1998

Professor/practitioner case development program - 1998 case studies

American Institute of Certified Public Accountants. Academic and Career Development Team

Assurance Services: ElderCare Assisted Living Case

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Teaching Notes

Introduction

Upon graduation last spring from State University, you decided to join Jenkins & Associates, LLP as a new staff member. Although many of your classmates selected to go with banking institutions or large consulting firms, you thought that your "best fit" was a progressive regional accounting firm. Your decision was primarily based upon the campus interview in which the recruiter from the firm stated that Jenkins & Associates was very forward thinking and was planning to enter into new markets in the near future. The recruiter stated that you would definitely be involved with these new and exciting adventures of the firm as these new services are being developed.

Following your visit to the firm's Chicago office, you evaluated the pros and cons of joining Jenkins & Associates with your other, alternative job offers. After much discussion with your faculty advisor, placement office, and parents you gladly accepted the offer to join Jenkins & Associates, LLP. You also looked forward to the opportunity to live in the big city of Chicago after growing up in a farming community and spending four years in the small university town of State University. Your parents, somewhat concerned, fully supported your decision as to your first professional job upon graduation.

Your Internet and placement office research of various accounting firms revealed that Jenkins & Associates, LLP, founded in 1964, is a medium size professional accounting and consulting firm located in the Midwest with a professional staff of 350 talented individuals. Currently the firm has 15 offices located in five states with its main office located in Chicago, Illinois. Although the firm has been growing steadily the past five years, the partners have been discussing ideas for firm expansion into new services to offer clients. In addition to increasing their traditional accounting, auditing, and tax services with a larger client base, the partners have discussed the possibility of expanding their consulting practice in the areas of litigation/valuation services and also entering into the new area of assurance services as well as forensic accounting.

In a recent annual planning meeting of Jenkins & Associates professional staff held at a golf resort, discussion among the staff focused on what new services the firm could offer in order to expand their services and revenue base. The partners were rather anxious to expand into other services as the firms accounting and auditing revenues have been relatively flat for the last five years. The partners concluded that the market for accounting and auditing services appears saturated, with overcapacity and increased price competition. The general agreement in the meeting was that these new service areas (assurance services, forensic accounting and litigation services) offered major ways for the firm to grow.

Fred Jenkins, co-founder and managing partner of the firm gave a presentation at the annual meeting as to the new assurance services that the AICPA have been presenting at various AICPA conferences. Fred stated that the accounting profession is in a period of transition. The typical services that have normally been offered by accounting firms are rapidly expanding to include many other types of assurance services. In Freds presentation, he provided copies of newspaper articles of examples to stress his point. The articles reported that accounting firms are currently providing services that include: assurance that a drug-testing program works for certain Olympic athletics; assurance that electronic messages are secure and are properly transmitted; and whether musicians are receiving proper royalties for their music.

After a lively discussion as to these new areas of assurance services by the professional staff, one in particular caught Freds eye. This assurance service was entitled "Eldercare". Fred stated that he recently reviewed various U.S. Census statistics as to the aging of America and that maybe a major focus for the firm in the future should be concentrated in the healthcare area. A recent forecast stated that assisted living for the elderly will become a $25 billion industry in the near future. Careful planning is especially critical now since two-thirds of care givers (family members taking care of elderly relatives) also hold jobs, which prevents them from providing the unpaid, full-time family care that has typically been the basis of the nations long-term care system. Besides, Fred stated, "We are all getting older and will need some kind of healthcare service ourselves, so why not evaluate this area as a potential new market for the firm to enter?" Fred also reported that it is estimated that individuals over 65 years of age control approximately $11-13 trillion of wealth. Therefore, with such a large concentration of wealth in this age group, one often reads news reports of various fraud schemes by predators on senior citizens. This Eldercare service could also help protect these individuals from such predators.

Background

In Freds presentation, he reported that the AICPAs Special Committee on Assurance Services (Elliott Committee) has been addressing the assurance needs of customers, as well as the capabilities of CPAs to offer these new services. He stated that the AICPA Committee has identified assurance services as follows:

"Assurance services are independent professional services that improve the quality of information, or its context, for decision makers."

Fred further commented that although this definition of assurance services embraces the traditional audit and attest services, it also includes other services that have unique characteristics. He stated that after much work, the Elliott Committee has identified and developed business plans for an initial set of six assurance services they believe the profession should actively pursue. Two of these assurance services address the areas of Healthcare and Eldercare. The Committee has described the nature of Eldercare service as follows:

"Eldercare is a service designed to provide assurance to family members that care goals are achieved for elderly family members no longer able to be totally independent. The service will rely on the expertise of other professionals, with the CPA serving as the coordinator and assurer of quality of services based on criteria and goals set by the customer. The purpose of the service is to provide assurance in a professional, independent, and objective manner to third parties that the needs of the elderly person to whom they are attached are being met."

Fred concluded that by providing Eldercare services to family members, Jenkins & Associates could provide assurance that the needed care goals of elderly family members are being achieved.

