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# **JOURNAL OF THE INTERNATIONAL ACADEMY FOR CASE STUDIES**

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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 editorial content of this journal is under the control of the Allied Academies, Inc., a non profit association 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 *JIACS* 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 cases contained in this volume have been double blind refereed, and each was required to have a complete teaching note before consideration. The acceptance rate for manuscripts in this issue, 25%, conforms to our editorial policies. The Instructor's Note for each case in this volume are published in a separate issue of the *JIACS*.

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We intend to foster a supportive, mentoring effort on the part of the referees which will result in encouraging and supporting writers. We welcome different viewpoints because in differences we find learning; in differences we develop understanding; in differences we gain knowledge and in differences we develop the discipline into a more comprehensive, less esoteric, and dynamic metier.

The Editorial Policy, background and history of the organization, and calls for conferences are published on our web site. In addition, we keep the web site updated with the latest activities of the organization. Please visit our site and know that we welcome hearing from you at any time.

Inge Nickerson, Barry University

Charles Rarick, Purdue University, Calumet



# **SMALL TOWNS DON'T ALWAYS HAVE SMALL PROBLEMS: ASHVILLE CASE STUDY**

**Stan Newton, Jacksonville State University**  
**Patricia C. Borstorff, Jacksonville State University**

## **CASE DESCRIPTION**

*The essence of this case is the evaluation of the impact of organizational structure on the efficiency of small municipal governments. The methodology used is that of Organizational Analysis (OA), which is a type of internal business appraisal aimed at identifying areas of inefficiency and opportunities for streamlining and reorganization. In this case, it involves the evaluation of policies and procedures that are performed on an ongoing basis in a small southeastern city government. Often not being designed on an efficiency model, but a political one, these organizations atrophy as personnel and requirements change over time. The situation of being subject to political, versus professional, leadership presents a challenge to the gaining of and the continuance of proficiency. Organizational features such as span of control and departmental responsibilities become quite complicated as there is typically a lack of stability in the quality of leadership. With the ebb and flow of demands, due either to exponential growth or substantial decline in population and the tax base, comes the need to realign areas of responsibilities. When this need goes unrealized or neglected appropriate changes in response to new situations are not made in a timely manner. Issues that need addressing may include work flow evaluation, reassessment of assignment of responsibilities, number and quality of personnel, and the adequacy of infrastructure. This case has a difficulty level of three and is suitable for a junior- level organizational behavior or management course. It can be taught in a 90 minute class with two hours of student preparation outside of class. The current trend in our society of expecting more from governments of all level gives this case a practical pertinence.*

## **CASE SYNOPSIS**

*This case deals with an Organization Analysis (OA) for the city government of a small southern town. OA is an internal evaluation of an organization's strengths and weaknesses that will provide unbiased findings and recommendations to address shortcomings. The design of an organization can impact everything, from proper work flow to the efficient allocation of resources. The characters and situation that come to life in the case are those of a popular but ineffective politician, an under-performing municipal government, and the consultant retained to perform this analysis. In spite of recent economic downturns the city is doing relative well and it is with considerable anticipation that Dr. Russell, the consultant, undertakes this behind the scenes evaluation. Dr. Russell's methodology for deriving the needed information is to interview a total of 26 persons holding leadership positions. While the interviews revealed somewhat diverse opinions, some consistent themes appeared. After analyzing this primary data, Dr. Russell felt he had ascertained the principle problems and makes recommendations to correct them. Students find themselves entwined in the dilemma of striving to attain an acceptable level of city governmental performance while dealing with long standing traditions and pleasing, but ineffective, political operatives. Like the consultant, students are asked to provide solutions.*

## **THE SCENARIO/CHARACTERS**

Professor Russell received a very interesting assignment: to perform an organizational analysis study for Ashville. As a management professor, Dr. Russell was well versed in the theoretical solutions to organizational problems, but this was different. This involved practical application of management theory in a real life situation. Having been given a mandate by the contract between the university and the city, Dr. Russell set out to establish a methodology to mine the information needed to make recommendations for better city government.

Starting with investigation of the local economy, Dr. Russell was somewhat surprised to find that even while suffering the loss of its largest employer, the Spydex Corporation, Ashville had maintained a stable population of around 15,000. Due primarily to continued retail growth and with the further development of U.S. Highway 230, tax revenues had kept pace with recent history. While the municipal population remained stable, the peripheral trade area had shown growth, even in light of the Spydex Corporation move. The expansion of residential subdivisions around Lake Wilson, to include upscale vacation homes, represented much of this.

Even though the tax income had remained relatively stable the departure of Spydex left Ashville with an over capacity in the area of community services. This situation had been addressed by downsizing in many departments, primarily through personnel slots lost to attrition being left vacant or abolished. This represented about 10-15 percent of the workforce.

Professor Russell felt the first step was to interview as many leaders as practical. Twenty-six individuals in leadership positions, ranging from department heads to the mayor, were selected for interviews over a period of three months. Fully expecting to find the typical infighting that characterizes many organizations, it was a pleasant surprise to discover little of the animosity that is typically present in such situations; instead, a scenario of cooperativeness and intergovernmental support was found.

## **INTERVIEWS**

The Mayor's interview was quite interesting. She was frustrated and felt inept in the execution of her administrative duties due primarily to a lack of time and communication problems. Mrs. Williams spoke of tension that existed between her office and many departments with the main complaint being personnel issues and the allocation of resources, specifically money for pay and department equipment. Her personal frustrations included not being able to spend as much time with each of the department heads as she would like. The Mayor enjoyed the perks of the office and believed in being present at all community functions, meetings, and celebrations. A closer look at the infrastructure revealed that the Mayor had 13 different department heads reporting to her, several requiring guidance on a professional level that she felt unqualified to give. She knew that she personally lacked the technical expertise in their specific areas.

Visiting with Chief Jones of the police department, Dr. Russell was made aware of what was to become a recurring theme: low pay and high employee turnover. As Chief Jones explained, "Our main problem is the retention of qualified personnel. Many times, as soon as we get them trained and certified, we lose them to another municipality." As Chief Jones defined it, this situation was 'killing them.' This problem was mentioned frequently by almost everyone interviewed. He also expressed frustration in his lack of access to the Mayor, his direct

supervisor, in a regular and timely manner. Chief Jones knew the Mayor wanted to be 'in the loop' but he could not chase her down to include her.

Chief Kelly of the Fire Department felt he had a unique situation. Ashville's fire department was also responsible for area Emergency Medical Support (EMT), requiring that each Firefighter be trained in both firefighting and EMT certification. Given this dual certification requirement, he was especially distraught concerning the compensation received by the Firefighter/EMT's relative to that paid to policemen. Chief Kelly was also frustrated by the lack of communication and direction received from the Mayor's office. He stated repeatedly, "Her office is just up the street and sometimes I find myself waiting for days to confer with my boss". And even more than the Chief of Police, Chief Kelly was frustrated by employee turnover, as trained firemen and EMT's continued to leave for better pay in surrounding cities. The fire and police chiefs shared two common problems: no access to the Mayor and few trained personnel staying in their jobs. As to the pay issue; Professor Russell's research revealed this lack of remuneration parity between police and fire departments was quite the norm in municipalities. While both professions are in the domain of public safety, policemen are generally higher paid. His inclination was to suggest serious consideration be given to the fire department's dual qualification requirement and the current salary discrepancy be adjusted, if not eliminated. Dr. Russell could see immediately the issue of internal pay equity had to be addressed.

As the City Engineer, Wayne Odum was responsible for a wide array of functions to include street maintenance, facilities upkeep, city motor pool, and the sewer operation. These responsibilities resulted in a total of six department heads working under his guidance and supervision. When Dr. Russell asked about work assignments and specific areas of responsibility, Mr. Odum answered "that he felt there was quite a bit of duplication of responsibility with a resulting lack of awareness as to who was to do what". Mr. Odum further commented that "this causes a significant misallocation of resources and funds that could be used for much better purposes". He was quite happy with his job but expressed concern that the opportunity to be more efficient was often lost due to inaccessibility to the city's chief executive, his direct supervisor.

Mr. Robert West had been the head of the electric department for longer than anyone could remember and was known as a very efficient manager. He described the relationship with other departments as "very cooperative" and spoke of how everyone seemed willing to help across department lines when needed. However he also felt there was significant overlap in the assignment or non-assignment of duties and responsibilities. He had a very interesting story of how he had proposed a joint venture with the main power supplier only to "see the opportunity taken by another municipality due to inaction by city hall". While being most congenial in his opinion of his work associates, both subordinates and his superior, when asked about his most urgent complaint he responded, "lack of communication and guidance from the Mayor's office".

Mike Baugh, director of Parks and Recreation, was a relative new employee with Ashville but had 10 years of experience working in the field with other municipalities. He gave his opinions quite candidly without the inherent bias of the other supervisors who generally were 20 year-plus employees. Somewhat surprisingly, his thoughts and observations were much the same as those given by his peers: low pay scale, duplication of responsibilities, and lack of guidance from the Mayor's office

Susan McCarthy, City Clerk, seem to be perceived as the 'second in command' of day-to-day operations. With her office being in city hall, just a few steps from the Mayor's, she was

fully informed as to the most current management problems being addressed by city government. As the city clerk position required close coordination with most other departments, Dr. Russell deduced from these interviews that the position of city clerk was probably the most influential in the functioning of an efficient city government. In fact, he suspected that the house of cards would come tumbling down without her efficient oversight. Her broad responsibilities ranged from preparing and implementing the municipality's budget, the court administrative function, utility department collections, and administering the human resources department. She was highly respected and Dr. Russell believed that she was doing an exceptional job. She, too, had misgivings concerning her lack of audience with the Mayor. When asked for her suggestion to increase city efficiency, she replied "I am frustrated that issues often lay on my desk for days, and sometimes weeks, because no decision maker can be found to move the issues forward". When pressed by Dr. Russell for a solution, she replied "perhaps better organization in the Mayor's office would be a big help". She knew that the Mayor was elected by the populace and was well liked. After all, shaking all those hands and eating all those dinners with constituents had resulted in a Mayor that was quite popular outside the city government.

### **THE PROBLEM**

With the above interviews being typical of other departments, Dr. Russell started to compile a list of the most common voiced complaints and perceived inefficiencies. Aside of the normal trivial grievances that are present in most organizations, the three main areas of discontent seemed to be; inadequate compensation, work duplication, and lack of accessibility to the Mayor. With thorough in-depth research, Dr. Russell found that city governments, like most organizations, evolve over time and tend to increase in both size and complexity as the nature of their operations become larger and more encompassing.

Governmental organizations typically find that the larger they become, the more difficult it is to effectively administer the services they provide to the public. The organizational structure of the city government, the way departments, agencies and divisions are arranged, is often the result of unrelated decisions made by different officials at different points in time. The result can be a hodge-podge organizational structure that evolves in a fragmented fashion. It is characterized by a lack of unity and coordination among its many parts. Effective administration of government – getting things done – is often difficult and expensive due to duplication of effort, overlapping functions, and lack of coordination and cooperation among departments. Conflicting administrative policies and procedures that become ingrained over time contribute to organizational "calcification" and resistance to change. Problems of "turf" between departments, overstaffing in some departments and understaffing in others, slow moving activities, and high cost are among the most common symptoms of a need for governmental restructuring and rethinking of the way a city carries out its business.

Creating a results-oriented governmental organization involves a process of consciously and deliberately integrating the separate administrative functions of the city into one cohesive unit. Building a capable government to carry out the work of a city depends largely on developing a good internal organization and selecting competent personnel. These critical elements are the result of strategically designing an organizational structure that has a logical arrangement of the city's work among departments. A capable organizational system consists of many interrelated and interdependent parts that must function together as a whole.



## THE SOLUTION

Almost immediately, even before being confirmed by the interviews, Dr. Russell was confident he saw an area of inefficiency in the current organizational configuration. The Mayor was serving as the first line supervisor to 13 different departments. Compounding this extremely large span of control was the fact that many of these were of a specialized technical nature requiring knowledgeable leadership. Further complicating this situation was the Mayor's time consuming political duties, which by all accounts she enjoyed and was quite adept at. Professor Russell was confident this situation was the source of the "lack of access to the Mayor" problem.

Solving a work duplication problem usually requires the management and leadership of a central authority who is responsible for the entire body of work, in this case the Mayor. Dr. Russell had already perceived short comings in the Mayor's capabilities, due in large part to both a huge span of control and a perceived lack of interest in the running of the government. It seemed likely that this was also the root of the work duplication problem. Most likely there was an accumulation of extra employees over the years during the ebb and flow in the size of the city. In the good times, employees were added; in the rough times, these employees remained.

The inadequate compensation issue was a management problem of a different sort; or was it? While not given complete access to the financial condition of the city, Dr. Russell felt that monies were available to address this issue. The problem was how to allocate them in the best service to the city. A thorough financial analysis requires unbiased evaluation and time for objective review. Neither of these criteria was being met here. The central authority that should have had the grand overview, the Mayor, was overwhelmed with daily tasks and had few resources available to undertake larger management issues. The other decision makers in the compensation dilemma, the department heads, had little vision and no authority beyond their limited areas of responsibility. Hence, Dr. Russell believed this too was an indirect result of over stressed management and the excessive span of control held by the chief executive.

In the business world, some of the most difficult changes to accomplish are proactive ones. These are changes instituted by futuristic management in companies that are currently doing well, in an effort to prepare for tomorrow, versus maintaining the status quo of yesterday. While management may be aware of the need for these changes to meet the coming onslaught, oftentimes customers, citizens, and employees are not. It is possible Ashville may suffer from this syndrome, as the city is not broken; actually it appears to be doing relatively well. With Dr. Russell's review of all he had learned it became clear that the principle question facing Ashville was; "Is now the time to address shortcomings and prepare for the future?" Given the fact that the city had invested considerable time and treasure in getting this study and that the current political atmosphere seemed conducive to the acceptance of logical change, he was unhesitant in answering this question affirmatively.

After considerable research into the form of governments of other municipalities of similar size and into state law stipulating what types of organizational arrangements would meet legal requirements, Dr. Russell made the following summations and recommendations:

1. Stay as you are. As discussed, while the city is not broken, the current arrangement does have some shortcomings. The fact that the mayor has 13 reports to monitor, and make daily decisions concerning operations therein, is in itself, an inhibiting factor to growth and efficiency (See Figure 1). The broadness of this responsibility, along with the technical aspects of much of it, makes this situation professionally untenable at worst, and a cumbersome one at best. The

reliance on the intangible asset of the enormous years of experience held by the department heads could result in a false sense of security as these longtime employees start to depart.

2. Consolidate existing departments. This option would be a step in the right direction to reduce the above mentioned unwieldiness of the current situation; but, it would do little to bring professionalism to the affairs of government. The resulting arrangement would still require supervision of technical areas by nonprofessional (political) individuals.

3. Consider a change in the form of government; namely to one of the three variations of the Council - Manager form. Under these auspices, the options are:

A. Formally adopt the Council-Manager form of government in compliance with the Council-Manager Form of Government Act of 1975/1982, pursuant to sections 11-43A-1 through 11-43A-52 of the State Code governing the creation and operation of municipalities. The implementation of this option requires holding an election and other exact specific compliances with the law. The details of this option are not listed here as they are quite lengthy, somewhat confusing; and, in Dr. Russell's opinion, not the best one for the situation in Ashville.

B. Appoint a City Manager under Sections 11-43-20 through 11-43-22 of the State Code: any mayor/council may elect to hire a manager without changing its form of government. While the city manager's duties are not spelled out to the detail as they are in the option listed above, they are still mandated to a significant degree by the stipulations in the referenced code. This inherent inflexibility, along with the ambiguity of the law in its references to the legality of mayor versus city manager authority, makes this option somewhat problematic.

C. Appoint a Municipal Administrator. It is this option that Dr. Russell suggests the strongest consideration be given. As pointed out above, internal conflicts among Code sections have caused some municipalities, which wanted an executive administrator but who did not want to change their form of government, to look more closely at appointing an employee to assist the mayor. The Municipal Administrator, or the administrative assistant to the mayor, as the position is sometimes called, is usually an officer of the municipality, who performs whatever functions are assigned to him or her by the council ordinance creating the position. The Administrator, while given a great deal of discretion in the performance of his or her duties, is subject to the daily supervision of the chief executive officer of the municipality; in this case, the mayor.

The administrator is usually a person with considerable experience or training in the operation of municipal government. He or she should be knowledgeable about the laws and regulations governing the municipality and have a working knowledge of how to interpret and apply them. The reason for hiring an administrator is usually the same in most places; the desire to have a centralized person, who is familiar not only with local needs but with national trends and ideas, to supervise municipal functions. This person's job is not to usurp the mayor's powers, but to make the executive more effective. The administrator can advise the mayor and the council of municipal needs and keep them informed on the implementation of city projects. The administrator can also help de-politicize city hall. The mayor and council are sometimes forced to resolve highly polarizing political conflicts. While the administrator must keep his or her employer happy to stay employed, he or she can help resolve opposing political desires by providing an objective source to which the mayor and council can look to for advice.

When contemplating hiring additional personnel and adding salaries, cost and cost effectiveness always seems to come up. Many of the benefits gained by adding an administrator

often lie in intangible areas, making the situation difficult to formally analyze or audit. While there doesn't seem to be any hard data to support a conclusion, there is sizeable evidence and strong perception that hiring a professional administrator most often actually saves money. The administrator should provide a higher competency of supervision in the many technical areas of city operations, more professional coordination, and enhanced probability of seizing initiatives early; be they problems or opportunities. These areas represent increased efficiencies, effectiveness, and inherent savings.

## SUMMATION

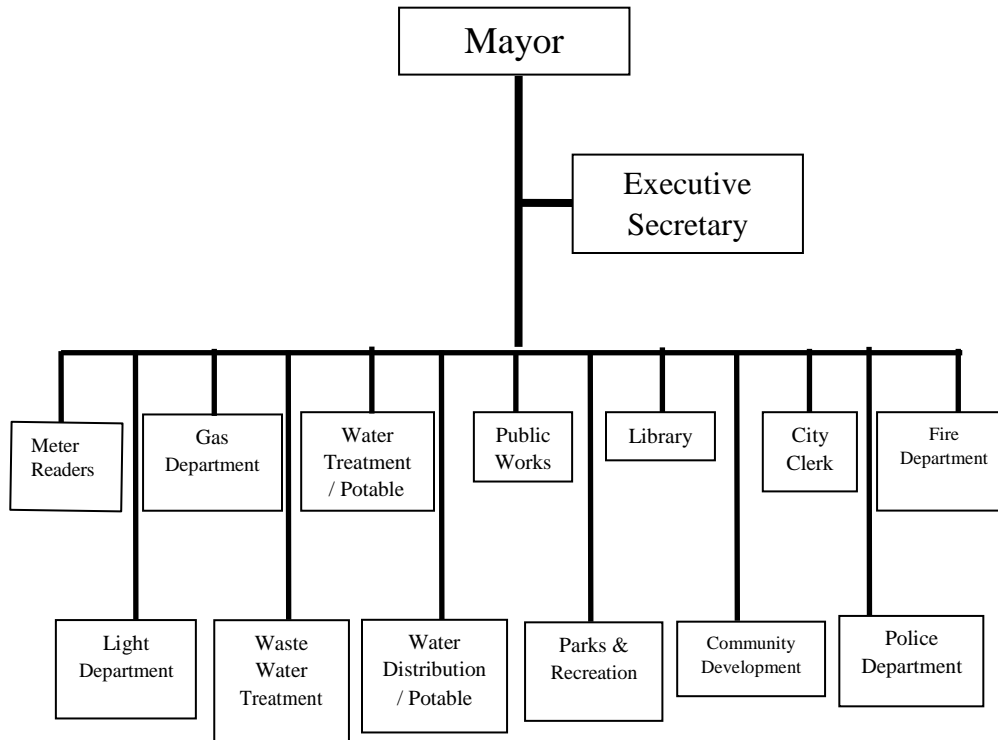
Should the city elect to follow this recommendation, Dr. Russell suggested that the new administrator be given the title of Director of Utilities; with responsibilities as defined by the council and in keeping with the accompanying organizational chart (See Figure 2). This new position of Director of Utilities would have seven reports: Meter Readers, Lights, Gas, Wastewater Treatment, Sewer, Potable Water Treatment, and Potable Water Distribution. It is thought that these are the areas needing the most technical expertise and coordination. While not necessarily the goal of this suggestion, seven (7) personal supervisory functions are theoretically thought to be approaching the maximum most people can control without slipping into the syndrome of diminishing returns. As is shown in Figure 3, this position reports directly to the mayor and is on a par level with the other shown entities.

This limited reorganization would result in a new city organizational structure. As shown in Figure 3, the mayor also has seven (7) reports to deal with on a daily basis. This is down from the present thirteen (13). This suggested restructuring has the mayor over seeing departments that are all headed by a professional: Utilities, Public Works, Library, Community Development, City Clerk's Office, and Police and Fire Departments. It is thought, while retaining political control of city functions, this arrangement will better allow for a continuity of professionalism at the core level of city operations. Another anticipated result is less disruption and the resulting inefficiency in city government caused by the prevailing political winds every (4) four years. Consequently, this structure should contribute to an increased level of efficiency that can proceed unabated year to year.

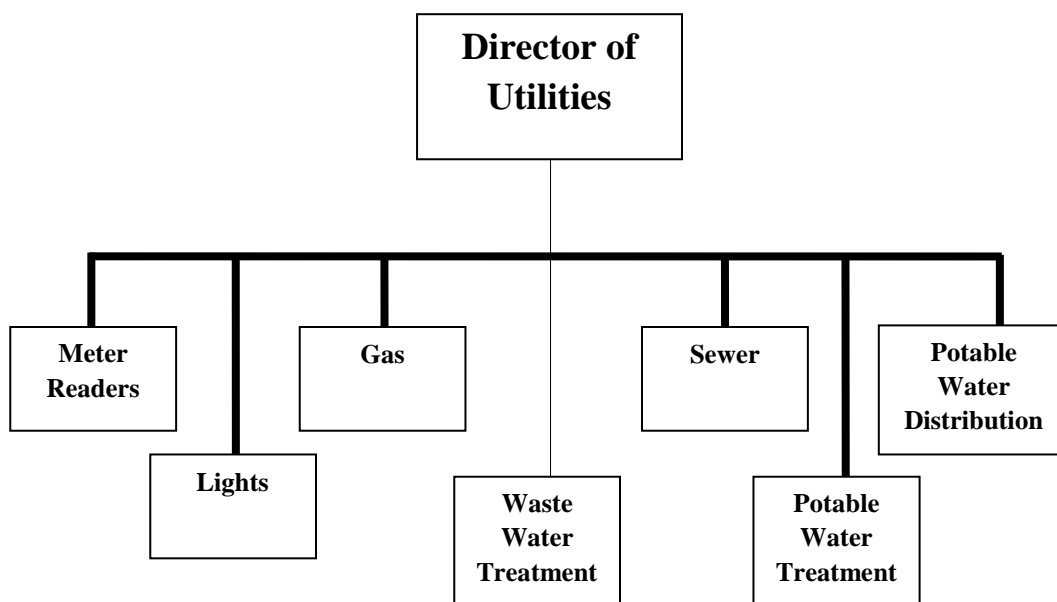
After three months of hard work and diligent research Dr. Russell's project was completed with his presentation to the city council at a meeting that was open to all city employees. While no political body ever seems to be in complete harmony, he was quite pleased with the reception of his findings and recommendations. Following a quite intense question and answer period the council went into formal session with the Mayor recommending that "Dr. Russell's work be accepted as official guidance for city staffing in the future".

**FIGURE 1**

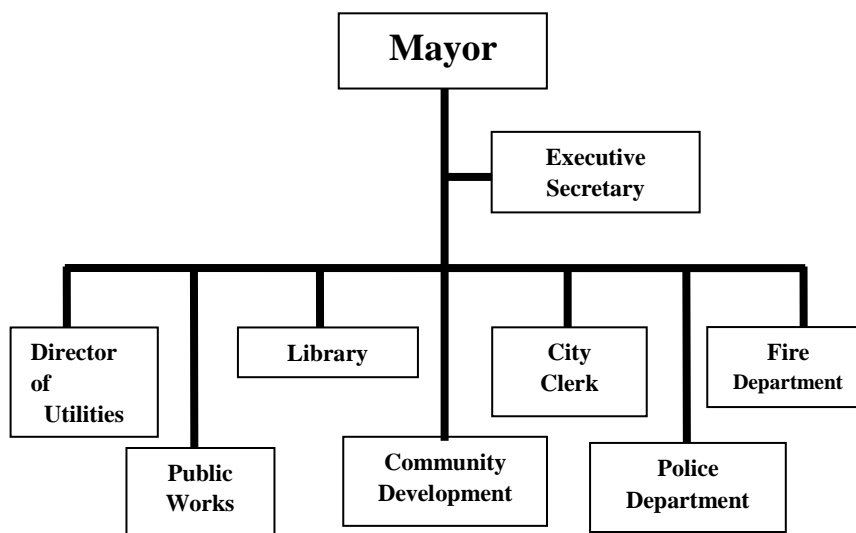
**ASHEVILLE MUNICIPAL ORGANIZATIONAL CHART CURRENT**



**Figure 2**  
**ASHVILLE DIRECTOR OF UTILITIES ORGANIZATIONAL CHART**  
**SUGGESTED**



**Figure 3**  
**ASHVILLE MUNICIPAL ORGANIZATIONAL CHART SUGGESTED**





# THE TALE OF TWO BANKS: SOCIÉTÉ GÉNÉRALE AND BARINGS

**Pierre Canac, University of St. Thomas**  
**Charlene Dykman, University of St. Thomas**

## CASE DESCRIPTION

*The primary subject matter of this case concerns stories of financial fraud involving two rogue traders: Nick Leeson whose trading caused a 200 year-old institution, Barings Bank PLC, to lose almost \$1 billion and go bankrupt in 1995; and Jerome Kerviel who lost over \$7 billion for Société Générale in 2008. Secondary issues are the complexities of financial instruments driven by the growth in derivative markets. Additionally, there is discussion of operational risks and lack of managerial oversight. The focus is more on the managerial, procedural, and control issues than on the financial instruments themselves. This case can be used effectively in finance, auditing, information systems or management classes. The case has a difficulty level of four or five, appropriate for late undergraduate or MBA students. The case is designed to be taught in three hours and is expected to require three hours of outside preparation by students.*

## CASE SYNOPSIS

*This case study documents the stories of two “rogue traders”, Nick Leeson of Barings Bank PLC in 1995 and Jerome Kerviel of Société Générale in 2008. The esteemed history of each banking institution adds to the drama of the case. Nicholas (“Nick”) William Leeson was the chief trader at the Singapore branch of Barings Bank PLC, while Jerome Kerviel was a low-level trader working in the Paris headquarters of Société Générale. These financial frauds led to bankruptcy for Barings (founded in 1762) and more than \$7 billion in losses at Société Générale (founded in 1864). Both of these “rogue traders” did not fit the typical psychological profile of successful traders who are usually educated at top-tier universities, are gregarious, possess a sense of invincibility, work extraordinarily long hours, are always connected to the market, sleep very little and react with joy or sadness based on the state of the market on a given day. Leeson and Kerviel were both from humble origins and earned degrees at second-tier universities and seemed far removed from the typical high-flying trading elite.*

*The case discusses the career path followed by each trader, the insider knowledge gained along the way, and the lack of oversight that provided opportunities for their fraudulent activities. These frauds are separated by more than thirteen years and many miles geographically, with the Barings fraud taking place in Asia in 1994-1995 and Société Générale in Europe in 2008. It seems that Société Générale failed to learn from the experiences at Barings which occurred many years prior. Discussion is included about the dissimilar impacts each of the rogue trader’s actions had on their respective banks. Questions are raised regarding*

*what went wrong, the lack of operational and managerial controls and how similar frauds can be prevented in the future.*

## INTRODUCTION

Henry Theroux, a Partner of Risk Management, PC, a consulting firm dedicated to teaching methods of controlling risks to financial institutions, was contemplating his upcoming speech to plenary of Banking Institutes International. The topic was about prevention of internal fraud through improved monitoring techniques and more rigorous auditing. Henry intended to discuss two very dramatic real-life examples of “rogue trading” and their devastating financial impacts. These stories took place more than a decade apart, yet the lessons learned from the first case were never applied to prevent the second. Henry reflected upon the stories carefully and wondered how he could utilize these stories to emphasize the importance of serious and effective oversight. What are the lessons that financial institutions should learn from these frauds? How can such fraud be prevented in the future, without undermining the trading business, which has become such an important part of banking?

Derivatives are at the epicenter of the problem. Derivative markets have grown tremendously since the mid 1980s. This growth has been accompanied by spectacular losses by both financial institutions and nonfinancial organizations throughout the 1990s and 2000s. Some of the financial institutions that suffered significant losses include Allied Irish Bank, Amaranth, Daiwa Bank, Kidder Peabody, Long-Term Capital Management (LTCM), Midland Bank, and National Westminster Bank, in addition to Barings and Société Générale that are the subject of this case study. Among nonfinancial organizations, we can mention Allied Lyons, Gibson Greetings, Hammersmith and Fulham, Mettetalgesellschaft, Orange County, Procter & Gamble, Shell and Sumitomo. This has caused a backlash against “unregulated” financial markets in general and derivative products in particular, as the term “casino capitalism” became more widespread.

The high visibility of those losses is not only due to their huge size but also to the fact that a large number of them arise from the activities of a single, so called rogue, trader. These traders become well-known and may even be popular. Thus Jérôme Kerviel is considered a French “Robin Hood” inside France and is extremely popular especially among young women. Although management tries to portray itself as a victim, it will be seen that, as a result of poor supervision of its traders, management must share in the blame. Henry Theroux, the presenter introduced earlier, has studied and compared two cases of financial fraud involving two rogue traders: Nick Leeson, whose trading caused a 200 year-old institution, Barings Bank PLC, to lose almost \$1 billion and go bankrupt in 1995; and Jerome Kerviel who lost over \$7 billion for Société Générale in 2008.

What makes those two cases particularly interesting is that the similarities between them are striking. One is led to wonder why history repeats itself and why economic agents do not seem to learn from their mistakes. Perhaps the nature of the job requires the trader to possess some psychological traits that induce him (rogue traders are generally males!) to break rules regardless of the consequences of doing so. On the other hand, could it be that management does



not understand the complex nature of the financial products being traded and thus looks the other way when traders make large gains?

The two cases elucidate some of these points. Theroux will discuss these cases extensively with his audience. In the first section he compares the two banks in order to better understand why Leeson's \$1 billion loss caused Barings to go bankrupt, while Kerviel's \$7 billion loss caused much less damage at Société Générale. The second section introduces the two traders, Nick Leeson and Jerome Kerviel, to appreciate the psychological forces that may have led them to behave recklessly. The third section compares the economic conditions in Asia in 1994/5 and in the U.S. and Europe in 2008 since traders bet on the direction of the markets in which they operate, which is itself affected by the economic fundamentals of the time. The fourth section details the strategies and positions of our two traders as both took long unhedged futures position in the hope that markets would rise. In the fifth section, the role of management who seemed to have been caught by surprise after becoming aware of the huge losses is analyzed. The sixth section discusses the difference in outcome in each of the two cases, as Barings perished while Société Générale survived. Theroux wants his audience to look for ways to prevent such fraud and to better ensure the stability of banking institutions.

## **BACKGROUND OF BARINGS BANK AND SOCIÉTÉ GÉNÉRALE**

The British merchant bank, Barings Bank PLC, was founded in 1762. It helped to finance the Louisiana Purchase in 1803 even though France and England were at war. To finance the purchase, the US issued bonds that Napoleon sold to Barings at a discount of 87 ½ per each \$100, probably a good deal for Barings while allowing Napoleon to finance his wars. However, in 1890 Barings had to be rescued at the last minute by the Bank of England following its overexposure to Argentinean and Uruguayan debt. Following this near collapse, Barings became a much more conservative banking institution with strong ties to the British monarchy. It refused to finance the recovery of Germany after WWI and helped the British Treasury finance WWII. This conservatism caused Barings to be surpassed by other banks although it still remained a significant player until its final collapse in 1995.

Since 1987, Barings had maintained an office in Singapore called Baring Securities Singapore Limited (BSS). Originally this office traded only equities until it became increasingly involved in trading futures contracts on the SIMEX (today's Singapore Exchange). Initially BSS did not have a seat on the exchange, and therefore had to pay commissions for all its transactions. This situation changed when it purchased a seat and hired traders, including Nick Leeson. Clearly this conservative institution was not ready for the highly risky speculative strategies for which Leeson became famous.

Société Générale, (known as SocGen in the international financial world), was founded in 1864 in order to finance the growth of commerce and industry in France. The bank grew rapidly and six years after its creation, had already 15 branches in Paris and 32 in the rest of France. A permanent office was opened in London in 1871. By 1894, the bank was a modern credit institution that not only accepted deposits from firms and private individuals but also was issuing shares of stocks, and doing business in Russia. It was the leading French bank in the 1920s,

reaching 1,457 sales outlets in 1933. When the Great Depression and the German occupation of France during WWII prevented it from growing domestically, it started to expand into Africa and the United States. After the war ended, the bank was nationalized and thus the state became its sole shareholder.

During the twenty-year period that followed WWII the French economy grew rapidly. However this high growth was accompanied by balance of payments disequilibrium and high inflation which were dealt with by controlling foreign exchange transactions and limiting credit. In spite of such curbs, international trade and production continued to grow, allowing Société Générale to increase the range of services it offered to its customers. It was also able to take advantage of its presence in London, benefiting from the additional flow of business generated by the Marshall plan. It also moved into additional countries including Mexico, Italy, Belgium and Spain and to Africa, exporting its technical expertise and providing services to a rapidly growing number of multinational corporations.

European banking regulations were significantly changed in 1966 and 1967. The separation between deposit (retail) and investment banking was abolished and the home mortgage market was created. This is significant because the Glass-Steagall Act, that ended the separation between the banking, securities and insurance companies in the U.S., was not abolished until 1999. Interestingly enough, some economists, such as Robert Kuttner (2008), have criticized the repeal of this act for its role in contributing to the 2007-08 subprime financial crises in the U.S. even though European banks had been unconstrained more than 30 years earlier. Société Générale took an early lead in these new activities thanks to the regulatory changes in Europe. At the same time, information technology was introduced in banking thereby allowing the further expansion of SocGen's international network through telecommunications capabilities. In 1973, SocGen opened a representative office in the Soviet Union. In the 1980s, SocGen took advantage of the increasing pace of financial deregulation and the explosion of technological innovations to expand both its network of retail outlets and its investment activities both at home and abroad. On July 26, 1987, Société Générale was privatized after some 42 years of belonging to the state.

In 1997, SocGen embarked on an acquisition spree in order to expand its retail banking in France and outside France. It first bought Credit du Nord, another French bank. Then in 1999 it attempted to merge with Paribas which was instead purchased by its main competitor in France, Banque Nationale de Paris (BNP). BNP-Paribas is now the largest French banking institution just ahead of SocGen. Between 1999 and 2004, SocGen acquired banks in Eastern, Central and Southern Europe - Romania, Bulgaria, the Czech Republic, Greece and Slovenia – and Africa – Madagascar, Morocco, Tunisia, and Ghana.

Today the Société Générale Group is the 4th largest bank in the euro zone in terms of assets under management. The Société Générale Group has three main core activities: Retail Banking and Specialized Financial Services, Global Investment Management and Services, and Corporate and Investment Banking. In February 2004, Société Générale set up a new division named SG Global Securities Services for Investors, or SG GSSI, to provide full investor services on securities and listed derivatives around the world. Société Générale employs about 7,600

people in its global investment management activities and is now a global leader in equity derivatives, surpassing BNP-Paribas in this activity.

Clearly Société Générale is a lot more sophisticated banking institution than Barings was before its collapse and is one of the top equity derivatives trading houses in the world. Thus, though one could perhaps make the case that Barings managers may not have understood what Leeson was up to, the same could certainly not be said of SocGen's managers whose expertise in derivatives trading was indisputable.

At the heart of the problem may have been the fact that in 1999, following the failed merger with Paribas, SocGen became more vulnerable. In order to offset this weakness, its CEO, Mr. Bouton, adopted a somewhat risky strategy which consisted not only of investing in Eastern Europe but also of pushing his traders to become much more aggressive. Until the rogue trading scandal surfaced, this strategy paid off as risk taking was handsomely rewarded with huge profits.

### **NICK LEESON AND JÉRÔME KERVIEL – TWO ROGUE TRADERS**

Who were those traders? By and large, a successful trader is someone who believes that he is invincible, a characteristic that most senior managers find profitable to encourage. Generally, they are young and quit the business before they get old. The average age is 28 years. Every day they get to work by 6:30 a.m. and do not go home until 9:00 p.m. They do not have time to eat lunch as they must remain continuously aware of market activities and be able to react to market changes as needed. They rarely sleep more than four hours per night as there is always a market that is open somewhere in the world and they are always on the lookout for good deals. When they get home they are connected to the markets via their blackberrys. Their mood can shift from depression to euphoria as markets fluctuate. Stress is a constant (Oberlechner and Nimgade, 2005).

During weekends or evenings, traders must keep up with financial news and analyze each word pronounced by Ben Bernanke, Chairman of the U.S. Federal Reserve Board, or Jean-Claude Trichet, President of the European Central Bank, in order to more accurately predict the direction of interest rate changes. Although they receive bonuses in the millions of dollars if they are successful, money is not necessarily their most important goal. Instead their main objective is to compete and to win, and the size of their bonuses is only important to the extent that it is a reflection of their competitive successes. They tend to be gamblers willing to take huge risks in order to win big when the market moves in the direction they had predicted.

