition to the three stated consideration, political aspects are also a strongly implied consideration.

2. What are the political issues in selecting this team? Should political issues play a role in project team member selections?

There are the relationship political issues and the career advancement political issues for Raef. Three of the potential candidates, Simon Wright, Philip Lowery and Rae Beth Merson, have a strong political relationship with upper management. Simon Wright is the son of the VP of the Engineering Division; Philip Lowery is a very close friend to Jonathon Wright (VP of Engineering Division), and Rae Beth Merson is a close associate of Jonathon Wright and his wife in community related activities—fundraisers, community events etc. Ms. Merson is more closely connected to Mrs. Wright.

Jonathon Wright has a vested interest in having Simon Wright and Philip Lowery on the project team. Jonathon’s remarks to Raef at the end of the case are very revealing politically—“I trust you will make the ‘right’ decisions, Raef.”

Raef Conley has been with the Design Prototypes, Inc. for 9 years and has been given the opportunity to manage his first major project with the company. Raef believes that managing the project will advance his career with the company. Since Raef reports directly to Jonathon Wright, his decisions and effectiveness in managing the project team will have strong implications for his career.

3. Who should Raef select for his project team? Assume 7 team members will be chosen. Explain and justify each person chosen for the project team.

Answers will vary; however, the key element is in justifying the selections. Selections and their justifications should address the selection criteria and reflect the role of political influence in the process.

5. Based upon the Project Team Selection Process, evaluate Raef's effectiveness in the selection of the project team.

The answers will vary to this question. However, the student responses should reflect the criteria or factors in Table 2 (Project Selection Process) by relating their academic learning from the Operations Management or Quality Management and other management courses in the curriculum such as Organizational Behavior, as most likely the course will include a discussion of the effectiveness of a project manager. Some of the effectiveness criteria include but are not limited to: Visionary leader and Detailed-Oriented manager, Technical savvy and Interpersonally and Politically Astute, Disciplined and Flexible, Effective communicator, Ability to persuade and influence others, Consistency, Credibility as a Source of Authority, Ability to lead productive meetings, and Managing conflict. The professor could lead a discussion during class which integrates various management topics on teams.

Students will likely recognize that Raef's effectiveness is also related to who he chooses for the team and his justification for his selections.—Questions 2 and 3.

5. Identify the 'halo' effects and the 'projection' effects (perceptions) in the case.

This question gives students the opportunity to use their knowledge of perception. Students can find the perceptual issues in the interviews with Raef and in their biographical profiles. For example: similarities in academic credentials—Michael Matson, Alison Whitley, and Philip Lowery; similarity based on time with the company: Michael Matson, Pierce Kennedy, and Philip Lowery; gender-based similarity: Michael Matson, Elroy Bennett, Daniel Swenson, Robert Brandon, Pierce Kennedy, Philip Lowery, Billy Brown, and Simon Wright.; similarity based on home department: Michael Matson, Alison Whitley, and Philip Lowery (Raef most likely comes from one of the Engineering departments and has contacts within the 3 departments); Previous associations with candidates: Alison Whitley—Raef was on the selection committee to hire Alison and has served as an informal mentor to her; also Alison's interview went on longer than any of the others; personal similarities: for example, in the interview with Robert Brandon Raef could relate to Robert Brandon and the I-645 traffic and road construction.

REFERENCES

- Instrument Society of America. (Producer). & De Luca, A. R. (Director). (1987). *Project management 2, Planning a project and building your project team* [VHS]. Available from Encyclopedia Britannica Educational Corp.
- Video Arts. (Producer). & Garden, G. (Director). (2000). *Selecting the perfect team* [DVD]. Available from Video Arts Ltd.