New Initiative

After gathering additional information related to providing Eldercare services, the firm decided to enter into this new market. A committee of the professional staff of Jenkins & Associates spent considerable time and effort in developing a feasibility and firm business plan for offering eldercare services. They carefully analyzed the market for this service in their demographic area of the firms offices by conducting surveys and interviews with current elderly tax clients, physicians, nurses, hospital administrators, and the local Commission on Aging. Jenkins & Associates wanted to make sure that they completely understood the market, in terms of physical need, economic ability, and social desire before entering into the eldercare area.

The firm selected five professional staff members, including you, that have expressed an interest in this new market of Eldercare to begin staffing this new segment of the firm. John Fisher, a new partner with the firm, agreed to head up this new service area along with two managers that have audited a few local hospitals and two staff members. The firm also hired, on a consulting basis, a physician and a registered nurse with expertise in geriatric care. After attending several conferences and professional development courses associated with Eldercare and discussions with their consultants, Jenkins & Associates was ready to market their new service.

Following the development of the technical competencies for offering Eldercare services by the selected professional staff, the marketing segment of the firm prepared pamphlets that described Jenkins & Associates and the new professional services the firm will be offering to clients in the area of eldercare. These pamphlets were mailed to existing tax clients, local physicians, hospitals, attorneys, churches, local agencies on aging, and trust officers at various banks in the communities served by Jenkins & Associates. In a manner of days, the firm was receiving inquiries about this new service.

First Eldercare Client

On Tuesday morning, Fred Jenkins was very excited during coffee break. He reported to the partners that he had just received a phone call from Bob and Mary Anderson concerning Eldercare services. The Anderson family has been a long time tax client of Jenkins & Associates. From the new pamphlet they received from Jenkins & Associates that presented their new eldercare services, the Andersons concluded that this was exactly the type of service they needed for Bob's elderly mother.

The Andersons grew up in the Chicago area and met at college. Shortly after graduation they were married and headed off to California to pursue their professional careers. Becoming discouraged with their jobs and the distance from family, Bob and Mary decided to move closer to Home and become entrepreneurs by starting their own firms. Currently Bob and Mary Anderson, with their two junior high school children, live in an upscale neighborhood ten miles south of St. Louis, Missouri. Both have very successful professional careers in the St. Louis area. Bob has his own architectural firm and Mary owns a floral shop. Due to their busy schedule with work and children, the Anderson family has only been able to visit grandparents approximately twice a year.

Bobs elderly mother, Esther, who turned 73 on her last birthday, lives by herself in a Chicago suburb after the recent death of her husband. She is an insulin-dependent diabetic and has a tendency to be self-isolating. Over the past three months Esther has been forgetting to daily check her blood sugar level and to follow the proper diabetic diet. She states it is just too hard to cook for one person so she has resorted to eating snacks and frozen dinners. Recently Esther got lightheaded (a common sign of a low blood sugar level), fell and broke her hip and two ribs. She is currently recovering well in a local medical care facility near her own home. After physical therapy, that should last approximately 5-6 weeks, Esther is very determined to return to her own home for her normal "peace and quiet".

After the call from the emergency room concerning Esthers accident, Bob and Mary worry about the type of care she is currently receiving at the medical care facility. This incident has also raised the concern of Bob and Mary as to what the future possibilities are for Esthers living and eldercare arrangements since it is impossible for them to take weekly trips to check on mom. The doctor states that Esther, due to her age, will never be able to completely recover from her fall, and Esthers physical therapist does not feel Esther could return to her home alone due to the fact that her entrance to her home has steps. Bob and Mary are also concerned about Esther's increased forgetfulness and lack of motivation to follow a diabetic diet. They fear that if Esther returns home alone she may cut-off all contact with the outside world and not have anyone to call on if she needs any kind of assistance.

Additionally, in a recent phone call from Bob, Esther was very emphatic in her refusal to move to St. Louis. She also told Bob that she would like to have an "advance directive" prepared as to her own healthcare needs. These major concerns have resulted in the phone call by Bob to Fed Jenkins as to the request for his firms eldercare services. The Andersons are hopeful that Jenkins & Associates can provide them assurance as to the eldercare services that Esther is currently receiving as well as future care for mom.

In the phone conversation with Bob Anderson, Fred stated that the Andersons are interested in entering into an engagement with Jenkins & Associates whereby the firm would render the appropriate Eldercare service for Bobs mother. Bob is aware of the different types of healthcare facilities and would first like Jenkins & Associates to advise him as to the appropriate facility alternatives for Esther considering her current financial estate. The Andersons are finding it difficult to evaluate various facilities as to proper certification and financial viability. The alternative facilities that Bob has read about and proposed for Esther include: a nursing care facility (skilled nursing center); an assisted-living facility; an adult foster-care Home; or living in her own home with proper supervision and assisted living services.

In further discussion with Esthers doctor and physical therapist, a future time line as to living arrangements for Esther was developed. The Andersons believe that Esther will be able to live in her present home for approximately another two years. She then would need additional care, which would require a move to an assisted living facility for the next two years of her life followed by two years in a skilled nursing facility.