Traders often have huge egos and believe that their feats are due to their special talent as individuals. In fact, reporting on rogue traders differs around the world with North American newspapers focusing primarily on the individual rogue traders while Asian newspapers tend to refer to the organization as the principal agent facilitating the frauds through lack of proper oversight (Mennon et al 1999). Rogue traders generally do not entertain the possibility that their previous successes may have been due to luck rather than their superior trading skills and ability to predict the future direction of the market. Many have a superior sense of control and yet, research has shown that illusions of such control are maladaptive, particularly for traders,

frequently resulting in significantly lower performance (Fenton-O'Creevy, et al 2003). The best traders also tend to come from the best universities worldwide where they study financial mathematics rather than business and commerce. Successful financial traders are the banking equivalents of film stars who command huge salaries (Bacqué & Gatinois, 2008). Thus trading is one of the most coveted jobs in the financial markets. A good trader can make tens of millions of dollars for his company every year and take home vast bonuses. At the same time, it is a stressful job, knowing that one wrong move can wipe out profits and destroy reputations.

Nicholas ("Nick") William Leeson was the chief trader at the Singapore branch of Barings Bank PLC, while Jerome Kerviel was a low-level trader working in the Paris headquarters of Société Générale. How do Leeson and Kerviel fit the portrait of a typical trader as described above? Actually, they are both somewhat atypical. Both Leeson and Kerviel are of humble origins, compared to most other traders.

Leeson was the son of a plasterer; he first worked as a clerk at Barings. He then was sent to the Barings office in Indonesia to work in the back office where a large number of stock trades did not reconcile due to the rapidly growing trading volume on the Indonesian stock exchange. Leeson was charged with cleaning up the mess in the back office and he did that by following the bank's practice of posting all non-matching trades to a special account called the 'errors account.' By suspending all discrepancies into this account, the bank's financial statements would balance. The discrepancies could then be dealt with separately. While working for the back office of the Indonesian branch, Leeson realized how poorly supervisors monitored the errors account.

In January 1992, after his managers noted his excellent performance in Indonesia, he applied for a position at the newly opened branch of Barings Bank in Singapore (BSS). Not only was he approved, but he was made the chief trader and floor manager for BSS on the Singapore International Monetary Exchange (SIMEX) as well as the head of trade settlements, thereby being charged with hiring both front office (traders) and back office (accounting and IT) staff. Thus, in spite of being only 25 years old at the time and having no previous trading experience, he arrived at BSS in 1992 and started hiring local staff. Since he had not been a trader previously, he quickly took the required exam so that he would be qualified to trade on SIMEX along with the small team of traders that he had hired.

Thus within a very short period of time, Leeson ended up being the head trader, in spite of his lack of trading experience. And he was also the general manager of the back office, thanks to his knowledge of back office operations acquired in Indonesia. It is astonishing that Barings' senior management in London did not seem to be aware of the obviously flagrant conflicts of interest that their negligence had fostered – negligence that would prove fatal to the bank. In the defense of management, one might argue that it was obviously not possible to know that Leeson was an expert and talented liar. He did not hesitate to falsify records, fabricate letters, invent elaborate stories, and was able to trump not only upper management but also auditors and representatives of SIMEX. He was unusually adept at exploiting other people's naïveté.

Given his lack of experience, and to some extent lack of luck as a trader, Leeson very quickly got himself in trouble. Prior to 1995, he systematically made wrong bets and by mid February 1995 he had accumulated a huge long position in futures contracts through his

purchases—half the open interest in the Nikkei (Tokyo stock exchange) index futures contracts and 85% of the open interest in Japanese Government Bonds (JGB) futures contracts. It is likely that other market participants were aware of his enormous unhedged positions and made his life more miserable by trading against him. Nevertheless, he remained arrogant and sure of himself until the very end, always believing that he would eventually succeed against all odds.

Jerome Kerviel is the French version of Nick Leeson and like Leeson, he does not quite fit the typical profile of a trader. Unlike Leeson however he was rather shy, reserved, quiet, and introverted, and did not show off. He had been a serious child, placing first in mathematics at his High School (Lycée) and was talented in English. Like Leeson, he is of modest origins, his mother being a former hairdresser in the small town of Pont l'Abbé in Western Brittany and his father a blacksmith. Pont l'Abbé, where Kerviel grew up with his brother and parents, is a picturesque town of grey granite houses with 8,000 inhabitants. He would hang out at the traditional Breton crêperies and work during his school holidays at his mother's hairdressing salon.

Kerviel's managers at SocGen claimed that he seemed to have been deeply affected by setbacks in his personal life including his father's death in 2006, a failed marriage a year later, and his recent break up with a girlfriend. Like Leeson, he did not graduate from a top-notch university but obtained degrees from second-tier universities in Nantes and Lyon. Thus he was far removed from the highly educated and highly paid mathematicians who made up SocGen's trading elite. His highest degree was only a Masters in Finance from the University of Lyon 2 which specializes in preparing students for back office operations in financial institutions. France's largest banks supported these essentially vocational programs, and in 2000, Kerviel joined the compliance department of Société Générale as a member of the middle office support and control unit of the investment bank, earning a modest salary of €35,000 a year.

Although he was quiet and reserved, Kerviel did not lack ambition. In the second half of 2002, he got closer to the action by taking a job as a trading floor assistant. By 2005, he had become one of the few people to matriculate from the back office into the front office by becoming a junior trader. He was part of the Delta One products team in Paris dealing with program trading, exchange traded funds (ETFs), swaps, index and quantitative trading. Specifically, he was assigned to arbitrage discrepancies between the price of equity derivatives and that of cash equity, an unassuming job that seemed to fit his reserved personality but that he took so seriously that it dominated his life. Kerviel was known for being always well dressed and hard-working. He spent most of his time in front of four screens and two telephones on the sixth floor of the elegant, modern building of Société Générale in the La Défense suburb on the West side of Paris. He would travel to Brittany most weekends to spend time with his mother.

Both Leeson and Kerviel most certainly wanted to become star traders, though lacking the necessary qualifications. They probably both acted in a financially rational manner. In particular, it was easy for Kerviel to look across the trading floors and try to imitate the star traders taking positions in complex over-the-counter derivatives and structured products while earning 10 or 20 times what he was earning. Given these two traders' lack of expertise, and inappropriate schooling, it was unlikely that they would be given a chance to join the star traders. The only way they could achieve stardom was to prove themselves to top managers by making

huge amounts of money for their banks. In order to achieve this, they would take huge unhedged bets on futures markets and hide their trades.

Furthermore, when one looks at the risk and return of their strategies to become stars, their behavior is not actually irrational. By shifting from low-risk arbitrage to high-risk speculative strategies, they could double or triple their bonuses and achieve stardom, on the upside; on the downside, they ran the risk of perhaps being caught, but they would still become famous. Thus either way, by winning big or losing big, they would be notorious. At worst they would spend a few months or a few years in jail while their employers would bear most of the blame for not supervising them closely enough. It was worth the gamble, especially for individuals who were predisposed to believe in their own invincibility. As long as management does not realize that there are huge incentives to become rogue traders, they will continue to be attracted by banks and financial institutions that trade derivative instruments.

## **THE ECONOMIC ENVIRONMENT**

### **Japan 1994-95**

After growing at a rate of 10% in the 1960s, 5% in the 1970s and 4% in the 1980s, the Japanese economy suffered a decade long recession, due to the effect of overinvestment and speculative bubbles in the stock and housing markets in the late 1980s (Nakaso, 2001). Focusing on the 1990s, output declined in 1992-1995, recovered in 1996 and 1997 and fell again during the Asian financial crisis in 1998-1999. Overall, Japan suffered from deflation during the decade of the 1990 causing real interest rates to be relatively high. This resulted in a drag on consumption, an increase in debt burdens and a rise in uncertainty for investment. The problem was made worse by the fact that standard monetary policy tools could do nothing to stimulate economic growth since nominal interest rates were already approaching zero.

It took a fairly long time for the central bank to finally succeed in changing inflationary expectations; it was only in 2003 that the central bank governor pledged not to raise interest rates until inflation was positive again. Moreover, even if nominal interest rates could not be lowered, the central bank could still provide additional liquidity and did so fairly effectively, if somewhat belatedly, in March 2001 under the so called Quantitative Easing Monetary Policy (QEMP). Under the QEMP, the Bank of Japan played the role of a money broker by allowing financial institutions with funds shortages to borrow at a discount rate (that was lower than the market rate), while amassing the funds of institutions with surplus funds. Unfortunately, the Japanese regulator, the Financial Supervision Agency, did not simultaneously force banks to write off bad loans and recapitalize their balance sheets. Those bad loans, which resulted from the failure of bank regulators and markets to enforce discipline during the boom years, were now a drag on the economy. In that sense, there are similarities between Japan in 1994-5 and the U.S. in 2007-8, although the U.S. authorities were quicker to take decisive action to alleviate problems.

During the time between Leeson's arrival in Singapore in 1992 and the Barings collapse in 1995, the Japanese recession was at its worst, before the QMEP had been put in place. In addition, the Kobe earthquake, the largest earthquake ever recorded in Japan, struck on January

17, 1995, causing major damage to the Japanese economy and its stock market. Shortly after, in February 1995, Barings collapsed. Ironically, the Japanese stock market began to recover six months later in July 1995.

Although one cannot blame Leeson for failing to predict the Kobe earthquake, he was responsible for underestimating the severity of the Japanese slump and the slow reaction of the Japanese government to that downturn. If he had not underestimated the severity of the Japanese recession and overestimated the Japanese government's ability to stimulate an economic recovery, he would have predicted that the stock market would continue to fall and closed his positions, thereby reducing losses. Instead, he stubbornly held that the stock market would rebound and allow him to recoup his losses. It eventually did (in July 1995), but by then it was too late for Leeson and for Barings.

### **United States 2007-08**

SocGen's problems coincided with some of the worst stock market declines since the 9/11 attacks in 2001. The negative sentiment impinging upon world stock markets resulted from a financial crisis that started in the U.S. in the summer of 2007. It was largely the result of ongoing loose monetary policy combined with more than two decades of deregulation and inadequate supervision of financial firms, leading to questionable lending practices to US consumers and home buyers of dubious creditworthiness.

The financial crisis that started in the U.S. and spread to other countries, including in Europe, owes its origin to the rapid increase in subprime lending after 2003 which made it possible for risky borrowers to obtain mortgages. The problem arose because low and middle income families were pushed to buy over-priced homes in bubble-inflated markets. To make matters worse, these loans started with relatively low teaser rates and no down payments. When these mortgage interest rates were later adjusted upwards, the mortgages became unaffordable. The problem is compounded when housing prices fall so that home values are lower than the money owed on their respective mortgages. When this happens, many borrowers simply quit paying their mortgages, abandon their houses and send their house keys back to the lender ('jingle mail'), precipitating a foreclosure. The increased rate of foreclosures causes further housing price declines that lead to more foreclosures and so on. The banks that issued the loans take large losses on the foreclosed homes. To make matters worse there were also rumors that bond insurance companies (called 'monolines'), the firms that provide banks with protection against losses on fixed income investments, were hovering close to bankruptcy as well.

This financial innovation was supposed to disperse the risk of subprime loans away from core depository institutions and into the financial markets. Thus, those loans were "sliced and diced" before being securitized, that is repackaged into mortgage backed securities that would be held by financial institutions worldwide thereby spreading (and hiding) the risk. Securitization generated huge fees for issuing institutions while the credit rating agencies failed to properly monitor and price the risk of such asset backed securities. It was only a question of time before banks in the U.S. and Europe, including Société Générale, started to accumulate large losses on their portfolios of mortgage backed securities. Bear Stearns failed; Lehman Brothers was

liquidated; and the two giant mortgage finance companies, Freddy Mac and Fanny Mae, which own or guarantee \$5 trillion of debt, collapsed. These events and the huge losses at AIG forced the U.S. Treasury and the Fed to intervene aggressively (unlike the Japanese authorities in the 1990s) to try to boost confidence in the health of the U.S. and global financial markets.

While the U.S. financial crisis was running its course, several external shocks were also impacting the real economy. Both oil and commodities prices had been rising, causing inflationary fears, before falling during the second half of 2008. As those prices were rising, the dollar was falling, further boosting inflationary expectations. Concurrently both the U.S. consumer and government were spending at an unsustainable rate, and the U.S. current account deficit was getting increasingly larger. As financial conditions were deteriorating and uncertainties rising, firms responded by cutting back on investment spending and hiring. There was fear that the consumer would stop spending and that a recession would be unavoidable. The U.S. Congress passed a temporary tax cut while the Fed reduced interest rates. So bad was the sentiment that on Tuesday January 22, 2008, the US Federal Reserve took drastic action and slashed its main interest rate to 3.5% from 4.25%, its biggest single cut in 25 years. This was remarkable given that inflation was a serious threat and that the housing bubble and over borrowing by both consumers and home buyers had been partially caused by low borrowing rates resulting from a loose monetary policy and the mispricing of risk.

During this same time period the European business cycle appeared not to be synchronized with the U.S. cycle. European economies were for the most part growing strongly at the beginning of 2008 in spite of the slowing down of the U.S. economy. The German and French economy did not start slowing down until the summer 2008 while the British and Spanish economy had started to slow down a little earlier. However, the European Central Bank (ECB) was still very concerned with the impact of rising oil and commodity prices on inflationary expectations. This concern caused the ECB to follow a tighter monetary policy than the U.S. Fed in order to bring the inflation rate back down toward its official target of 2%.

Such were the basic economic fundamentals that Kerviel had to bear in mind when betting on the direction of European stock markets, taking into account the lack of synchronization between the US and European economies. This would not necessarily imply that the stock markets would not move together. As a matter of fact, European financial institutions were widely exposed to the U.S. subprime crisis, implying that European stock markets could be expected to underperform relative to the performance of the real (rather than financial) sector of the economy in early 2008. The worldwide integration of financial and stock markets, causing prices to be highly correlated, is probably more complete than that of the real sector of various countries since barriers to the movement of goods and people are still extensive. Did Kerviel fail to properly evaluate the dangerous economic conditions that were prevailing in late 2007 and early 2008?

When the recession became global in the third quarter of 2008, after spreading from the U.S. to Europe and on to emerging economies, the price of raw materials, including oil, fell drastically and fear of inflation disappeared. The fall in inflation reflects the severity of the ensuing global recession. But at the time when Kerviel lost 4.9 billion Euros, the recession was not yet evident.



## DETAILS OF THE FRAUDS

The similarities between the trading losses at SocGen and those that caused the collapse of Barings more than a decade earlier are striking. In both cases, a young man responsible for exchange-traded equity futures, trading on behalf of a major bank, ended up accumulating huge hidden positions of which the banks were unaware. In each case, a trader who previously worked in the back office had advanced to a trading position. Each used knowledge of back office procedures to conceal questionable actions. The activities of Nick Leeson caused the collapse of Barings and those of Jerome Kerviel inflicted huge losses on Société Générale. However, those disasters should never have happened because those two rogue traders were supposed to be simple arbitrageurs in the pursuit of low profits with little risk.

Nick Leeson was trading futures contracts on the Nikkei 225 stock index, the 10-year Japanese government bonds, and euro-yen deposits. The Nikkei 225 index is based on the share prices of the 225 largest companies trading on the Tokyo stock exchange. As these contracts were trading simultaneously on the Osaka Securities Exchange (OSE) and the Singapore International Monetary Exchange (SIMEX), Leeson was charged with arbitraging between these two markets. Barings called this arbitrage “switching”, an activity that has little market risk since positions are always matched. Arbitrage trades take advantage of price discrepancies between two markets and carry no risk since a long position in one market is offset by a short position in the other. This is a routine activity that earns a low rate of return.

Leeson who was both clever and unscrupulous determined not to follow such a boring and low risk strategy, especially since he was far from the London headquarters and its oversight. Instead he took unhedged positions on both the OSE and the SIMEX. Consequently, he was betting on the rise of the stock indexes and interest rates by taking respectively long futures positions on the Nikkei and short positions on Japanese Government Bonds in both markets. In addition, shortly after arriving in Singapore, he opened an 88888 Error Account like the one he discovered during his stay in Indonesia. The difference was that Leeson did not use this 88888 Account only to settle discrepancies but instead to hide his unauthorized money-losing trades. To make sure that the managers in London did not know what he was up to, he modified the software controlling the 88888 Account so that the transactions in the account would not be reported daily to management in London.

While he was secretly accumulating losses in account 88888, he was publicly recording profits in three arbitrage trading accounts, numbers 92000, 98007 and 98008. This was accomplished through cross-trades with account 88888. A cross-trade is a transaction executed on the floor of the exchange by one member (Barings) who is both a buyer for one customer and a seller for a different customer. The transaction is executed by matching (crossing) both clients' accounts. A cross-trade must be executed at established bid and ask market prices. However Leeson would execute cross-trades and then would order his staff in the back office to break the total number of contracts traded at one price into several different trades at fictitious prices, crediting the (fictitious) profits thus generated to the three arbitrage trading accounts while recording the offsetting losses in the 88888 account.

Thus the pairs of transactions recorded in the books of Barings Singapore bore no resemblance to those executed on the floor of the exchange. The entries recorded in the three arbitrage accounts reflected spurious contracts transacted at prices different from those transacted in the exchange market. Additional losses from unauthorized positions were also recorded in the 88888 account. During 1994, Leeson thus booked 28.5 million British pounds in false profits. This was a huge profit to earn from futures arbitrage, but it would ensure that Barings employees earned bonuses that year. Leeson himself was to be paid a bonus of \$720,000, which he did not receive because the bank failed before it could be paid. Needless to say, nobody around Leeson would question his unusually high arbitrage profits. He was viewed as a star trader who should not be held back. In reality, in 1994 alone, Leeson had lost Barings US \$296 million while his supervisors thought he had made a profit of US \$46 million.

As if falsifying records and betting on the direction of the market was not enough, Leeson engaged in additional risky steps. He used a lot of leverage, meaning that he bought Japanese stocks index futures and sold Japanese government bond futures fulfilling his margin requirements with borrowed funds rather than Barings' own funds. At times when the Japanese stock market and interest rates were both rising, leverage amplified his gains and this success increased his credibility with his managers who then failed to scrutinize his subsequent trades. Unfortunately, when the Japanese stock markets began to sink in 1994, instead of closing his long futures position by selling stock index futures, he continued with a long position, betting that the market would turn around and start rising again. As his losses were hidden in the 88888 Account, he was able to continue reporting profits in his regular accounts and was thus able to maintain his reputation as a star trader while remaining free of the bank's controls. As his losses became larger and larger, exceeding \$100 million, he was facing margin calls and did not have the cash that he needed to meet them. Remarkably he managed to convince Barings to transfer the funds from London, an amazing achievement that should have set off warnings in London given that, as an arbitrageur, the losses on his long futures position should have been offset by gains on his short futures position, requiring very little additional margin.

In addition to receiving funds through wire transfers from London, Leeson also sold options on the Nikkei index, both calls and puts (such a combination is called 'a straddle') in order to obtain cash to meet his margin calls on his losing futures contracts. However, as the Nikkei index kept falling, his losses on the short put portion of the straddle further compounded his losses on the long futures position. The premiums received from selling the straddles were not sufficient to offset the huge losses on the long futures and short puts. In order to be able to continue funding his margin calls he had to sell more options. At this point there was no way he could ever hope to recoup his losses. Even if the Nikkei index turned around and rose, the losses on his numerous short calls would be greater than the gains on the long futures position. In a last desperate move in late January 1995, he bought some 20,000 additional futures contracts to try singlehandedly to turn the Japanese market around. The market fell 1,000 points! He continued to try to raise Japanese stock prices into February 1995 having purchased more than 61,000 futures contracts by February 22, 1995. By then the margin calls reached \$1.2 billion. As the market continued falling, Leeson left the mess he had created behind and went on vacation with

his wife, Lisa! The Japanese market did eventually rebound but not until July 1995. Barings did not last that long as it was bankrupt by February 1995.

Kerviel at Société Générale was also not supposed to be a speculator. Instead, as an employee on the Delta One trading desk, he was supposed to look at the bank's portfolio and trade in the opposite direction, to hedge some of this risk. A delta neutral portfolio is one whose value does not vary as the price of the underlying assets changes. Thus the name Delta One trading desk suggests that Kerviel was supposed to take low-risk positions. If SocGen's other traders had bought into the equity market, expecting a rally, Kerviel was expected to hedge by selling stock index futures. But instead of neutralizing risk, as he was supposed to do, he took directional positions instead, betting on the rise in various European stock indexes. More precisely, he took unhedged long future positions in various European stock market indexes, the UK's FTSE 100, the Euro Stoxx 50 (an index of Europe's biggest companies), Germany's Xetra Dax and the French CAC40. These strategies would have been profitable if markets had been rising, but markets instead collapsed causing huge losses that Kerviel hid in fictional transactions imitating Nick Leeson.

As an arbitrageur, Kerviel was supposed to purchase one portfolio of stock index futures and simultaneously sell a similar mixture of index futures with a slightly different value, as a hedge. But while Kerviel, according to the bank, put sizable, real purchases in one portfolio, he created fictitious sales transactions in the second, offsetting portfolio. This gave the impression to risk managers that Kerviel was arbitraging between the two portfolios and that the risks in the first portfolio had been hedged when in fact they had not been.

Kerviel initiated his first unauthorized transactions at Société Générale in 2005, not long after moving to the trading desk from the risk-management department. He sold short shares in Allianz, the German insurer, betting on a fall in the market. Shortly afterwards, on July 7, terrorists bombed the London Underground causing the market to fall, and allowing Kerviel to earn €500,000. This first success convinced him that he should continue his unhedged trading in order to continue making profits similar to those earned by the star traders who were dealing in more exotic products.

Accordingly, Kerviel shorted the Dax index in January 2007, making €28 million. In February 2007, he bet that the subprime crisis would spread and harm the real economy and he shorted European stock indexes. At first his position lost money as the market temporarily rose. Eventually his prediction proved correct and the market fell in July. His short position became profitable and by the time he had earned €500 million he was too nervous and frightened to explain to his superiors how he had made so much money. He turned to hiding his large winning bets with fake "hedges", by taking positions in the opposite direction, thereby appearing to balance out the his abnormal profits.

After the market had fallen substantially, Kerviel bet that it had gone too far and that a correction was imminent. He took long positions as the market turned around and by the end of December he had amassed large profits. Then the European market turned down again and his losses mounted. Over time, Kerviel had increased the size of his bets and had hedged his positions on paper with falsified documents and e-mail messages. Nevertheless, he remained convinced that the market would rebound. His earlier successes had made him believe that he

was some kind of financial genius who could predict the direction of the market and that he would eventually be successful and impress his supervisors. He was also hoping to get a bonus from his winning positions.

Unfortunately Kerviel was caught on January 18, 2008. By then he had accumulated positions which were worth €30 billion on the Euro Stoxx, €18 billion on Germany's Dax and €2 billion on the UK's FTSE. The cumulative size of his trading positions was close to €50 billion, an amount larger than the bank's entire market capitalization. Kerviel's trades caused Société Générale to report a loss €4.9 billion, the largest loss from fraudulent activity in banking history, and four times larger than Leeson's malfeasance. As a matter of fact, his losses were even greater than the €4.9 billion originally announced by the bank. SocGen actually incurred a €6.3 billion loss as it carried out a three-day secret fire sale between January 21 and 23 while the market was falling. The bank defended its actions, saying it could not risk keeping the positions open. It was able to reduce the size of the loss by offsetting it with a profit of €1.4 billion made by Kerviel through other unauthorized trades in 2007 (Gauthier-Villars et al, 2008).

How did Kerviel manage to take such risky positions? He was able to hide his large speculative bets on European stock indices by entering false hedges into SocGen's risk management system. This was possible because, like most banks, SocGen assesses the risk of its traders' positions on a net basis instead of a gross basis. Thus a trader can buy €50 billion of equity derivatives, as long as he also takes offsetting short positions. The problem was that Kerviel's offsetting positions were fictitious and thus did not really exist. He used other people's access codes and "falsified documents" to create fake hedges, leaving the bank exposed to the full downside. He managed to get away with such fraudulent activity thanks to his knowledge of back office operations and trade processing, having been previously employed in the bank's back office. Thus, he was able to hack into the bank's computer systems and set up trades using false identities in order to circumvent the compliance team that is in charge of monitoring traders' accounts. This allowed him to make unhedged unauthorized trades betting on future share price movements throughout 2007. The combination of high trading volumes (supported by leverage) and fraudulent activity generated huge losses.

Kerviel was also helped by the fact that long delays are required to confirm trade settlements as the hedge documents are bounced back and forth between the exchange (Eurex – Europe's largest futures exchange), the clearing corporation, the broker, and the bank's back office. Due to these long delays in settling trades, Kerviel's fake trades were never settled. An annual International Swaps and Derivatives Association (ISDA) report states that over the calendar year 2007, it was taking about 14 days on average to settle unconfirmed trades in equity derivatives and five in credit derivatives (ISDA, 2008). Such delays are caused by mistakes contained in the paper work of a significant fraction of derivatives trades. In spite of pressure from regulators such as the New York Federal Reserve, banks have made little progress in improving their back office procedures. Under those circumstances, the exchange is unable to determine whether the customer should add cash or securities to his margin account to offset any loss in value of the futures positions. Normally, if the margin is insufficient, the customer is not allowed to trade until additional funds are added to the account; if funds are not added, the

exchange can liquidate part or all of a trader's position. Kerviel was able to take advantage of such delays in processing and was able to postpone or even avoid margin calls.

To recover his losses, Kerviel, like Nick Leeson, was using a doubling strategy based on doubling a bet after every loss. However for such a technique to work, a trader needs to have unlimited funds at its disposal, something beyond SocGen's reach. It is hard to imagine that such risky behavior did not attract the attention of management at both Barings and SocGen.

### **LACK OF MANAGEMENT CONTROLS AND RISK MANAGEMENT FAILURE**

The losses at both Barings and SocGen did not develop over a short period of time. The two rogue traders had been speculating for a long time without the supervising authorities, i.e. risk managers, compliance officers and settlement people, apparently being aware of the types of activities in which their institutions were engaged. As long as Leeson and Kerviel were making huge profits, no questions were asked to find out whether these high profits were the results of taking huge risks or of exercising superior trading skills. It is inconceivable that the losses that eventually materialized would have occurred if management had controlled the activities of the two traders. After all, these two rogue traders were supposed to be simple arbitrageurs pursuing low but riskless profits. Therefore, the big question is: Why did the system break down in the case of Barings in 1995 and then again in the case of Société Générale in 2008?

This is the way it was supposed to work: Banks have checks and balances, and controls to make sure that unauthorized trades are exposed. Operationally, there are three units, the front, intermediate and back offices, that are supposed to be distinct from one another. The front office consists of the traders who execute trades and take positions. The middle office consists of risk managers who monitor the traders to make sure that they do not exceed the trading and risk limit defined clearly and unambiguously by the Board. Both Barings and SocGen had limits in place that were not enforced.

This monitoring of risk limits by risk managers is critical since financial derivatives can either be used to reduce risk or to take on additional risk in order to try to boost profits. So, an arbitrageur can be tempted to become a speculator in order to enhance his earnings if he is not closely monitored by risk managers. The back office consists of record keeping and accounting. These are non-trading bank employees that compile daily trading activities in order to determine how much the bank is earning or losing each single day. In addition, at many banks, back-office controllers (like traders) are organized into teams (also called 'desks') that monitor the trading of particular products, such as stocks, bonds or currencies. Each time one of Kerviel's trades raised an alert at SocGen, it appeared to be an isolated case because those various alerts were not consolidated across different products. No cumulative record of each trader's alert history was available making it impossible to detect violation patterns. Senior managers could not readily verify the bank's actual risk levels and force traders to close positions that exceeded preset risk limits.

One of the big mistakes at both Barings and SocGen was the lack of separation between the front, middle and back office. As both Leeson and Kerviel had been previously employed by the back office, they were fully knowledgeable about the operations of both the front office and

the back office in their respective banks. In fact, Leeson had been employed at the back office of Barings' office in Jakarta, Indonesia. In Singapore, he was put in charge of the back office even though he was also the head trader. This understanding of back office systems and procedures made it relatively easy for Leeson and Kerviel to hide their loss making trades from their superiors, while their profitable trades were properly recorded and visible. Both traders were able to switch from being arbitrageurs to speculators as control systems at both banks were so inadequate that they were able to take highly risky positions without attracting the attention of anyone, even their immediate supervisors.

One of the techniques used by Kerviel to dissimulate his speculative positions is called the 'matelas' or 'mattressing'. This practice, according to Kerviel, is commonly used by traders to hide their results so that they do not attract the attention of risk managers and controllers. Thus when a desk (team) has reached its profit objectives, all future transactions that drive the profits beyond the target are hidden by being recorded into the following year's accounts. Mattressing was used by Kerviel in addition to entering into fictitious positions to hide previous trades. As only the size of net positions is reported, this allows traders to keep their unhedged positions open without drawing managers' attention.

Such fraudulent activities would be less likely if employees were not promoted from back office positions to traders. Although an audit report in 1994 revealed the danger of having Leeson in charge of both the front and back office, managers at Barings chose to ignore the recommendations of the report. The cost savings generated by having the same person running both the front and back office was supposed to make up for the additional risk of fraud. After all, there is very little risk in arbitraging! Likewise, the prime failure of SocGen was to allow a back office employee to become a trader. The two types of jobs entail very different career paths and salaries, the salary of the trader being larger than the salary of the back office employee by a wide margin. This large difference in salary increases the pressure to promote an excellent back office employee to become a trader.

Using his knowledge of SocGen's back office and control systems – that utilized a computer system called 'Eliot' – Kerviel was able to enter fictitious hedging contracts to make it appear that he was taking minimal risks. By logging into the system under different names, he then cancelled the fabricated contracts before they were supposed to settle, and replaced them with new fake ones. As a result Kerviel was able to roll over one bogus transaction into another and thus avoid managerial scrutiny.

A method commonly used by banks to detect fraudulent trading activities is to force traders to take holiday breaks so that their portfolio can be monitored by other traders (Moullakis, 2008). When SocGen's human resource department realized at the end of 2007 that Kerviel had not been on holiday for eight months, except for four days in August, his boss was notified. However after being asked to take some leave, Kerviel managed to convince his boss to allow him to wait until January arguing that December was the anniversary of his father's death and that he did not want to be alone then.

The responsibility of managers at SocGen was exacerbated by the fact that, aside from failing to implement its own controls, it missed external warning signs concerning Kerviel's suspicious trading activities. Typical banking policies regarding out of the office vacation time

were ignored (Global Employment Law Ticker, 2008). Thus in March 2007, France's regulatory banking commission, after several inspections, twice wrote to SocGen's CEO, Mr. Bouton, about the need to reinforce SocGen's controls, particularly in the equity derivatives section where Kerviel happened to be working. SocGen did not take note of those warnings. Then, in November, a surveillance officer at Eurex, the pan-European derivatives exchange operated by Deutsche Borse, the German stock exchange, emailed Société Générale's compliance department raising questions about the purchase of 1,700 Eurostoxx futures and 2,000 Dax futures by Kerviel. As usual, Kerviel was able to provide fake documents to demonstrate to his gullible supervisors that nothing was wrong.

Kerviel's deceptive practices were finally revealed when on Friday January 18, 2008, compliance officers at SocGen uncovered problems with a €30 billion trade in the bank's equity derivatives division and contacted Jean-Pierre Mustier, chief executive of corporate and investment banking at Société Générale. This trade, which consisted of a futures contract on Germany's Dax stock exchange index, had aroused suspicions because it was far too large for the fictitious counterparty, a small German lender, Baader bank. It would have required Baader to make a margin payment to Société Générale that would have exceeded Baader's credit limit. When Kerviel was questioned about the transaction, he claimed to have made a mistake and produced an e-mail indicating that the counterparty was instead the much bigger Deutsche Bank. However, when the bank officers, still suspicious, tried to reach Deutsche Bank, first in Frankfurt and then at its New York's office, they realized that Deutsche Bank was not the counterparty. The fraud was finally uncovered and SocGen immediately decided to liquidate the €50 billion (US \$74 billion) unhedged trading position amassed by Jérôme Kerviel over the following three days even though it was the worst possible time as markets were falling. The position was unwound in almost total secrecy to prevent the news of the fraud from leaking and thereby triggering a run on the bank. Only the French regulatory authorities, not even the French government, were informed. By the third day, the bank had lost huge sums of money although it avoided total disaster in large part thanks to the US Federal Reserve three-quarter-point interest rates cut.

SocGen announced the fraud once the bank had closed all of Kerviel's remaining positions. Was the bank right in closing Kerviel's positions while markets were falling? Some have argued that the bank could have waited until markets recovered before selling; however it was unlikely that the fraud could have been kept secret long enough for the market to recover and avoid a run on the bank. The bank was backed into a corner from which it could not extricate itself without serious damage. By waiting, it is likely that news of the fraud would have become public before positions could be closed, causing an exit by depositors. Closing the positions right away while markets were falling, but before the news of the scandal became public, was thought to be less risky. Thus SocGen chose to unwind these positions within the span of three days and in such a way that its trades would be limited to less than 10% of total trading volume in order to minimize impact on the market. According to the head of Bank of France, Christian Noyer, "The way Société Générale has handled its affairs to unwind positions in a very short space of time, and without moving the markets [...] because they remained within normal trading limits [...] was very professional" (Noyer, 2008).

## THE AFTERMATH: DIFFERENT OUTCOMES

By February 27, 1995, Barings had lost \$1.4 billion while its capital was only \$900 million. A Dutch bank, ING, purchased Barings for the nominal price of £1.00 and assumed all of Barings liabilities. In 2001, ING sold the US operations to ABN Amro for \$275 million. The rest of Barings became part of ING European operations. In 2005, ING split Barings Asset Management (BAM) and sold BAM's investment management activities to MassMutual, and BAM's Financial Services Group to Northern Trust. MassMutual acquired the rights to use the Baring Asset Management name. Thus the Barings name still lives on as the MassMutual subsidiary, Barings Asset management, while Barings bank no longer exists.

Immediately after the collapse of Barings in February 1995, Nick Leeson flew out of Singapore with his wife. Six days later, he was arrested in Frankfurt trying to make his way back to London. He was extradited back to Singapore to stand trial. Convicted of fraud, he was sentenced in December 1995 to spend six and a half years in Singapore's Changi prison. His wife, Lisa, got a job as an airhostess to be able to visit him regularly in prison. At first their marriage survived the strain of being apart, but Lisa divorced him in 1997 after she learned of his infidelity with Geisha girls. Soon afterwards, in early 1998, he was diagnosed with colon cancer that had spread to his lymph nodes. He had colon surgery in Changi General Hospital and underwent six month of chemotherapy. He was released from prison in July 1999 and was given a clean bill of health some five years after his surgery.

While in prison, Leeson wrote an autobiography, *Rogue Trader*, in which he condemned the practices that allowed him to gamble unchecked with large amounts of money. Later the story was turned into a movie, starring Ewan McGregor. After his release from prison, he earned a Psychology degree from Middlesex University. In June 2005, he released a new book, *Back from the Brink, Coping with Stress*, published by Virgin Books. In 2006, he was appointed chief executive officer of Galway United FC, a football club in Galway, Ireland, where he currently lives with his second wife Leona, whom he married in 2003. The Leesons live with their three children, a son who was born in 2004 and two other sons from Leona's previous marriage. Nick Leeson also does charity work and gives speeches on topics such as risk management, stress, and the Barings failure.

Soon after the scandal at SocGen, the BBC interviewed Nick Leeson about the losses suffered by the French bank at the hands of Jérôme Kerviel. Interestingly enough he remained as unapologetic as ever, failing to acknowledge his own mistakes or those of the SocGen traders, blaming instead the banks' managers and arguing that nothing has changed since the Barings collapse.

*"I think rogue trading is probably a daily occurrence amongst the financial markets. Not enough focus goes on those risk management areas, those compliance areas, those settlement areas, that can ultimately save them money." Nick Leeson*



Unlike Barings, Société Générale was able to survive its scandal more or less unscathed. One reason is that it was a much stronger institution than Barings at the time. SocGen experienced not only a €4.9 billion in trading loss that Kerviel generated through unauthorized transactions but also a €2.6 billion write down related to US subprime investments soon afterward. This last figure includes a loss of €1.25 billion on its portfolio on non-hedged collateralized debt obligations (CDOs), €947 million in default risk related to bond insurers, and €325 million in trading losses on its investments in residential mortgage-backed securities (MBS). In spite of this, the bank ended up with a profit of €947 million (US \$1.4 billion) in 2007, down from €5.2 billion the previous year (an 82 per cent drop). SocGen used the so called “get-out” clause to book Kerviel’s losses in 2007 rather than 2008. Up until December 31, 2007 Kerviel’s trades were showing a profit of about €1.4 billion while the losses were realized in late January 2008 when the bank unwound the trades. Thus the bank booked a net loss of €4.9 billion in 2007 arguing that taking a profit in 2007 and a loss in 2008 would present a misleading picture. The French regulators approved the move.

Another reason why SocGen survived was that many of its competitors suffered even greater losses from their exposure to mortgage backed securities backed by U.S. subprime loans. There was no potential buyer strong enough to purchase the wounded bank although several candidates were often mentioned in the press. It was speculated that the bank could be taken over by a foreign bank such as Barclays and HSBC of the U.K., or Banco Bilbao Vizcarría Argentaria (BBVA) of Spain. However, given the nationalist economic policies of the French government headed by President Nicolas Sarkozy and Prime Minister François Fillon, it was unlikely that Société Générale would be allowed to fall victim to a foreign takeover, regardless of whether or not this was in the interests of shareholders. A more likely suitor would be a local rival such as BNP-Paribas or Crédit Agricole, since both banks had clashed in the past over their desires to merge with SocGen. It could perhaps be argued that from a purely economic perspective, a French bidder would be willing to pay a higher price as higher cost savings may result through combining the branch networks of two French banks. However a BNP-Paribas SocGen combination would also create overlap in investment banking causing the combined banks to lose clients. In order to reduce their exposure to the new group, it was feared that many of the clients of both BNP-Paribas and SocGen would switch to another bank. Thus BNP-Paribas claimed to be no longer interested following the damage suffered by SocGen’s previously stellar investment banking division and the risk of contagion remaining from the continuing subprime crisis. Likewise, a bid by Crédit Agricole, although it would have made it a big player in Eastern Europe, would most likely have been rejected by both the European competition authority and the regional banks that control Crédit Agricole.