Further questions raised also focused on Medicare coverage for Esthers current stay in the skilled nursing facility. Another concern of the Andersons was a newspaper article they recently read which reported that the Balanced Budget Act of 1997 will definitely change long term health care in the area of services delivered as well as the quality of those services.

On Tuesday afternoon, Fred arranged for a meeting with the five staff members assigned to eldercare professional services. He briefed them as to his phone conversation with the Andersons and to the request for the firms services. Fred reviewed his notes as to the phone call and presented to the team the following questions to be discussed at next weeks scheduled meeting for this new assignment.

Issues and Questions

1. Bob is requesting from Jenkins & Associates a brief proposal as to what type of services the firm can offer in the area of Eldercare for Esther. Fred Jenkins has asked you to prepare a draft for this proposal.
2. As to the services identified in question #1, which service(s) do you believe the CPA has the expertise to offer?
3. As the professional accountant enters into this new area of eldercare, do you foresee any legal liability issues? As a CPA, what might one do to minimize their liability exposure in the eldercare area?

Assuming Jenkins & Associates obtains the engagement with the Andersons, answer the following issues/questions:

4. Prepare a draft of an engagement letter that you would present to Bob Anderson. (Two sample engagement letters are available which need be modified for the specific services rendered in this engagement. Sample A, Sample B).
5. Provide a projected overall budget for the next six years to present to Bob and Mary Anderson for Esthers care. (NOTE: The Andersons estimate Esthers living arrangement time line as follows: the next two years at Home, followed by two years at an assisted living facility and then two years at a skilled nursing facility).
6. As an addendum to your report in #5, comment briefly as to the impact that the Balanced Budget Act of 1997 will have on long-term health care as raised as a concern by Bob Anderson.
7. Bob is also requesting your advice as to the advantages and disadvantages of an "advance directive" that Esther is demanding in her discussions with Bob and Mary.
8. Assuming Esther was living in your own community, prepare an inventory of organizations and services available in your community for a senior citizen living in their own home that needed assisted living services.
9. For those home organizations offering eldercare services as identified in #8, how would you measure the performance of their services as they render the service to Esther?
10. As Esther becomes more care dependent and moves to the assisted living and skilled-nursing facilities, how would your measure the performance of care (services rendered) at these facilities?
11. What are the professional standards that apply when offering Eldercare services?
12. What skills or competencies are necessary for individuals to possess as one enters this expanded market of assurance/eldercare services?
13. After gathering information as to this case and as you reflect on the issues, what are your personal thoughts of a CPA entering into this new market area of Eldercare Services?

Engagement Letter Example A:

APPENDIX 14C-1 ILLUSTRATIVE ENGAGEMENT LETTER- CARE SERVICES [CPA'S LETTERHEAD] [Date]

[Client's name and address][1]

We are looking forward to working with you to coordinate and oversee the care of your mother, Mrs. Katherine Smith. We know your mother's care is important to you, and our service is designed to provide you with the comfort of knowing that her needs are being met. This letter highlights the steps involved in developing, implementing, and maintaining a care program for your mother. It also outlines our understanding of the terms and objectives of our engagement.

It is our understanding that you wish for Mrs. Smith to have an in-Home companion sitter stay with her for approximately four hours per day, seven days a week. We will first provide you with a list of placement services that provide companion-sitters. We will ask you to review the list and let us know which, if any, you prefer. Once you have selected a placement service, we will conduct interviews of potential candidates. After narrowing the number of candidates, we will introduce them each to Mrs. Smith. We will report to you on Mrs. Smith's preferences and the candidate's required financial arrangements so that you can make the final hiring decision. Some of the placement services that we will recommend are also tax and accounting clients of our firm.[2] So that you are fully aware of these relationships, we will indicate in our list those that are our clients.[3] It is our understanding that you wish for the sitter to provide the following services:

1. Transportation as needed.
2. Shopping as needed.
3. Meal preparation (lunch and dinner).
4. Personal care and exercise, as requested by Mrs. Smith.
5. Arranging doctor's appointments as necessary.
6. Ensuring that medications are available and taken as prescribed.
7. Responding as necessary in the event of medical emergencies and contacting our firm as soon as practical.
8. Contacting our firm to make arrangements for unusual or unexpected (nonemergency) circumstances, such as Home maintenance needs.

It is our understanding that cleaning and housekeeping services will not be required, nor will yard maintenance services, because Mrs. Smith already has arrangements for these. If you wish for us to assist you in coordinating these services in the future, please notify us.

Monthly, we will require a report from the companion/sitter service verifying that the sitter(s) was (were) present during the agreed-upon times each day and summarizing the services performed by the sitter(s). Every three months, beginning with September 30, 19xx, we will perform certain agreed-upon procedures you deem necessary for you to assess the quality of the sitter's services.[2] As part of these agreed-upon procedures, our assigned staff person will visit Mrs. Smith in person at least once per week and will contact her by telephone at least twice per week. We will provide you with a copy of the service's report, and we will report to you our findings as a result of our procedures. Our agreed-upon procedures are detailed in the separate letter dated [date].

It is our understanding that you will arrange for our firm to have check signing authority for Mrs. Smith's checking account with ABC Bank. All bills will be mailed to us, forwarded to us by you, or picked up during our weekly on-site visit to Mrs. Smith's Home. We will make disbursements as necessary for all amounts of $300 or less. We will make no disbursements exceeding $300 without prior written authorization from you. The monthly statement for this account will be mailed to you, so we will not perform a monthly reconciliation of the account. That will be your responsibility. Also, since Mrs. Smith's retirement and social security checks are direct deposited, we will be unable to verify their deposit. This will also be your responsibility. If in the future you wish for us to assume those responsibilities, please notify us. We will submit to you monthly a listing of disbursements made.[4]

In making disbursements, we will be relying on the accuracy and reliability of information provided. We will not audit, examine, or review the information. Please also note that our services cannot be relied on to disclose errors, irregularities, or illegal acts, including fraud or defalcations, that may exist. Our firm's maximum liability to you for any reason relating to our services under this letter shall be limited to fees paid to our firm for our services under this letter. In addition, you will indemnify and hold harmless our firm and its personnel from any claims, liabilities, costs, and expenses relating to our services under this letter, except to the extent finally determined to have resulted from the gross negligence or willful misconduct of our firm. We reserve the right to terminate this engagement at anytime. In the event that termination on our part is necessary, we will notify you in writing.[5]

Professional standards preclude us from disclosing client information without your specific consent. It is our understanding that we have your permission to disclose information about Mrs. Smith's care needs to third parties as necessary in arranging for her care. Such disclosures, if any, will be limited to information necessary for the care provider to provide effective care.

We estimate that our fees for these services (excluding our agreed-upon procedures services) will range from $___ to $___ per month. You will also be billed for travel and other out-of-pocket costs such as report production, typing, postage, etc. Additional expenses are estimated to be approximately $.. per month. The fee estimate is based on anticipated cooperation from you in completing forms as necessary, making documents available upon request, and communicating with us as necessary. The fee estimate does not include additional time or costs that we may incur due to unexpected circumstances. If significant additional time is necessary, we will discuss it with you and arrive at a new fee estimate before we incur the additional costs. Our invoices for these fees will be rendered weekly [monthly] and are payable on presentation. In accordance with our firm policies, our services may be suspended if your account becomes days or more overdue and will not be resumed until your account is paid in full.[6]

During the course of our providing services, disagreements may arise between you and Mrs. Smith as to what type of assistance she needs. It is our understanding that such disagreements will be resolved by you and Mrs. Smith, and that the resolution will be communicated to us.[7]

We appreciate the opportunity to be of service to you and believe that this letter accurately summarizes the significant terms of our engagement. If you have any questions, please let us know. If you agree with the terms of our engagement as described in this letter, please sign the enclosed copy to confirm your understanding, and return it to us.[8]

Sincerely,

[Signature of CPA]
RESPONSE:
This letter correctly sets forth the understanding of [Client's name].
Client's signature: ____________________________
Date: ______________________________________

Notes:

1. The client may be the elderly person in need of care, or it may be family members who wish to arrange for the elderly person's care. This letter assumes the client is a family member arranging care for an elderly parent. Also, the description of services in this letter should be modified as appropriate to reflect the services that will be provided in the engagement.
2. The CPA must be independent to provide agreed-upon procedures or other attestation or assurance services.
3. As discussed in Section 1425, the practitioner should disclose any conflicts of interest.
4. If the sitter is to be paid directly by the care provider, the following might be added:
   We will also make payroll disbursements to the sitter and prepare the necessary payroll reports. The amount paid to the sitter will be in accordance with the financial arrangements approved by you.
5. The list of disbursements can simply be a list of transactions. If the list includes both receipts and disbursements and is presented in the form of a financial statement, the practitioner must comply with the compilation requirements of SSARS No. 1. PPC's Guide to Compilation and Review Engagements provides guidance and illustrative reports.
6. This is an example of an indemnification clause that firms might consider including in their engagement letter. As discussed in Section 920, practitioners may choose to add additional language, such as this or alternative dispute resolution, to minimize their liability. Before including such clauses, however, firms should consult with both legal counsel and their insurance carriers. Practitioners may refer to PPC's Guide to Managing an Accounting Practice and Guide to Audits of Small Businesses for a more detailed discussion of protective language in engagement letters.
7. Some CPAs believe this sentence provides some protection against liability for breach of contract should they not complete the engagement because of nonpayment.
8. As discussed in Paragraph 1425.14, the letter should describe how such disagreements will be resolved.
9. Some CPAs prefer not to obtain an acknowledgment, in which case the letter would omit this sentence and the spaces for the acknowledgment.