Finally, the resolution of SocGen rights issues in February 2008 not only allowed it to restore its balance sheet by raising new equity, but also assured that it would probably survive as an independent entity. The success of the rights issue also repaired a portion of the damaged reputation that had been suffered by SocGen. In a rights issue, existing shareholders have the right of first refusal over the newly issued stocks. If they choose to exercise their right and buy the shares at the subscription price, their holdings will not be diluted by the issuance of shares to new investors. Moreover, SocGen obtained from its underwriters, JP Morgan and Morgan

Stanley, the guarantee that they would purchase any shares that existing shareholders would not acquire and which could not be sold to outside investors. The underwriters, therefore, agreed to assume most of the risk if the rights issue failed.

The fact that SocGen was able to negotiate such a seemingly advantageous deal was largely due to its reputation and importance as a client. The underwriting banks minimized their risk by pricing the issue at a big discount to increase the chance that existing shareholders would exercise their rights and buy the new shares. Under the terms of the agreement, shareholders could buy one new share in SocGen for every four shares they already own at a subscription price of €47.50 (\$68.96), a 39% discount. The success of the rights issue depended largely on the subscription price staying below the market price in order to attract wide shareholder participation and fend off any takeover attempt. In order to raise the intended €5.5 billion (nearly \$8 billion), 117 million new shares would have to be sold. The successful rights issue allowed SocGen to raise its Tier 1 capital ratio to around 8% from 6.6% at the end of December, 2007. Tier 1 capital includes the most liquid holdings such as equities and provides a cushion to absorb potential losses. The issuance of new shares, by reducing future earnings per share, could have pushed current shareholders to sell their preferential rights to the new shares on the Euronext exchange, thereby allowing outside investors, including potential bidders, the chance to build up a stake in the bank. They could have done so between February 21 and February 29, 2008. However, it did not happen and the bank remained independent.

In the end, the rights issue generated strong shareholder demand and proved to be successful as subscription orders amounted to €10.2 billion, making it oversubscribed 1.8 times. Thus recapitalization of the bank was completed under the responsibility of the same management team under whose watch the losses had occurred. Nevertheless, as explained below, the bank's shareholders would insist upon the resignation of Mr. Bouton, SocGen's CEO in spite of the success of the rights issue.

So far Jérôme Kerviel did not have to pay a high price for his responsibility in causing the largest fraud in banking history. Unlike Leeson, Kerviel did not run away, flee the country, or try to hide from the police. Following the discovery of the fraud, the police raided his apartment in the Paris suburb of Neuilly sur Seine to seize his computer files, and took him into custody the next day for 48 hours. On January 28 he was charged with fraud, breach of IT controls, falsifying documents and breach of trust. The charges filed against him carry a maximum five-year prison term and €375,000 in fines.

Kerviel was jailed on February 8 and released on March 18 after spending five weeks in pretrial detention. As a condition of his release, he is not allowed to step into a trading room or an exchange or to engage in any activities related to financial markets. While waiting for his trial, he started a new job in mid April as a trainee at Lemaire Consultants & Associates, a firm which specializes in computer security and system development. At the time of this writing, Kerviel has changed out his entire legal team and he is awaiting trial which, after being postponed several times, could be held in the first half of 2010. In the Barings fraud, Nick Leeson wanted to be tried in the United Kingdom; however, unfortunately for him, he was extradited to Singapore where justice is a lot more expeditious than in Europe.

Although Société Générale did not suffer the same fate as Barings, and the last chapter of Kerviel's trading scandal has not yet been written, significant changes have taken place at the top of SocGen's hierarchy. After 15 years in the job, Daniel Bouton was replaced by the Finance Director, Frédéric Oudéa, as chief executive officer. Didier Valet, a former banking analyst and head of strategic performance management at SocGen, replaced Oudéa as Finance Director. Mr. Bouton remained as chairman until his resignation in May 2009, a position he occupied while he was CEO. Although Bouton would not receive a severance package upon his final departure from the bank in May 2009, he would still receive a €730,000 pension per year.

Starting in May 2009, Oudéa occupied both position of CEO and chairman. It was thought that Jean-Pierre Mustier, the head of Investment Banking, would have replaced Bouton as CEO. However, his reputation had been too badly damaged by the Kerviel scandal and the €2.6 billion in subprime related write downs. Instead Mustier was replaced by Michel Péretié, who had been with Banque Paribas since 1980 where he created and developed its derivatives group, before merging with BNP in 2000. Subsequently he joined Bear Sterns as head of fixed income and derivatives for Europe and Asia before becoming the chief executive of Bear Sterns in Europe and Asia. Mr. Péretié also became a board member at Bear Sterns in January 2007.

Mr. Kerviel's immediate manager, Eric Cordelle, and Martial Rouyère, the head of the Delta One desk, have been fired. Rouyère's boss, Pierre-Yves Morlat, the head of trading, and Morlat's superior, Luc François, Société Générale's former head of equities and derivatives, have both resigned and left the bank. Did the bank make scapegoats of its middle managers?

The French banking regulator fined Société Générale €4 million (\$6.3 million) in July 2008 for failures of the bank's internal control procedures. This is the biggest penalty imposed by the French Banking Commission with a finding that the bank had violated its own rules regarding the separation of its trading and control staff, the security of its computer system, the enforcement of trading limits and the provision of adequate qualified staff to monitor trading. Additionally, the regulator blamed the bank for being too focused on market risk and not enough on risk of fraud and abuse in its operations. Following the scandal, SocGen has announced measures to improve controls and raise awareness of fraud in its surveillance teams, and earmarked €100 million for investment in its control and information systems. Is this going to be enough?

## **REPRISE**

Henry Theroux, speaking at the Banking Institutes International meeting, was eager to enlighten members about prevention of fraud. The stories of two rogue traders offered an opportunity to teach auditors and those responsible for oversight of banking operations about the practices to prevent such situations. Should auditors do more than evaluate the validity of numbers? Do they need to evaluate management practices, internal checks and balances, and controls on exposure to risk? The trading business is very complicated and many top managers may lack experience with trading, providing fertile ground for fraud. What can be done? What is the role of the global regulators in the frauds at Barings and Société Générale? What about reporting structures in the organizations? What about remuneration structures? All of these

questions were in Henry's mind as he worked to put together his training program for the members of Banking Institutes International. It was time for these frauds to be prevented and Henry was serious about helping to make this happen.

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# AN INTERNATIONAL ACQUISITION FOR HOLOGEN INC.

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## CASE DESCRIPTION

*The primary subject matter of this case is the valuation of an international acquisition. Secondary issues examined include assessing exchange rate risk and performing sensitivity analysis. 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 3-4 hours of preparation time from the students.*

## CASE SYNOPSIS

*Hologen Inc., a diversified medical technology company, currently operates in three business segments (Breast Health, GYN Surgical, and Skeletal Health). Hologen's strategy for long-term growth had previously been focused on expanding the breast health segment, the largest of the three divisions. In response to the potential vulnerability of the breast health division, Hologen's CEO has suggested the company pursue an acquisition that would diversify its product line as well as increase its exposure in international markets. Hologen's vision is to become the world's largest pure-play women's health-care company. In order to achieve this status, Hologen would need to enter the diagnostic health-care segment of the industry and expand international sales.*

*Hologen felt the quickest and more cost effective way to accomplish these goals was through an acquisition of an existing diagnostic company with an international clientele. The company Hologen is interested in acquiring is a British firm, Cybertech. Cybertech is a molecular diagnostic company whose main product line is T-Prep, the most widely used method for cervical cancer screening in both Europe and the United States. In addition, Cybertech had been expanding market penetration to include Asia, India and Brazil. Cybertech, a publicly traded company listed on the London Stock Exchange, has a current market capitalization of about 252 million British pounds.*

## BACKGROUND

Hologen, Inc. is a diversified medical technology company that develops, manufactures, and distributes medical imaging systems and surgical products for serving the healthcare needs of women. The company currently operates in three segments: Breast Health, GYN Surgical, and Skeletal Health. The Breast Health segment offers breast imaging products. This segment also

develops a breast imaging platform to produce 3D images. The GYN Surgical segment offers a minimally-invasive procedure that allows physicians to treat women suffering from excessive menstrual bleeding; and a form of permanent female contraception intended as an alternative to tubal ligation. The Skeletal Health segment assesses the bone density of fracture sites and the bone density of heels as well as an extremity MRI for detecting rheumatoid arthritis and orthopedics. Hologen, Inc. sells its products through a combination of direct sales and service force, and a network of independent distributors and sales representatives primarily in the United States and Asia. The company was founded in 1987 and is headquartered in San Francisco, CA.

The breast health segment is the Hologen's largest division, contributing to about 60% of sales. The majority of revenues in the breast health division are derived from the sale of imaging devices, with digital imaging driving sales. Over the past few years, sales from the breast health division have been driven due to a shift from analog to digital imaging by hospitals and clinics. Hologen's GYN surgical division has been performing steadily. The established sales force with strong connections to OB/GYN physicians has proven effective at delivering consistent 7%-8% revenue growth over the last 5 years. However, this division is the smallest in terms of revenue contribution (only about 15% of total sales). Hologen's skeletal health segment, which represents about 25% of total revenue, has come under pressure from lower reimbursement rates and the company is anticipating a decline in revenue growth from this division over the next few years.

Even though Hologen is well positioned in the digital mammography segment, with a market leading 65% share in the United States, the company is concerned this area of business is becoming saturated. Contributing to declining sales is the gap or extension of the replacement cycle by hospitals as they continue to cut capital spending on many big-ticket devices, such as digital imagers.

## **THE SITUATION**

During the first week of 2010, Hologen's CEO John Rollins was reviewing the most recent fourth quarter financial statements. The results were disappointing. Revenues were down 8% for the quarter and this mirrored the full-year results in which sales were down almost 3%, mostly due to weaker results from the breast health segment.

To date, Hologen's current strategy for long-term growth has been focused on the breast health segment. Hologen has continued to invest in research and development to maintain a competitive advantage in the digital market. In addition, the company has focused heavily on 3-D imaging devices, which the company believes is the next frontier for digital mammography. This strategy has potential vulnerability as large conglomerates such as GE and Siemens also compete in this business segment. If either of these competitors decides to focus their vast research budgets on digital imaging, Hologen's superior technological advantage may be severely diminished. GE and Siemens could also use their broad product lines and large sales force to erode away Hologen's current leading market share position in this segment.

In response to the potential vulnerability to the breast health division, Rollins had suggested to Hologen's board that the company pursue an acquisition that would diversify its

product line as well as increase its international exposure. Currently Hologen had very little access to developed markets such as Europe, which Rollins feels Hologen must penetrate in order to achieve consistent earnings growth over the long-run. Moreover, Rollins wants to position Hologen as a future player in emerging markets where the potential for growth is extremely promising. Rollins vision is for Hologen is to become the world's largest pure-play women's health-care company. In order to achieve this status, Hologen would need to become a participant in the diagnostic health-care segment and increase international sales. Rollins felt the quickest and more cost effective way to accomplish these goals was through an acquisition of an existing diagnostic company that had an international presence and ties to emerging markets.

The company Rollins is interested in acquiring is a British firm, Cybertech. Cybertech is a molecular diagnostic company whose main product line is T-Prep, the most widely used method for cervical cancer screening in both Europe and the United States. In addition, Cybertech had been expanding market penetration to include Asia, India and Brazil. Over the last year, they had seen some especially positive results from expansion into India. About a month ago, Rollins was at a major medical conference in Las Vegas where he met Jim Burns, the CEO of Cybertech. They had briefly met at a reception where both had been presenting new products for the upcoming year. Rollins remembered that he had really liked Burns' vision for Cybertech's role in the diagnostic screening procedure market. Burns had a philosophy for running a business that matched well with Rollins. The two had had dinner together and talked mostly about the challenges of the healthcare sector.

When Rollins had returned from the conference, he began to research Cybertech and found their sales were fairly predictable and the company had a number of other market leading products in the diagnostic segment in addition to the well-known T-Prep. Cybertech, listed on the London Stock Exchange, recently closed at 420 pence (100 pence is equal to 1 British Pound (GBP)). There are currently 60 million shares of stock outstanding, placing the current market capitalization for Cybertech at about 252 million GBP. Over the last five years, Cybertech has traded in a range from 220 pence (2.2 pounds) to 810 pence (8.1 pounds). A five year historical stock price chart is provided in Exhibit One. Consolidated financial statements are shown in Exhibit Two.

### **THE TASK**

Rollins set up a meeting with Tim Scott, Hologen's CFO to talk about the likelihood of acquiring Cybertech. Rollins estimated that if Hologen were able to acquire Cybertech's existing diagnostic business and strong international sales force, it would provide Hologen an opportunity to realize additional revenue benefits from cross-selling existing Hologen products via Cybertech's sales network. Furthermore, Rollins expected net margins might also improve by eliminating some duplicate research and development expenditures and lowering other costs.

Rollin's has been involved in some smaller private acquisitions during his tenure at Hologen, so he was not unfamiliar with the difficulty of integrating newly acquired business segments, however, this acquisition would be his largest and most important decision to date. In

addition, this would be the first ever international acquisition for Hologen. With revenues declining last year, Hologen could not afford to overpay for Cybertech.

**Exhibit One: Five Year Historical Stock Price for Cybertech**



Tim Scott's initial reaction to the proposed acquisition was centered on the price they would have to pay for Cybertech. With Cybertech trading at around 420 pence, up from 220 pence a year ago, the current market capitalization is 252 million pounds. Furthermore, the pound is trading at around \$1.60, up from \$1.40 a year ago. In US dollars, Cybertech market value is a little over \$400 million. Scott casually mentioned he wished Rollins had thought of acquiring Cybertech a year ago when the US dollar equivalent market capitalization for Cybertech was under \$185 million. The pound has been strengthening and Cybertech's stock has almost doubled over the last year, partially due to the world economic recovery and partially due to Cybertech's recent success in India. Scott also noted that an acquisition of a public company would also have to include about a 15% to 35% premium in order to persuade the target's board of directors and current shareholders to approve the acquisition.

Rollins was still convinced that the acquisition of Cybertech would be a good deal. Rollins had estimated that cross-selling between business segments would increase Cybertech's revenues by 10% the first year, 12% the second year and 8% the third year. After the third year he expected a steady revenue growth of 6%. Rollins also estimated that he could increase Cybertech's gross margins to 52% by utilizing his network of suppliers and buying in larger volume. Selling and General Administrative expenses could be reduced from an average of 12.6% of sales over the last 4 years to 10% of sales by eliminating duplicate sales and administrative positions and reducing marketing costs. Rollins was also convinced that there was significant overlap in the research and development efforts between the two companies that would allow for a reduction of Research and Development expenses at Cybertech (from an average of 12% of sales over the last 4 years to 9% of sales). Rollins anticipated that Cybertech would require 3 million GBP per year to support existing operations for capital expenditures and increases in net working capital. Rollins had also been in preliminary talks with a major investment bank about a long-term currency swap in which Hologen could exchange British pounds for US dollars at a fixed rate of \$1.60/1GBP. These terms have not been finalized and are subject to change based on current market conditions.



<b>Exhibit Two</b> <b>Cybertech Consolidated Financial Statements</b> <b>Statement of Income (Millions) For the Years Ending December 31</b>				
	2006 GBP	2007 GBP	2008 GBP	2009 GBP
Net Sales (Pounds)	57	59	86	113
Costs and expenses				
Cost of sales	30	32	46	59
Selling G & A	5	6	14	17
Research and Development	7	7	10	14
Depreciation	1	1	1	1
Total costs and expenses	43	46	71	91
Operating income	14	13	15	22
Interest expense	0	0	0	0
Income before income taxes	14	13	15	22
Income tax expenses	5.3	4.9	5.6	8.1
Net Income	8.7	8.1	9.4	13.9
Shares Outstanding (millions)	50	55	60	60
Earnings per share	0.174	0.147	0.157	0.232
<b>Balance Sheets (millions) For the year ending December 31</b>				
	2008 GBP		2009 GBP	
Current assets				
Cash	24		56	
Receivables	21		19	
Inventories	33		34	
Prepaid expenses	5		3	
Total current assets	83		112	
Property and equipment at cost				
Plant, property and equipment	46		61	
Less accumulated depreciation	(6)		(7)	
Other	2		10	
Total plant, property and equipment	42		64	
Total assets	125		176	
Current liabilities				
Accounts payable	10		11	
Accrued expenses	22		58	
Total current liabilities	32		69	
Long-term obligations	0		0	
Total liabilities	32		69	
Shareholders' equity				
Common stock	60		60	
Paid in capital	15		15	
Retained earnings	18		32	
Total shareholders' equity	93		107	
Total liabilities and equity	125		176	

Rollins asked Scott to perform a preliminary valuation of Cybertech incorporating the revenue increases and cost savings he had projected. They set a follow-up meeting in 3 days to discuss Scott's findings. Scott decided that he would need to write out a list of tasks he needed to perform over the next week. He began with a free-cash flow valuation of Cybertech incorporating the assumptions Rollins had assumed would result from the acquisition. However, Scott also realized there were a lot more questions that needed to be addressed before a presentation to the board would be ready.

1. What is the highest per share cash offer Hologen could make using a free-cash flow model of valuation of Cybertech under Hologen's management given the following assumptions:
  - a) Revenues are expected to increase 10% the first year, 12% the second year, and 8% the third year. After the third year revenues are expected to increase at a long-run constant rate of 6%.
  - b) Gross margins will increase to 52%. Gross Margins are equal to Gross Profits/Revenues. Gross Profits are equal to Sales Revenues minus Cost of Goods Sold.
  - c) SG&A expenses will be reduced to 10% of Sales Revenues
  - d) R&D expenses will be reduced to 9% of Sales Revenues
  - e) Depreciation is expected to remain constant at 1 million GBP per year
  - f) The tax rate of Cybertech's earnings is expected to be 38%
  - g) Cybertech would require 3 million pounds in cash each year to support existing operations for capital expenditures and increase in net working capital.
  - h) The free cash flows generated by Cybertech would be remitted back to Hologen each year assuming a constant exchange rate of \$1.60/1GBP.
  - i) The current exchange rate is \$1.59/1GBP
  - j) Scott has estimated that the appropriate required rate of return for this acquisition is 14%.
2. How would short-term changes in the value of the British pound affect the likelihood of acquiring Cybertech with an all cash offer? (Assume the free-cash flows generated by Cybertech would still be remitted back to Hologen at a constant exchange rate of \$1.59/1GBP)
3. How would short-term changes in London stock market conditions affect the likelihood of acquiring Cybertech with an all cash offer?
4. Assume the terms of the long-term currency swap changed to \$1.55/1GBP. What impact would this have on the highest per share cash offer Hologen could make and the likelihood of acquiring Cybertech holding all other assumptions constant?
5. Assume the terms of the long-term currency swap changed to \$1.63/1GBP. What impact would this have on the highest per share cash offer Hologen could make and the likelihood of acquiring Cybertech holding all other assumptions constant?
6. Assume that Rollins is not able to implement the desired cost savings after acquiring Cybertech and Gross Margins would remain at their historical average of 48%. (Utilize all other base assumptions from questions 1) What impact would this have on the highest per share cash offer Hologen could make and the likelihood of acquiring Cybertech without the additional cost savings?
7. Address the potential strengths and weaknesses of the proposed acquisition of Cybertech.

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# OMEGA GEOPHYSICAL CORPORATION

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## CASE DESCRIPTION

*The OMEGA Geophysical Corporation (OMEGA) case was originally designed as a commercial lending case. The case is centered around a loan request from OMEGA to Third National Bank of San Luis Obispo. Company representatives gave the funding needed to reorganize and relocate various company operations as a purpose for the loan request. OMEGA is a multinational company engaged in manufacturing several high-technology product lines and providing related technical services in a highly competitive industry. The company provides both mature and developing products and services to both established and emerging markets. Financial statements provided for analysis include 5-year historical balance sheets, income statements, and statements of cash flows, and 5-year projected balance sheets and income statements.*

## CASE SYNOPSIS

*The case contains sufficiently complex decisions and concepts to challenge advanced graduate students, but is flexible enough to not overwhelm junior and senior level undergraduate students if the faculty member directs the focus to the less complicated issues. In addition to the standard issues involved in commercial lending, there are production, marketing, human resources, and ethics issues that can be considered for focal points of study. Cases based upon the material included can also be developed for use in Human Resources Management, Operations Management, Marketing, and Business Ethics courses at similar levels with the same limitations. There is flexibility built into the materials and the teaching notes to allow the faculty member to adapt the case to meet instructional needs either the undergraduate or graduate level and to focus on the specific discipline of the course in which the students are enrolled. The case is designed to be taught in two to three class hours and is expected to require six to eight hours of outside preparation by students. The faculty member can choose to include all or part of the material provided. The case provides ample opportunity for faculty modification to meet individual styles and needs in commercial lending as well as the different disciplines mentioned above.*

## CASE INTRODUCTION

OMEGA Geophysical Corporation (OMEGA) is a multi-national corporation headquartered in San Luis Obispo, California. OMEGA is an acronym representing the various

products and service areas the company provides. These business segments, and the current primary operating locations for each, are as follows:

- Overland Imaging Systems – San Luis Obispo; Chennai, India; Porto Alegre, Brazil
- Marine Imaging Systems – San Luis Obispo; Chennai; Porto Alegre
- Electronic Data Processing, Transmission, and Communication Systems – Amsterdam, Netherlands (through subsidiary Innova, BV, acquired 2005)
- Geophone Sensors – Maastricht, Netherlands (digital); San Luis Obispo (analog)
- Analysis and Interpretation Services – Menlo Park, California (through subsidiary EnergyData, Inc., acquired 2006)

OMEGA was founded in 1860 to provide equipment and services to the academic community teaching and performing research in geology and geophysics. The company experienced moderate growth for its first 100 years of operation. In the 1960s and 1970s, OMEGA developed a major market in the oil and gas exploration industry. Today sales to commercial customers for oil and gas exploration applications account for 90% of the company's sales, with the remainder going to academic and research institutions. The company established a 100%-owned Dutch subsidiary, now known as OMEGA Nederland, BV (OMEGA Nederland), in 1868, and European operations are conducted through OMEGA Nederland and its subsidiaries. This provides considerable tax advantages for operations in member countries of the European Union (EU), including oil and gas exploration operations in the North Sea.

OMEGA's initial entry into the oil and gas exploration market was through the manufacture of analog geophones, used as sensors in geological and geophysical (G&G) operations conducted by oil and gas exploration and production companies. In the early 1960s, the company expanded to include the manufacture of cable-based data acquisition systems for overland operations. OMEGA has subsequently diversified into the manufacture of a wide range of overland data acquisition systems and components. In the 1970s, the company further expanded into the manufacture of marine data acquisition systems and components. During the 1980s, the company entered into cooperative research agreements with California Polytechnic Institute, San Luis Obispo, California, and Vrije University, Amsterdam, Netherlands. In connection with these agreements the company developed and implemented a number of advanced equipment designs and, more recently, computer-based solutions for communication, management, analysis, and interpretation of G&G data. One result of this activity was the 1990s development of digital geophone systems by a subsidiary of OMEGA Netherlands, to augment the analog geophone product line. In 1998 the company commenced operations in Chennai, consisting primarily of the manufacture and assembly of both overland and marine cable systems. In order to take advantage of the rapidly expanding Brazilian energy exploration industry, OMEGA opened a Brazilian assembly plant in Porto Alegre in 2002. The Brazilian facility has grown to serve the oil and gas industry in West Africa and the South Atlantic areas. Today the company faces the following market conditions and threats:

- Declining energy exploration in the United States of America (USA) has reduced the company's domestic market.

- Areas where the company is experiencing significant demand growth include Brazil, western and southern Africa, offshore in the Indian Ocean (including the Persian/Arabian Gulf), onshore in the Middle East, China, India, Australia, and New Zealand.
- USA manufacturing operations have become less profitable, primarily due to higher labor costs and higher taxes.

The company is experiencing significant price competition in the analog geophone market from Chinese suppliers, whose prices are lower but whose quality has not yet reached the level of the company's products. The company believes that it has been the victim of industrial espionage in this area, and that while the Chinese have acquired illegally essentially all the technology involved in the analog geophone product line, they have not yet been able to achieve the necessary quality control. The company is extremely concerned about safeguarding intellectual property, particularly regarding its data library and its digital geophone product line.

The company's fastest-growing product line is digital geophones, which are more expensive than the analog geophones but deliver higher-quality results. The company is the acknowledged industry leader in quality, for both analog and digital geophones.

In response the company has proposed the following strategic changes:

Transfer the manufacture of analog geophones from the USA to the company's facilities at Porto Alegre (serving western hemisphere) and Chennai (serving eastern hemisphere). This will enable the company to realize significant savings in cost of labor and taxes over the current US operations.

Transfer manufacturing operations for overland and marine cable and other data acquisition systems currently located in the USA to Porto Alegre, and similar manufacturing operations currently located in Maastricht, to Chennai. The company believes that consolidating western hemisphere production and assembly operations in Porto Alegre, and eastern hemisphere production and assembly operations in Chennai, will increase efficiency and reduce shipping costs.

Convert the manufacturing capacity freed up at Maastricht, to the manufacture of the rapidly-growing and profitable digital geophone product line. The company has not yet experienced significant price competition in this product line. At this point the company wishes to continue manufacturing this product line in a country where adequate legal protection is afforded to intellectual property.

Convert the manufacturing capacity freed up at the company's San Luis Obispo, campus to consolidate the data analysis and interpretation operations currently conducted at Menlo Park, California (including the seismic data library repository) with those conducted at San Luis Obispo, and to create a dedicated research, development, and service facility.

- The company is requesting a loan of \$55 million, to be used as follows:
- Upgrade Brazil facility \$10 million
- Upgrade India facility \$10 million
- Relocate analog geophone manufacturing \$10 million
- Relocate cable manufacturing and assembly \$10 million
- Convert San Luis Obispo campus to R&D/data repository facility \$8 million
- Convert Maastricht facility to manufacture of digital geophones \$7 million
- Total Loan Proceeds \$55 million

Additional information about the company includes:

During 2002-03 several members of the company's executive management team became involved in protracted disputes with several of the company's major shareholders, primarily regarding the decline in the company's profitability. These disputes ended with the firing or resignation of those executives who had been involved, and their replacement with a new management team that has been in place since early in 2004.

In 2004 the company was found by its auditors to have a material weakness in its revenue recognition policies and procedures for the purposes of the Sarbanes-Oxley Act. This resulted in a significant downward restatement of revenues for 2003 and prior years, on top of what were already declining financial results for the period 2001-03. The company's management has represented, and its auditors have concurred, that it has had no internal controls weaknesses that would be classified as material in subsequent years.

In an attempt to lower the cost of goods produced in the US, the company attempted to employ a number of undocumented aliens during the period 2001-03. In 2003 the company's manufacturing facility at San Luis Obispo was raided by ICE/INS agents. The company eventually paid a fine of \$1 million and discontinued the practice. Since then its US manufacturing costs have risen significantly.

Primarily through a number of recent acquisitions, the company has grown significantly in the data interpretation and service segments of its business. The company intends to continue to emphasize the service area over the product area, largely because it has realized significantly greater gross margins in this area.

### **ABOUT THE BANK**

Third National Bank of San Luis Obispo is a well-capitalized bank with a generally conservative lending philosophy. At this time, its financials indicate that it has the funds necessary to provide this loan if that is the correct decision. However, lending this much to OMEGA would challenge its ability to undertake additional projects for the short term and would require an exception to its lending concentration policy.

### **SAMPLE QUESTIONS**

1. If you were OMEGA's banker, would you make the requested loan?
2. What factors favor making the loan?
3. What factors oppose making the loan?
4. Would you make the loan alone or with another bank?
5. If you elect not to make the loan alone, what would be the advantages to consider by participating with another bank?
6. What about the possibility of participating partners in one of the countries to which operations are being moved (Brazil, India)?
7. If you would not make the loan as requested, are there changes which could be made that would cause you to change your mind?
8. How do you as a banker achieve adequate collateral security for the repayment of the requested loan if you elect to make the loan?

EXHIBIT 1A - BALANCE SHEET (ASSETS)					
(dollar amounts in thousands)	31-Dec	31-Dec	31-Dec	31-Dec	31-Dec
	2004	2005	2006	2007	2008
Current Assets:					
Cash and cash equivalents	43,024	10,798	11,462	12,331	26,324
Restricted cash	815	1,151	1,108	755	5,099
Gross Receivables	24,777	44,535	87,396	121,281	135,945
Less: Allowance for bad debts	-743	-1,336	-2,622	-3,638	-4,078
Net Trade Receivables	24,034	43,199	84,775	117,643	131,867
Current notes receivable	10,426	7,797	6,053	4,554	3,943
Unbilled work in progress	0	5,284	10,896	20,677	16,187
Inventories	38,717	62,654	58,872	83,521	93,239
Prepaid expenses/other	2,677	5,765	7,894	7,124	9,194
Total Current Assets	119,693	136,649	181,059	246,606	285,852
Property, Plant, and Equipment					
Land	37	37	37	25	18
Buildings	12,730	17,257	7,578	56,978	65,231
Equipment	43,819	56,171	53,496	16,472	15,896
Total PP&E	56,586	73,465	61,111	73,475	81,145
Less: Accumulated depreciation	-36,626	-40,170	-40,146	-45,908	-54,430
Net PP&E	19,960	33,295	20,965	27,567	26,716
Non-current receivables	4,634	2,995	4,705	3,592	0
Intellectual property	0	7,248	13,734	23,911	43,155
Investments at cost	0	2,531	2,892	3,076	3,582
Goodwill	25,323	110,589	111,916	112,854	110,724
Other intangible assets	6,583	55,999	48,679	47,939	36,532
Total Long-Term Assets	56,500	212,656	202,891	218,939	220,708
Total Assets	176,192	349,305	383,951	465,545	506,560

EXHIBIT 1B - BALANCE SHEET (LIABILITIES AND EQUITY)					
(dollar amounts in thousands)	31-Dec	31-Dec	31-Dec	31-Dec	31-Dec
	2004	2005	2006	2007	2008
Current Liabilities:					
Short-term notes payable/Current portion of long-term debt	1,943	4,746	3,185	4,747	10,752
Accounts payable and accrued liabilities	20,507	51,313	61,968	81,372	100,422
Royalties payable	0	0	0	19,663	21,663
Deferred revenue	1,489	10,904	8,632	27,071	15,384
Total Current Liabilities	23,939	66,962	73,784	132,853	148,220
Long-Term Liabilities:					
Notes payable	58,710	62,143	54,909	56,061	17,867
Less: Current maturities	-1,943	-4,746	-3,185	-4,747	-10,752
Net Long-Term Debt	56,767	57,397	51,724	51,314	7,116
Deferred income tax liability	0	4,802	5,413	7,267	4,465
Other long-term Liabilities	2,757	1,943	3,138	3,317	3,033
Convertible/redeemable preferred stock	0	0	21,573	21,681	25,305
Total Long-term Liabilities	59,524	64,142	81,848	83,579	39,919
Total Liabilities	83,463	131,104	155,632	216,432	188,139
Shareholders' Equity:					
Common stock	377	575	583	586	685
Paid-in capital	212,914	346,570	351,188	355,795	403,261
Retained earnings	-117,283	-126,404	-118,611	-106,074	-84,713
Accumulated other income	934	1,686	-527	3,513	3,947
Less: Treasury stock	-4,212	-4,225	-4,315	-4,707	-4,760
Total Equity	92,729	218,201	228,319	249,113	318,421
Total Liabilities and Equity	176,193	349,306	383,951	465,545	506,560

EXHIBIT 2 - INCOME STATEMENT					
(dollar amounts in thousands)	31-Dec	31-Dec	31-Dec	31-Dec	31-Dec
	2004	2005	2006	2007	2008
Sales					
Overland systems	35,796	41,166	47,341	54,443	69,839
Marine systems	29,288	35,146	42,175	50,610	67,962
Electronic data processing/communication	0	51,136	90,609	107,942	126,829
Geophones-Analog	23,864	25,057	26,310	27,626	29,007
Geophones-Digital	19,525	21,478	23,626	25,989	28,588
Analysis and interpretation	0	0	32,158	97,461	131,732
Net Sales	108,474	173,983	262,219	364,071	453,957
Cost of Goods Sold					
Overland systems	29,389	33,345	38,820	45,237	57,124
Marine systems	23,723	28,117	34,162	41,601	54,977
Electronic data processing/communication	0	30,682	57,083	68,328	79,268
Geophones-Analog	19,593	20,484	21,837	23,261	24,599
Geophones-Digital	15,640	16,753	18,932	21,130	23,045
Analysis and interpretation	0	0	20,260	61,693	79,802
Total Cost of Goods Sold	88,345	129,381	191,094	261,250	318,815
Gross Profit	20,129	44,602	71,125	102,821	135,142
Operating Expenses					
Research, development, and engineering	13,517	14,179	14,652	23,679	33,476
Marketing and sales	9,085	16,984	23,980	29,391	31,723
General and administrative	9,851	18,908	17,718	26,813	32,408
Impairment of long-lived assets	2,298	0	0	0	0
Depreciation and amortization	3,770	4,332	4,483	4,484	5,153
Less: D&A included in COGS	-1,508	-1,733	-1,793	-1,794	-2,061
Total Operating Expenses	37,013	52,671	59,040	82,573	100,699
Operating Income	-16,884	-8,068	12,085	20,248	34,444
Interest expense	-2,955	-4,505	-4,435	-4,172	-4,543
Interest income	1,376	923	609	1,475	1,336
Other income (expense), net	495	159	593	-1,562	-788
Gain (Loss) on disposal of assets	210	2,878	-72	-42	183
Income before Taxes	-17,758	-8,614	8,781	15,947	30,632
Less: Taxes Related to Operations					
Current	252	884	1,507	4,431	7,131
Deferred	0	-377	-519	-733	2,140
Income Before Minority Earnings	-18,009	-9,121	7,793	12,249	21,361
Cum. Effect of Acct Change;	0	0	0	288	0
Net Income (Loss)	-18,009	-9,121	7,793	12,537	21,361
Other Comp. Income (Loss)					
Foreign currency gain (loss)	2,655	752	-2,212	4,039	435
Total Other Comp. Income (Loss)	2,655	752	-2,212	4,039	435
Comprehensive Income (Loss)	-15,355	-8,369	5,581	16,576	21,795



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# LEHMAN TRIKES: A STORY WITHIN A STORY

**Donald C. Looney, Black Hills State University**

**Annette Ryerson, Black Hill State University**

## CASE DESCRIPTION

*The primary subject matter of this case is strategic alliances. Secondary issues include business strategy, entrepreneurship and marketing. The case explores the dynamics of an alliance between Harley-Davidson and a small, entrepreneurial, niche market company, Lehman Trikes. The case is appropriate for senior level four undergraduate courses or level five graduate classes. The case may be taught in two class hours with 1-2 hours of outside student preparation.*

## CASE SYNOPSIS

*As the world was in the midst of a crippling recession, on July 22, 2008, Harley-Davidson unveiled the new Tri Glide three-wheeled motorcycle at the annual dealer meeting in Las Vegas. At the same meeting Lehman Trikes, a small but rapidly growing leading manufacturer of three-wheeled motorcycles, announced that it would be the exclusive supplier to Harley-Davidson of the Tri Glide. Ron Hutchinson, senior vice president of product development for Harley-Davidson said, "This is a big deal. The three-wheeled market is a market that we believe has been effectively underserved because it has been done in the aftermarket." (Pitlick, Harley trikes to be built here, 2008) While the entrance of Harley-Davidson into the trike market would obviously legitimize and add enormous growth opportunities for the three-wheel segment of the motorcycle market, would it profoundly change Lehman's environment and business model? Dan Patterson, then CEO of Lehman Trikes, would later cryptically write of the event in the 2008 Third Quarter Report, "We are truly pleased to have Harley-Davidson as both a competitor and a business associate" (Lehman Trikes, 2008). Did this somewhat obscure statement reflect his concerns about the new supply agreement? With the active participation of Harley-Davidson in the trike market, would the three-wheeled motorcycle market emerge from a niche market status to become a primary market and entice the motorcycle market leaders to introduce complete and competitive trike products? Would Lehman Trikes, "The Leader of the Three World," remain able to dominate the trike market? How would Lehman's strategic supply agreement with Harley-Davidson evolve, and would their long term goals be consistent?*

*In analyzing the case students should focus on several key questions. Would the alliance between Lehman and Harley-Davidson meet both of their strategic goals and what were the benefits to each organization of the alliance? What were the risks a small organization like Lehman was taking in entering an agreement with a much larger partner versus the rewards they hoped to gain? Was Harley fair in their dealings with Lehman or did they take advantage of their much smaller partner? Historically, Harley limited supply of new product launches. In the midst of a recession, was this the best marketing strategy? And finally, how viable was Lehman's*

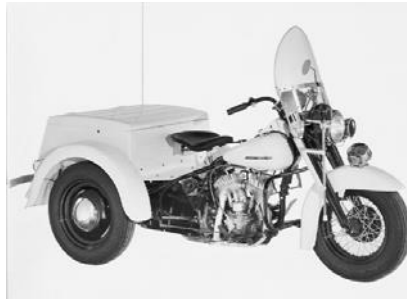


*business model? In analyzing the case students should focus on several key questions. Would the alliance between Lehman and Harley-Davidson meet both of their strategic goals and what were the benefits to each organization of the alliance? What were the risks a small organization like Lehman was taking in entering an agreement with a much larger partner versus the rewards they hoped to gain? Was Harley fair in their*

*dealings with Lehman or did they take advantage of their much smaller partner? Historically, Harley limited supply of new product launches. In the midst of a recession, was this the best marketing strategy? And finally, how viable was Lehman's business model?*

### **LEHMAN TRIKES HISTORY AND BUSINESS OVERVIEW**

Lehman Trikes began in 1984, literally in John Lehman's garage in Alberta, Canada, with a project to build a three-wheel motorcycle for his wife. With the help of friends, John fashioned a Chevrolet differential and a metal body onto a 1981 Honda CB900 motorcycle front end and engine. Three-wheeled motorcycles had been around for a long time, but never before were grafted to a modern front end. Harley-Davidson entered the market in 1932 with the box ended Servi-car for commercial and police use. It was discontinued in 1973. (Harley-Davidson, 2009)



Harley-Davidson Servi-car

In 1985, Lehman Industries began as a fiberglass fabricator of canoes and truck sleepers. Limited production of three-wheeled conversions of various Honda and Harley-Davidson motorcycles followed. Orders for the trikes began to pour in and in 1993 a new partnership between John Lehman and Larry Strilchuk resulted in the formation of Lehman Trikes, Inc. of Alberta, Canada. Production began in earnest in a factory in Alberta making conversion kits for Hondas, Harleys and later Suzukis. In 2002 Lehman Trikes completed its initial public stock offering and began trading on the TSX Canadian Venture Exchange under the symbol LHT.