Engagement Letter Example B:

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APPENDIX 14C-2 ALTERNATIVE ENGAGEMENT LETTER-CARE SERVICES[CPA'S LETTERHEAD] [Date]

[Client's name and address]

We are pleased that you have selected our firm to provide professional accounting services. This agreement contains the general terms of the nature of these services, which are described in the following paragraphs. These services will be performed for your mother, [name of care recipient]. It is our understanding that, because your mother is in the final stages of Alzheimer's disease, each of you have been granted Power of Attorney for your mother.[1]

Personal finances. We will handle all of your mother's personal finances, which will include preparing checks for payment of all personal and household bills. All checks will be mailed to [name] for review and signing and will be returned to us for distribution. We will deposit all monies mailed to your mother directly into her checking account. Mail will be picked up from her Home periodically, not less than biweekly. We will reconcile her bank account monthly and transfer cash from her investment account when necessary.

Investments. We will monitor your mother's investment account at [name of brokerage firm] in [location of brokerage firm] and will review any changes recommended by her investment adviser, [name of investment adviser]. We will assist [name of investment adviser] in planning her income and cash needs.

Contracts. We will handle all communications with attorneys, lessors, and agents concerning oil leases, rents, timber sales, and any other agreements to which your mother is a party. We will send all contracts to [name], who will sign as Power of Attorney and will make any decisions related to use of your mother's property.

Sitters. We will supervise the sitters whom you have hired to care for your mother. We will schedule their hours, prepare their paychecks, and monitor their performance through household visits and telephone communication. We will report any problems to you and will assist you in finding replacements when necessary.

Medical. We will monitor your mother's medical care and will communicate to you any significant changes in her condition. We will represent you in consultations with her doctors, home health agencies, and hospice, and will advise you of any change in treatment that may require your consent. We shall use as our guidelines the Advanced Directive that you have executed.

Taxes. We will prepare and send to you for signature all tax returns including federal and state income tax returns, quarterly payroll reports, W-2's, and other year-end reports. We will also do tax planning and prepare and file quarterly estimates when required.

Household and auto maintenance. We will oversee the normal maintenance of your mother's home, auto, and yard including supervision of [name of maintenance person]. We will notify [name] when minor repairs are needed arid will contract out services that they are unable to perform. We will obtain bids for major repairs costing more than $500, and these will be referred to [name] for her decision. We will also contact [name] before replacing any equipment.

Insurance. We will monitor your mother's insurance coverage, including homeowner's, auto, medical, and liability policies, to ensure that premiums are paid when due. We will prepare all claims under her policies and consult you about any recommended changes in her coverage.

Consent. Professional standards preclude us from disclosing client information without your specific consent. It is our understanding that we have your permission to disclose information about your mother's care needs to third parties as necessary in arranging for her care. Such disclosures, if any, will be limited to information necessary for the care provider to provide effective care.

In summary, our services will include oversight of all of your mother's finances, her household, and her personal care. Our fees will be charged at our hourly rates and will be dependent on the time required to perform the services. When possible, certain services, such as clerical and bookkeeping services, will be assigned to a staff member with a lower hourly rate. Our fees are expected to range between $ ___ and $___ per month. The fee estimate is based on anticipated cooperation from you in completing forms as necessary, making documents available upon request, and communicating with us as necessary. The fee estimate does not include additional time or costs that we may incur due to unexpected circumstances. Our invoices for these fees will be rendered weekly [monthly] and are payable on presentation. In accordance with our firm policies, our services may be suspended if your account becomes days or more overdue and will not be resumed until your account is paid in full.[2]

During the course of our providing services, disagreements may arise among you as to what type of assistance your mother needs. It is our understanding that such disagreements will be resolved by you and that the resolution will be communicated to us.[3]

If this letter correctly expresses your understanding, please sign the enclosed copy where indicated and return it to us. [4]

Sincerely,

[Signature of CPA]

RESPONSE:

This letter correctly sets forth our understanding.

Signature__________________________ Date__________________________

Signature__________________________ Date__________________________

Signature__________________________ Date__________________________

Notes:

1. Because the structure of care service engagements is flexible, this letter presents an alternative to the illustrative engagement letter in Appendix 14C-1. This letter, for example, lists different types of services. Also, the letter in Appendix 14C-1 anticipates that agreed-upon procedures will be performed and periodic reports on the quality of care will be provided. This letter, on the other hand, assumes that problems will be communicated on an exception basis. Either approach is appropriate. As discussed in Section 1430, the structure of the engagement will depend on the needs of the family members and the preferences of the practitioner.
2. Some CPAs believe this sentence provides some protection against liability for breach of contract should they not complete the engagement because of nonpayment.
3. As discussed in Paragraph 1425.14, the letter should describe how such disagreements will be resolved.
4. Some CPAs prefer not to obtain an acknowledgment, in which case the letter would omit this sentence and the spaces for the acknowledgment.

Engagement Letter Example A:

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Engagement Letter Example B:

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AICPA, Statements on Auditing Standards No. 75, *"Engagements to Apply Agreed-Upon Procedures to Specified Element, Accounts, or Items of a Financial Statement"*.

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Programming:
Norman B. Cregger, MBA - Central Michigan University, 1998

HARDKEY INCORPORATED: A MERGER VALUATION CASE

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BACKGROUND

Meet Clark Shine, CPA. In several weeks Clark will sit for the AICPA examination to earn the credential of "Accredited in Business Valuation" (ABV). He believes that this accreditation, along with his good reputation, gives him an advantage in this rapidly expanding market segment. Another reason that he and many other CPAs have entered this area is their reputation for objectivity and independence. Many CPAs believe that this cornerstone of the CPA profession provides the user of the valuation report extra confidence in the validity of the product.

Clark is sitting at his desk reviewing the financial statements (see pages 6 and 7) of HardKey, Incorporated (HardKey). He has just wrapped up the quarterly review of a different company and is happy to be mailing the statements only two weeks after the balance sheet date of July 31. Currently, he is in the early stages of a business valuation engagement for HardKey. This company is in the process of merger negotiations with Manufacturing Enterprise Co., Ltd. (Manufacturing). He is working on a valuation report for the purpose of estimating the value of 100% ownership interest in HardKey as of June 30, 1997. HardKey is currently an affiliate of Manufacturing. As Clark looks over these financials, he also ponders on the difference between business valuation and the other "accounting" work that he has been involved in. Specifically, he is thinking about the relative subjectivity of this area and how little his college training, and even a lot of his work experience, has prepared him for this type of work.

HardKey imports and distributes computer components, principally keyboards, manufactured in the Republic of China (Taiwan) to customers located in the United States, Canada and Europe. Manufacturing makes the computer keyboards in Taiwan. Currently, HardKey is affiliated with this foreign corporation through a common stockholder. HardKey designs, imports and packages the keyboards for delivery to its customers. Thus, HardKey is engaged in light manufacturing and distribution of computer components.

HardKey was formed in 1988. In 1989, HardKey began supplying keyboards to catalog computer retailers such as Compaq and Dell. Since 1991, Dell has been HardKey's largest customer, currently constituting 70% of HardKey's sales.

HardKey developed its competitive strategy around a two-pronged plan of action: First, it sought to differentiate its products by manufacturing and importing computer components of consistently superior quality. Second, it collaborated with its customers in the design and development of new keyboard models. By providing skilled design engineers to work with its customers, HardKey believed that it could reduce design lead times. In addition, HardKey has attempted to solidify its position in the industry by increasing its market share. Toward that end, it has increased sales by approximately 100% from 1994 to 1997. Manufacturing Enterprise, Ltd. has provided approximately 95% of HardKey's computer keyboards since 1991. Because of the partial common ownership that exists between the two companies, procedures have been implemented to ensure that prices paid to Manufacturing are competitive with prices available through other manufacturers.

Quotes, invoices and payments between HardKey and Manufacturing are denominated in U. S. dollars, HardKey's functional currency. Price quotes and related invoices are based upon the current exchange rate between the U. S. dollar and the Taiwanese dollar on the date quotes are obtained. Any subsequent fluctuation in the exchange rate between the time of quotation and the time of shipment is considered an adjustment to the product and is borne by HardKey. Currency fluctuations occurring between the time the amount payable is recorded and the subsequent payment (which, pursuant to the agreement between HardKey and Manufacturing, could be as long as 60 days) is borne by Manufacturing. These payment patterns introduce a foreign exchange exposure (risk factor) into the valuation puzzle.

HardKey believes that it has developed an effective competitive strategy of differentiation through close customer contact/dependence in the initial design phase and overall superior quality assurance in the manufacturing phase of its products. While limited in total number, the Company's management and trained workforce weigh favorably in the consideration of company-specific risk in this engagement. The success of HardKey has resulted in the management of Manufacturing becoming interested in acquiring HardKey or merging the two companies. This has resulted in the need for the business valuation of HardKey.

As Clark ponders over this engagement, he wonders about the future prospects of HardKey as a stand alone corporation. In particular, a severe price war in the consumer PC market has resulted in new category of sub-$1,000 PCS. Given that the major PC manufacturers (which purchase HardKey's components) must still turn a profit, the continuing price war does not suggest improved profitability for commodity suppliers.

THE MERGER VALUATION AND RELATED ISSUES

As mentioned earlier, Clark's analysis and summary appraisal report should be prepared for the purpose of estimating the value of 100% ownership interest in HardKey.

Standard of Value

In this engagement Clark determines the appropriate measurement standard to be "fair market value" (FMV). This widely recognized standard of value is defined as "the amount at which property would change hands between a willing seller and a willing buyer when the former is under no compulsion to sell and the latter is under no compulsion to buy, and both parties have reasonable knowledge of all relevant facts" (Revenue Ruling 59-60). This definition implies that the value arrived at is the most probable price in cash or cash equivalent that would be paid if the property was placed on the open market for a reasonable period and generally assumes the existence of a noncompetitive covenant. While other standards of value exist, the FMV is still the most commonly used standard of value (Pratt et al. 1996) and is best suited to this scenario.

General Approach

Clark has decided that his approach should be to determine an estimate of value that will provide a fair and reasonable return on investment to the current stockholders of HardKey, considering the facts available at the time of this report. His estimate will be based upon, among other things, an assessment of the risks facing HardKey and the return on investment required on alternative investments with similar levels of risk.