The business grew rapidly, but over 90% of the customers were in the United States. With a weakening of the U.S. dollar and a subsequent strengthening of the Canadian dollar, manufacturing in Canada and selling in the U.S. continued to erode profits as the U.S. dollar continued to weaken. In 2003, a decision was made to relocate primary manufacturing to the US. In January 2004, a new manufacturing and assembly facility was opened in Spearfish, South Dakota. The location was chosen for its proximity to Alberta, its central location in the U.S.,

nonunion labor availability and economic development incentives provided by the community. It was a bonus to have nearby the world famous Sturgis Motorcycle Rally, which brings in as many as 500,000 motorcycle enthusiasts every August. Sturgis would be the venue for numerous later new product launches for Lehman Trikes. (Strilchuk C. , 2009)

In 2006, Lehman announced a supplier agreement, the first of its kind in the three-wheel industry, to provide conversion services for Harley-Davidson. Under the agreement, Lehman Trikes provide components, paint and conversion assembly under this agreement. In 2008, that agreement was expanded to include the exclusive production for Harley-Davidson of the Tri Glide product line. The Tri Glide was designed by Harley engineers and was to be built by Lehman to Harley's exacting specifications. Harley vice president Hutchison proclaimed, "We are on the brink of creating the largest subset in the industry. We expect to have very high volume potential of serving the needs of the wide variety of customers who haven't yet been able to participate in the freedom ... of the open road. With a growing baby-boomer population, there are many people who have health conditions, or other reservations about riding a two-wheeled motorcycle. This new product will fill that niche." (Pitlick, Harley trikes to be built here, 2008)



Lehman Trikes continues to develop products and relationships with other manufacturers. In July 2009, Lehman announced the unveiling of the new CrossBow with cooperation from Victory Motorcycles (Polaris). The CrossBow features an ultra modern design by Lehman with engineering participation from Victory. The CrossBow matches the powerful Victory V-Twin engine with the Lehman, "No-Lean" suspension, providing a smooth, comfortable ride and seamless styling. The CrossBow retail pricing starts at \$33,995. (Lehman Trikes, 2009)

The company's business model is based on four segments:

**1. Sale of conversion kits to authorized dealers** – accounting for almost 50% of sales and the highest margin line, trike conversion kits are sold to one of 122 Lehman trained dealers. Lehman extends a three year, unlimited mileage warranty to the conversions. The kits can be provided either painted or unpainted. The retail price of this option is \$12,000 - \$13,000 without accessories.

**2. Lehman factory assembly of trikes from new O.E.M. motorcycles** – approximately 30% of revenue derives from assembly of new models of motorcycles for Harley Davidson, Honda, Suzuki and Victory (Polaris). Lehman develops conversion kits specifically designed for each model of factory motorcycle. Lehman disassembles the new motorcycle, removing the stock rear-end and replaces it with the Lehman conversion kit designed for that specific model. One of the issues increasing the cost of this option is the very limited resale market for the rear-end assemblies once they are removed. Due to limited volumes, other than the Tri Glide, manufacturers have been unwilling to sell Lehman just the front end of the new motorcycles. The retail price of this option is \$18,000 - \$33,995 depending on the model converted and the accessories ordered.

**3. Lehman factory assembly of conversions for dealer supplied, customer owned motorcycles** – 20% of revenue is provided from conversions of motorcycles that are delivered

from a Lehman dealer for a customer's own motorcycle. The retail price of this option is \$12,000 - \$13,000 without accessories.

#### **4. Conversion and assembly for Harley-Davidson of the new Tri Glide line of trikes**

– Lehman assembles the Harley designed Tri Glide line to Harley's exacting design specifications. The Harley trike line for 2010 offers two models: the Tri Glide Ultra Classic and the new Street Glide Trike, a leaner, lighter, stripped-down hot-rod style trike. Harley provides the front end frame, engine and chassis structure specifically designed by Harley to handle the loads generated by the steering forces and weight of a three wheeled vehicle. For the Tri Glide and Street Glide, Lehman adds primarily outsourced components: a rear axle assembly and wheels, a luggage carrier, and fenders. Lehman paints the molded-composite body work to provide a near perfect color match to the front fender and tank. (Harley-Davidson, 2009) The retail price of the Tri Glide Ultra Classic is \$29,999 to \$32,339, depending on options and the price of the new Street Glide Trike starts at \$26,999. (Strilchuk C. , 2009)

Despite a challenging economy, Lehman Trikes reported 2008 Revenues of \$22.620 million, up 20 percent over 2007. First quarter 2009 revenues were \$6.382 million, an increase of 40 percent over the prior year first quarter. This is at a time when the motorcycle industry as a whole was down 32 percent. "That is pretty darn amazing in this economy," said Ken Hines, then Lehman Trikes executive vice president. "It's the trike, and trikes are being recognized as legitimate recreational, fun vehicles. Given the demographics, your trike buyers tend to be more affluent than the general population." (Pitlick, Leman Trikes Expanding, 2009)

### **EXTERNAL ENVIRONMENT**

In most developed countries, including the United States, motorcycles are not a necessity and are primarily used as leisure or recreational vehicles. They are bought with discretionary income such as one would spend on luxury items or vacations. Discretionary spending will rise and fall with the economy and usually exaggerates both the highs and the lows. According to market research, the average Lehman Trike customer was 73.3% male; age 56 – 65 (45.5%). Average income was \$50,000 to \$70,000. On average, they have been riding motorcycles for over twenty years, but have been riding trikes for less than five years. Fifty percent of Lehman trike owners own Harley-Davidson trikes, thirty percent own Honda trikes and twenty percent own Suzuki trikes. The majority of trike owners (77%) primarily ride their trikes for recreation or day trips. Styling and reputation were the primary influences on their trike purchase. The average trike owner listens to country music and heard about Lehman Trikes through a dealer. (Lux, 2009)

According to the Bureau of Economic Analysis, in the second quarter of 2009 the U.S. Gross Domestic Product declined 2.5 percent. In the same quarter, the U.S. motorcycle market was down 40%. (Pitlick, Leman Trikes Expanding, 2009) The U.S. motorcycle market declined 2.6% in 2007 to a total value of \$10.2 billion and 1.05 million units in volume. Of that the three-wheel market is estimated to be a small fraction of one percent. The United States generates 15.9% of the global motorcycle market's revenue. Honda Motor Company generates over 40 percent of the U.S. motorcycle market volume. (Datamonitor, 2008)

Company	% Market Share
Honda Motor Company	40.2%
Harley-Davidson	24.0%
Yamaha Motor Co.	15.0%
Suzuki Motor Corp.	11.7%
Other	9.2%
<b>Total</b>	<b>100.0%</b>
Source: Datamonitor	

The U.S. and international motorcycle market for heavy bikes (+651cc engine size) is highly competitive. All of Harley-Davidson's major competitors are financially large and involved in numerous market segments beyond motorcycles. They all also offer more models including dirt bikes, small entry level bikes, sport bikes, and racing bikes as well as ATVs. Competition in the heavy weight segment is based on brand, price, styling and customer preference.

### INTERNAL ASSESSMENT

**Management** – In 2007, Dan Patterson, a member of the Board of Directors since 2004, became President and CEO of Lehman Trikes. Patterson had previously been a Division President for Lockheed Martin. He would bring with him to Lehman, Ken Hines, his former Vice President of Business Development at Lockheed Martin. They would bring the professional management and systems learned in the aerospace industry to Lehman. Together, Patterson and Hines would oversee the complete transfer of company operations from Canada to the United States, forge relationships with Harley-Davidson as the official supplier of the Tri Glide, direct a significant expansion of the company and staff and develop the relationship with Victory Motorcycles. (Lehman Trikes, 2009)

On July 31, 2009, it was announced that Dan Patterson was stepping down as CEO to enter retirement. Simultaneously it was announced that Ken Hines, who had been serving as executive vice president running daily operations, was named president and CEO. (Lehman Trikes, 2009)

**Operations** – Currently Lehman is primarily involved in assembly of components and painting. Many components are outsourced for production based on Lehman designs and specifications. Conversion kits are assembled and shipped to conversion dealers. O.E.M. motorcycles are sourced direct from the manufacturer's factory for the assembly of trikes. This is very inefficient as there is little market for the rear wheels or rear assemblies which are removed when assembling the trikes. The Japanese manufacturers have been approached by Lehman to supply only the front end and engines but have so far declined. For the Tri Glide, Harley provides the specifications and the front ends (including engines). Harley has modified the design of the front end of the Tri Glide to have an increased rake and legs that are two inches longer. Subcontractors provide the bodies, the rear boxes, differentials, wheels and other minor components. Lehman completes final assembly and paints the rear ends to match the factory front ends.

Interestingly, Lehman does not buy the Harley-Davidson supplied components. Once a Tri Glide is completed, it is shipped to Harley on a Harley trailer and Lehman bills Harley for labor, paint, other Lehman supplied components and profit. Lehman maintains a seven day inventory of components and is running a five day/ two shifts per day work week, and there are plans to increase production capacity by 30% in the near future. (Jafrum, 2009)

In November 2009, Lehman Trikes received the internationally accepted quality standard certification, ISO 9001:2008. "This certification provides testament to the quality and reliability of our products...", said Ken Hines, president and CEO.

**Marketing** - The sale of conversion kits to dealers has provided the largest profit margin for Lehman. In an informal competitor study conducted by students at Black Hills State University (BHSU, 2006), it was determined that the majority of conversion kits were being assembled in mom and pop garages. The decision was then made by Lehman to differentiate themselves by tightening their dealer requirements. As quoted from Lehman's website, "Lehman Trikes has proudly partnered with premium dealers to support our customers and products. Every Lehman dealer must meet the most demanding requirements in the trike industry so that we can provide our customers with the most enjoyable experience." (www.Lehmantrikes.com, 2009)

Lehman provides first year trike owners with a one year free membership to their Lehman Pride group. This group was created to enhance communication among Lehman trike owners. Lehman is proud of the fact that they are the only trike manufacturer with an owner's group. After the first complimentary year, members pay a \$35 annual fee to remain a member. The members receive the Pride Matters Magazine, which is the official magazine of Lehman Pride and is issued three times per year. To further support Lehman trike owners, the magazine offers information on "rallies, chapter and national events, member stories, technical tips, new products and accessories, and financial services." (www.Lehmantrikes.com, 2009) Lehman's website states, "Pride Matters is more than just a name, it is the oath we ride by. It doesn't matter what you ride or where you ride, always ride with pride." (www.Lehmantrikes.com, 2009) By having an accurate database of Lehman trike owners, Lehman has the opportunity to maintain regular contact with their current customers and possibly future customers. In May, 2009, Lehman had a list of over 2,000 in their Pride Owners group. (Lux, 2009)

Lehman has been successful in maintaining a premium price point for their products. The goals of Lehman are a consistent (reliable) product, brand leadership, and a premium price point. (Strilchuk C. , 2009) A brief overview of the strengths and weaknesses pertaining to Lehman Trikes follows:

**Strengths:** Lehman's strengths include strict dealer standards, thereby having more control over who represents the Lehman Brand. Currently there are 122 dealers worldwide, with 112 in the U.S. and the remainder in Canada, England, Germany, Japan and Guam. (Strilchuk C. , 2009) Lehman has been recognized by their competitors, customers, and Harley-Davidson for having state-of-the-art painting capabilities, thereby giving them a competitive advantage. Currently, the relationship that Lehman maintains with Harley and Victory place them in a very competitive position. In addition, they have established relationships with the leading manufacturers in the industry. The belief of Lehman and those in the industry is that the three

wheeled trike will provide aging baby boomers the opportunity to spend more years on the road after they are no longer capable of handling a traditional motorcycle.

**Weaknesses:** The contract with Harley-Davidson is currently a three year contract, with pricing renegotiated annually; Lehman is in the second year of the contract. The production demands of Lehman require that as volume increases, they expand their workforce and facilities to comply with the contract with Harley-Davidson. This short time frame potentially puts Lehman in a compromising situation. An additional weakness for Lehman is the size of the trike market. As the baby boomers move into their older years, there is no guarantee that future generations will have the same attraction to motorcycles and, accordingly, trikes as did previous generations. Is the current market for motorcycles and thus trikes going to disappear as the baby boomer generation passes through? This is a consideration for both Lehman and Harley-Davidson. Lehman's lack of diversification is also a weakness. Two other leading trike companies, Motor Trike and Champion, are diversified into the motorcycle trailer business.

## COMPETITIVE ASSESSMENT

Lehman is the market leader in the trike industry. (Strilchuk C. , 2009) A conglomeration of the mom and pop shops make up the largest potential in the conversion kit market. Three companies would be considered competitors in the conversion kit market: California Side Car, Motortrike and Champion. Lehman has maintained a diversified product line with conversion kits, factory assembly, factory conversion and their agreement with Harley-Davidson. Currently the agreement with Lehman and Harley-Davidson is the only such agreement in the industry. Lehman was selected after an exhaustive search by Harley. Obviously Harley had been looking at the proliferation of trikes in the past 15 years and realized this could be a profitable niche. (Hines, 2009) According to Ken Hines, Lehman does not have any serious competitors. Hines believes the Japanese companies have been threatened by the previous mishaps with three-wheeled all terrain vehicles and, therefore, they do not appear to be a threat to Lehman.

In September, 2009, a blog posting by Jafrum discussed the perceived benefits of a three-wheeled motorcycle. The author's belief was that the increased size and stability of a three wheeled motorcycle as opposed to a two-wheeled motorcycle improves the feeling of safety. Added comfort and storage options come from the larger size of a three-wheeled motorcycle as well. To summarize the benefits of the three-wheeled motorcycle, the blogger stated, "For some people they simply want to be able to continue to enjoy the 'wind in your hair' feeling of a motorcycle but have some physical limitations that prevent them from riding a two wheeled motorcycle." (Jafrum, 2009)

**California Sidecar** (located in Arlington, VA) is considered to be one of the largest and most respected conversion manufacturers in the U.S. The trike conversion models they supply are Honda GoldWing GL 1800, Honda GoldWing GL 1500 and the Honda Valkyrie. According to triketraders.com, "California Sidecar conversions have an excellent record of performance, durability and safety and are one of the more affordable conversions on the market today!!" (www.triketraders.com, 2009)

**Champion Trikes** (located in Garden Grove, CA) is considered to be the “best overall bang for your buck as far as quality, durability, reliability, simplicity, style and performance.” The range of conversion kits extends further than that of California Sidecar, with models ranging from Honda GoldWing GL 1800, 1500 to Honda VTX, Harley Davidson FLST Softail, Harley Davidson FL Touring Series and the Yamaha Road Star. (www.triketraders.com, 2009)

**Motor Trike** (located in Troup, Texas) states the following about their trikes, “Superior strength, light weight – the closer you look, the more you will experience the differences that our engineering, manufacturing, and quality make in your trike.” The slogan for Motor Trike is “Motor Trike – Experience the Difference.” Motor Trike provides the broadest range of conversion kits, offering the “Trog” for the Harley Davidson conversion. Motor Trike is proud of the fact that they manufacture and test their products in house and are always available for tours. (Motortrike, 2009)

The latest addition to the three-wheeled market is the Can Am Spyder developed by BRP who are also the makers of Ski-Doo, Sea-Doo and Lynx snowmobiles. The Spyder is designed with three wheels, having two wheels in the front and one wheel in the back. Lehman does not perceive the Spyder as direct competition, given that it provides a uniquely different experience and different capabilities than the Lehman trike. “We see the product as broadening the market of three-wheel vehicles rather than carving out a piece of the market which already exists. While there is bound to be some overlap, we have really not needed to provide direct comparisons to those products as they have attracted a different buyer.” (Strilchuk C. , 2009)

## **HARLEY-DAVIDSON**

Harley-Davidson Inc. (NYSE: HOG) is the parent company for a group of companies: Harley-Davidson Motor Company, Buell Motorcycle Company, MV Agusta and Harley-Davidson Financial Services. The company manufactures heavyweight motorcycles (engines of 651+cc) and parts, brand labeled general merchandise and clothing. The company was founded in 1903 by the Davidson brothers and William Harley. The company is headquartered in Milwaukee, Wisconsin, has 10,000 employees, and has eight unionized manufacturing facilities, the largest of which is in York, PA. In the United States, Harley sells through an independently owned network of 684 dealers. There are 74 independently owned dealers in Canada. (Harley-Davidson, 2009)

Harley-Davidson provides its dealer network with management training programs, service training, dealer software, advertising and promotional programs. Floor plan and customer financing are offered through Harley-Davidson Financial Services. The company also offers motorcycle insurance services to both dealers and riders. Harley’s 2009 model-year product line includes 35 models ranging from sport bikes to touring bikes to custom motorcycles. Retail prices range from \$6,999 for an 883 Sportster to \$35,999 for a Custom Ultraclassic Electraglide. (Harley-Davidson, 2009)

The agreement between Harley-Davidson and Lehman Trikes was hardly a relationship of equals. In 2008, Harley Davidson had revenues of \$5.594 billion, while Lehman Trikes had 2008 revenues of \$22.6 million. In a difficult year for Harley-Davidson, shipments of



motorcycles in the United States declined 13 percent from 2007, while the overall U.S. heavyweight market declined 7 percent. The stock markets judged Harley's performance harshly. The company's share price declined 63.7 percent in 2008 reflecting Harley's performance in a very challenging macro-economic environment. (Harley-Davidson, 2009)

But the worst was yet to come. In the midst of a worldwide recession and selling a product line heavily dependent upon discretionary income, Harley Davidson reported second quarter 2009 revenues decreased 30% globally from the prior year and decreased 35% in the US. This is compared to a quarterly sales plunge of 48% in the U.S. overall heavyweight motorcycle market. Harley-Davidson's net income for the second quarter was down to \$19.8 million from \$222.8 million in the prior year. "It is obviously a very tough environment for us right now, given the weak consumer spending in the overall economy for discretionary purposes," said Keith Wandell, the new CEO of Harley-Davidson. (Reed, 2009)

Additionally, Harley was executing a strategy for dealing with the economic downturn. This included a wholesale restructuring of management including a new CEO, COO and CFO as of April 2009. The cost structure was addressed by reducing 300 nonproduction positions and 1200 hourly production jobs. The Harley-Davidson Financial Services (HDFS) business of Harley-Davidson raised \$600 million from unsecured notes and applied for the U.S. Federal Reserve Bank's Term Asset-Backed Securities Loan Facility (TALF) program to be able to continue to supply financing for Harley's dealers. (Harley-Davidson, 2009) HDFS wrote down \$72.7 million in a credit loss provision on motorcycle loan receivables caused by rising credit losses resulting in a second quarter loss of \$62.7 million for HDFS. (Reed, 2009)

<b>Harley-Davidson Income Statement Selected Data</b>			
(In \$ Millions)	2009	2008	2007
Total revenue	\$4,781.9	\$5,971.3	\$6,143.0
Cost of revenue	3,353.8	3,957.7	3,816.8
Gross profit	1,428.1	2,013.6	2,326.3
Selling & admin expense	979.4	984.6	900.7
Non Recurring expense	252.7	-	-
Income from operations	196.1	1,029.0	1,425.6
Interest expense	21.7	4.5	-
Income before taxes	178.7	1,033.9	1,447.8
Income taxes	108.0	379.3	513.9
Net income	(55.1)	654.7	933.8

Against this challenging economic backdrop, in the summer of 2008, Harley-Davidson chose to launch the Tri Glide simultaneously to all 684 U.S. dealers. The problem was that early demand far exceeded supply. Harley-Davidson customers interested in a three-wheeled motorcycle had long wanted a true Harley designed and Harley backed warranty on a trike. Following the launch, a leading Harley dealer was allocated only eight Tri Glides through May of 2009 with orders for twenty five. (Burgess, 2009) Both Harley-Davidson's and Lehman Trike's preparation for and reaction to the launch of the Tri Glide seemed cautious and tentative. Nonetheless, from 2008 through 2009, Lehman expanded their number of manufacturing employees 40% from 100 to 140 and anticipated additional hiring in the future. (Fugleberg, 2009) This is important to note because Lehman is a nonunion shop. In 2007, Harley-Davidson went through a painful three week strike by the machinists union. The resulting three year

agreement was for a 12% wage increase eventually reaching a maximum hourly wage of \$27.89. (Moore, 2007) Clearly Harley had the production capacity and expertise to produce the Tri Glide. Why would Harley-Davidson have chosen to outsource production of the Tri Glide line to Lehman-Trikes?

Harley-Davidson Balance Sheet Selected Data			
(In \$ Millions)	2009	2008	2007
Cash	\$1,630.4	\$593.6	\$402.8
Net receivables	1,885.2	419.6	2,641.1
Inventories	323.0	400.9	349.7
Total current assets	4,341.9	5,377.9	3,467.3
Total assets	9,155.5	7,828.6	5,656.6
Current liabilities	2,268.2	2,603.8	1,905.1
Long-term debt	4,114.0	2,176.2	980.0
Total liabilities	7,047.4	5,713.0	3,281.1
Shareholder equity	2,108.1	2,115.6	2,375.5
(Harley-Davidson, 2010)			

### LEHMAN TRIKE'S STRATEGY

For a relatively small company, Lehman is pursuing multiple strategies including product development, market development, market penetration, and strategic alliances. All strategies are basically focus strategies with the niche market focus of large engine trikes. Lehman's continued product development efforts are evidenced by the summer 2009 launch of the Victory Cross Bow. Lehman's product development is closely tied to the motorcycle manufacturer's release of new models. Lehman's vision is "To be the world's dominant three wheel motorcycle provider with unique culture and ethical practices that benefit our stakeholders." Their stated six ambitious goals:

- *Enhance brand recognition and loyalty.*
- *Expand production to meet anticipated sales.*
- *Increase product quality while decreasing costs.*
- *Increase shareholder value.*
- *Fully develop the North American market.*
- *Set and maintain the standards for the industry.* (www.Lehmantrikes.com, 2009)

Lacking in promotional resources, Lehman is largely looking to Harley-Davidson to develop the trike market. With Harley's direct participation in the trike market, the market gained immediate legitimacy and expanded to those riders who had been waiting for a Harley product with a Harley manufacturer's warranty. Lehman's dealer network also plays a role in market development as well as market penetration. Lehman's own promotional activities at events such as rallies also contribute to market development and market penetration.

Lehman's strategic alliance with Harley-Davidson is unique to Harley as well as the industry. As already mentioned, Lehman has entered into discussions with the major Japanese motorcycle manufacturers in an attempt to structure an agreement similar to the one with Harley, but so far to no avail. There are two key impediments to gaining the Japanese manufacturers' commitment to the trike market: their disastrous experience with three-wheeled ATVs and the accompanying law suits, and simply the current relative lack of volume in the trike market.

In 1987, the Japanese ATV manufacturers voluntarily agreed to discontinue manufacturing three wheeled ATVs for the US market citing the design flaws of the three-wheeled ATVs, which made them dangerous. Nonetheless, lawsuits continued as the manufacturers were not required to recall the over 2.4 million vehicles already sold. The Japanese aversion to litigation, no doubt, affected their assessment of the viability of the current trike market. (All Terrain Vehicles)

### LEHMAN TRIKES FINANCIAL STATUS

Lehman Trikes financial status continued to show significant improvement in 2009. For the fiscal year ended November 30, 2009, Lehman reported revenues of \$33.4 million, a 48% increase over the same period in 2008. While revenue was up significantly, cost of goods sold was up 60% over prior year, reflecting the changing mix of the business model and the resulting lower margins on the Harley-Davidson trike business. "This is the cost of volume," said Ken Hines, Lehman President. (Hines, 2009) Nonetheless management showed tight control of expenses, down 20% from the prior year. The resulting Comprehensive Income for the period was \$636.4 thousand, up significantly over the \$570.9 loss of 2008. The Balance Sheet also reflected improvement with cash up significantly to \$177.6 thousand from a prior year position of only \$12 thousand. Despite revenue growth of 48%, inventories were actually down 22% reflecting the fact that Lehman does not run the Harley provided components through cost of goods sold nor inventory. "We continue to improve cash management, inventory control and profitability," said the CEO Ken Hines. (Lehman Trikes, 2009)

<b>Lehman Trikes Selected Income Statement Data</b>			
(In \$ Thousands)	2009	2008	2007
Net revenue	\$33,384.2	\$22,619.8	\$18,856.8
Cost of goods sold	28,442.5	17,674.8	13,357.2
Gross profit	4,941.8	4,944.9	5,499.5
General & admin expense	2,017.9	2,359.7	2,664.9
Selling & distribution	1,105.6	1,898.9	1,816.9
Interest	408.5	547.6	610.4
Total expenses	4,305.4	5,338.8	5,621.7
Other expense (plant closure)	-	(165.0)	(998.2)
Net Income (Loss) before income taxes	636.4	(558.9)	(998.2)
Income taxes	-	(12.0)	(0.1)
Net Income (Loss)	636.4	(570.9)	(998.3)
<b>Lehman Trikes Selected Balance Sheet Data</b>			
(In \$ Thousands)	2009	2008	2007
Cash	\$177.6	\$12.4	\$85.4
Receivables	1,771.2	2,249.0	1,401.7
Inventories	4,726.1	6,039.6	3,846.3
Total current assets	6,875.9	8,478.9	5,440.9
Total assets	10,224.2	12,044.0	9,019.0
Current debt	7,020.3	8,813.0	4,510.4
Bank debt	2,731.5	4,008.8	3,049.5
Accounts Payable	2,203.7	3,045.1	1,248.6
Total liabilities	7,344.9	9,801.1	6,913.4
Shareholder equity	2,879.2	2,242.9	2,105.6
(Lehman Trikes, 2010)			

Lehman was at a critical juncture in the continued development of their business model. The contract with Harley-Davidson to build the Tri Gide proved to be a boon for the overall business, even in the midst of a global recession, one which had a profoundly negative impact on the overall heavy motorcycle market. During this period, the growth of the Harley-Davidson agreement supply side (the “Harley side” as it became known internally) of the business more than offset the decline in sales volume of the non-Harley side. While new employees, primarily in manufacturing, were being hired to support the Harley business, employees on the Lehman trike assembly side were being laid off. As Lehman’s sales mix increasingly favored the Harley business, there was a subsequent decline in the relative mix of the non-Harley assembly side of the business. Lehman’s growth was becoming increasingly dependent upon the contract with Harley.

When asked what he worried about most for the future, CEO Ken Hines quickly responded, “The Harley contract ... it comes up for repricing every year and the threat of them opting to not execute the full term of the contract will keep you up at night.” (Hines, 2009) What should Lehman do? The Harley relationship was becoming the major engine for growth, but at the expense of the non-Harley business. As the Tri Glide side of the business continued to grow faster, would Lehman face an increasing risk of over dependence on the Harley contract? Should Lehman redouble their efforts to sign a similar agreement with one or more of the Japanese manufacturers? Another strategic possibility Hines mentioned was for Lehman to build a Lehman branded trike of their own design, maybe with the cooperation of an engine manufacturer. Is the market too immature and undeveloped to consider this strategy? What would this do to the relationship with Harley?

From Harley-Davidson’s standpoint, were the supply agreement with Lehman Trikes and the sales of the Harley trikes meeting their expectations? If the trike market continues to flourish, should Harley-Davidson acquire Lehman, or should they simply let the contract with Lehman expire and begin producing trikes themselves?

## **EPILOGUE**

Harley-Davidson’s third quarter financial results showed some improvement. Sales of Harley-Davidson motorcycles declined 21% compared to prior year third quarter, an improvement from the 30.1% decline in the second quarter. However, net income declined 84.1% from the year-ago quarter, reflecting lower motorcycle shipments and the effect of the economy. Harley management also announced its “go-forward” business strategy. A key element of this strategy was to focus efforts and resources on the Harley-Davidson brand by leveraging Harley’s unique strengths and through continuous improvements, to improve productivity and profitability. Taking a chapter out of the U.S. automaker’s restructuring efforts, as part of the new focus strategy Harley also announced that they would be discontinuing the Buell product line and divesting the MV Augusta business. They also announced a “two-path” study to restructure their York, PA manufacturing facility, which would require major concessions from the unions, or to relocate those operations to a new non-union plant in Kentucky. (Harley-Davidson, 2009)

On December 3, 2009 Harley-Davidson announced that the unions at their largest factory in York, PA had agreed to job cuts of 50%, more work-rule flexibility, and a seven-year agreement. The agreement also created a new category of “casual” workers who would earn 30% less and would work as needed, depending on seasonal production and covering absences. From a workforce of 1,950 hourly workers, the restructured workforce would consist of 750 full-time unionized employees and 250 unionized “casual” employees. The agreement also called for job classifications being cut from 60 down to five allowing workers and teams to do more and significantly different tasks. In addition to productivity savings of up to \$150 million a year, “The agreement is designed to allow York to resize and become more flexible and efficient”, said Harley spokesman Bob Klein. (Maher, 2009)

In a major blow to Lehman Trikes, on January 16, 2010, officials announced that “Harley-Davidson will no longer use the Spearfish based manufacturer to assemble its trikes. Harley-Davidson officials said the move was due to the motorcycle company’s restructuring its York operations.” Offering further explanation, Lehman CEO Ken Hines said, “Harley-Davidson has advised us they will be moving the trike assembly in-house to their York, PA production facilities for the 2011 models”. Julie Chichlowski of Harley-Davidson said, “Our decision to move trike assembly is based purely on the restructuring of Harley-Davidson’s York operations, which now provides the opportunity for us to build trikes in house and streamline trike assembly and distribution.” (Pioneer Staff Reports, 2010) For Lehman Trikes, the alliance with Harley had truly become a “Story Within a Story.”

With the Harley-Davidson business being the growth engine of the past two years for Lehman Trikes, will they be able to recover from this major loss of business? The timing of the recovery of the economy and the resultant impact on freeing up discretionary spending will have a significant impact on Lehman’s future business model. Can Lehman restructure their manufacturing operations to reflect a lowered critical mass of sales to less than half the volume at the time of the Harley announcement? The economy and significant management decisions facing Lehman Trikes will have a profound impact on their future.

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# ETHICAL ISSUES IN PROFESSIONAL TAX PRACTICE

**Richard Powell, Pepperdine University**  
**Cynthia E. Bolt-Lee, The Citadel**

## CASE DESCRIPTION

*The primary subject matter of this case concerns the pressure placed upon today's tax professional by both the client and the firm to minimize tax liabilities through aggressive tax positions. Secondary issues include the competitive environment of professional tax practice, incentives to maximize revenue by retaining old and recruiting new clients, challenges facing the entry-level tax professional, and compliance with Circular 230 and the AICPA's Statement on Standards for Tax Service (SSTS). The case is appropriate for all introductory level tax students at both the undergraduate and graduate level and has a difficulty level of five: appropriate for first year graduate students. The case is designed to be taught in one class period and should require approximately three hours of outside preparation by students.*

## CASE SYNOPSIS

*Students are placed in the role of inexperienced tax practitioners who must deal with aggressive clients wanting to minimize their tax liability. The student must analyze several tax issues, determine the appropriate tax treatment, and address the technical and ethical limits on the tax positions a CPA can take. Students must address numerous sanctions including penalties, malpractice claims, expulsion from the AICPA, loss of a CPA license, and even imprisonment.*

*As a recent college graduate with an accounting degree, a CPA license, and membership in the AICPA, the student, in a role play, is a recent hire at a regional CPA firm, Burst and Packend. The CPA has spent two years mostly in auditing, has obtained the experience necessary for licensing, but has decided to move into the tax department for a trial run. It is March 2009 and the CPA is meeting, for the first time, John and Mary Smith, who are coming in for an appointment to discuss their return. The supervising partner encourages development of an excellent relationship with the Smiths because they have been good clients who have paid high fees over the years. An audit manager, called upon to help during last year's heavy tax season, prepared their 2007 tax return. The Smiths tend to be aggressive in seeking deductions and minimizing their tax liabilities. They have dropped off various tax documents for review prior to their appointment.*

## TEACHING CASE: THE SMITHS

As a recent college graduate with an accounting degree, a CPA license, and membership in the AICPA, you are currently employed at the CPA firm, Burst and Packend. For the past two years you have worked in auditing and have now decided to move into the tax department for a change of scenery. It is March 2009 and today you are meeting, for the first time, John and Mary Smith, who are coming in for an appointment to discuss their return. Your supervising partner encourages you to develop an excellent relationship with the Smiths because they have been good clients who have paid high fees over the years. An audit manager, called upon to help during last year's heavy tax season, prepared their tax return in 2007. The Smiths tend to be aggressive in seeking deductions and minimizing their tax liabilities. They have dropped off various tax documents for your review prior to their appointment.

John Smith is a professor of art at the local private university and works on the side as a commissioned portrait artist. He has an office at the university. Mary is a marketing executive. The client file indicates their combined 2007 adjusted gross income was \$200,000.

Mary has been attending evening classes in the university's law school. She finds the law courses helpful in her work as a marketing executive because she is very active in contract negotiations. In her second year of law school, tuition and related expenses are running \$20,000 per year. On last year's tax return, the couple deducted the tuition as an itemized deduction for education expenses.

Although John has an office at the university, he has set up a home office where he can work on his academic research. The office includes an area that he uses as a studio for his commissioned paintings. By working at home, he is able to spend more time with the couple's young daughters. On their 2007 tax return, the Smiths deducted \$5,000 for the home office. They hope to deduct similar amounts for 2008. The room includes a pullout sofa for occasional guests and a computer area for the personal use of his wife and a daughter. He has included the cost of paints and other supplies as part of his expenses as well as the cost of a top-of-the-line camera that he uses to take the portrait pictures from which he paints. The camera is used for personal purposes as well as for his art work. John also teaches group art lessons in his home studio. His earnings are \$25,000 and his business continues to earn a profit. One major deduction was for travel. John studied in France during the year taking art classes focusing on portraiture, which he indicates will not only benefit his work as a portrait artist but also his work as a professor at the university. His sales brochures state that he has been formally trained abroad.

In connection with her work, Mary frequently drives her car from her downtown office to meet with purchasing agents and occasionally stays overnight near the agent's office prior to meetings the next day. For trips in the local metropolitan area, her employer does not reimburse her for mileage, much to her annoyance. Mary does not maintain detailed mileage records. She estimates her business mileage over the entire year and in the past has claimed an itemized deduction for transportation expenses.

The Smiths are fortunate to have a friendly neighbor, Brian Westbrook, who runs a private daycare. For years, Brian has allowed the Smith girls to attend at no cost in return for



several of John's paintings. The Smiths believe this arrangement, worth approximately \$8,000 in 2008, has no tax implication, and it was not reported on their 2007 tax return.

When the Smiths appear at your office, they say that they went to Las Vegas in 2008 to attend one of John's academic conferences and lost \$3,000 gambling. John's school paid for his trip at a cost of \$1,800, which excludes Mary's plane ticket and any of her separate costs. Mary comments, "We were better gamblers in 2007 when we won \$4,000. At least we can deduct this year's loss on our tax return." When you review the 2007 return, the income items do not include gambling income.

John then comments, "You folks are so good at getting us tax refunds, why don't we make your fee equal to 20% of our refund for 2008. That way, you have lots of incentive to find us all possible deductions. We have never been audited, but I still really like your firm's ad in the newspaper saying "We win when the IRS audits our clients. For peace of mind, come to Burst and Packend."



# APPLE INC.: PRODUCT PORTFOLIO ANALYSIS

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## CASE DESCRIPTION

*This case assesses a company's product line mix relative to two marketing environmental factors and explores four product line growth strategies using a product portfolio analysis approach. The case provides a history of the Apple Computer Company and its key product lines. An approach to analyzing a company's product portfolio is reviewed and applied to Apple's product lines. Students will be able to see how each Apple product line fits within the portfolio analysis tool and will be asked questions relative to possible strategies for Apple's product portfolio. The case has a difficulty level 2 and is designed to be covered within one (75 minute) class period. The required preparation time is about 2 hours. It is appropriate for marketing principles, marketing strategy, strategic management, and corporate entrepreneurship classes. The purpose of this case is to illustrate to students one approach to making decisions about a company's line of products. The case also stimulates critical thinking in regards to the future direction of a company's product portfolio.*

## CASE SYNOPSIS

*The Apple Computer Company is arguably one of the most innovative technology companies to emerge in the last three decades. Apple, Inc. is responsible for bringing to market such products as the Macintosh desktop and the portable computer, iPod and iTunes, and most recently, the iPhone. The success of the company can be traced to the ingenuity of their founder and CEO, Steven Jobs. His philosophy has always been to create products that consumers find easy to use and integrate innovative technology. Throughout Apple's history it has accomplished these goals. However, with a growing line of products, a competitive market landscape, and an unpredictable technology lifecycle curve, the company faces challenges as to the direction of its product lines. The case gives an overview of a tool that is used to analyze a company's product line portfolio and applies it to Apple, Inc.'s array of products. Questions for discussion are provided to enable students to use critical thinking skills in applying the case material.*

## INTRODUCTION

Apple, Inc. stands for innovation in personal computing and digital media distribution. The company aims for nothing short of a revolution when designing, developing, and distributing its line of products ([www.Hoovers.com](http://www.Hoovers.com)). Apple's products range from a host of desktop and portable computers geared for the consumer and education markets, digital music players (iPod), online music store (iTunes), and SmartPhone (iPhone). Applications are designed for user convenience and productivity.