As of the valuation date and since its incorporation, HardKey has been a closely held, private corporation. Closely held corporations are, by definition, entities whose shares are owned by a relatively limited number of stockholders. Consequently, there is little trading and no ready public "market" exists for the stock. The value of the company must therefore be determined by an objective and thorough appraisal of the enterprise. Various recognized valuation methods are described below and the most appropriate method is selected.

BUSINESS VALUATION ENGAGEMENTS — OBJECTIVES AND METHODS

The most commonly used valuation methods are:

- Earnings-based (income) approach.
- Market (comparable sales) approach.
- Asset-based (assets adjusted to fair-market or liquidation value) approach.

The decision as to which methodology is most appropriate in a particular engagement is based upon many factors. Examples include:

Earnings-based (i.e., income) methods are normally employed, or given primary emphasis, when a company —

- Expects current operations to continue in the future and the results (i.e., profits) can be reasonably estimated based upon either historical earnings or forecasts of future activity.
- Maintains a consistent, predictable customer base.
- Produces distinctive products or provides services that might give rise to significant intangible value (i.e., goodwill).
- Employs key management and/or specialized technical personnel who cannot be readily replaced.
- Has developed specialized products or processes that are not easily reproduced.

Market-based methods are employed when —

- Analyzing recent sales of comparable assets or business ventures can be used to develop reasonable estimates of value.
- Guideline companies, which are economically similar to the company being valued, can be identified and these companies trade in one of the public markets.

Cost-based (i.e., asset) methods are employed when a company —

- Exhibits an earnings history that is small compared to the size of its tangible asset base or the earnings cannot be reasonably measured.
- Creates little or no value added to the company's products or services through the application of labor or materials provided directly by the company.
- Experiences no consistent, predictable customer base.
- Requires little or no specialized labor base or exhibits no intangible assets.
- Retains a significant portion of its assets in very liquid or investment-type assets in lieu of tangible property used for production or delivery of a service.
- Realizes relative ease of entry into the industry, and has little need for specialized or highly trained personnel.
- Considers the possibility of closing its business activities and liquidating its assets to be imminent.

Considering the approaches outlined above, and information pertaining to HardKey and its business operations, Clark decides that the most appropriate set of methods to consider in this engagement are the earnings-based methods.

Valuation Methods Selected

The primary value of HardKey is derived from its ability to generate future earnings from continuing operations. The two basic approaches are historical and forecasted earnings methods. Each of these methods is described briefly as follows:

Capitalization of historical earnings — This method is used when a company's historical earnings can be accurately measured and are considered to be indicative of returns expected from future operations (assuming some normalized growth rate). This method also assumes that a company's earnings are more important than its underlying assets. The process of estimating value by this method requires:

- Adjustment (i.e., normalization) of historical earnings for unusual elements of income or expense which are not expected to be repeated in the future. [The financial data provided below have already been adjusted]
- Development of an earnings capitalization rate.

Once normalized historical earnings are determined and a capitalization rate is developed, the valuation estimate is determined by dividing the weighted historical earnings by the capitalization rate.

Discounted future earnings — This method is employed when future earnings or cash flows can be reasonably forecasted. This method requires development of the financial discount rate for the company, establishment of a projected earnings period, and estimation of a final (or terminal) value for the company.

Note to the student:

Your instructor may provide either the discount rate or the information needed to estimate the rate. Alternatively, your instructor may direct you to research (justify) and use an appropriate method of determining a discount rate. In addition, your instructor may provide a comprehensive example employing both the capitalization of historical earnings and the discounted future earnings methods.

Provided below are selected financial statement data for HardKey between 1991 and 1997.

FINANCIAL STATEMENT DATA

HARDKEY INCORPORATED
SELECTED NORMALIZED INCOME STATEMENT DATA (IN THOUSANDS OF $)
FOR THE YEARS ENDED JUNE 30, 1991 – 1997

	1991	1992	1993	1994	1995	1996	1997
Net Sales	11,986	24,045	30,615	26,861	37,202	45,193	54,727
Cost of Goods Sold	10,642	21,915	27,325	25,246	33,017	41,680	52,512
Gross Profit	1,344	2,130	3,290	1,615	4,185	3,513	2,215
Operating Expenses	1,144	1,594	1,735	1,429	1,856	2,037	2,427
Operating Income (Loss)	200	536	1,555	186	2,329	1,476	(212)
Other Income	10	27	12	14	30	31	91
Other Expenses	16	104	42	3	0	54	81
Net Income (Loss)	194	459	1,525	197	2,359	1,453	(202)