Competition for market share in any one of Apple's product offerings is fierce and top competitors come from a formidable list which include Dell, Hewlett Packard, Microsoft, and Nokia (to mention a few). Users of Apple's products can be fickle, which causes a revolutionary product like the iPod to give way to newer technologies like the iPhone within the span of five years. Thus, the ability to accurately assess and forecast the market demand for products can mean the difference between corporate profit and loss.

At the helm of these important decisions is Apple's visionary CEO, Steven Jobs. Jobs understood that given the competitive landscape and market growth opportunities for Apple's products, it is critical for him and the company to periodically assess its product line portfolio. This case provides the background of Apple Inc., its core product lines, and presents the feasibility of utilizing a product line portfolio tool to assist Jobs and Apple in identifying strategies to hold, build, harvest, or divest their product lines.

### **HISTORY OF APPLE, INC.**

The Apple Computer Company was founded by two college dropouts Steven Jobs and Steven Wozniak in 1976. Within 2 months of building their first computer circuit board in their garage, they had sales orders for 200 units. The venture was capitalized from money raised by the sale of Job's van and Wozniak's HP calculator and the company was named after a 220 acre farm in Oregon that Jobs was part owner (Wozniak and Smith, 2006; Young and Simon, 2005). Working as a team, Wozniak was the technical genius and Jobs was the visionary whose mission was to bring an easy-to-use computer to the market (Yoffie and Slind, 2008). Fueled by the successful launch of the Apple II computer (a simple machine that people used straight out of the box), which sold more than 100,000 units, Apple began selling publicly offered stock by the end of 1980.

Jobs was forced to leave Apple in 1984 after the company sustained net income losses of 17%. In the years leading up to this crisis, Apple introduced the Macintosh computer ("Mac") which, despite its sleek and user friendly design, sales lagged. The estimated reasons for the collapse in sales were the slow processing speeds and incompatible software.

Jobs was replaced by John Sculley, whose focus was to improve the Mac design to lead the computer industry in desktop publishing and provide a more user friendly alternative to users of IBM compatible machines. Under Sculley, Apple was able to drive down costs by shifting much of its manufacturing to subcontractors. But because gross margin on Apple products fell to a 10 year low in 1993, Apple's board decided to appoint a new company president. This move prompted Sculley to leave Apple. From 1993 to 1997, Apple cycled through two more company heads, Michael Spindler and Gilbert Amelio.

Spindler's focus was on the education (K-12) and desktop publishing markets which Apple held 60% and 80% market share respectively. Expansion internationally was a priority under Spindler since 45% of 1992 sales came from outside the U.S. To slash costs, Research and Development spending was cut and 16% of Apple's workforce was reduced (Yoffie, 2005).

Despite these efforts, Apple's customers became disloyal. A 1995 *Computerworld* survey revealed that almost half of Apple's users expected to buy an Intel-based PC (Yoffie,

1996). This consumer sentiment was realized as Apple reported a \$69 million loss for its first fiscal quarter of 1996 (Kehoe, 1996). Gilbert Amelio, an Apple director replaced Spindler as CEO in 1996. He saw the need to update the Mac operating system and announced that Apple would acquire NeXT Software Company to refresh the Mac OS. NeXT founder, Steve Jobs was hired on as part time advisor and ultimately returned as the interim CEO of Apple when Amelio was released due to poor company earnings under his leadership (Apple lost \$1.6 billion during this period).

In 1997 Apple was once again under the control of Steve Jobs and he wasted little time in turning the company turnaround. He arranged for Microsoft to invest \$150 million in Apple. He was committed to making Apple's products compatible with Microsoft Office, a move that pleased many users (Moisescot, 2008). Products such as the iMac were introduced allowing consumers to "plug and play" peripherals compatible with Windows-based machines. During this period, Jobs changed Apple's image to a "hip" alternative to other brands – computers that offered a cutting-edge, tightly integrated user experience (Edwards and Burrows, 2007). The company thrived under Job's visionary leadership. By the new millennium, digital convergence of the personal computer with other consumer electronics had become a reality and in 2010, Jobs was named Fortune Magazine's "CEO of the decade" (November 5, 2009). However, to continue this trend of innovative product offerings, Jobs and Apple Inc. needed to remain in front of the demand curve by strategically designing and marketing new products to capture the productivity, communication, and entertainment needs of a very loyal customer base.

## **APPLE PRODUCT LINES AND BUSINESS STRATEGY**

Since 2001, Steve Jobs worked to make Apple, Inc. a household name and a cultural force (Deutschman, 2000). Apple offers a range of personal computing products including desktop and portable personal computers, related devices, and peripherals. Software products include the Mac OS X (proprietary operating system software for the Mac), server software and related solutions, professional application software, consumer education, and business oriented application software. Apple also designs, develops, and markets to Mac and Windows users its family of iPod digital music players and its iPhone mobile communication devices, along with related accessories and services, including the online distribution of content through the Apple iTunes Store. This array of product offerings has made Apple Inc. one of the most financially successful technology companies of the last decade. Exhibit 1 illustrated the annual net sales revenue of Apple products since 2005.

Apple's business strategy is to "bring the best personal computing, portable digital music and mobile communication experience to consumers, students, educators, businesses, and government agencies through innovative hardware, software, peripherals, services, and Internet offerings." (Apple Inc. Annual Report, 2008). This strategy allows Apple to leverage its unique ability to design and develop its own operating system, hardware, application software, and services to provide its customers new products and solutions with superior ease-of-use, seamless integration, and innovative industrial design. Continual investment in research and development is believed to be the key to capitalizing on the convergence of the personal computer, digital

consumer electronics, and mobile communications market. However, like many companies that offered a broad spectrum of product and service lines, some means to periodically assess and adjust the product/service portfolio is necessary. The following section describes a tool that Jobs and Apple could utilize to examine and make some strategic decisions relative to their line of products.

<b>Exhibit 1: Apple Inc. Net Sales by Product Line 2005-2010 (in millions of dollars)</b>						
<b>Product Line</b>	<b>2005</b>	<b>2006</b>	<b>2007</b>	<b>2008</b>	<b>2009</b>	<b>2010*</b>
Desktop Computers <sup>a</sup>	3,436	3,319	4,020	5,603	4,324	1,532
Portable Computers <sup>b</sup>	2,839	4,056	6,294	8,673	9,535	2,228
iPod	4,540	7,676	8,305	9,153	8,091	1,861
Other music products <sup>c</sup>	899	1,885	2,496	3,340	4,036	1,327
iPhone and related products	NA	NA	123	1,844	13,033	5,445
Peripherals and other hardware <sup>d</sup>	1,126	1,100	1,260	1,659	1,475	472
Software, services, and other sales <sup>e</sup>	1,091	1,508	628	2,207	2,411	634

\* Quarter ending March 27, 2010. Sources: Apple financial statements ([www.apple.com](http://www.apple.com)), Yoffie and Slind (2008).

<sup>a</sup> Includes iMac, eMac, Mac Mini, Mac Pro, Power Mac, and Xserve product lines.

<sup>b</sup> Includes MacBook, iBook, MacBook Pro, and PowerBook product lines.

<sup>c</sup> Includes sales from iTunes Music Store, iPod-related services, and iPod related accessories.

<sup>d</sup> Includes sales of Apple-branded and third-party displays, wireless connectivity and networking solutions, and other hardware accessories.

<sup>e</sup> Includes sales of Apple-branded operating system, application software, third-party software, AppleCare Services, and Internet Services.

## PRODUCT PORTFOLIO ANALYSIS BACKGROUND

Utilizing a product portfolio analysis, Jobs and his management team could potentially evaluate the various Apple products to determine which are expected to be the most profitable to the firm in the future. Such an analysis would be important because it would impact the allocation of resources, the amount of cash available to fund other Apple ventures, and signal to shareholders the direction of the company.

Typically, a portfolio analysis is performed at the product line level of the firm and each product line usually represents a strategic business unit (SBU) within the scope of the company (Ingram, LaForge, Avila, Schwegker, and Williams, 2009). Although each SBU should have an independent management structure responsible for a single product line's profits and losses, it could be tailored to a company like Apple where a single set of marketing and sales goals are common to the entire corporation.

For firms like Apple with multiple brands or product lines, a product portfolio analysis is necessary to determine where resources should be applied or reallocated to ensure the maximum profitability of the corporation. Maintaining product lines that commanded a substantial share of a competitive and growing market is the ultimate goal while deciding to divest or sell off products lines that lag in growth and competitive market share. However, such decisions are not easy or apparent for firms. This is because forecasts for product demand are not always accurate (take for example the quick obsolescence of Apple's iPod shuffle – or in earlier years entertainment technologies like the laser disc, mini CD, and VHS Camcorders). These examples suggest that even the best business and marketing plans may not account for rapidly easing of demand for such products. In addition, many competitors marketed the same or similar products,

which impact a product line's successful contribution to profit margin. To account for both the market growth rate (demand) of a product line and its market share strength (share compared to its largest competitor), the Boston Consulting Group (BCG) developed a product portfolio analysis tool.

### BCG GROWTH-SHARE MATRIX

The BCG Growth/Share matrix emerged as a popular portfolio analysis methods used by industry practitioners. It is a tool that could be applied to Apple's array of products. This tool enabled firms to classify all of their product lines in a 2 x 2 matrix according to the dimensions of relative market share and market growth rate. An example can be seen in Figure 1.

Figure 1: Boston Consulting Group - Growth Share Matrix		
	Relative Market Share	
	High	Low
Market Growth Rate	<b>Star</b> <ul style="list-style-type: none"> <li>• High growth and share</li> <li>• Profit potential</li> <li>• May need heavy investment to hold/sustain position</li> </ul>	<b>Question Mark</b> <ul style="list-style-type: none"> <li>• High growth, low share</li> <li>• Build into stars or phase out</li> <li>• Requires cash to hold</li> </ul>
	<b>Cash Cow</b> <ul style="list-style-type: none"> <li>• Low growth, high share</li> <li>• Established and successful product line</li> <li>• Source of harvesting cash for other product lines</li> </ul>	<b>Dog</b> <ul style="list-style-type: none"> <li>• Low growth and share</li> <li>• Low profit potential</li> <li>• Consider divesting product line</li> </ul>

The dimension of relative market share (horizontal axis) is defined by the product line's market share as compared to its *largest* competitor in the industry (Farris, Bendle, Pfeifer, and Reibstein, 2006). For example, in the personal computer industry, Apple's largest competitor was Dell (with 26% market share). Therefore, Apple's (9%) share of the personal computer market relative to Dell was approximately .34 (9/26). Thus, the delineation between low and high relative market share for a particular product line is 1.0. Market growth rate (vertical axis) is a measure of how attractive a particular market is to the firm and is quantified by the annual growth rate (usually expressed as percent growth) for that product line. For example, the projected growth rate of the entire personal computer market would be predicted by industry analysts like the Gartner group ([www.gartner.com](http://www.gartner.com)) and based on market research, forecasting, and expert opinion.

Given the estimates of relative market share (low-high) and its market growth rate (low-high), a product line can be categorized in one of the four cells illustratively named for the amount of resources generated from and required from the firm (Grewal and Levy, 2010). Figure 1 illustrates that a product line that is considered to be a *star* is one where the expected market demand (growth) is high and relative market share is also high. Resource requirements for stars suggested that a heavy investment in production and promotion are required. Financial resources to fund these activities typically come from product lines that generated cash (i.e., *cash cows*).

Product lines that are in low-growth markets but have high relative market share are *cash cows*. Such product lines had been stars at some point in time but because of a decrease in product demand (e.g., due to market saturation, new product introductions, etc.), financial resources are unnecessary for research and development and new production facilities. Instead, cash could be harvested from these product lines to fund new up and coming product lines in higher-growth markets (i.e., *question marks*). *Question marks* are product lines that are in high-growth markets but do not overcome the larger competitors due to higher levels of relative market share.

To compete more aggressively, significant financial resources are needed to market and promote these product lines. Ideally, the strategy is to build question marks into stars, however based on the question mark's position in the portfolio analysis matrix, it could move left and become a star (if market share increased) or it may move south (if demand for the product line decreased) and divestiture of the line becomes an option (i.e., *dogs*). *Dogs* are product lines with low market growth rates and low relative market share. Unless the firm has a compelling reason to keep these product lines in the product portfolio (e.g., they are needed to complement another product or service) strong consideration should be given to divesting them. The likelihood that dogs will become stars is low and the resources needed to sustain these product lines needs to be taken from others that contribute to the company's revenue and profit goals.

## ASSESSING APPLE'S PRODUCT LINES

### Desktop and Portable Computers

Steve Jobs and Steve Wozniak built Apple, Inc. from the development of its flagship line of desktop personal computers, known as the "Mac" (Kahney, 2004). Since its introduction in 1984, the Mac computer had undergone many transformations but had always been known for its stylish design, high performance levels, and competitive price (Linzmayr, 2004). Today's version of the iMac desktop computer, targeted at consumer, education and business customers features two duo processors running at up to 3.06GHz, up to 4GB of SDRAM memory, a faster graphics card option, built-in sight video camera, wireless networking, and Bluetooth compatibility. Over the last decade, the desktop computer market has been dominated by a few large Apple competitors. Exhibit 2 illustrates that currently, over 60% of the market is shared by Dell Computer (26.2%), Hewlett Packard (25.7%), and Apple (8.8%) ([www.gartner.com](http://www.gartner.com)<sup>a</sup>). The industry outlook for desktop computer demand shows a downward trend, as last year, desktop computer sales (in units) registered only a modest increase of 2.9% and the forecast for 2010 suggests a decline of about 20.2% ([www.physorg.com](http://www.physorg.com)). This trend is illustrated in Exhibit 3.

However, Apple's outlook for its line of laptop personal computers is a bit brighter. Jobs introduced the first laptop (notebook) computer in 1991. The original "PowerBook" line was very successful and evolved over the next 18 years to the current version known as the MacBook. This portable computer was designed specifically for consumer and education users; included a 13-inch widescreen display, a built-in video camera, and a magnetic power adapter. Newer MacBook models featured an all-metal enclosure, LED-backlit glossy widescreen



display, Intel Core 2 Duo processors running at up to 2.4GHz, built-in wireless networking and Bluetooth capabilities (Kahney, 2008).

<b>Exhibit 2: Top competitors by Product Line 2008-2009 (% share of units sold)</b>		
<b>Product Line</b>	<b>2008</b>	<b>2009</b>
<b>Desktop and Portable Computers</b>		
Apple	8.6	8.8
Dell	29.9	26.2
Hewlett Packard	26.0	25.7
<b>MP3 Players</b>		
Apple	72.0	71.0
Scandisk	10.0	11.0
Microsoft	3.0	4.0
<b>SmartPhones</b>		
Apple	2.8	14.4
Nokia	47.4	36.4
Research in Motion	17.3	19.9
Sources: Van Buskirk (2009), <a href="http://www.gartner.com">www.gartner.com</a> <sup>a</sup> , <a href="http://www.gartner.com">www.gartner.com</a> <sup>b</sup> , <a href="http://www.gartner.com">www.gartner.com</a> <sup>c</sup> , Hefflinger (2008), Schonfeld (2010).		

Although Apple continues to chip away at market share from its biggest competitor (Dell), it still lags behind (see Exhibit 2). But, the market forecast for portable computer (laptop/notebook) sales suggests that it is a growing segment with industry experts predicting an annual (2009-2010) increase upwards of 50%, a trend primarily driven by the demand for smaller devices and ubiquitous internet access ([www.gartner.com](http://www.gartner.com)<sup>a</sup>).

## iPod

Jobs and Apple were late to enter the MP3 market. In 2001 they began selling their line of iPods (versions included a full size, mini, nano, and shuffle). The iPod was released to compete with traditional MP3 players and its major advantages were its compact size, large storage capacity, and speed of uploading music. The original iPod was sleek and small, weighing only 6 ½ ounces. It had the ability to hold up to a thousand songs in its huge five gigabyte hard drive and could load one thousand songs in as little as ten minutes. Its battery could hold a charge for up to 10 hours and it was simply integrated with its popular iTunes online music store.

Apple's iTunes was the first to introduce an online store for selling music downloads and quickly gained market share as consumers quickly took to this new and innovative way of obtaining music (Boddie, 2005). For as little as 99 cents per song, consumers could choose music from the major record labels and thousands of independent ones (Yoffie and Slind, 2008). Today, the popularity of the iPod since its inception puts it on track to become the all time largest selling consumer electronics product (Mark and Crossan, 2005).

To date, over 71% of all industry MP3 player sales are Apple iPods relative to Scandisk's 11% share and Microsoft's 4%. Exhibit 2 illustrates Apple's dominance in this market (Van Buskirk, 2009). However, demand for MP3 players is shrinking (see Exhibit 3) and based on other devices that can provide music playing capabilities, there are risks that the MP3 player is due for a market freefall (Hesseldahl, 2008). Sales of 2009 MP3 player units registered about 9.9 million, down 16.2% from 2008 (Elmer-Dewitt, 2009). However, projections for 2010,

suggest a more modest decline of about 2.1% over 2009 sales. Some reasons for the slowing decline are the introduction of more feature-rich models like the iPod touch, which includes a touch screen and wireless access to the internet and thousands of “apps”.

## iPhone

In 2007 Apple joined forces with AT&T and introduced the iPhone. Marketed as the most sophisticated “smart phone”, the iPhone featured music playing capabilities, a 3.5 inch high quality interactive touch screen, a 2 mega-pixel camera, GPS capability, and access to thousands of Internet applications. Alliances with Yahoo!, YouTube, and Google provided popular services and video applications. The original iPhone models sold for between \$399 and \$499 and despite its initial selling price, iPhone sales exceeded 270,000 in the first 30 hours of its U.S. debut. The iPhone was a big hit! However, the introduction of the iPhone was not without its challenges. Users complained that the network access was slow, battery was not replaceable, and memory capacity could not be increased. In response to such customer feedback, Apple released a newer and faster version in 2008 that addressed some but not all of the problems. Upon releasing its fourth generation (G4) of the iPhone, Apple users once again experienced problems – this one stemming from a poorly designed antenna that would be blocked when users handled the phone. In response to this latest “hiccup”, Apple provided consumers a case, at no cost as a remedy.

The iPhone’s shortcomings allowed competitors to maintain market share in the smart phone industry. Recent industry market share estimates indicated a surge in iPhone sales between 2008 and 2009 (from 2.8% to 14.4%) (www.gartner.com<sup>b</sup>). Despite this rapid increase in demand, Apple’s share of the smartphone market still lags relative to industry leaders Nokia (36.4%) and Research in Motion (19.9%) (O’Brien, 2009). The good news for Apple is that the growth and demand outlook for the smartphone market remains strong as industry experts predict the attractiveness of this market continuing for the next few years (Sutherland 2009).

**Exhibit 3: Industry Growth Estimates by Product Line 2008-2010 (in millions of units sold)**

Product Line	2008	2009	% Growth (‘08-’09)	2010*	% Growth* (‘09-’10)
Desktop Computers <sup>a</sup>	133.7	137.6	2.9	109.8	(20.2)
Portable Computers <sup>b</sup>	141.6	168.2	18.8	256.3	52.4
MP3 players	11.8	9.9	(16.2%)	9.7	(2.1)
SmartPhone/ related products	139.3	172.4	23.8	250.5	45.3

\*Projected Sources: www.physorg.com, Southerland (2009), Elmer-Dewitt (2009), Schonfeld (2010), Purdy, J. (2009).

## MARKETING AND DISTRIBUTION STRATEGY

Apple’s overwhelming success can be attributed to the marketing and distribution strategies for the iPod and iPhone (arguably its two most innovative products). Steve Job’s overall approach to marketing Apple products is to produce fresh and imaginative products that have a great style and design with sleek and enticing communications direct to the consumer (<http://www.vertigoteam.com>). An effective advertising strategy for Apple was to depict their

products as trendy, cool, and hip (e.g., silhouettes of young people dancing with iPod headphones, iPhone user talking with friends while simultaneously accessing popular phone “apps”). It was cool and prestigious to own Apple products.

Both the iPod and iPhone entered markets that were already mature and saturated. Portable music devices such as the “walkman” enabled users to listen to music on the go as early as the 1980’s. However, the iPod’s early ability to store and retrieve up to 1000 songs revolutionized the portable music product line. By 2008, the iPod was responsible for Apple’s rapid success as a company. Not an instant success, when the iPod was introduced in 2001 it was initially a flop. Some say it was a product ahead of its time. But one factor (and early iPod “hiccup”) was that internet connections were initially very slow and until broadband became more common, high speed music downloads were problematic. In addition, Apple invested very little in the original communication and advertising of the iPod, relying mostly on word of mouth and “buzz” communication.

The iPhone also entered the saturated mobile phone market but not as a direct competitor to other phones designed to make phone calls or send text messages. Apple managed to develop a revolutionary product that some hailed as 5 years ahead of its competitors. The iPhone’s touch user interface and sleek/trendy design guaranteed its position as a one of a kind product crossing between a mobile communication device and a laptop computer (<http://www.vertigoteam.com>). The prestige of owning and using an iPhone has become a motivating factor in consumer adoption of the product (“there’s an app for that”). Its success and rapid growth in share has sparked other companies to mirror its functionality (e.g., the Android). There were however, several marketing glitches in Apple’s introduction of its iPhone. For one, the introductory price of the first iPhone was \$599. Within 3 months of the product launch, the price was reduced to \$399. Although rebates were made available to early adopters, Apple’s most faithful customers might have felt betrayed and exploited. A second mistake was forcing customers to sign with AT&T, the exclusive carrier of the iPhone. An oversubscribed AT&T network caused users to experience dropped calls, poor reception, and prevented consumers under contract with other mobile providers to obtain an iPhone.

The primary distribution strategy for Apple products are retail stores. These stores are known as “tech shrines” because they provide a space where consumers can see feel and touch all of the Apple products. Similar to Best Buy’s version of the “Geek Squad”, retail consultants are available to answer questions about the products and consumers can consult experts at the Apple store’s “genius bar”. Apple stores are a place where users of Apple products can get service and all consumers can try out new products and get excited about what the company has to offer. If imitation is the best form of flattery then Apple is doing something right with its in-store distribution strategy. Heavy hitting tech firms like Microsoft and Sony have begun to mirror Apple’s retail store environments.

## SUMMARY

Steve Job’s business strategy for Apple Inc. centers on its ability to provide innovative computer, portable digital music, and mobile communication products to its customer base.

Such markets are characterized by rapid technological advances in both hardware and software resulting in the frequent introduction of new products with competitive price, feature, and performance characteristics. Price competition in these markets has been intense. Apple competitors who sold personal computers based on other operating systems aggressively cut prices and lowered their product margins to gain or maintain market share. In addition, as the personal computer industry and its customers placed more reliance on the Internet, an increasing number of Internet devices that were smaller, simpler, and less expensive than traditional personal computers were emerging.

The mobile communications industry is also highly competitive and includes several large, well-funded and experienced companies. Jobs and Apple anticipate that competition for SmartPhone customers will intensify as others attempt to imitate the iPhone's functionality and applications. Apple's music products and services face significant competition from other companies promoting their own digital music and content, including those offering free music and video services. Competitors with substantial resources may be able to provide such products and services at little or no profit or even at a loss to compete with Apple's iPod offerings.

Steve Jobs understands that the future of Apple Inc. rests with its ability to continue its strategy of offering new and innovative products. So far Jobs has done exactly that. Unlike other technology companies who hold focus groups and conduct market research, "Apple does not ask people what they wanted, it tells them what they were going to want next" (Grossman 2010, p 37). The main challenge for Steve Jobs, the visionary, is to be able to periodically and accurately assess their product line portfolio and to remain competitive and maximize Apple's corporate earnings. This case demonstrates how Apple might use the BCG Growth-Share portfolio analysis tool to accomplish this task.

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# FLOATING ISLAND INTERNATIONAL

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## CASE DESCRIPTION

*This case is about a small entrepreneurial firm, Floating Island International (FII), that used principles of biomimicry to develop a new product and, potentially, a new industry. The founder, Bruce Kania, invented BioHavens, which are literally floating islands and can be used to help clean water and create riparian habitat. The primary issue in this case is how to develop an appropriate 'blue ocean' strategy to establish this new technology as a vehicle for wastewater treatment and water remediation. Secondary issues include challenges of proving the technology across a variety of applications; being a small entrepreneur; developing appropriate marketing channels; protecting intellectual property; and reaching a global market. This case is intended for undergraduates and MBA students in strategy, entrepreneurship and international business courses, and courses with a focus on environmental sustainability. This case is designed to be taught in three class hours, and students would benefit by an additional six hours of outside preparation.*

## CASE SYNOPSIS

*Floating Island International (FII) explores the challenges faced by a Montana entrepreneur who used principles of biomimicry to invent BioHavens, a potential water treatment technology. A BioHaven floating island is a man-made ecosystem which mimics natural wetlands, and can be used to help clean water and create riparian habitat. After four years of operation, his small company had produced and deployed over 3,000 islands and had established a network of 8 licensees, including 2 outside the US. BioHavens were being used in a variety of ways and settings, but to date the dominant applications were small scale and largely ornamental or aesthetic. However, the potential to use BioHavens as a vehicle for wastewater treatment and water remediation was immense, particularly in smaller communities and/or areas with limited infrastructure. FII had obtained some money for research and field applications, but the islands were a new technology and data documenting their water quality performance was far from complete. Many potential clients weren't interested in buying a technology whose effectiveness was not thoroughly documented. Water treatment represented totally new markets for FII, a 'blue ocean' scenario, and the company and its licensees were unsure how to best proceed. The case encourages students to consider the possibility of a solutions-based business model as one way of moving FII ahead, and to address the challenges of prospering in new markets.*

## INTRODUCTION

Bruce Kania, the founder of Floating Island International LLC (FII), was wrestling with yet another ‘opportunity’. It was the summer of 2009 and his patented invention, Biohaven floating islands, was gaining ground. A BioHaven floating island is a man-made ecosystem which mimics natural wetlands and naturally occurring floating islands, and can be used to help clean water and create riparian habitat. After four years of operation, his small Montana based company had produced and deployed over 3,000 islands, with several months of orders in the pipeline. While BioHavens were being used in a variety of ways and settings, their full potential as a vehicle for wastewater treatment and water remediation could not be realized without additional documentation of their efficacy in the field. But this sort of field testing and data gathering was expensive, and required that the islands be deployed and monitored for a period of time. FII had obtained some money for research and field applications, but the islands were a new technology and data documenting their water quality performance was far from complete. Many potential clients weren’t interested in buying a technology whose effectiveness was not well documented, no matter how encouraging the preliminary testing had been. It was going to require more creative thinking to move this technology into water treatment markets.

## BIRTH OF BIOHAVENS

Bruce is an inventor, with a successful history inventing and licensing product concepts, including a unique medical prosthetics material and related products (alpha liner). He is the majority owner of Fountainhead LLC, a Bozeman Montana based corporation that develops and licenses inventions. In an interview with the Montana Small Business Innovative Research Center, Bruce described inventing as finding a new and proven solution to a problem, which takes analytical expertise as well as creativity (Newsletter, M. A., 2003). This was the genesis of the BioHaven concept.

In 1999 Bruce moved 150 miles east of Bozeman to a 300 acre farm in Shepherd, Montana. The farm is located 30 miles east of Billings, the largest city in Montana. The property borders the Yellowstone River, and is also located the end of a 60 mile irrigation ditch. As Bruce noted: *“By the time the Yellowstone gets to Shepherd, some of its water will have passed through agricultural irrigation ditch networks. The ditches service the needs of farmers, cities, feedlots, lawns and gardens...so, as you can imagine, the water carries a high nutrient load, especially phosphates and nitrogen”*

Nitrate levels in water have increased worldwide, primarily due to increasing use of fertilizers. Excessive levels of nitrates can lead to lack of oxygen in the water, algae blooms, and resulting reductions in water quality and fish habitat. The color and smell of algae blooms garnered Bruce’s attention because his dogs smelled bad after swimming in the ponds and streams on his property. In addition, predators like fox were killing off pheasant and other ground nesting birds. Solving the problem of smelly dogs, and providing a safer habitat for nesting birds led to the development of BioHavens.



The creation of BioHavens was based on biomimicry: the practice of using nature as a guide for design. The concept gained prominence through the work of Janine Benyus and the publication of her 1997 book *Biomimicry: Innovation Inspired By Nature*. As defined in the beginning of the book, biomimicry uses nature as a model, a measure, and a mentor. Benyus describes biomimicry as a science that studies nature's models and then imitates or takes inspiration from natural designs and processes to solve problems. It is a new way of viewing and valuing nature. It introduces an era based not on what we can *extract* from the natural world but what we can *learn* from it.

In the case of the Shepherd farm, wetlands were the natural model Bruce began to study. Wetlands are nature's ways of purifying water while enhancing habitat. Nutrient cycling and removal of contaminants (notably nitrates) are just several of the key functions of wetlands. According to a paper written by Bruce and others and published on the FII website:

*"Wetlands are Nature's Laundromat...cleansing water by utilizing excess nutrients, exchanging healthy amounts of gasses via photosynthesis and respiration while providing much needed habitat for a wide range of wildlife. Shallow depth promotes aquatic plants, which represents another form of nutrient biosequestration to grow abundantly. Nutrients are plant fertilizer. Waste becomes food, rather than a water pollutant, via biofilm and wetland plants."*

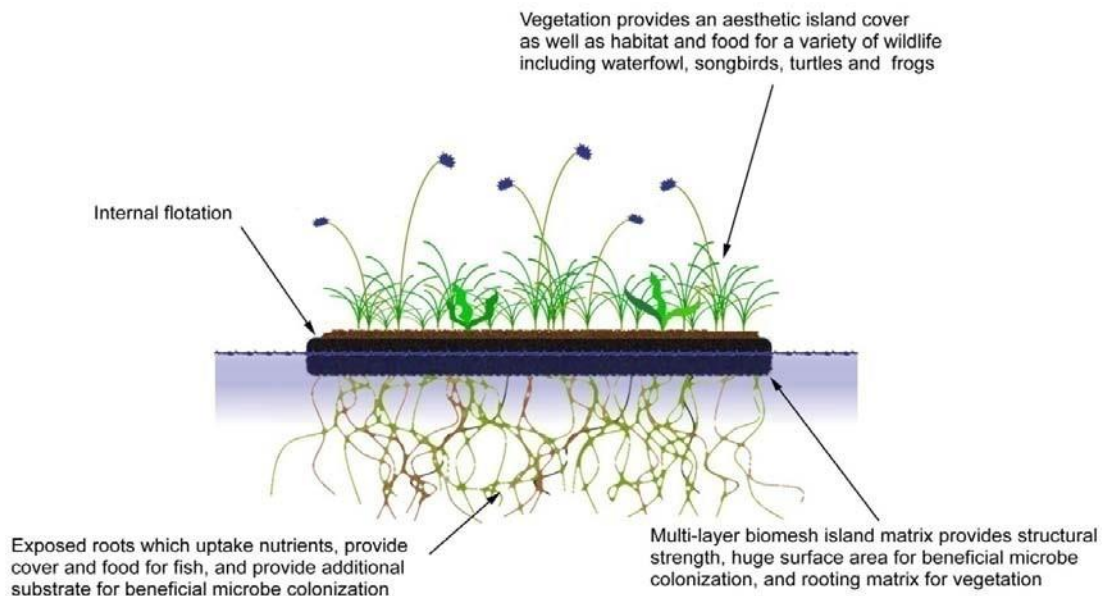
The challenge at the Shepherd farm was figuring out how to obtain the benefits of wetlands without actually constructing new wetlands. And a model for doing that already existed in nature.

BioHavens were designed to imitate naturally-occurring floating islands, or marshes. Natural floating islands are not common, but they do occur in different parts of the world, including Northern Wisconsin, where Bruce grew up. These naturally-occurring floating islands typically consist of a significant organic mat of live and dead roots, peat and detritus; range in thickness and size; and can support a variety of plant life and vegetation. As one study noted, floating marshes range from small mobile islands or extensive, stationary vegetated mats covering hundreds of hectares of water surface (Auckland Regional Council, 2006). They 'float' because of the trapped gases generated by the on-going metabolism of organic deposits, and the air spaces that exist in the living biomass matrix. These natural islands function as floating wetlands, tying up nitrogen and carbon, and moving dissolved nutrients up the food chain, supporting plants and vegetation. Of course, the level of nutrient uptake and many other water quality properties of floating wetlands are contingent on a number of factors, include size and mass of the island, water characteristics (including hydraulics), plant species and, most notably, bacterial activity.

With this naturally occurring model in mind, Bruce began experimenting with designing artificial floating islands. The process of designing and developing a working BioHaven took five years, many prototypes, and involved a team of people. The initial group included Frank Stewart, a civil engineer and Thomas Coleman and Russell Smith of Aquatic Design and Construction Services, Inc. Mr. Stewart specialized in hydrology, and had extensive experience in pond design. One important decision concerned the type of material the islands should be made of. Through experimentation and trial and error, the team identified a 'matrix' of filtration material derived from recycled polyester from plastic (PET) drinking bottles. The development

of the materials and the design of the islands were critical breakthroughs. According to Frank Stewart, part of FII's innovation was deciding to use porous materials that allowed the islands to grow plants and microbes internally as well as externally – thus increasing the nutrient removal potential. In addition, the material also allowed the group to design islands that looked good – for example, that had curved edges and natural shapes. As explained in FII materials, layers of matrix were shaped and bonded together with foam and made into buoyant mats. The islands could be prepared in any shape or size, and virtually any degree of buoyancy. With the addition of a proprietary blend of potting soil, wetland or terrestrial plants were able to grow naturally, sending roots down through the matrix and into the water. A cross sectional diagram of a BioHaven is provided as Exhibit 1.

### Exhibit 1 Diagram of BioHaven



## THE LAUNCHING OF FII

After five years of experimentation and development, it appeared BioHavens were ready to be launched – literally and figuratively – into the market. Floating Island International LLC was created in July 2005 as a wholly owned subsidiary of Fountainhead LLC. Fountainhead was founded in 1991 as a private LLC to manage Bruce's innovations and patents. Bruce remained the majority partner. FII was also set up as a privately held company, with Bruce as the majority shareholder. After four years, FII had about 25 shareholders, the other owners being current or former employees, or associates who earned portions of shares by virtue of working for FII.

The creation of FII was a departure for Bruce, who typically applied for patents and licensed his inventions, leaving it to others to further develop and market the product. But this project was different. Bruce noted: *"The concept [of BioHavens] was newer than previous inventions. It needed more development to demonstrate efficacy and viability in order to answer*

*the questions that a potential licensee would ask. As an inventor, we get paid for making mistakes. It is rare when a prototype is impeccable, yet we are selling our prototypes, though not at market price. As an inventor my job is to get it right before we license it."*

At the startup, FII consisted of four full time people (Bruce Kania, CEO; his wife Anne Kania, International Liaison; an Office Manager; and Production Manager), several part time employees, and contract specialists (for example, the Civil Engineer, Frank Stewart) The entire business operated out of Shepherd, and included a small production facility located one mile down the road from the farm. The facility was capable of producing 4,000 SF of islands in a 24 hour period, which proved sufficient to meet startup demand. In addition, FII developed standard models of BioHavens, ranging in size from 25 to 250 square feet that were made available 'off the shelf' through FII or its distributors.

The model for marketing and distributing the islands focused on establishing a distribution network. Initially, distributors were independent dealers who ordered and obtained islands through FII. The goal, however, was to establish a network of licensees, with their own manufacturing operations and distribution channels. Licensees were to be granted exclusive rights to sell BioHavens in a given geographic region in exchange for a one-time payment (based on population in the designated region) and royalty fees based on retail sales.

One of the characteristics that made the floating islands so exciting was the very thing that proved to be a challenge. The potential diversity of applications (and markets) for this product was immense. Would people want it for backyard pond decoration? A floating garden? Water remediation/environmental clean-up? A water structure (like a floating dock)? Wildlife habitat? Early on Bruce and his associates identified over 25 potential applications, from erosion control and wetland restoration to fish spawning platforms and biogas generators. Given the broad range of potential uses, it was difficult to narrow the focus to just one or two markets.

The first target was the garden or ornamental market. Once manufactured, planted, and 'launched' small BioHavens had significant aesthetic and practical appeal. Pictures of BioHavens as ornamental fish habitat and as a floating garden walkway are provided as Exhibit 2 and 3. The potential represented by the garden and ornamental market for floating islands was the primary focus of FII's first licensee, Savio Engineering. Savio's subsidiary, Freedom Ponds, was in the water gardening products industry. Under the October 2006 licensing agreement with Savio, Freedom Ponds obtained the exclusive manufacturing and distribution rights for smaller BioHavens (modules between 2 ½ to 15 square feet) everywhere in the US and Canada. Freedom Ponds marketed the FII floating islands as Islandsapes. According to Debbi, Director of Sales for Freedom Ponds, the company was very excited about the momentum and enthusiasm that had been established for Islandsapes in its first years of sales. Freedom Ponds' initial target market was the water features segment, but other users were also showing interest in the islands. Debbi noted that an endorsement of the Islandsapes from the National Wildlife Federation had made them particularly appealing to habitat enthusiasts.

The deployment data summarized in Exhibit 4 is a rough estimate of how the over 3,000 FII BioHavens were deployed in the initial 2 ½ years of operation. Early on the islands that were donated were not priced, so when donations peaked in 2007, as FII got more of its product out in the public view, revenues actually declined slightly. Similarly, as the distributions and licensing

network grew (but manufacturing was still focused in Shepherd), the sales to dealers became very significant, but the data about how those islands were being deployed was less available to FII. While it is a rough estimate, the data clearly shows how the aesthetic market was the first to take off and that, once Savio was on board with its licensing and manufacturing agreement, that segment declined (even as royalties increased). The data also show that there were identified markets – water remediation and restoration – that had yet to be addressed.

There were two ways a potential customer acquired a FII floating island. One way was to directly contact distributors or licensees (such as Freedom Ponds). The distributor would then deal with the client, making sure the customer obtained the right product (island; plantings; anchoring, etc.) for their situation. Potential customers could also contact FII directly. Given a customer inquiry, the office manager sent out an information packet (including an audio DVD and a CD); put the customer in touch with the nearest BioHaven distributor; and notified the distributor about the inquiry. If a distributor was not available in the client's vicinity, FII dealt directly with the customer. In cases where a more customized solution was needed, clients worked directly with Bruce and others to design an island.

By 2009, four years into its operations, FII had grown significantly. An organizational chart of FII is provided as Exhibit 5. By this time FII had eight licensees – six domestic and two international - and was in negotiations with other potential partners. Each licensee negotiated its own agreement with Bruce and FII.

By the summer of 2008 FII had applied for 11 patents related to BioHavens, including six international patents covering more than 130 countries, and additional patent applications were pending. As Bruce noted, the patents and intellectual property aspects of the new technology were critical, as royalty payments were a key part of his long term strategy. Speaking about the intellectual property issues, Bruce said: *"I am an inventor, and I have an extensive background with this. Having a team that helps with the intellectual property and licensing is crucial, and we have a well established team. The long term potential for this technology is incredible."*

Bruce did have years of experience in protecting intellectual property and developing licensing agreements. Royalties from some of his earlier inventions helped fund the startup of FII and supported the cash flow in the initial years of operation. And his recognition of the long term potential for the technology, patents, and royalties was one of his reasons for staying with the concept and bringing it to market. As the technology became more established, licensing and royalties would be the long term source of revenue and profit.

## **BIOHAVENS AS WATER QUALITY TECHNOLOGY**

Even as FII initiated production of BioHavens in 2005, Bruce remained interested in ongoing product development, especially improving the water quality/treatment characteristics of the islands, and broadening the range of their applicability. After all, this was the central problem that he set out to solve with his invention. The mission and vision of the company reflected a commitment to a new stewardship ethic, and having a reliable and measurable impact on water quality around the globe. Bruce was not the first individual to think about the potential of artificial floating islands as a water quality technology. In fact, there were other artificial

island patents in existence. However, the FII team believed BioHavens were different – and better – than anything else that had been developed. While patents dealing with wastewater treatment, microbial activity, even ornamental islands existed before BioHavens, none centered on FII's core idea of a floating treatment wetland that used microbes and plants for water treatment, and none incorporated the unique materials and design elements that BioHavens featured.

A key potential application for BioHavens was related to water cleanup. One of the challenges in the development and marketing of the BioHavens was documenting their efficacy in removing nutrients and improving water quality, particularly across the variety of waterways in which they might be deployed. By late 2008 there had been several studies that looked at the nutrient uptake of floating islands. One was a study conducted by the National Institute of Water and Atmospheric Research in New Zealand (NIWA) which reviewed the application of floating treatment wetlands for storm water treatment. In this study, FII's BioHaven was one of several artificial islands discussed. There was evidence that the islands were effective at taking up levels of copper, zinc, nitrates and phosphorus, and in reducing turbidity. As the review concluded:

"Floating...wetlands offer great potential as a relatively simple, low-cost passive option for the upgrading of existing storm water ponds in order to enhance the removal of fine particles and associated metals....However, substantial research is needed in order to identify the key treatment processes and expected treatment performance...for storm water quality improvement"(Auckland Regional Council, 2006).

FII was also working with Alden Research Laboratory on mechanical testing and computer simulated testing of the BioHavens. Their research focused on mechanical evaluation for island anchor sizing. The anchoring of islands in waterways would become a significant issue when the islands were large, the water currents or winds strong, and/or the wave action potentially large. As David Schowalter of Alden explained in a presentation: *"The value of mechanical testing and simulation is it ensures robustness of islands during extreme weather events, thus reassuring clients. Testing is also customizable for local conditions and island shapes."*

Testing and customization was not necessary for smaller, more routine applications. But it would prove critical if some of the envisioned BioHaven deployments (for example, as coastal barrier islands) were realized. As one FII person summarized it, the Alden lab results were important for the high dollar projects, where the costs of failure were equally high.

The potential market for naturally engineered solutions to on-going water quality issues was immense. The most recent FII licensee, Headwaters FI (HFI), is particularly interested in this application. Headwaters CEO Tim Mulholland is an environmental engineer and had worked with Bruce at FII developing BioHavens. Tim talked about the potential role of BioHavens in treating wastewater. *"New regulations from the EPA in the next few years are going to require smaller communities to more aggressively treat nutrients like ammonia, nitrates and phosphorus. We know Biohavens do seem to treat these things. The changing regulatory environment could create a market opportunity for BioHavens. But the technology needs to be proven in field applications before smaller communities would be willing to invest in it as a proven remediation technology."*

In fact, BioHavens were being field tested in a wastewater lagoon in Wiconisco Township, PA. According to Stephen Zeller, Sr. Environmental Consultant at Brinjac Engineering Inc, approximately 18 months into the project the floating islands were beginning to show signs of performing as anticipated related to nitrogen and phosphorus removal, but the field test had some time to go.

More generally, a good field test or pilot study could take years and cost upwards of \$400,000 for ongoing monitoring, sampling, lab testing, and island deployment. But if BioHavens were proven to be an effective remediation technology, they could be an optimal treatment option, in terms of cost and effectiveness, for smaller communities facing new regulatory requirements. Wastewater specialists, public works engineers, and others seemed to immediately ‘get’ the potential of BioHavens, but committing to this as a reliable remediation technology required more data, and some willingness to take a risk. As Bruce noted: *“Why is it so hard to get into a market like wastewater treatment? Data is one issue, but the demand for data is perpetual. You could be a proven technology and still require more data. There is plenty of receptivity to BioHavens, but we are weird enough that people are afraid to be first. They want someone to have done it before them.”*

The immediate potential for using BioHavens for wastewater treatment and water polishing was significant. In Montana alone, there are approximately 400 settling ponds and/or aerated wastewater facilities serving rural communities. As Tim, from Headwaters FI noted, in the next few years these communities will have to meet new EPA standards relative to ammonia nitrates and phosphorus levels. BioHavens can clearly help treat these nutrients, and could be a very cost effective solution for small rural communities. But BioHavens are not a proven technology, and communities are not willing to purchase this technology without assurance that they will help them meet new EPA requirements.

Wastewater treatment was just one of many examples of potential applications of BioHavens. The floating islands might be used as floating treatment wetlands to help remove residual ammonia in mine tailing ponds; to help manage storm water runoff (an application being studied in North Carolina); or to reduce/remediate the increasingly large ‘dead’ zones found in fresh and salt water bodies. And there were plenty of other potential uses in the US and other developed countries. As Bruce noted: *“Getting that last one percent of pollution out of water is water polishing. FI technology is ideal for that. When it comes to contending with non point-source pollution, the modular floating technology that we are behind is ideally positioned for this. No one else knows how to incorporate wetland treatment into deep water settings – which require circulation and surface area. The concept of being able to apply the wetland effect, even in deep water settings, which BioHavens can do, will be a major opportunity.”*

The potential applications in the international market were equally immense. The design and operation of BioHavens made them particularly well-suited to water treatment challenges in developing countries, where large scale infrastructure, even access to power, are often inadequate. The BioHavens were relatively easy to construct, lightweight, and were ‘scalable’; connectivity to power grids wasn’t required; and they could be designed and tailored to meet the requirements of a particular waterway and treatment situation. FII was already in long term contact with interested parties in China, as well as other Asian countries.

The potential was vast, and Bruce's 'futuristic vision' for floating islands was equally broad and expansive. The challenge was how to bridge the gap between what BioHavens seemed to be able to do, based on initial research and considerable anecdotal evidence, and what they delivered in terms of a proven water remediation technology. The latter would require ongoing resources, deployments, data, and documentation. In sum, the water quality properties of BioHavens represented a really valuable potential of this technology – valuable in both an economic and environmental sense. But proving those qualities, and getting into these new markets, represented a huge challenge for FII.

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### Exhibit 2 BioHaven Ornamental & Fish Habitat



### Exhibit 3 Biohavens Walkway and Garden



<b>Exhibit 4</b> Summary of FII BioHavens Deployed by Type of Application (% of revenue)			
	2006	2007	2008 (Jan-June)
Aesthetics	52	90	10
Water Remediation	30	0	1
Habitat Creation	10	2	7
Restoration	2	8	0
Dealer Purchases			78
R & D	6	0	4
Total Revenue	\$227,445	\$170,430	\$261,441

**Exhibit 5 Floating Island Organization Chart 2009**



# FOREIGN DIRECT INVESTMENT IN ARGENTINA AND URUGUAY

**Paul S. Marshall, Widener University**

**Clement H. Noble, Widener University**

## CASE DESCRIPTION

*The primary subject matter of this case concerns the financial analysis of real estate investments both for apartments in an urban area (Buenos Aires, Argentina) and raw developable land in a rural setting (Colonia Province, Uruguay). A strong secondary focus is on international aspects of business including language and cultural differences, human resource management problems and ethical concerns.*

*The case is best suited for a graduate level course in Real Estate Finance, though if the financial analysis aspects are deleted or minimized, it could be used in a junior or senior level class in International Business. 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

*Two German professors travel from Ulm to Buenos Aires to investigate potential real estate investments for their consulting client. Their colleague, a real estate professor in an Argentine university, assists by finding students to help them. The case deals with the problems the professors endure and the adventures they experience in their search for data necessary to help their client make informed investment decisions. This case is unusual for U.S. students in that the perspective they must take is that of a German rather than an American.*

## THURSDAY EVENING

As the big Lufthansa jet finally reached cruising altitude over eastern France and the “fasten your seat belt” light went out, Herr Doktor Wolfgang Bayern turned to his friend, former colleague and now travel companion Ing. Doktor Gunthar Rodemann and said, “Gunthar, we have both had long careers in real estate education and consulting in Germany and throughout Western Europe. Do you think we will find investment conditions to be different in South America?”

“Nein,” Rodemann replied. “As we have seen throughout Europe and most recently in der ost, value is primarily a function of a real estate parcel’s location. Of course, the skill involves finding a location that the market has yet to recognize at full value. The Americans tend to say, “Standort, standort, und standort.” We too know location is important, but viele other variables enter the value equation.”

“Your preliminary work, Wolf, with your Argentine colleague Professor Silvio Murilo seems to indicate that both Buenos Aires luxury apartments as well as raw land with up-scale vacation potential in Uruguay, just across the river, both seem undervalued. At least so based on your and Murilo’s 2006 paper in the *Journal of European Real Estate*. I predict that with our long and varied international experience, we will have no problem with understanding the market or analyzing it.”

“Except for Silvio’s help we would have had a language problem.” replied Bayern. “You and I are both weak in Spanish, so I counted on Silvio. Who knew that his kind would get sick and require hospitalization? Thank God that his Belgrando University has a strong international relations program and can provide us with high quality student translators, at least for Spanish to English.” “Wolf, we have had to do most of our work in English outside of Deutschland” replied Rodemann. “It is a pity that our German language is not more useful internationally. But there in South America it might be politically incorrect to search for and employ native German speakers.” “Ja, Ja” laughed Bayern. {{1}}

Wolfgang Bayern was a long-time professor of real estate and finance at Warsteiner University in Ulm, Germany. Gunthar Rodemann had a similar career up until about ten years ago when he accepted an assignment with the Germany chemical giant BASF. {{2}} Gunthar was appointed international finance director for Latin America, but he remained at corporate headquarters in Ludwigshafen. The South American subsidiary finance directors usually visited Rodemann in Germany and spoke German with him. Rarely did Rodemann find the need to visit Latin America. Gunthar had retired two years ago and returned to the more bucolic Ulm. Bayern hired him back to teach finance courses at Warsteiner whenever the urge to teach hit Rodemann.

Now, both professors were also employed as consultants to the Bayerische Staatsoper Pensionsplans (Bavarian State Pension Plan) to recommend real estate investments in the developing world. Bayern had published a number of academic papers with Professor Murilo in both Argentine and German academic journals. Rodemann’s books on analyzing early East German and Soviet bloc real estate and his practical experience in South America made him another ideal candidate for the consultancy job.

The plan for this preliminary visit was two-fold. First to tour a broad sampling of luxury 2, 3 and 4 bedroom apartments primarily in the Recoleta, Barrio Norte and Palermo sections of Buenos Aires. Here the Germans were planning to compare the rents available for similar properties on the web to the real selling prices demanded in the Argentine market. Clearly this, along with operating cost data to be collected on-site, would allow an estimate of annual cash flow from operating such properties as rental units. Predictions, yet to be made, on a unit’s future net resale value would complete the cash flows necessary to estimate the return potential from the investment to the pension plan.

The second aspect of the trip involved a visit to the Colonia province of Uruguay, just across the broad and muddy Rio de la Plata. Here the plan was to investigate the large-scale development of raw riverfront land into a purpose-built luxury vacation destination with condos, restaurants, golf courses, yacht basins and more. Fortunately, Dr. Rodemann was also a world expert at estimating large tract land costs. He had shown conclusively the validity of a model

that estimated the cost of acquiring a large block of land (say 500 hectares and up) by mathematically relating that cost to the cost of acquiring small (say 10 hectares and under) vacant land in the general area. The plan was to price such smaller plots and assure that their geographic distribution met Rodemann's model requirements. Bayern's main professional focus for the trip was Buenos Aires apartments. Rodemann would concentrate on the Uruguayan resort development.

A month prior to the trip Dr. Bayern sought Professor Murilo's advice on how much time was needed. Silvio assured them that three days in the city and two in Uruguay were plenty. Silvio suggested that Belgrando University students could do much of the preliminary work allowing the German professors a free weekend in the city and a day or two to either be entertained by Silvio or to undertake other assignments.

## FRIDAY

As the big jet neared final approach to Ezeiza, B.A.'s international airport, Gunthar said, "It will be good to visit Buenos Aires again, I was only here twice during my BASF years." Wolf responded, "Ja. B.A. is a great place. I know the city very well after spending a sabbatical on the Belgrando faculty. I can't wait to sample their fabulous Argentine beef again. We'll have fun, make good money and escape the dreary German February for South American summer." "Ja, Ja!" replied Rodemann with a big smile.

As they cleared passport control Bayern quickly saw a young Argentine man holding a sign reading, "Dr. Bayern / Dr. Rodemann." When approached he identified himself as Carlos, one of Professor Murilo's graduate students. He confirmed that the Professor was still spending almost all his time with his sick child but Carlos assured them that he was prepared to take them to el Centro and get them settled in their short term rental apartment on Avenida Las Heras in the fashionable Recoleta district.

Both professors enjoyed the taxi ride downtown along Avenida 9th de Julio, past the impressive Obelisco and out Avenida Santa Fe toward Recoleta. On the way, Carlos assured them that he was there to solve any problems until their 1 PM meeting Monday at the University with Professor Murilo. As Carlos carried their bags inside the posh apartment building, they met the representative of "ByT Argentina," the agent for their apartment and an internet-based real estate company that matches over 1600 contracted apartments with tens of thousands of visitors each year seeking cheap but high quality short term accommodations. This was basically the business model that the professors planned to test for return potential for their pension fund client.

By dinner time that first Friday both Bayern and Rodemann were yawning. They were tired after the long flight from Frankfurt. After a good night's sleep, their weekend was free. Nothing was scheduled prior to the 1 PM Monday meeting; nothing except for writing up a detailed work list for the students that Silvio had promised.

Each professor slept well after a good steak dinner at a nearby parilla. They were amazed that the bill, including a bottle of high quality Mendoza merlot<sup>{3}</sup>, came to 75 Argentine pesos. "In Frankfurt or Berlin, we'd have paid probably 75 euros." <sup>{4}</sup>said Rodemann. "Ja! Almost everything is much cheaper here. Silvio told me to expect a 10 peso taxi fare to

Belgrando and that is almost all the way across der Zentrum. Imagine what that would cost zu hause.” responded Bayern.

## **SATURDAY**

Saturday was spent walking the avenues in the best parts of town. Following Las Heras northwestward they eventually entered the barrio of Palermo and finally Belgrando. Their return path was along Avenida del Liberador past parks, the zoo, museums and embassies. “This place has the look of the best Europe or America has to offer.” said Bayern. “Und all on about a 7,000 euros average GDP per capita. How do they do it on so little? We have more than three times the income, even mit purchasing power parity adjustments.” asked Rodemann. “Essentially all the rich Argentines are here in a rectangle 10 km by five, housing maybe one million. The other 39 million are mostly poor and scattered throughout this great city and this massive country.” replied Bayern.

While sitting at an outdoor café, Bayern suggested, “You know, Gunthar, when I lived here on my last sabbatical, a nice zimmer in the Congrso area could be had for 30,000 euros. For 100,000 you had a two bedroom palace on the best street in Recoleta. I get the feeling that prices are up substantially. The Sunday papers will be interesting!”

## **SUNDAY**

Sunday the German friends devoted to a late morning and early afternoon visit to the weekly antiques fair in the San Telmo district. Bayern bought a small Ukrainian wooden painted plate. Rodemann, quite an antique expert in Germany, saw nothing of interest for the prices asked. “Too touristy.” he said.

Their late lunch was nearby at the Lezama restaurant, across from a park of the same name and a favorite of Bayern’s during his semester teaching in Argentina. Both were amazed that the bill was just a bit more than one-half of last night’s. “Maybe rich retired Germans can be attracted here with these prices and the great weather?” suggested Rodemann.

## **MONDAY**

Monday morning was spent getting ready for the meetings after lunch at Belgrando University. Rodemann reviewed the Sunday paper real estate advertisements both in “Clarín” and “La Nación.” {{5}} He was searching for properties that seemingly met their needs. Bayern prepared detailed “to-do” sheets, one for each soon-to-be-hired student.

After a quick and early lunch of empanadas and cerveza, the Germans took a taxi down to the modern riverfront campus of Belgrando University. Bayern knew exactly where Murilo’s office was, but he was somewhat surprised to see him there considering the health problems of his youngest child. Murilo greeted both Germans warmly, particularly Bayern, with whom he had worked and collaborated on research.

Speaking in almost perfect English Murilo said, “This is a very bad time for me. Our term is about to begin. I have administrative as well as teaching responsibilities and our little girl is hospitalized already for a week. Wolf, I just don’t have time to help you as I had planned. Thank God I have arranged for student helpers for you. We will meet them later this afternoon. I don’t know them personally, but they come highly recommended by the Escuela de Internacional Relaciones external support manager.”

Bayern replied, “Silvio, we are lucky; lucky to be friends with you. Who else would be as concerned with the success of our visit? Even with your difficult family problems. Thank you for anything that you can do for us.”

Murilo replied, “My friends, I am so glad that you are here. Your presence alone honors me and my university. Why don’t we go to the university café to drink coffee and talk? Later we will go to meet the Dean, then to International Relations to meet your student assistants at 4 PM. I am scheduled to leave at 4:30 PM to relieve my wife, Rosaria, at the hospital.”

The old friends and colleagues Wolf and Silvio talked animatedly about prior conferences and characters they had dealt with, including former Deans at Belgrando. When they switched to proposed collaboration on future research projects, Rodemann excused himself for a self-guided walking tour of the Belgrando campus. In fact, Gunthar’s absence caused him to miss the meeting with Dean Alberto Fernandez who called Silvio on his mobile to announce that he was ready to meet earlier than scheduled. Without a working phone it was impossible to locate Gunthar. Wolf had a very good relationship with Dean Alberto and he was warmly welcomed. After a 15-minute discussion of their current project, the Dean wished him luck and offered whatever assistance he could provide. Wolf thanked him and said he looked forward to another visiting faculty appointment at Belgrando. Dean Alberto replied, “Just name the term!”

Afterwards, Gunthar was located and the threesome walked across campus to meet their student helpers. Eva (short for Evangelina), a 22 year-old of Italian ancestry, and just about to graduate, had been selected to help with Buenos Aires real estate. Jose, a 21 year old Ecuadorean, studying politics had been selected to handle Uruguayan real estate. Both “kinder,” as Rodemann called them, seemed intelligent, out-going and fluent in English and, naturally, Spanish.

Dr. Bayern briefed their new assistants together on the purpose of their visit, the data that needed to be collected and the time line required. He concluded saying that Eva’s job was the easiest – scheduling showings of appropriate apartments for sale in Buenos Aires. Jose’s job was advertised as more challenging since he had to arrange travel to Uruguay, a rental car in B.A. to take with them on the ferry and a hotel for the three to stay over night. Bayern also mentioned that Jose might have to talk with land owners about selling small pieces of their estancias. Bayern described Jose’s job as “challenging.” The joint meeting closed on a financial note. Bayern went over the previously agreed salary – basically U\$4 per hour {{6}} plus any expenses. Der kinder and the professors were happy.

Bayern then asked Eva to stay in the conference room and Jose to temporarily leave, so that Eva’s assignment could be discussed with her in detail. Eva was told to schedule tours of 2, 3 and 4 bedroom apartments, all with a good outside view, and in the Recoleta district first. Bayern suggested that they should tour at least 10 apartments per day and that Eva could act as

the official photographer. Eva mentioned that she had only half days to devote to the project, but she saw no problem complying with the request. She said that she could work on the project a little today and on Tuesday morning. She suggested that either she could then guide the Germans on Wednesday morning or have the agents give the tour on Tuesday afternoon. Bayern told her that he preferred her, as the language expert, to accompany them on all showings led by real estate agents. "Call me at home this evening between 8 and 9 PM to let me know how things are going," said Bayern. Eva agreed, said her "Hasta Luego" and was dismissed.

On her way out Eva sent Jose into the conference room for his detailed assignment. Jose started by saying that he had plenty of time to work, but that he couldn't go to Uruguay before Friday. Rodemann assured him that was exactly the plan, but he had much to do to prepare for the trip. Rodemann then went over Jose's assignments as follows: (1) arrange a rental car in B.A. to take with them on the ferry to Uruguay on Friday morning, (2) arrange ferry passage over for all three plus the car and a single return for Jose on Saturday night, (3) contact real estate agents in Colonia and schedule meetings and tours of raw land, (4) arrange for a hotel in Colonia for all three for Friday night and (5) arrange for a hotel in Tigre, Argentina for the Germans for Saturday night. Jose assured them that he understood the assignment. Bayern reminded him to call Tuesday evening between 5 and 7 PM to report on his progress so far.

Dr. Rodemann remarked, "Well, Wolf, it looks like we had a very successful day. The kinder will work hard today and tomorrow for us to do something on Wednesday. Tomorrow looks like another day off. Perhaps we can leather shop in the Malabia district that you recommend so highly?" Dr. Bayern replied, "That sounds like a good idea Gunthar! Almost as good an idea as the "Happy Hour," which we have managed to delay." The Germans, naturally, were weaned on beer, but both Gunthar and Wolfgang were also fans of Canadian whiskey. Happy hour Monday would be whiskey and not beer since they had not yet taken time to stock the apartment's refrigerator. Silvio, ever the good host, had informed Bayern that Weidner Bier, a good German brand, was available at local DISCO supermarkets. Gunthar promised to stock the refrigerator on return from dinner.

As 8 PM approached Wolf and Gunthar were still sipping whiskey and talking about dinner. Wolf wanted Italian; Gunthar wanted more Argentine steak, before the issue was settled, Eva called. She reported some success with inmobiliario, but she said she needed more time to define which apartments were best to show. Later Wolf shared the results of the call with Gunthar. Gunthar replied, "Eva has done a good job so far."

Wolf got his choice of Italian food by agreeing to steak again the next night. Wolf suggested a nice place on Avenida 9<sup>th</sup> Julio, "Caracol" famous for its risotto with a "secret" ingredient. {{7}}

## **TUESDAY**

Tuesday was to be the Germans' last day off until the raw land work was finished in Uruguay. They planned to work through Saturday morning in Colonia province, then drive north to Fray Bentos. There they would cross the Uruguay River back into Argentina, then on to Tigre in the Parana delta. That part of the trip was just to see the countryside and to find adventure.

Early on Tuesday morning, after coffee, Bayern announced that he needed to e-mail Jose about his failure to call and check the internet for developments on the Deutsche Borse. Rodemann mentioned that he wished to take a long walk down Avenida de Mayo from Congreso all the way to Casa Rosada. Wolf reminded him to take the #102 bus to Congreso and to meet again back at the apartment at noon for lunch, then out for a trip to Malabia for leather and for yet another “surprise.”

From a ubiquitous locutorio just down the Avenue, Bayern sent Jose an e-mail basically “reading him the riot act” {{8}} and requesting a call re Jose’s activities at noon, or if that was impossible at 4 PM. Wolf was in a bit of a bad mood with the problems with Jose. The fact that the Borse was lower by 2% on Monday and another 1% so far on Tuesday did not improve his mood.

At 11:30 Gunthar returned to the apartment praising the architecture along the Avenida de Mayo, but cursing the Argentine late summer rain. The plan now was lunch and leather in Malabia, just a short “Subte” ride away. Recalling his experiences leather shopping while living in B.A., Wolf had warned Gunthar to come to Argentina barefooted and with a rope holding up his pants. On their return to Recoleta, they were both burdened with dress shoes, belts and briefcases – a life time supply.

While in Malabia they stopped in a small café for drinks and decided to stay for lunch. Bayern excused himself by saying, “Let me check if my friend is available.” On his return he announced that they both had appointments for the “service” after lunch. Bayern was secretive and Rodemann wondered just what that service might be. After lunch they strolled down Calle Malabia for a half cuadra until Wolf pushed Gunthar into a tiny barber shop run by Wolf’s buddy, Oswaldo. “I regularly got my hair cut here. Back then, in 2004 Oswaldo charged 5 pesos. With inflation I see he’s up to 7, but still a great bargain compared to Ulm. I’m getting my hair cut, Gunthar. How about you?” Oswaldo cut both Germans’ hair while telling them how much he would like to immigrate to Germany, but how his wife forbids it. Both men gave Oswaldo a generous tip, but still got a great bargain. “Cheap hair cuts are one of my favorite things about the developing world. And just like residential real estate, hair cuts were real cheap when I lived here. Now it looks like both are up in price substantially.” commented Bayern.

As expected, Wolf had not heard from Jose by their noon departure. He wanted to be sure to be back in the apartment by 4 PM for his call. Eva was also to call to confirm appointments to visit real estate on Wednesday as she had promised. As always, 4 PM was start of happy hour and Gunthar had stocked the refrigerator with the recommended Weidner Bier. The men were on their second half liter each when the phone rang. It was Jose reporting that he had facts and figures on the trip to Uruguay. Gunthar spoke with him and was satisfied that the schedule made sense and that the number of real estate agents was sufficient. He did however give him further assignments on car rental and hotel arrangements. The Germans agreed to meet with Jose at the University at 3PM the next day. Eva did not call.

Just before going out to dinner, this time to a large parilla on Avenida Santa Fe, Wolf called Eva. Eva came to the phone and announced that there was a problem and a change in plans. She had visited three apartments and even though the agent had assured her that they were just what the Germans were looking for based on her description, she found them to be totally

unacceptable. She had spent the afternoon calling other agents to set up a schedule for Wednesday morning. Eva continued with more bad news. She would be unavailable tomorrow. She now needed to baby-sit her niece, Carletta. If the Germans were to see residential real estate tomorrow, it would be without Eva or other competent translation.

Bayern was not a happy man! So far Eva had been able to deliver nothing useful. He asked whether Eva could spend all day Thursday showing real estate. She agreed that she could and promised to call at 6 PM Wednesday with the full plan for the next day. After agreeing and hanging up, Wolf said to Gunthar, "I wonder if she would have ever called? I wonder if she'll call tomorrow? I'd better spend the day tomorrow at the University collecting internet based data just in case it all falls through with Eva."

Rodemann replied, "I'd better do what I can on-line with Uruguayan land values as well."

## WEDNESDAY

The colleagues took the #29 bus down Avenida Santa Fe and on across town to the University. It was rush hour; hot, humid and crowded. "Next time a taxi!" said Gunthar. At the University they were able to collect data freely. Silvio had made prior arrangements to allow them faculty use of the computers. In fact Silvio was in the office when they arrived. He mentioned how busy he was but suggested lunch in a nearby restaurant at 1 PM. The Germans toyed with the idea of telling Silvio of their problems with Jose and Eva, but decided not to. Silvio had plenty of his own problems and probably could do little to be of further assistance.

During the morning Wolf collected lots of data on Buenos Aires luxury apartments. He emailed the data back to his graduate assistant at Warsteiner. The summarized results with statistical analysis are shown in Table 1.

At lunchtime the Germans met with Professor Murilo and they adjourned to a small restaurant in Puerto Madero, El Sol. Here Belgrando University had negotiated a discount for faculty and their guests. The conversation was pleasant until Gunthar mentioned to Silvio about their plans to cross the river back into Argentina at Fray Bentos in Uruguay. Silvio warned them that there was continuing conflict between Argentina and Uruguay over an up-stream paper mill polluting the river. Silvio suggested there were often blockades of the bridge and the next bridge north was 200 KM away. "Change your plans, Amigo!" Silvio suggested.

Both Rodemann and Bayern were experienced travelers and decided to take their colleague's advice. Much of the rest of the lunch conversation involved Wolf trying to convince Silvio to accept his offer to be a visiting professor at Warsteiner. Silvio insisted that now was just not a good time in his career for a German adventure. After the second bottle of Mendoza merlot, the colleagues departed. Again Silvio apologized that he would likely not see the Germans again on this trip, but he made sure they knew that he was always available to help them in any emergency.

After a stroll along the yacht basin in Puerto Madero, time arrived for the meeting with Jose. During the walk the Germans had decided not to rent a car for travel in Uruguay and to consider returning to Buenos Aires on the late ferry if sufficient data could be collected on-site in Uruguay by Friday evening. This meant that Jose now had no need to reserve accommodations



or contract for the rental car. Rodemann particularly was interested in what Jose had accomplished.

<b>Table 1. Statistics on Buenos Aires Luxury Real Estate</b>						
District der Stadt, all measured in €						
	<b>Recoleta</b>		<b>Barrio Norte</b>		<b>Palermo</b>	
	<b>Mean</b>	<b>Std Dev</b>	<b>Mean</b>	<b>Std Dev</b>	<b>Mean</b>	<b>Std Dev</b>
<b>Two Bedroom</b>						
Rent/month	1600	320	1500	300	1450	225
Op. Exp./month	50	5	45	5	45	6
Utilities/month	10	1	10	1	10	1
Selling Price	128,000	33,000	112,000	27,000	122,000	18,000
<b>Three Bedroom</b>						
Rent/month	1720	360	1580	330	1520	230
Op. Exp./month	63	5	49	5	52	6
Utilities/month	15	1	15	1	15	1
Selling Price	146,000	23,000	129,000	31,000	137,000	22,000
<b>Four Bedroom</b>						
Rent/month	1862	400	1617	385	1601	240
Op. Exp./month	70	6	63	6	64	6
Utilities/month	20	2	20	2	20	2
Selling Price	179,000	38,000	142,000	32,000	153,000	24,000
<b>Vacancy Est.*</b>						
2 Bedroom	18%		26%		23%	
3 Bedroom	27%		31%		17%	
4 Bedroom	31%		41%		30%	
*As provided by ByT Argentina, S.A. and as adjusted in the Business Plan						

Just at the appointed hour Jose knocked on the door of the Real Estate Department conference room. Gunthar asked him to sit and go over progress on his assignments. Jose did have the full ferry schedule to Colonia, with prices and the names and telephone numbers of three real estate agents. He had spoken with each and they were very interested in showing the Germans what raw land was available.

Gunthar instructed Jose on further contacts with the agents and then gave Jose his credit card to purchase ferry tickets. Strangely Jose made no mention of a rental car or hotel accommodations in Colonia, even though those assignments were given at the initial meeting on Monday. In fact, now they were not needed, therefore no longer an issue. Rodemann chose to ignore the issue to see if it would ever surface from Jose. When Jose left the conference room, Rodemann leaned back in his chair, shook his head and said, “What is the problem mit these kinder. Are the assignments too difficult?” Bayern reminded him that Jose had at least delivered something of value. Tonight’s call from Eva would determine if she could keep pace.

By 6 PM that evening happy hour was again well underway. Gunthar joked that he should ask the DISCO store for quantity discounts on Weidner Bier. By 6:15 Wolf was a bit disturbed that Eva had not called regarding tomorrow’s full day of real estate. By 6:30, he was livid. By 7 PM, he called her number, but the call went to her cell phone answering machine. He left her a terse message about meeting them at the apartment on Las Heras at 9 AM sharp on Thursday.

Both colleagues were tired and decided to stay in, watch English subtitled movies and eat pizza. Bayern suggested anchovy and blue cheese pizza - a favorite from his earlier time in Buenos Aires. The phone did not ring that evening.

## **THURSDAY**

As usual, the Germans were up by 7:30 AM. This day Gunthar finally accepted Wolf's offer of fried eggs for breakfast. Usually Gunthar would skip breakfast to save calories, but perhaps he did not eat as full a supper as he normally did. Wolf liked anchovies and blue cheese pizza better than Gunthar did. By 8:30 each was dressed and had sufficient morning coffee. They were ready for Eva's arrival. Gunthar asked, "What are the odds she'll show up? One in three?" Wolf responded, "If that is the odds you quote, I'll bet 10 euros that we don't see her." Rodemann declined to cover the bet and by 9:45, with no Eva, he was glad he refused.

Finally Bayern said, "It looks like we have another free day. Let's arrange for that tango show that you wanted for this evening before we leave. Then how about a train ride out to the provincial capital of La Plata? We can get a good look at the country side, have lunch in that city and be home in plenty of time for a siesta before the tango." Rodemann agreed and called a place called "Complejo Tango" that promised a good dinner, a show and round trip door-to-door transportation all for about 23 euros each. A good deal at twice the price!

The day went as planned with no problems or controversy. Bayern checked his e-mail for messages from Eva. There were none. Rodemann did the same for Jose and did find a confirmation that tickets were purchased and would be available at the "will call" window at the Buquebus terminal in Puerto Madera. The ferry was scheduled for 8:30 AM. Jose promised to be there by 8.

## **FRIDAY**

The #29 bus on Avenida Santa Fe went reasonably close to the Buquebus ferry terminal. Traffic had been heavy and after a four block walk the colleagues arrived late. It was almost 8:10 AM, but Jose was nowhere to be seen. Bayern went to retrieve tickets while Rodemann searched for Jose. By 8:25 the colleagues decided that Jose or not, they had better board the ferry if they planned to go to Uruguay.

As one of the last passengers they quickly cleared customs, boarded and decided to wait by the ferry entrance just in case Jose did show up. At 8:30 the whistle blew, but nothing happened. A few moments later, amazingly, Jose walked onto the ferry as though nothing was out of order. "Heavy rush hour traffic!" he said, as the burly crewman closed the door behind him.

Gunthar shook his head in amazement at his friend Wolf and said, "I wonder if der kind realizes that he was ten seconds away from total failure in his assignment?" Wolf replied, "Ich weiss nicht. It will be interesting to see how arrangements with the real estate people he found works out."

The two and a half hour ferry ride across the broad and muddy Rio de la Plata was pleasant. The cloudy weather had broken to sunshine and the colleagues and Jose chose outside seats and a round of “Patricia” the best Uruguayan beer. Jose explained that he had scheduled us to meet at 12:30 PM with Sergio Mato and his wife Nadina of “Sergio Mato Immobillaria.” Wolf, always hungry, suggested lunch first, and then have the agents meet them at the restaurant afterwards. Gunthar agreed and Jose used his cell phone to coordinate the change in plans.

Their taxi driver in Colonia suggested a good Italian restaurant in the center of town and after a nice plate of cheese gnocchi and some mellow Uruguayan red wine, the colleagues were ready to see some rural real estate. At the appointed time Sergio and Nadina arrived and introductions were made. While sitting in a small park Gunthar explained that he was interested in property with at least a river view, preferably riverfront and in size ranging from one-half hectare to ten. The land should be vacant of buildings or have such with minimal value. Gunthar leveled with the Matos and explained that he was doing preliminary research on the economics of a major, € 100 million or more, resort and residential complex to be built here mostly for German pensioners and financed by the Bavarian State Pension Plan. Gunthar assured the agents that they would be protected as the buyer’s agent for any commission earned should the project proceed.

Never before had poor Sergio and Nadina been offered such an opportunity. Nadina took charge by asking how many properties Gunthar would like to see. She mentioned that there were maybe 10 such properties within 20 KM north and south of Colonia. “Can we see them all today?” asked Gunthar. Nadina immediately ordered Sergio to go make phone calls to set up appointments as necessary, while Nadina made small talk with the Germans, naturally with Jose as translator.

Shortly Sergio returned and whispered into Nadina’s ear. “Please, let me buy you a round of cerveza at the outdoor cafe. Sergio and I must make some arrangement before we depart.” It was obvious who the power was in this partnership. Within ten minutes Nadina returned and announced, “We have nine properties that meet your criteria that we can see today. Two others north of Colonia are too near the paper plant for your purposes. Vamos a ver!”

<b>Table 2. Statistics on Uruguayan Raw Land</b>								
<b>Property Number</b>	<b>(A) Size (Hectares)</b>	<b>(B) Price (€)</b>	<b>(C) Taxes (€/yr)</b>	<b>(D) Shape (1-10)</b>	<b>(E) Distance From River(KM)</b>	<b>(F) Distance from Colonia (KM)</b>	<b>(G) Access (1-10)</b>	<b>(H) Condition: Clear or Wooded</b>
1	0.9	6,200	124	10	1.0	6.3	6	C = 0
2	6.1	38,800	792	10	2.3	2.3	3	C
3	6.0	35,000	685	6	3.2	7.1	10	C
4	2.3	22,500	520	10	0.7	0.9	10	W = 1
5	4.9	47,000	1102	3	0.2	1.8	10	W
6	0.7	5,300	103	10	0.6	7.7	3	C
7	4.0	24,500	487	3	1.8	8.2	10	C
8	2.0	14,000	296	6	3.1	4.0	6	C
9	5.1	37,000	836	3	1.2	1.9	6	W
Sum above	32.0	230,300	4945	5.94	*	*	*	*

The day in the campo of Uruguay was useful. Gunthar collected detailed information on each property and decided that nine data points would be sufficient for at least a preliminary run of his valuation model. Table 2 shows what data was collected for each property. Statistical calculations were updated by Gunthar's laptop as he input data.

From prior work Rodemann had calculated coefficients for each of the eight variables shown in Table 2. That information is presented in Table 3 below and is necessary to understand and apply Rodemann's valuation model.

<b>Table 3. Coefficient Value as a Function of Variable Size.*</b>	
<b>If Column D Size Weighted Mean is:</b>	<b>Then the Appropriate Valuation Coefficient is:</b>
0-3	0.60
3.01-6	0.80
6.01-10	1.00
<b>If Column E Size Weighted Mean is:</b>	<b>Then the Appropriate Valuation Coefficient is:</b>
0-0.3	1.00
0.31-0.5	0.92
0.51-1.0	0.79
1.01-1.5	0.64
1.51-2.5	0.52
2.51-5.0	0.46
5.01 and up	0.37
<b>If Column F Size Weighted Mean is:</b>	<b>Then the Appropriate Valuation Coefficient is:</b>
0-2.0	0.6
2.01-5	0.8
5.01-8	1.0
8.01 and up	1.1
<b>If Column G Size Weighted Mean is:</b>	<b>Then the Appropriate Valuation Coefficient is:</b>
0-3	0.90
3.01-6	0.95
6.01-10	1.00
<b>If Column H Size Weighted Mean is:</b>	<b>Then the Appropriate Valuation Coefficient is:</b>
0	0.95
.01 - 0.33	0.967
.34 - 0.99	0.983
1	1.00

During parts of the afternoon two other real estate agents joined the party to show property for which they represented the seller. One, a young man named Carlos from "JC Propiedades," a major real estate broker in Buenos Aires and Colonia, had a Ford 4-wheel drive SUV. Gunthar and Wolf rode with him, where others could not follow, to see two properties nearest the river. On hearing Gunthar's story, Carlos mentioned that he was aware of the possibility of a large tract near the river over 200 hectares, that might come to market at a price just below € 2 million. "Esta mucho?" asked Carlos.

By 6:30 PM the party had returned to Colonia for wrap-up conversations mostly between Gunthar and Nadina. Wolf asked Jose to call Buquebus and see if they could get a ferry back to Buenos Aires that evening. Jose reported back that a fast ferry left Colonia at 8 PM and would be back in Buenos Aires at 9:30 for an extra fare of 31 pesos each.

As Wolf and Gunthar settled into their plush seats for the ride “home” to Buenos Aires, Wolf asked Jose what he was owed for his time. Jose calculated in his head 72 pesos. Wolf paid him 75 and told him to stay for dinner in Buenos Aires. Wolf also asked Jose to write him a receipt for the payment. Strangely, Jose was mystified and Wolf eventually had to almost dictate the wording. {{9}}

As the ferry left Colonia Wolf asked Jose to call Eva. He decided to give her one last chance. Wolf could tell by overhearing Jose’s side of the conversation that Eva was amazed that they had actually done as planned in Uruguay. She also seemed surprised that Jose had been paid for his time. When Wolf spoke with her Eva apologized for missing the Thursday meeting. She was sick she said. When Wolf suggested they might still tour Buenos Aires apartments on Saturday, Eva agreed and suggested that the Saturday newspaper had extensive real estate listings and many open-houses. They agreed to meet at 9 AM at the apartment and spend the day Saturday touring apartments.

## **SATURDAY**

As always the colleagues were shaved, showered and finished with breakfast well before 9 AM. Gunthar said, “Jose managed to “pull it out of the fire” for me. What do you think the chances are that Eva will be able to do the same for you?” Wolf replied, “Verdammt, Ich weiss nicht!” Based on past experience with Eva, the odds can’t be good. By 9:15, still no Eva, by 9:30 Wolf was again fuming. By 10 AM and not even a call, Wolf cursed again, “Verdammt, let’s just go into the city. I need some time on the internet anyway.” Gunthar chuckled, picked up his key and headed for the door. “Not a peso for that madchen!” murmured Wolf.

## **SUNDAY**

The big Lufthansa jet powered down as it reached cruising altitude at about the Brazil-Uruguay border. It was a long way back to Frankfurt, then on to Ulm. The colleagues, riding in business class ordered Canadian whiskey as their pre-dinner drink. It was nice to hear German again spoken around them. Finishing his drink, Gunthar stretched, turned to Wolf and said, “That was certainly a very strange week. I’m sure that the people at Belgrando University selected their top students to help us, but it was a disaster, or almost so. What do you think went wrong?” Wolf replied, “I can’t imagine mein freund. Our German students would not have acted that way. The only thing I can think of is to give Silvio the blow-by-blow and ask him to explain it.”

Always one to look for the silver lining in any cloud, Gunthar concluded, “Well, may be we can write an interesting business case study? It certainly has a strong international flavor about it.” Wolf chuckled a quiet, “Ja, Ja.”



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# WOMEN CONSUMERS IN THE CHINA COSMETIC SURGERY MARKET

**Junsong Chen, China Europe International Business School**

## CASE DESCRIPTION

*The case is designed for a marketing research course or a general marketing management course. It has the difficulty level of 5 (appropriate for first year graduate level) and 6 (appropriate for second year graduate level).*

*The major issues discussed in the case include:*

- *Judgment on how income influences purchase intention and price sensitivity*
- *Judgment on how age and marriage status affect consumers' interest in the cosmetic surgery*
- *Recommendations on marketing communication strategy*
- *Judgment on the effectiveness of advertisement*
- *The case is designed to be taught in 2 class hours and does not require outside preparation.*

## CASE SYNOPSIS

*The case is about a Korean businessman who has conducted a market research in Shanghai before he builds up a cosmetic surgery clinic. The survey has investigated many consumer parameters. Therefore the first task for students is to learn how to analyze the relationship between marketing variables, such as consumers' purchase intention, demographics, price sensitivity, and so on. More importantly, students should be able to identify the business implications behind the data. This case is deliberately kept sufficiently simple to direct students' attention to the use of research findings, not to the intricacies of research design and execution. Information in the tables is displayed in a way that reflects how research is often presented in practice, in less than optimal ways, forcing students to come to an independent interpretation, including some recalculation of the data. Therefore, this case is suitable for a marketing research course, or for a general marketing course.*

## BACKGROUND

Mr. Yanhoo Li has decided to set up his first cosmetic surgery clinic in Shanghai, China next year. As an owner of five cosmetic surgery clinics in South Korea, Mr. Li has already been very successful in this industry. But Mr. Li will be only 40 years old next year, and he has much ambition left. Mr. Li could invest to build up the sixth clinic in South Korea, but the economy

there does not seem to be that promising. He has been thinking about international expansion for a couple of years now, and he has decided that next year shall be the right time and China shall be the right place. Several South Korean cosmetic surgeons already work in Shanghai hospitals and customers are lining up for their services, paying a 30% higher price than for surgeries performed by local doctors. Some affluent Chinese consumers even flight to South Korean to have the cosmetic surgery.

Cosmetic surgery has become increasingly popular in the West over the last two decades, and Mr. Li believes that China, as has happened in so many other markets, will exhibit a similar development. Thousands of Chinese women, and some men, are turning to surgeons for cosmetic enhancements they can now afford thanks to a prosperous economy that expanded by at least 8 percent a year even during the global slump in 2007 and 2008. Analysts see the rise in cosmetic surgery as yet another example of how the once cloistered nation has opened up to Western businesses -- and influences.

“People here tend to believe that good looks may bring them good luck with their career and marriage,” said a marketing director of a famous Chinese cosmetic surgery clinic. “There is a long history in China of craving beauty. In the Book of Verses, completed more than 2,000 years ago, there is a line that goes, ‘A slender lady is the perfect marriage partner of a gentleman’.”

It seems that many Chinese consumers cannot wait to undergo cosmetic surgery to better their self-esteem. Statistics from the China Plastic Cosmetology Committee show there are more than 10,000 medical institutions carrying out procedures throughout the country. Revenues close to 2 billion RMB (US\$240 million) have accumulated since the cosmetic surgery was first offered in the country. Although the United States is still the world’s largest market for plastic surgery, Asia-Pacific ranks a close second.

In 2005, A survey conducted by the Ministry of Labor and Social Security of China last year showed about 85 per cent of the cosmetic surgery institutes in China are privately owned, with most of them operating on a small scale, and with nearly four in five institutes opened in the last five years. The survey also showed the total spending on cosmetics and related products was up to 160 billion RMB (US\$19.3 billion) in 2003, a 20 per cent year-on-year increase. In addition, each urban resident spends an average of 30 RMB (US\$3.7) on cosmetics every month. The gross production value of the cosmetic industry makes up more than 5 per cent of that of the tertiary industry, according to the survey, adding that it is also showing higher growth than other service sectors.

Women offer a variety of reasons for undertaking cosmetic surgery. Some seek cosmetic surgery for career reasons; professionals want to stay young – or at least want to appear so – in order to keep or find jobs. Some have specific dislike for the way their nose or their ears, etc. are shaped. Some want to adopt a more Western look. Some want to change their body shape. Cosmetic surgery increasingly has become vanity more than anything else, and a way to express one’s identity, or perhaps to create a new identity.

Some Chinese have expressed a strong enthusiasm towards cosmetic surgery which might even surprise the West. It has been reported that parents in the wealthy southern Chinese city of Guangzhou have been rewarding their children with cosmetic surgery when they pass



their high school exams. Girls are being given nose jobs and work around their eyes while boys have operations to cut out excess fat as a treat for winning places in university at the end of secondary school.

However, cosmetic surgery is not without risk. According to an estimate of the China Cosmetology and Hairdressing Association, there have been more than 200,000 malpractice lawsuits filed by patients because of disfiguring operations in the last decade. Statistics from the Chinese Consumers' Association also show that consumer complaints are increasing, with an average of 20,000 lawsuits filed every year. In 2004, the State Administration for Industry and Commerce found that the cosmetic-surgery sector was one of the four industries beset by problems. In Mr. Li's intended clinic in Shanghai, he plans to include cosmetic surgeries such as breast surgery, chin and cheek augmentation, laser resurfacing, facelift, forehead lift, hair replacement, ear and nose surgery, and so on. Mr. Li's motto is: "Beauty is a balance and cosmetic surgery is a blending of science and art."

Before investing his money, Mr. Li plans to carefully research the market in Shanghai. Although Mr. Li has more than a decade experience in this profession, he still has many things unsure. After all, what Chinese consumers need may differ from what Korean consumer need due to the economic and cultural difference between the two countries. Mr. Li believes there is no need to rush, and a sound market study will help him better understand Chinese customers and avoid mistakes. He therefore has entrusted a local market research agent to conduct a market survey in Shanghai, investigating consumer attitudes in Shanghai with regard to cosmetic surgery. The survey focused on a variety of cosmetic surgeries, but Mr. Li is particularly interested in the findings on laser resurfacing.

In laser resurfacing, sometimes called "laser peel", a carbon dioxide (CO<sub>2</sub>) laser is used to remove areas of damaged or wrinkled skin, layer by layer. The procedure is most commonly used to minimize the appearance of fine lines, especially around the mouth and the eyes. However, it is also effective in treating facial scars or areas of uneven pigmentation. Laser resurfacing may be performed on the whole face or in specific regions. Often, the procedure is done in conjunction with another cosmetic operation, such as a facelift or eyelid surgery.

## **MARKET RESEARCH**

The research is conducted in Shanghai with 1,339 female individuals surveyed in total. The quota sampling technique was adopted to help ensure a representative sample with age as the quota criterion. Specifically, respondents are evenly distributed among five different age groups: Group A – age 18-22; Group B – 23-27; Group C – 28-32; Group D – 33-37, and Group E – 38-42 (See Table 1 for details). Street intercept and home visit methods were used to collect the data. According to the market research, 394 out of the total of 1,339 respondents indicated that they might consider laser resurfacing at some point in their lives.

Income is usually believed to be a major factor which might affect consumers' willingness and ability to purchase a product and service. In this survey, the respondents can also be classified based on income; the following table presents the classification of the respondents into five groups based on income.

<b>Table 1</b> The Distribution of All Respondents and Potential Users for Laser Resurfacing Among Five Age Groups				
Age	Number of Potential Users	Percentage	Number of Respondents	Percentage
Group A (18 – 22)	82	20.8%	264	19.8%
Group B (23 – 27)	74	18.8%	276	20.6%
Group C (28 – 32)	76	19.3%	275	20.5%
Group D (33 – 37)	80	20.3%	263	19.6%
Group E (38 – 42)	82	20.8%	261	19.5%
Total	394	100.0%	1,339	100.0%

<b>Table 2</b> Respondent Income Groups		
Income (RMB)	Frequency	Percentage
0-500	19	1.42
501-1,000	140	10.46
1,001-2,500	429	32.04
2,501-5,000	508	37.94
5,001-10,000	209	15.61
10,001+	34	2.54
Total	1,339	100

These 394 respondents willing to consider laser resurfacing were further asked to choose one of four prices to indicate the most they are willing to pay for the procedure. The following table is designed to provide Mr. Li some insights into how sensitive consumers are to the price.

<b>Table 3</b> Consumer Income and Price Choice (RMB)									
Income \ Price	Below 2000		2000 – 3000		3000 – 4000		4000 above		Total
-500									19
501-1,000	21	65.6%	9	28.1%	2	6.3%	0	0%	32
1,001-2,500	70	57.9%	29	24.0%	16	13.2%	6	4.9%	121
2,501-5,000	38	24.8%	44	28.8%	41	26.8%	30	19.6%	153
5,001-10,000	15	20.8%	19	26.4%	20	27.8%	18	25.0%	72
10,001 +	3	18.8%	4	25.0%	5	31.2%	4	25.0%	16
Total	150	38.1%	103	26.1%	82	20.8%	59	15.0%	394

Mr. Li would also like to know if marital status could have an impact on women's interest in cosmetic surgery. He also suspects that having a child may also affect women's interest. Table 4 divides the sample into five groups by different marital status and presents the information on the number of potential users in each group.

Several questions sought to measure the consumer's psychographic profile across the five age groups. The questions are all measured by a 5-point scale (1=strongly disagree, 5=strongly agree). Mr. Li wants to make sure he understands what is important to women in Shanghai so that he can create the right positioning strategy for his clinic as well as effective advertising appeals.

**Table 4**  
The Distribution of All Respondents and Potential Users across Five Groups of Different Marital Status

	Number of Potential Users	Percentage	Number of Respondents	Percentage
Single, without a partner	105	26.6%	313	23.4%
Single, in relation with a partner	60	15.2%	206	15.4%
Married without a Child	115	29.2%	500	37.3%
Married with a child	110	27.9%	305	22.8%
Divorced or Widow	4	1.1%	15	1.1%
Total	394	100.0%	1,339	100.0%

**Table 5:** Consumer's Psychographic Profile across the Five Age Groups

Questions	Group A	Group B	Group C	Group D	Group E
1. A woman should try to be beautiful.	4.04	4.11	4.13	4.05	4.08
2. Enjoying life is more important than health.	2.70	2.74	2.80	2.88	2.94
3. I like changes in my life.	3.84	3.71	3.67	3.70	3.74
4. I think health is more important than wealth.	3.65	4.08	4.17	4.15	4.22
5. I attach more importance on career than family.	3.17	3.15	3.12	3.27	3.31
6. I believe a woman should rely on herself.	2.97	3.04	2.92	3.30	3.51

Mr. Li further has asked his assistant to design three advertisements for laser resurfacing surgery in his clinic. The market research is used also to test these different ads, labeled Ad A, Ad B, and Ad C. The three ads all emphasize that the clinic is from South Korea. Differences among the ads were as follows:

Ad. A: This ad doesn't have too many words except one slogan, and shows a woman's face with obviously excellent and glowing skin. The model is a very good-looking woman and appears to be very happy.

Ad. B: It shows the pictures of a medical clinic, a doctor, and a young woman. The majority of the ad is taken up with text explaining the details of the laser resurfacing process, conditions of operation, possible risks, recovery, and so on.

Ad. C: It shows a beautiful and professional woman. About one third of the space in the ad is used to provide some basic information about laser resurfacing surgery. The ad also emphasizes that having this cosmetic surgery will help women to be independent and successful. Each potential user respondent was presented with one ad and then was asked to evaluate the ad on a number of dimensions measured by a 5-point scale. In each age group, one third of the respondents saw either Ad A, or B, or C. The table below presents the results.

**Table 6:** Comparison of Three Ads

Dimensions	Ad A	Ad B	Ad C
Visually stimulating and eye catching	4.1	3.1	3.5
Nice appearance of people in ad.	3.9	3.5	3.7
I am more interested in laser resurfacing by this clinic after seeing this ad.	3.1	3.4	3.0
Strong information content	3.2	3.6	3.2
I know key features of the surgery after seeing this ad.	3.1	3.6	3.2
In general, I like this ad.	3.8	3.3	3.1
Total	21.2	20.6	19.7



# **DETERMINING THE VALUE OF THE COCA COLA COMPANY – A CASE ANALYSIS**

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## **CASE DESCRIPTION**

*The primary subject matter of this case concerns finance related topics and uses actual financial data to assess the rationale for why and when various models can be used to determine the stock price performance of the Coca Cola Company. Secondary issues examined include a determination of the value of the company using the discounted cash flow model. The case enables students to apply their knowledge of the principles of finance and accounting to a real world example. It is specifically designed to enhance, among other things, students' understanding of the selection of appropriate financial techniques and to apply those methods to a specific company, in this case the Coca Cola Company.*

*The case has difficulty levels of three, four, and five. The content is appropriate for the both an undergraduate principles of finance course taken primarily by students at the junior or senior level (levels three and four) as well as for first-year graduate students (level five). The case is designed to be completed primarily outside of class as group work with limited discussion in an in-class setting. Outside preparation time is expected to be three to four hours for students who have adequate background in the topics included. In-class discussion may range from thirty minutes to one hour.*

## **CASE SYNOPSIS**

*Nicki James, a CFO of a wealth fund management advisory group, had been successful in solving the financial woes of her clients for a number of years. During that time, she had also dabbled in some investing of her own and was always looking for new opportunities. Therefore it was no surprise that ideas randomly came to her as one did on that fall day in 2009 as she was sipping from her can of Classic Coca Cola. Coke, as many referred to the product, had been a part of her life ever since her early childhood. Thus the well-established nature of the company along with the new prospects in sight for the organization inspired her to instruct her assistant and recent MBA graduate, Sarah Mills, to perform some financial analysis on her behalf. Could Coca Cola stock be the financial goldmine that both Nicki and her clients had always sought? With a little research and a few calculations, Nicki and Sarah were determined to find out!*

## **BODY OF CASE**

On a fall day in 2009, Nicki James, the chief financial officer (CFO) of a wealth fund management advisory group, was sitting outside enjoying a cool breeze while sipping from her

can of classic Coca Cola. As she was sipping, she thought about how Coke, as a beverage, has evolved over the years. She could remember how, as a young girl, her mother would persuade her and her siblings to be well behaved and to be kind to each other and would even offer them a can of Coke as an incentive for their good manners. As she grew older, new versions of the classic soft drink including Diet Coke, Caffeine Free Coke, Cherry Coke, Coke Zero, and many others emerged. As incredible as the variations of the coke flavors were, the Coca Cola Company even began to diversify and began to produce PowerAde, vitamin water, energy drinks, and juices.

With all of the other newly introduced beverages, the company somehow managed and even thrived throughout all of the transitions and remained the undisputed leader in the industry notwithstanding the competitive challenges it faced by the entrance of Pepsi, Dr. Pepper/Seven Up, and others into the market. In fact, being the financial guru Nicki was, she recalled reading in a business article recently that the company had once again and for the ninth consecutive year claimed the title of the top world brand outshining a number of equally well-reputable and successful companies like Toyota, Disney, IBM, Microsoft, Google, and Intel. The Coca Cola Company, with a listed brand value of \$68.7 billion, had gained an amazing three percent in this measure in less than a year (Trubey, 2009).

Like most financial professionals, Nicki not only utilized her expertise exclusively for her clients but also delved into investing for her own account in hopes of striking it rich so she could retire early and lead a comfortable life. Many already knew that the key to her successful career lied in her ability to select companies with steadily improving and predictable financial performances. However, she had never investigated Coca Cola as an alternative investment option in any detail. The memory of what her mother used to say and the encouraging headline news about Coke's brand caught her attention by surprise and she decided to explore whether the stock price performance of the company justified the risk.

One other item that also stuck in her mind, though, was an announcement that had been released a few months prior regarding a possible national (U.S.) tax on the sugary beverages of the industry. The tax, if imposed, as she recalled, would be collected as an additional revenue source for the nation's healthcare system (Adamy, 2009). The ramifications of such a measure on the demand for the company's products could be worth examining as well. With such news and prospects as her motivators, Nicki began gathering additional information and data needed to properly analyze The Coca Cola Company and explore whether or not the company's stock should possibly be one of the investments included in her portfolio.

Among the latest news that Nicki uncovered, was an announcement by the company of its plans to double its revenue by 2020. According to company officials, such phenomenal growth could be achieved, among other ways, through the penetration of new and untapped markets like China, India, Mexico, and South Africa (Geller, 2009). Nicki was quite intrigued by these potential market outlets and the company's growth prospects. On a trip she took a few years back, she had the privilege of visiting a Coca Cola World museum and had the opportunity to taste Coke blends that were actually native to many of the countries represented. She had assumed that the brand that she was familiar with was just as popular in those nations as it was in the United States but was unaware of the exact expansionary opportunities available.

Moreover, on the company's list of modifications, were plans to revise its marketing approach and to specifically target new segments including multicultural teenagers and women while also offering new product sizes including a 7.5-fluid ounce mini can boasting a mere 90 calories ("Coca Cola to offer," 2009). Additional packaging changes proposed included a front-label energy (or calorie) display to further appeal to health-conscious consumers and juice packages displaying prominent fruit images emphasizing the healthy contents of the products ("Coke putting energy," 2009; Frederix, 2009). Even more awe-inspiring was news of a Coca Cola vending machine that would allow consumers to quench their thirst by blending flavors to create their own personalized carbonated beverages (Collier, 2009). Nicki was captivated by all of these growth prospects and they reinforced her desire to carry out an exploratory investigation.

While sifting through industry news, Nicki also learned of PepsiCo's plans to buy some of its bottlers in an attempt to better control the supply chain and to partner with Anheuser Busch in an effort to cut costs (Birchall, 2009). Despite such competitive threats, from the preliminary news Nicki had gathered, she thought that the company's financial background appeared to be solid and its prospects bright.

Now, it is time to determine if the number crunching offers a similar positive outlook. Specifically, Nicki is keenly interested in knowing how much the company is worth and whether the company's stock price is under- or overvalued given its current price of \$56.54 as of December 31, 2009.

Nicki has delegated Sarah Mills, her immediate assistant, who after having just graduated from a reputable business school with an MBA degree joined her wealth fund advisory group, to sift through and compile the necessary data, and to then make a recommendation. Sarah immediately got involved and put all of the necessary accounting and financial information together in order to make a recommendation.

In order to complete her analysis, Sarah made the following assumptions:

- \* The company carries various outstanding loans with different maturities (Table 5). These loans are assumed to be rolled over or refinanced at the existing rates upon maturity.
- \* Growth estimates (Table 8) in earnings and dividends over the past five years from various sources range from a low of 7.9 percent to a high of 8.5 percent. Sarah used the lowest estimate of 7.9 percent to be reasonable and to err on the side of caution.
- \* Sarah took the overall average of the daily returns of the S&P 500 over a 60-year period, January 1, 1950 through December 31, 2009, for which data was available on Yahoo.finance.com, to determine the annualized compound growth rate as a proxy for the market return.
- \* She used the 20-year Treasury bond rate (Table 6) as the risk free rate and the current beta of 0.62 (Table 7) as a measure of the firm's market risk.
- \* The company has outstanding short-term loans of \$6.32 billion with a weighted average interest rate of 0.2%. On the grounds that the claim on operating income for such loans would be immaterial, Sarah decided to exclude them from the determination of the weighted average cost of long-term debt.

Additional financial data used include Tables 1 and 2 which provide the income statement and balance sheet, respectively, for the past five years. Table 3 provides the free cash flows generated over the past five years while Table 4 outlines the company's dividend and earnings history. Table 5 outlines the outstanding bond issues as of December 31, 2009, while Table 6 provides U.S. Treasury rates for a variety of maturities. Finally, Tables 7 and 8 itemize various company and industry data.

**Table 1: The Coca Cola Company Consolidated Comparative Income Statements**  
For the Years Ended December 31 (In Millions of Dollars)

	2004	2005	2006	2007	2008	2009
Revenue	21,962	23,104	24,088	28,857	31,944	30,990
COGS	7,638	8,195	8,164	10,406	11,374	11,088
Gross Profit	14,324	14,909	15,924	18,451	20,570	19,902
Selling, General, and Administrative	8,626	8,739	9,431	10,945	11,774	11,358
Other	0	85	185	254	350	313
Operating Income (EBIT)	\$5,698	\$6,085	\$6,308	\$7,252	\$8,446	\$8,231
Net Interest Income and Other	524	605	270	621	(1,007)	715
Income before Income Taxes	6,222	6,690	6,578	7,873	7,439	8,946
Income Taxes	1,375	1,818	1,498	1,892	1,632	2,040
Minority Interest						82
Net Income	\$4,847	\$4,872	\$5,080	\$5,981	\$5,807	\$6,824
Diluted EPS	\$2.00	\$2.04	\$2.16	\$2.57	\$2.49	\$2.93
Average Shares Outstanding (diluted)	2,429	2,393	2,350	2,331	2,336	2,329
Source: Morningstar.com						

**Table 2: The Coca Cola Company Comparative Balance Sheets**  
As of December 31: (In Millions of Dollars)

	2004	2005	2006	2007	2008	2009
Cash and cash equivalents	\$6,707	\$4,701	\$2,440	\$4,093	\$4,701	\$7,021
Short-term investments	61	66	150	215	278	2,192
Accounts receivable	2,171	2,281	2,587	3,317	3,090	3,758
Inventory	1,420	1,424	1,641	2,220	2,187	2,354
Other current assets	1,735	1,778	1,623	2,260	1,920	2,226
Total current assets	12,094	10,250	8,441	12,105	12,176	17,551
Property, plant, and equipment (net)	6,091	5,786	6,903	8,493	8,326	9,561
Intangibles	3,836	3,821	5,135	12,219	12,505	12,828
Other long-term assets	9,306	9,570	9,484	10,452	7,512	8,731
Total long-term assets	19,233	19,177	21,522	31,164	28,343	31,120
Total Assets	\$31,327	\$29,427	\$29,963	\$43,269	\$40,519	\$48,671
Accounts payable	\$4,283	\$4,493	\$929	\$1,380	\$1,370	\$0
Short-term debt	6,021	4,546	3,268	6,052	6,531	6,800
Taxes payable	0	0	0	0	252	264
Accrued liabilities	667	797	4,693	5,793	4,835	0
Other short-term liabilities	0	0	0	0	0	6,657
Total current liabilities	10,971	9,836	8,890	13,225	12,988	13,721
Long-Term Liabilities						
Long-term debt	1,157	1,154	1,314	3,277	2,781	5,059
Other long-term liabilities	3,264	2,082	2,839	5,023	4,278	5,092
Total long-term liabilities	4,421	3,236	4,153	8,300	7,059	10,151
Total Liabilities	\$15,392	\$13,072	\$13,043	\$21,525	\$20,047	\$23,872
Total Equity	\$15,935	\$16,355	\$16,920	\$21,744	\$20,472	\$24,799
Total Liabilities and Equity	\$31,327	\$29,427	\$29,963	\$43,269	\$40,519	\$48,671
Source: Morningstar.com						



**Table 3: Historic and Current Free Cash Flows**

	2005	2006	2007	2008	2009
Free Cash Flow (FCF)	\$5,524	\$4,550	\$5,502	\$5,603	\$6,193
(In millions of dollars) Source: Morningstar.com					

**Table 4: Historic Annual Dividends and Diluted Earnings per Share**

	Annual Dividend	Diluted EPS
2004	\$1.00	\$2.00
2005	\$1.12	\$2.04
2006	\$1.24	\$2.16
2007	\$1.36	\$2.57
2008	\$1.52	\$2.49
2009	\$1.64	\$2.93
Source: Yahoo Finance and Morningstar.com		

**Table 5: Bonds Outstanding (Late 2009 / Early 2010 – Prices and BV roughly as shown below)**

	Maturity Date	Book Value	Price	Coupon
Coca Cola, 5.35%	11/15/2017	\$1,748,000,000	109.8	5.35%
Coca Cola, 4.875%	3/15/2019	1,339,000,000	103.8	4.88%
Coca Cola, 3.625%	3/15/2014	897,000,000	104	3.63%
Coca Cola, 5.75%	3/15/2011	500,000,000	104.5	5.75%
Coca Cola, 7.375%	7/29/2093	116,000,000	116.9	7.38%
Coca Cola, 5.30%	2018	510,000,000	92.32 (Inferred from financials)	5.30%
Source: Morningstar.com & Coca Cola Company Financials				

**Table 6: YTM on U.S. Treasuries (12/31/09)**

1-month	0.04%
3-month	0.06%
6-month	0.20%
1-year	0.47%
2-year	1.14%
3-year	1.70%
5-year	2.69%
7-year	3.39%
10-year	3.85%
20-year	4.58%
30-year	4.63%
Source: U.S. Treasury.gov	

**Table 7: Various Other Financial Data**

Shares outstanding (non-diluted) (12/31/09)	2,310,000,000
Beta (12/31/09)	0.62
P/E – Beverage Industry	\$17.23
S&P 500 overall average daily return (1950 - 2009)	0.03%
Source: Yahoo.finance.com	
Industry Growth Rate	5.07%
Source (Cooper, 2009)	

**Table 8: Company Growth Rates**

5-Year Estimated Growth – Morningstar	7.90%
5-Year Long-Term Growth Rate of Earnings - Reuters	8.50%
Historical Compound Growth Rate (based on 5 years of EPS)	7.94%
Historical Average Growth Rate (based on 5 years of EPS)	8.28%

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# TRANSFORMING THE TEXAS PLANT

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## CASE DESCRIPTION

*The primary subject matter of this case is organizational transformation, along with the leadership and management theories that are necessary for success. The setting is a Texas plant that builds good products but has many personnel and operations problems that need to be resolved rapidly if it is to be competitive in the short run and survive in the long run. The case has a difficulty level of three to six depending on the assignments. Therefore, it could be used in junior- or senior-level undergraduate courses or first year graduate courses in leadership, management, organizational behavior, high performance teams, and organizational transformation.*

## CASE

The Texas Plant had been through some tough times. In fact, Corporate had threatened to close the Texas Plant if operations were not improved. While product quality was excellent, the Texas Plant was not competitive with sister plants in terms of speed of product changeovers and cost. Also, union/management problems persisted, and relationships among management employees were strained as well. The Texas Plant's reputation was one of "bureaucratic status quo" with managers who did not encourage suggestions for improvement.

Corporate leaders decided that the Texas Plant needed a team-based entrepreneurial approach that included empowered employees and continuous improvement of processes. As part of the transformation process, Corporate fired the corporate vice president who resided at the Texas Plant and hired a vice president from another corporation. This new vice president, David, was considered a maverick, but in his previous positions, he had demonstrated his ability to achieve performance results. In his first month at the Texas Plant, he realized that he needed someone to help him with the organizational transformation. In his usual maverick style, David personally called a headhunter and described the type of organizational development (OD) person he wanted – one with proven capabilities to rapidly transform organizations. Since the Texas Plant's Human Resources (HR) Director reported to the Corporate Vice President of HR as well as to David, the decision was made by David to have the new OD manager report to Harvey, the Plant HR Director. See Chart 1, Appendix B.

Harvey usually had total control over who was hired, promoted, terminated, and disciplined at the Texas plant. However, over his objections and much to his chagrin, his boss, David, corporate vice president over the plant, hired the new (OD) manager, Paula.

# **CHANGING AUDITORS—THE CASE OF CALLAWAY GOLF COMPANY AND ITS FOUR DIFFERENT AUDITORS IN ONE YEAR**

**Allen K. Hunt, Southern Illinois University Edwardsville**  
**Brad J. Reed, Southern Illinois University Edwardsville**  
**Gregory Sierra, Southern Illinois University Edwardsville**

## **CASE DESCRIPTION**

*This case examines a proposed new auditor who is considering accepting a new audit client. The student then searches the professional literature regarding auditor changes. In particular, students are required to research Generally Accepted Auditing Standards (GAAS) regarding changing auditors and the Securities and Exchange Commission (SEC) form 8-K disclosure rules for auditor changes.*

*The case is appropriate for senior level and graduate level auditing courses. The difficulty level of this case is 3 to 5. The case is expected to require three hours of outside preparation and is designed to be taught in one class period. The suggested final product of this case is a short memo where the student evaluates the possible reasons why a company may change auditors as well as the required responses from the auditor when a change in auditors occurs. The case also works well as a discussion vehicle to discuss auditor changes.*

*This case exposes students to a real-world situation derived from Callaway Golf Company's (Callaway) 8-K filing, which documents a disagreement between Callaway and their auditor. (Additional information is taken from Callaway's 10-K and 12B-25 filings.)*

## **CASE SYNOPSIS**

*What circumstances induced a well known NYSE traded company to employ four different auditors in the span of approximately one year? The principal event in this case is a disagreement between Callaway and the auditing firm of KPMG Peat Marwick (KPMG) over the interpretation of and accounting treatment for certain transactions. Although most companies and auditors go to great efforts to keep any accounting dispute private, both Callaway and the previous auditor in this case made the details of their dispute public, providing the public with interesting details on a dispute between a company and its auditor and how accounting standards are often open to different interpretations.*

## **HISTORY**

Callaway is known for making numerous types of golf equipment, including clubs, putters, balls, and drivers. In 1991 Callaway introduced the Big Bertha driver. The Big Bertha

was the first wide body stainless steel “wood” introduced in the golf market. The founder of Callaway Golf, Ely Reeves Callaway Jr., is credited with the idea of a stainless steel golf club taking its name from a World War I German cannon known for its long-distance capabilities. In 1991 Mark Brooks was the first PGA Tour player to use the Big Bertha to win a PGA tournament, the Greater Greensboro Open. The Big Bertha was an instant success and the following year the company went public on the NYSE under the ticker symbol ELY (Callaway website). Callaway continued to innovate, and in 1995 introduced a driver made partially with titanium. Titanium is lighter and stronger than steel and does not rust. Following the success of the titanium driver, Callaway then introduced titanium fairway woods in 1996 (Callaway website). Although titanium has advantages over steel, new materials sometimes increase the risk of product failure and a corresponding increase in warranty costs. In 2001 Ron Drapeau was hired to manage the Odyssey Golf unit, which was acquired in August 1997. In May 1998 Callaway acquired partial ownership in All-American Golf and sold this interest in February 1999 (The Alacra Store website). In 2001 Anna Sorenstam, a Callaway sponsored professional golfer, shot 59 for a sanctioned tournament round record.

In May 2001 Ely Callaway, the Chief Executive Officer and President of Callaway resigned due to failing health and was replaced by Ron Drapeau. Early in 2001 Callaway’s audit committee requested that the company obtain proposals from potential new auditors (Callaway website). Although PricewaterhouseCoopers LLP (PWC) had been the company’s auditor since Callaway’s IPO, PWC was released in June 2001 because Callaway’s audit committee believed that having a new auditor would enhance the auditor’s independence. Arthur Andersen LLP was appointed as the new auditor in June 2001. Other reasons that can prompt the release of an auditor are competence or the need for specialty expertise, when a company has outgrown its auditor, to obtain a lower-cost audit, or when there are disagreements with the auditor over an accounting treatment.

In January 2002 Arthur Andersen admitted to destroying documents related to Enron and then New York and Connecticut announced that Andersen’s license to practice was under review. In March 2002 Arthur Andersen was indicted on criminal charges related to Enron (Rezaee, Hunt and Lukawitz; 2004). Subsequently in March 2002, Callaway dismissed Arthur Andersen due to concerns about the future of Arthur Andersen and was replaced by KPMG.

Concern over earnings management among regulators had been building prior to the Enron debacle. In 1998 Arthur Levitt, Chairman of the Securities and Exchange Commission expressed grave concerns about the growing problem of earnings management and its potential to harm the quality of financial reporting. Mr. Levitt did not limit his criticism to the companies trying to meet analysts’ forecasts: “To many corporate managers, auditors, and analysts participate in a game of nods and winks” (p. 2, Mr. Levitt’s speech). One of the five gimmicks that Mr. Levitt indentified was “Cookie Jar Reserves;” reserving liabilities in good times to be reversed in bad times (p. 4 Mr. Levitt’s speech).

Accounting scandals characterized 2002, whereas other years saw few well-publicized problems. The list of firms with accounting problems in 2002 included Adelphia Communication, Bristol-Myers Squibb, AOL Time Warner, ImClone Systems, Qwest Communications, Baptist Foundation, WorldCom, Tyco, Halliburton, Nicor Energy, Merrill

Lynch, Mirant, El Paso Corporation, CMS Energy, Reliant Energy, Dynegy, Duke Energy, Peregrine Systems and Global Crossing (Sullivan 2006). In response to the Enron fraud and these other scandals, congress passed the Sarbanes-Oxley bill in 2002 to improve corporate governance and financial reporting.

Callaway Golf Ball Company was formed to produce golf balls in 1996 and the first product, the Rule 35 golf ball was produced in February 2000. In 2000 the golf ball company lost \$45.9 million before taxes, much worse than anticipated. Callaway Golf Ball Company merged into Callaway Golf Company in December 2000. Two more models of golf balls were developed for 2001 when the loss before taxes decrease to \$17.9 million. Three more models of golf balls expanded this product line in 2002, but the product line had yet to generate the sales volume necessary to efficiently produce the golf balls and charges related to the acquisition of the production equipment contributed to a loss of \$25.6 million before taxes for this product line in 2002. Callaway disclosed in the 2002 annual report that further write-downs of these assets might be necessary if sales volume continued to be inadequate.

In an unusual move on November 14, 2002; Callaway filed with the SEC a Notification of Late Filing for the September 30, 2002 quarterly statements; which stated the following.

'In the Company's October 17, 2002 earnings release (a copy of which is available on the Company's website at [www.callawaygolf.com](http://www.callawaygolf.com)), the Company announced that it would be voluntarily seeking the guidance of the staff of the Securities and Exchange Commission with regard to the appropriate periods in which to record a reduction in the Company's warranty reserve. The Company has initiated this process but it is not yet completed. The Company expects to receive such guidance, and will file its Form 10-Q, on or before November 19, 2002' (p. 3 Callaway 12B-25).

In December 2002, KPMG was dismissed due to a disagreement over the warranty liability accounting treatment and Deloitte & Touche LLP was proposed as the new auditor. Callaway had always received an unqualified audit opinion on its financial statements (Callaway 8-K, 10-K).

## **ACCOUNTING ISSUE**

At the end of 2001 Callaway had an accrued warranty liability of \$34.8 million (The discussion of the accounting issue presented here is taken from Reed & Rose-Green, 2007). In the third quarter of 2002 Callaway completed a review of its warranty reserves and implemented a new methodology to estimate future warranty obligations. Based upon this new analysis, management determined that the warranty liability was overstated by \$17 million.

KPMG who was the current auditor agreed that the warranty liability was overstated by \$17 million, however, management and KPMG could not agree on the appropriate way to account for the change. Management believed that because the warranty liability was based upon an estimate of future warranty costs, the change in the estimation process used to estimate the warranty liability should be treated as a change in estimate (Callaway 8-K, 10-K).

KPMG, on the other hand, determined through their analysis that a significant portion of the reduction in the warranty liability related to periods prior to 2002, and the Company's

financial statements for these prior periods should be restated for a correction of an error to reflect the warranty liability based upon information that was available to management at the time the prior financial statements were prepared. The following quote indicates the magnitude of the disagreement over the accounting issue that occurred between the management of Callaway and KPMG. “Despite lengthy discussions between management and KPMG, including consultation with the staff of the Securities and Exchange Commission, management and KPMG could not reach agreement on proper accounting treatment.” (Callaway 8-K). The disagreement led to Callaway dismissing KPMG as the company’s auditor and proposing that the auditing firm of Deloitte & Touche LLP perform the 2002 audit. (Callaway 8-K, 10-K). .

### **DECISION**

Bob is an audit partner with the proposed auditor Deloitte & Touche. The CFO from Callaway has requested a meeting with Bob regarding Callaway’s proposal to retain Deloitte & Touche as its auditor for 2002. Bob is aware of Callaway and is excited about the opportunity to obtain such a high-profile client. However, Bob is concerned that Callaway has had three previous auditors in the past year. Bob is aware that the auditing standards identify disagreements with auditors as a fraud risk factor. Bob is unsure if he should recommend to his fellow partners that they accept Callaway as a client.

To understand a proposed auditor’s process of a new-client review write a memo that addresses the following questions. Please support your answers (wherever appropriate) with some actual case examples.

1. What are some of the reasons a company may change auditors?
2. Why would a company feel that a new auditor might be more independent than the company’s current auditor with whom the company has a long-term relationship?
3. Callaway dismissed KPMG regarding a disagreement over an accounting estimate. What do the auditing standards require of an auditor regarding auditing an estimate?
4. What is the relevant section of GAAS that discusses a change in auditors?
5. What does GAAS require of the new auditor when there is a change in auditors?
6. What is a Form 8-K. What is its purpose? What are the rules regarding 8-K’s when there is a change of auditors?

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Table 1 <sup>1,2</sup> Callaway Golf Company Annual Income Statements				
	2002	2001	2000	1999
Net sales	792,064	816,163	837,627	714,471
Cost of sales	393,068	411,585	440,119	376,405
Gross profit	398,996	404,578	397,508	338,066
Selling expenses	200,153	188,306	170,541	131,858
General & administrative expenses	56,580	71,058	70,333	92,478
Research & development expenses	32,182	32,697	34,579	34,002
Restructuring costs	-	-	-	(5,894)
Sumitomo transition costs	-	-	-	5,713
Total operating expenses	288,915	292,061	275,453	258,157
Income (loss) from operations	110,081	112,517	122,055	79,909
Royalty income	1,016	3,231	-	-
Foreign currency gains (losses)	2,046	2,533	-	-
Gains (losses) on deferred compensation plan assets	156	1,462	-	-
Net gain (loss) on sale of securities	95	1,597	-	-
Net gain (losses) on excess energy sales	-	(2,052)	-	-
Other interest & other income (expense)	(63)	378	-	-
Interest & other income (expense), net	3,250	7,149	-	-
Interest & other income, net	-	-	8,791	9,182
Interest expense	1,660	1,552	1,524	3,594
Unrealized derivative gains (losses)	-	(19,922)	-	-
Income (loss) before taxes - U.S.	101,897	75,872	101,890	75,799
Income (loss) before taxes - foreign	9,774	22,320	27,432	9,698
Income (loss) before income taxes	111,671	98,192	129,322	85,497
Income tax provision (benefit)	42,225	39,817	47,366	30,175
Income (loss) before cumulative effect of accounting change	69,446	58,375	81,956	-
Effect of accounting change	-	-	(957)	-
Net income (loss)	69,446	58,375	80,999	55,322

Notes: 1All monetary units stated in millions of dollars. 2Prepared by the authors.



Table 2<sup>1,2</sup>  
Callaway Golf Company Annual Balance Sheets

	2002	2001	2000	1999
Cash & cash equivalents	108,452	84,263	102,596	112,602
Marketable securities	-	6,422	-	-
Accounts receivable (net)	63,867	48,653	58,536	54,252
Raw materials	63,953	67,336	56,936	45,868
Work-in-process	2,550	2,179	1,293	1,403
Finished goods	102,018	105,381	83,453	65,661
Reserve for obsolescence	16,761	7,136	7,720	14,994
Deferred taxes, net	34,519	27,266	29,354	32,558
Other current assets	10,429	20,327	17,721	13,122
Total current assets	369,027	354,691	342,469	310,472
Land and building	100,163	95,220	102,659	100,268
Machinery & equipment	114,635	67,329	60,399	50,942
Furniture, & equipment	79,891	65,300	65,140	64,334
Production molds	26,059	31,371	25,610	22,714
Construction-in-process	5,537	7,025	5,766	5,032
Property, plant & equipment, gross	326,285	266,245	259,574	243,290
Accumulated depreciation	158,945	132,995	124,862	101,076
Property, plant & equipment, net	167,340	133,250	134,712	142,214
Intangible assets, net	103,115	104,467	112,824	120,143
Goodwill	18,202	16,846	-	-
Deferred taxes, net	5,216	20,282	-	-
Other assets	16,945	18,066	40,929	43,954
Total assets	679,845	647,602	630,934	616,783
Accounts payable	18,544	7,892	5,552	11,297
Accrued expenses	151,232	119,232	127,942	125,662
Accrued warranty expense	13,464	34,864	39,363	36,105
Note payable	3,160	2,374	-	-
Income taxes payable	7,649	1,074	3,196	-
Total current liabilities	109,161	101,874	109,306	105,274
Energy derivative valuation	19,922	19,922	-	-
Deferred compensation & other	7,375	8,297	9,884	11,575
Long-term liabilities	-	3,160	9,884	11,575
Capital stock	372,332	420,368	348,555	308,092
Unearned compensation	15	211	1,214	2,784
Retained earnings	439,454	388,609	349,681	288,090
Other comprehensive (loss)	(7,694)	(4,399)	(6,096)	280
Less: grantor stock trust	(134,206)	(206,144)	(98,713)	(93,744)
Less: treasury stock, at cost	130,331	83,874	80,469	-
Total shareholders' equity	543,387	514,349	511,744	499,934
Notes: 1 All monetary units stated in millions of dollars. 2 Prepared by the authors.				

# **ALIBABA: CHANGING THE WAY BUSINESS IS CONDUCTED IN THE INFORMATION ECONOMY**

**Casimir Barczyk, Purdue University Calumet**  
**Gideon Falk, Purdue University Calumet**  
**Lori Feldman, Purdue University Calumet**  
**Charles Rarick, Purdue University Calumet**

## **CASE DESCRIPTION**

*The primary subject matter of this case concerns the changing nature of international business. Secondary issues examined include unique business strategies and issues of corporate governance. The case is written at a difficulty level of three, appropriate for junior level courses. The case is designed to be taught in one class hour and is expected to require six hours of outside preparation by students.*

## **CASE SYNOPSIS**

*The Chinese company, Alibaba, is changing the way global business is conducted. This fast growing B2B company has benefited from the explosion in information technology and has developed a unique business model. This case examines Alibaba's success and how the company is unique from most Western companies. With the explosive growth of Alibaba in China, the company is now ready to expand to the rest of the world.*

## **INTRODUCTION**

Jack Ma is a man on a mission. The Chinese entrepreneur who founded Alibaba and other companies, wants to change the way business-to-business (B2B) is conducted. He wants to develop a platform to support small and medium sized enterprises (SMEs). Alibaba, Taobao, and other Ma creations have already begun to make some wonder how this former English teacher, with an unassuming demeanor, has been so successful, and what the future holds for his companies and the future of B2B activity.

## **HUMBLE BEGINNINGS**

The founder of Alibaba, Jack Ma grew up in the Chinese city of Hangzhou, a city known for its beauty. Hangzhou has been consistently rated the most livable city in China for a number of years. Ma began his work life as a child, acting as a tour guide in order to improve his proficiency in English. Ma's academic skills in math and science were poor; however, he possessed a talent for languages. After graduating from the Hangzhou Normal College, Ma began teaching English. Not satisfied with the salary of an English teacher, Ma began his own

translation business. After a trip to the United States and gaining experience with computers and the Internet, Ma created China's first Yellow Pages company. Ma then started Alibaba in his small apartment and has grown the Alibaba Group into a collection of fast-growth companies including Taobao, Alipay, and Alisoft. While still a humble and frugal man, Jack Ma is building a strong competitive force in the information-based global economy. He is known for not thinking about today or tomorrow, but thinking decades ahead. Jack Ma has a long-term focus which has served him well in becoming one of China's wealthiest individuals. His rise from poverty to prosperity began with a vision, upon which he is constantly expanding.

### **WHAT'S IN A NAME?**

Jack Ma's selection of Alibaba as the name for his company is part of his unique strategy – one mired in symbolism and folklore. How and why did he select such a name? For one, it has a strong identification among people from numerous cultures. It comes from a tale of “The Thousand and One Nights” – a story that featured a poor wood cutter, lots of gold, and 40 thieves.

According to an interview discussion with Jack Ma posted on a company forum, the innovatively driven CEO found himself in a San Francisco coffee shop pondering the word Alibaba. When his waitress came by, he asked what she knew about Alibaba, and she said “open sesame”. Following this, he left the restaurant and asked 30 people on the street if they knew Alibaba. They were people from India, Germany, Tokyo, and China. Amazingly, they all knew Alibaba. They also knew aspects of the tale – open sesame and 40 thieves. Ma asserted that Alibaba was not a thief, but rather, a smart, kind business person who helped his village. What a name, he thought. It was easy to spell and had global recognition. His company would “open sesame” for small and medium size enterprises.

The company's controversial name, one associated with thieves, gives it great depth. It also enables Jack Ma to provide China with a lasting global brand – Alibaba – like the tale, can be identified across many cultures.

From a symbolic standpoint, there is a great deal of power in words with strong, specific connotations that are mapped to an aspect of a company's position. The word, Alibaba, in this case, becomes redefined. According to some experts, this naming strategy is one of the most powerful.

### **THE YAHOO-ALIBABA CONNECTION**

Yahoo was the first Internet company to set up shop in China in 1999. In 2005, it paid \$1 billion and handed over its China operations to Alibaba in return for a 40% equity stake in the Chinese company. This action was heralded by both companies. The cordial relationship between the top gurus at Yahoo and Alibaba was not without problems. Over the years privacy, censorship, and human rights issues became sticking points that led to Yahoo's friendly exchange of cash for ownership rights in Alibaba.

On September 14, 2009 Yahoo sold \$150 million worth of Alibaba shares in part because of a Chinese law that gives the government of China regulatory oversight over mergers that “involve acquisitions of Chinese companies or foreign businesses investing in Chinese companies’ operations”. At the same time, Jack Ma sold 13 million of his shares, slightly less than 5% of his holdings in Alibaba for about \$35 million. It appears that while Yahoo had a good relationship with Alibaba, it did not wish to assume the geopolitical risk imposed by the Chinese government. The stock sale was positively viewed by the Alibaba Group because they wanted Alibaba.com to have broader ownership.

Good relations quickly soured when Alibaba sharply criticized Yahoo for its public support of Google after that company’s conflict with the Chinese government over cyber attacks. The attacks stemmed from the government’s censoring of Google’s search engine results. What happened is that Yahoo aligned itself with Google in condemning the cyber attacks it experienced as a result of hackers in China. John Spelich, the International Affairs chief at Alibaba, says Yahoo’s support of Google was “reckless, given the lack of facts in evidence.” By criticizing Yahoo, Alibaba strained one of the most prominent corporate alliances between a Chinese and an American firm in the Internet industry.

Alibaba and Yahoo have different positions on human rights in China. Yahoo’s management suffered a major smear of its public image when it disclosed account information in 2004 to Chinese authorities about journalist Shi Tao, one of its email users. The information was used to convict Mr. Shi, who was sent to prison for 10 years, for divulging a government document related to a politically sensitive anniversary. Yahoo’s co-founder apologized personally to the family of Shi Tao. Alibaba, on the other hand, flatly stated that it would comply with the Chinese government should there be a conflict between a Yahoo China email user and Beijing in the future. Jack Ma said at the time, “I’m not a political group; I’m a businessman.”

Despite these frustrations, Yahoo retains its stake in Alibaba and Yahoo CEO, Carol Bartz, who took over the company in 2009, said that she has no reason to sell further interests in Alibaba. Yahoo will retain its 39% share in the parent company – Alibaba Group.

## **THE ALIBABA GROUP**

The mission of the Alibaba Group is “to make it easy to do business anywhere.” The company has a set of core values which include putting the customer first; teamwork; embracing change; acting with integrity; developing a passion in employees; and a commitment to serving the SMEs of the world (Figure 1). These core values have helped Alibaba become a successful organization by creating a strong and coherent corporate culture. Perhaps the strongest value is the commitment to customers, especially those customer companies in Alibaba’s target market. Ma feels strongly that the small and medium-sized companies of the world have been underserved and he hopes to level the playing field with Alibaba.

The Alibaba group consists of several companies, led by Alibaba.com. Additional companies include Taobao – an Internet retail website (similar to e-Bay); Alipay – a third party Internet payment company (similar to PayPal); Alisoft – an e-commerce software company; and

China Civilink (which operates in China as HiChina Web Solutions) - an e-commerce firm that provides domain name registration.

**FIGURE 1**  
**Core Values of Alibaba**

1. **Customer First:** The interest of our community of users and paying members must be our first priority.
2. **Teamwork:** We expect our employees to collaborate as a team. We encourage input from our employees in the decision-making process, and expect every employee to commit to the team's objectives.
3. **Embrace Change:** We operate in a fast-evolving industry. We ask our employees to maintain flexibility, continue to innovate and adapt to new business conditions and practice.
4. **Integrity:** Integrity is in the heart of our business as trust is an essential element of a marketplace. We expect our employees to uphold the highest standards of integrity and to deliver on their commitments.
5. **Passion:** Our employees are encouraged to act with passion whether it is serving customers or developing new services and products.
6. **Commitment:** Our employees have a dedicated focus and commitment to understanding and delivering on the needs of Chinese and global SMEs.

Source: Alibaba.com website

The flagship website, Alibaba.com, is vast and offers a wide variety of products from red onions to red dump trucks. On the site businesses can search by product or country, view pictures and specifics of various products, find company contact information, and in some cases even take a virtual company tour. The site is easy to navigate and offers sellers the opportunity to showcase their goods to the world. While suppliers can join Alibaba for free, many more services are available to suppliers who pay to become Gold Suppliers. Gold Suppliers can showcase an unlimited number of products, get earlier access to potential buyers, receive web templates for storefronts, and have access to performance tools to evaluate consumer activity. The company highlights how SMEs have become more successful through their involvement with Alibaba. One example is Doron Sanders' company, Paloma Dead Sea of Israel. According to Sanders, "We generated more than a million dollars in sales in just one week thanks to our Gold Supplier membership!" Another example is Shin Dong-man's company, Nubicom Inc. of South Korea. "Since we joined Alibaba.com in December 2008, we have inked US\$600,000 worth of deals with customers from the USA, Hong Kong and China," said Dong-man. From the

testimonies found on the company site, many SMEs may see the opportunity to greatly expand their business through Alibaba.

Alibaba.com offers a site for businesses seeking customers worldwide. Initially the company acted as a site for Chinese manufacturers to find buyers worldwide but the company has since expanded into other parts of the world catering not only to Chinese suppliers, but also to Indian, Korean, Japanese, and Southeast Asian companies. In addition, suppliers from many other countries have their goods listed on Alibaba. While the company still has a focus on Asian suppliers, Alibaba is moving into Europe and the United States. Ma feels that the business model can work anywhere and is currently heavily promoting the company in the UK. He has begun promoting it in the United States as well. Ma feels that his business can not only help sell China goods to the world, but also allow companies to sell their goods to Chinese buyers.

With the global recession decreasing the demand for Chinese made goods, as well as good made elsewhere, Alibaba has responded by reducing the cost to its Gold Suppliers. After cutting Gold Supplier fees in 2009 by 60%, the number of subscribers rose dramatically. Ma decided to sacrifice short-term profitability for long-term sustainability. Alibaba is a publicly traded stock sold on the Hong Kong Exchange. Listed in 2007 with an IPO of \$1.5 billion, the stock price has shown very good performance (Figure 2).

**FIGURE 2**  
**Alibaba Share Price**



Source: Business Week, August 17, 2009.

While investors are often concerned about short-term results, Ma insists on a long-term perspective, and his priority list is a bit unusual by Western standards. Ma places customers first, followed by employees, and places shareholders last. He is not concerned about how the investment community feels about his approach saying that people can always choose not to invest if they disagree with his strategy. Ma states that he wants “shareholders” and not “share traders.” He wants investors who share his long-term vision for the company. Jack Ma has a

unique perspective concerning stakeholder values and priorities. At a press conference in April 2009 he surprised the audience by apologizing for having made a \$39 million profit over the previous 12 months. Ma said that because of the world-wide financial crisis his goal was to make no profit. To support this goal, he reduced the fees for transactions by 60%. He wanted to support small and medium sized Chinese businesses so that they could survive the recession by continuing to sell internationally.

### **LOOK TOWARDS THE FUTURE**

With the global economic slowdown, profits at Alibaba have declined. Chinese exports, as well as exports from the rest of the world, have declined as global demand has fallen. While some companies would see such an environment as causing a need for reduction, Ma sees it as an opportunity for expansion and is hiring more employees. Ma feels that as travel budgets tighten in the world, companies will forgo trade shows and instead seek more online interactions. He has also begun to expand in the opposite direction by creating Export to China, a system which allows non-Chinese firms to establish Chinese language storefronts to export their products to China. China's economy has suffered with the rest of the world but its economic growth has remained strong, relative to other countries. There is a strong and growing consumer base in China, and Ma hopes to tap into a part of that growth opportunity as well.

With Alibaba.com as the B2B component, Taobao as the retail equal, and the support functions of Alipay, Alisoft, and HiChina, the Alibaba Group seems well positioned to change global purchasing practices. Jack Ma's success is based on hard work, a strong customer focus, and a sophisticated knowledge of market needs. He has competed successfully against eBay in China, attributing his success to knowing the Chinese market better, and employing Chinese business practices. As Alibaba seeks to expand globally it will be necessary to maintain this focus and to adapt to the different business and cultural constraints found in the rest of the world.

### **DISCUSSION QUESTIONS**

1. What do you think of Jack Ma's priority list which places shareholders last? Do you think this approach will work if he seeks capital outside of China? Explain.
2. What are the unique components of Alibaba's business model/strategy?
3. Many successful companies have controversial or provocative names such as Caterpillar, Gap, Virgin, and Yahoo. In what way is the name Alibaba controversial? How does this name advance Alibaba Group's strategy?
4. How would you assess Alibaba Group's reaction to Google's conflict with the Chinese government over its censoring of search engine results?
5. Do you think the future of international business will change as more people become familiar with the Alibaba business model? Explain.

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# **A SYSTEMS ANALYSIS, DESIGN, AND DEVELOPMENT CASE STUDY: WILLIAMS BROS. APPLIANCES INVENTORY & POINT-OF-SALE SYSTEM**

**Terry L. Fox, University of Mary Hardin-Baylor**

## **CASE DESCRIPTION**

*The primary subject matter of this case is Systems Analysis, Design, and Development. For Systems Analysis and Design students, this case provides a realistic, and fairly common, scenario that will require developing process and data models as well as user interface designs for the client. Furthermore, students in a Systems Development capstone course can use this scenario to develop an entire application from the ground up. The case has a difficulty level between three and four, appropriate for junior and senior level students. As a Systems Analysis and Design project, it will require approximately 12-15 hours to complete, outside of the normal course time to discuss process modeling, data modeling, and user interface design. As a Systems Development capstone project, it will require approximately 20-25 hours to complete. Students can examine Interview Notes and realistic document images. Teaching notes are also provided, with a proposed solution using UML.*

## **CASE SYNOPSIS**

*Dr. Thomas Waggoner, an information systems professor at the local university, has just received a phone call from his friend, Ted Williams, co-owner with his brother Will of Williams Bros. Appliances in River Falls, Iowa. Ted is extremely frustrated with their current slow, manual method of processing sales and tracking inventory, and is afraid that they are losing sales because of it. Ted explains what he needs and Dr. Waggoner thinks that this will be a great project for his students. He makes an appointment with Ted to get a better understanding of the initial requirements. He then begins organizing the students in his Systems Analysis and Design class and his capstone class in System Development to see if they can develop a solution for the Williams Bros'.*

## **INTRODUCTION**

"I'll be with you in just a moment!" apologized Ted Williams, co-owner of Williams Bros. Appliances, "Just as soon as I finish writing up this customer's sale."

"It's already been about 20 'moments'," thought the other customer, growing more and more impatient, "Why is it taking so long?"

Unfortunately, this very scenario was played out far too often. Ted, and his brother and fellow co-owner, Will, knew that during a regular weekday they seldom had more than one

customer at a time ready to complete their purchase. However, on Saturdays, as today was, it was more the norm for at least two or three people to be waiting in line to pay for their selection, obtain warranty information, and arrange delivery. If they were having a sale, there could quite possibly be twice that number of customers waiting, growing impatient at the seemingly very time consuming process of writing up the sales order. Every so often, a customer gets tired of waiting and simply walks out the door, taking a potentially profitable sale with them. Just this morning, a lady who had (finally) chosen a top-of-the-line GE Stainless Steel, Side-by-Side refrigerator, decided against the purchase after having to wait more than fifteen minutes for it to be written up. “There goes my daughter’s orthodontia payment this month,” Will muttered, and shook his head. Later that evening after closing, Will broached the topic with his brother. “We have to do something about the way we write up sales – it is taking way too long and we are the customers are getting upset. There has got to be a better way! I think we need to get a computer and automate the way we do business.” Ted quickly agreed, and thought of a friend from the local college who taught in the information systems department. Perhaps Dr. Tom Waggoner might have a suggestion as to how to make things easier and faster.

On Monday morning, Ted called Dr. Waggoner, who thought this sounded like just the type of project he had been looking for to use in his Systems Analysis and Design course as well as his senior-level capstone course in Systems Development which he would be teaching the following semester. They arranged to meet later that week, and Ted, Will, and Dr. Waggoner decided to see what the students could do. Ted and Will were grateful, partly because they believed that an automated inventory and point-of-sale system was precisely what they desperately needed, and partly because they were going to get a custom-designed system at no cost. And Dr. Waggoner was pleased to be able to provide a real-world systems development experience for his students.

## **THE DETAILS**

The students in Dr. Waggoner’s Systems Analysis and Design class were given the responsibility to gather requirements, develop logical process and data models, convert these to physical design models, and create screen and report designs. His Systems Development class in the next semester would then be responsible for taking the design specifications and building and implementing the system. The System Analysis and Design (SAD) students arrange to meet with Ted and Will Williams at their store, partly for the owners’ convenience, and partly to “get a feel” for the business environment. The students asked many questions about the way that sales are currently handled. Below is a summary of their interview notes.

The students asked the Williams brothers how the delivery process took place, and determined that this was primarily a manual process. However, one aspect that Ted and Will mentioned would greatly help is storing information from the Sales form on the computer, and providing a report for each delivery date, sorted by promised delivery time which listed the customer name, address, and phone number, along with the specific items (including product id and serial number) that are to be delivered. Right now, this is done by hand and once in a while a Sales Order form is overlooked when planning each day’s delivery schedule. When the

delivery is complete, the customer will sign the second copy of the Sales Order form which is then filed in the “Sales” folder.

### Williams Bros. Appliances

Current Sales System

Interview Notes

MIS 310

January 11, 20xx

When a customer enters the store (see store layout in Figure 1), they usually browse among the appliances and either Will or Ted will meet them and ask if they can help the customer find something. If the customer is interested in, for example, a stove, Will or Ted will walk them to that area of the store, show them what they have available, and ask if they had something particular in mind. They will answer any questions the customer may have, and then hopefully will “close the sale”. At that point, the customer is asked to follow one of the owners to the Sales Counter. Will or Ted then gets a pad of two-part carbonless Sales Orders (see example in Figure 2) and begins to write down all the necessary information. Each manufacturer has a different coding scheme for the serial number and product number. For example, some manufactures use all numbers whereas other manufacturers use a combination of numbers and letters, such as 18X-Y28Z. Ted and Will have to be very careful when writing down this information so they won’t accidentally transpose the characters.

If the customer purchases any parts with the appliance, such as hoses for a washing machine, the information for each part is also recorded on the sales order. When they thought about it, the owners agreed that writing up the sale was the most time consuming aspect of the entire process. Ted and Will then use a calculator that is (usually!) on the Sales counter to add up the subtotal of all the items purchased. Unless the customer is tax exempt, such as a school, church, or charitable organization, they then refer to a sales tax table that is taped to the Sales counter to calculate sales tax. If the customer is located more than 20 miles away, and if their purchase is less than \$350.00, then there is also a \$15.00 delivery charge added to the sale. The person writing up the sale uses the calculator again to calculate the total amount due from the customer. After a quick check that everything was written correctly, the customer is asked how they would like to pay for the purchase. If the customer pays by cash, Ted or Will recounts the cash, uses the calculator to determine the amount of change due, and remits the change to the customer. If the customer pays by check, they will be asked for their driver’s license number unless one of the owners knows the customer personally. If the customer pays by credit card, whoever is handling the sale will “swipe” the card, enter the appropriate information, wait for an approval code, and write this code on the top of the sales form. They will confirm with the customer the delivery date and time, and write this at the top of the sales form, also. The top copy of the Sales Order form is given to the customer, and the second copy is filed in a “to-be-delivered” manila folder.

Since the day was getting late, the students asked if they could schedule another interview early the next week. On Monday afternoon, the students met with Ted and Will again to talk about the process of receiving new inventory and keeping track of what was in stock. Building on what they learned in the previous interview, each student took their own notes and then met later to summarize and verify that each was consistent. The following is a summary of their collective interview notes.

Williams Bros. Appliances  
Inventory and Point-of-Sale System  
Interview Notes  
MIS 310  
January 18, 20xx

When the owners need to acquire additional inventory, they refer to various manufacturers' catalogs and promotional materials, as well as industry reports and evaluations. They currently stock products from Whirlpool, GE, Kitchenaid, Maytag, Frigidaire, Tappan, Amana, Hotpoint, Roper, White Westinghouse, Sony, RCA, and Toshiba. If a customer prefers to special order a product, they can also accommodate them. Most special orders take 2-3 weeks to arrive.

For regular stock items, Ted or Will completes a two-part carbonless Purchase Order (see example in Figure 3) and mails or faxes it to the manufacturer's regional sales manager. After all the information has been entered, they calculate the extended price for each line item, and total the purchase order. The top copy is sent via mail or fax, and the second copy is filed in the "Ordered Inventory" folder.

When the ordered items arrive, Ted or Will pull the second copy of the Purchase Order out of the "Ordered Inventory" file and confirms that what they received was what they had ordered. If there are any items that are backordered (they ordered something but it didn't arrive with the rest of the shipment) they write a note on the purchase order, make a copy, and place this now third copy back in the "Ordered Inventory" folder. The second copy showing the items that were received is placed in the "Update New Inventory" folder.

Before the end of the day, Ted or Will goes through the "Update New Inventory" folder and records all products they received that day in a three-ring notebook – one notebook for each manufacturer (see example in Figure 4). When a product is sold and after it has been delivered, Ted or Will goes through the "Sales" folder, and for each product that was sold, selects the appropriate inventory notebook, matches the sold item with the listed item based on product number and serial number, and write down the date of the sale in the notebook. At the end of each week, one of the owners will also go through the "Sales" folder, and create a "Weekly Sales Report" of everything that was sold during the week. This report lists the product, manufacturer, product number, serial number, cost, and price. This report is then totaled to provide a record of weekly sales. Ted and Will would like to be able to see sales by product line, and by manufacturer, and would also like to create this report daily, but they just don't have the time.

After the Systems Analysis and Design students completed the interview, they met to discuss their project strategy. What to do next? Dr. Waggoner provided the following requirements:

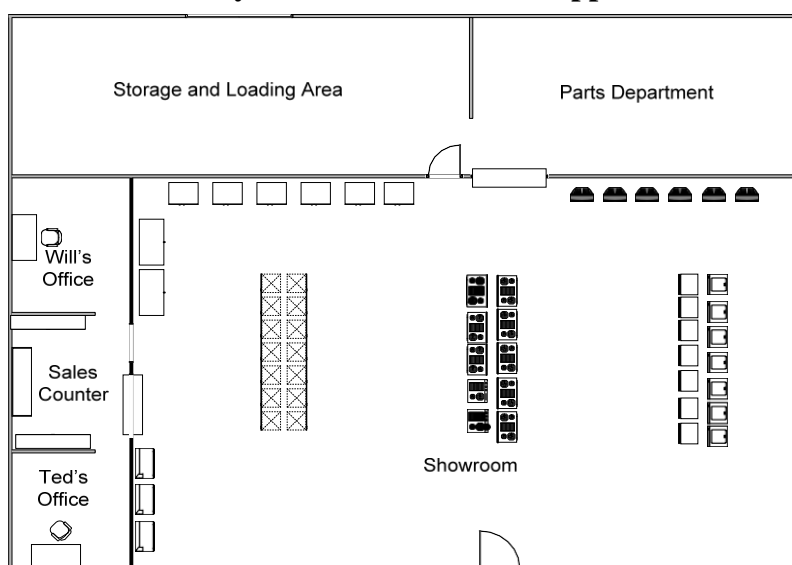
**Requirements for Systems Analysis and Design Students:**

1. Prepare a system proposal that includes an executive summary, the requirements of the system, and identification of your team members.
2. Develop appropriate process models (Use Case Descriptions and Diagram or Data Flow Diagrams – context level, level 0, level 1) per your professor's instructions.
3. Develop the appropriate data model (Class Diagram or Entity-Relationship Diagram) per your professor's instructions.
4. Develop preliminary screen and report designs for each user interface identified above.
5. Prepare a one-page "pre-implementation review" outlining what went right and what went wrong on this project.

**Requirements for Systems Development Students:**

1. Complete the above requirements, or refer to the packet of materials provided by your professor.
2. Using Microsoft Access and/or Visual Basic, develop a comprehensive, user-friendly, working system that will meet the requirements of Williams Bros Appliances.
3. Prepare a user manual describing how to use the system.
4. Prepare a one-page “post-implementation review” outlining what went right and what went wrong on this project.

**Figure 1**  
**Layout of Williams Bros. Appliances**



Williams Bros. Appliances Sales Order

*We thank you for your business!*

### Williams Bros. Appliances Purchase Order

Authored by \_\_\_\_\_

Williams Bros. Appliances Inventory

GE – Refrigerators

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# THE INVESTMENT

Henry Elrod, University of the Incarnate Word

## CASE DESCRIPTION

*The primary subject matter of this case concerns viatical settlements. This case may be used as a student assignment in a variety of college classes: (a) individual income tax, (b) tax research, (c) financial principles, (d) investments, (e) insurance, (f) fraud examination, or (g) an ethics class. Its primary use is intended to be in a graduate or senior capstone in which the students would be expected to examine the case from all perspectives: tax, investment, fraud, and ethics. The case should take the best students two or three hours of analysis and two hours of writing and editing to prepare if the response is a graded paper, but it could be discussed in a class cold—without any prior preparation by the students other than reading through the case—as it deals with relatively simple investment, tax, and ethical ideas with which most students have some basic familiarity. For each possible use, the case offers many teaching points that an instructor may use to lead the discussion. Difficulty level is rated four to five.*

## CASE SYNOPSIS

*Nita Beth and her husband David are middle-America, middle class college graduates with some sophistication in investing. They are confronted by the need to invest for the future, and the opportunity to make an investment with high potential returns. Jacob is dying, and needs cash for his medical expenses. He has life insurance, but how can he get the cash he needs now? A viatical settlement transaction may be the answer for these people. Or, is it?*

## THE INVESTMENT

Nita Beth's real name is Anita Elizabeth Wilson Salazar. She is a college professor in a small town in southwest Oklahoma. Having graduated from Southern Illinois about 15 years ago with a master's in accounting, Nita Beth worked briefly in Houston, while she studied for the CPA exam. About the time she finally passed the exam, she met David.

David Salazar had been a police officer in Houston until he was wounded during a routine arrest. He searched the prisoner but somehow missed the knife, and the prisoner managed to stab David while being put in the car. It was just a fluke, really, but the knife had damaged the sciatic nerves down David's left leg, and it left him in almost constant pain and with a slight limp.

After they met in Houston, and subsequently married, Nita Beth took the job teaching school. It offered a steady income, and good working conditions in terms of hours, dress codes, nice people to work with, etc. The pay would probably never be very high, but it was more than competitive with the pay in the beginning and mid level public accounting jobs in Houston. David had rolled over his 403-B plan from HPD when he retired, and he had his disability

pension. This too was money never destined to be much higher than it was today, with only COLA raises to look forward to, but it was 80% of his pay as a Sergeant on the police force. Both Nita Beth and David were glad that their income was as good as it was, but they both could see that their expenses were going to keep rising over the years, while their total income probably would not change much. That is why they decided to invest the \$85,000 of life insurance proceeds that Nita Beth had received when her dad passed away.

When they talked to the life insurance agent who had brought them the check from the life insurance policy, they asked for his advice on investing. He recommended his friend Tom, who was a part-time real estate broker and part-time investment advisor who rented the office next door. Tom's idea of investment advice was to analyze Nita Beth and David's assets, liabilities and income with a computer program given to him by a life insurance underwriter, and then to recommend products like insurance annuities, life insurance, and conservative mutual funds from companies he represented. For his wealthier clients he had some raw land deals that he had syndicated. Since the Salazars wanted a big percentage return but were too small for the risky real estate deals, and had too little tolerance for stock funds given the bubbles and serious market reverses of the last few years, Tom recommended they invest in a privately syndicated pool of life insurance policies in a transaction called a viatical settlement. Nita Beth and David looked it over, and thought it was a good deal—the best-case scenario showed a 40% return over fewer than five years.

Jacob LeBlanc did not know who transmitted the HIV infection to him, or even if he got it from a person. Jacob did not do drugs—at least not the kind that one injected—and even if he did not always practice “safe sex” he did know who his partners were. At 31, he was still young looking, and always considered himself healthy. Eight years ago, when he had been in a motorcycle accident, he had received a couple of units of blood in a transfusion during surgery. Jacob recovered from the accident, but a few years later learned that he had contracted the HIV virus—maybe from that blood transfusion. He discovered it after it turned to AIDS, when he had a cold and cough that he could not seem to shake. That and some weight loss took him to the Doctor, and a screening test told the diagnostic tale. It was devastating news: the treatment was expensive and did not work particularly well. When he had used all of his vacation and sick time, and the word got out as to why, the company had let him go. He had the COBRA insurance, but it was ridiculously expensive, and his savings were about gone. The prognosis was not good.

Jacob learned from his insurance agent that the group life policy in his COBRA plan could be converted to an ordinary life insurance policy, and the policy could be sold so that Jacob could have a big part of the death benefit up front. He did it, received \$70,000 in cash, paid off his car note, got current with his Doctor bills, and still had plenty of cash for the medicine. He was resigned to his fate, and thought he had made a good deal, considering everything.

Viatical settlements allow insured policy owners to sell their insurance death benefits to investors. The investors then become the owners and beneficiaries of the policies, make premium payments until the insureds die, and collect the death benefits. Investment vehicles for viatical settlement syndication consist of pooling a series of high-premium term and/or ordinary life policies issued on the lives of persons who have been diagnosed with HIV/AIDS or other life threatening illnesses. The price the insureds receive is the present value of the death benefit, discounted at a rate, and over a time, calculated to allow the pool to pay a return on investment, and have enough cash flow to pay its expenses, including the premiums on the policies it buys. This was a win-win-win deal. The insured patients got much needed cash up front, to help pay



for treatment, living expenses and so on. The insurance company sold the policies, which were actuarially underwritten so that the insurance underwriter would make money and pay commissions to the sales people. The investment advisor/syndicator collected commissions from the insurance companies for selling the policies, and collected an annual fee for managing the pool, and the investors were to get nearly spectacular returns.

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