HARDKEY INCORPORATED
SELECTED HISTORICAL BALANCE SHEET DATA (IN THOUSANDS OF $)
JUNE 30, 1991 — 1997

	1991	1992	1993	1994	1995	1996	1997
Cash & Marketable Securities	39	898	797	694	777	1,740	1,351
Receivables, net	3,609	5,140	3,935	1,827	6,472	5,712	11,985
Inventories	1,349	2,857	4,434	3,679	4,611	4,309	5,041
Other Current Assets	18	173	0	272	459	476	476
Total Current Assets	5,015	9,068	9,166	6,472	12,319	12,237	18,853
Property & Equipment, net	199	283	160	112	148	754	904
Other Assets	25	63	290	456	296	505	1,326
Total Assets	5,239	9,414	9,616	7,040	12,763	13,496	21,083
Current Liabilities	3,538	8,370	8,328	5,999	12,166	12,145	20,110
Long-term Liabilities	1,069	31	14	0	0	701	525
Total Liabilities	4,607	8,401	8,342	5,999	12,166	12,846	20,635
Contributed Capital	251	251	251	251	251	251	251
Retained Earnings	381	762	1,023	790	346	399	197
Total Stockholder's Equity	632	1,013	1,274	1,041	597	650	448
Total Liabilities and S.E.	5,239	9,414	9,616	7,040	12,763	13,496	21,083

QUESTIONS

1. HardKey has clearly been successful at increasing sales. However, there are other factors to consider when evaluating a company's profitability. What are these factors generally? Also, to what extent are these other factors important in this case?
2. Why are the Earnings-based methods most appropriate for HardKey? (Hint: Focus on specific aspects of the case that indicate the relative desirability of the various methods.)
3. Using both the Capitalization of Earnings and Discounted Future Earnings methods, what is the value of the company? What are the most important underlying assumptions used in arriving at this amount and how would you justify your assumptions?
4. What factors should affect the determination of the appropriate discount rate?
5. What business problems/issues would the newly formed entity face? What potential advantages and disadvantages does the merger provide in dealing with these problems/issues?
6. What are the legal liability issues facing the CPA who renders the valuation report?
7. How can the CPA best protect himself/herself against legal liability in such engagements?
8. Should the CPA be involved in such business valuation engagements? What are a CPA's competitive advantage (or disadvantage) on this type of engagement?
9. What potential impact does the use of a foreign currency have? What might management do about the associated risks?
10. What are the pros and cons of working with customers in designing product? What characteristics of HardKey's industry are particularly relevant?

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OPPORTUNITIES AND RISKS IN CPA ASSURANCES COMPUTER AND NETWORKING SECURITY SYSTEMS

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INCIDENT 1 (NETWORK SECURITY)
Risks of CPA Assurance of WebTrust^{SM} Electronic Seals and of DataTrust Privacy of Cookie Jars

ABSTRACT

This part of the case introduces students to a typical setting in need of WebTrust^{SM} assurance services available from an increasing number of accounting firms in the United States and Canada. Many firms have trepidation about offering WebTrust assurance services. One of the requirements of this case will be for students to learn about Web "cookies."

Deborah Coulter is keenly aware that what worries her superiors the most are the inventive ways in which hackers and crackers are able to break into the most secure computer and networking systems on earth, including the most secure systems in the Pentagon.[1] Whereas hackers invade systems as a challenge without evil intentions, crackers break into systems intending to steal from or otherwise injure the system. Stealing can be parasitic over time or a single-incident theft. Smart crackers are patient and resist stealing or otherwise letting intentions be known for long periods of time. Sometimes there is only information theft from the host (e.g., stealing cookies) that is later used to steal from or otherwise harm innocent third parties. In the early part of 1998 when the Pentagon was moving war planes into the Persian Gulf, mysterious hackers were invading and leaving trap doors (for exiting and re-entry) in classified databases. On June 1, 1998, *Newsweek* reported the following on page 60:

> The hackers turned out to be a couple of teenagers in Cloverdale, Calif., coached by a third teenager living in Israel; they were just having some fun. But to America's national-security establishment, the threat of information (IW) is deadly serious.

If Pentagon systems can be cracked by whiz kids, what is the risk of A&K assurance services to the Disabled Artist Resource Emporium (DARE)? Also, what is the risk that a disgruntled employee will leave the cookie jar open or sell passwords or other confidential information to criminals?

INTRODUCTION TO INCIDENT 1

In a PBS television broadcast of *Life on the Internet* in the early part of 1997, Carmen Cassidy discovered how art galleries and bookstores around the world are closing down in order to become virtual businesses on the Internet. Many such businesses are much more successful online than they were in fixed locations. The lead was initially taken by online bookstores attempting to build virtual communities among parties interested in each book.[2] Subsequently, galleries and other businesses discovered that virtual communities are both sources of inspiration for authors and artists and sources of renewed interest of customers in products.

Ms. Cassidy invested heavily in her online DARE headquartered in Dallas, Texas. DARE's mission is to both help artists with disabilities produce works of art and to help sell their finished products. Products include traditional paintings and computer art as well as sculptures, music recordings, books, poems, and handicraft items. Carmen Cassidy herself was an artist until she became quadriplegic following an automobile accident.

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[1] See Footnote 4.

[2] The Amazon Web site is at *www.amazon.com*, and the Barnes and Noble Web site is at *www.barnesandnoble.com*. Virtual bookstores offer server space to readers and authors who want to share opinions and ideas about particular books.

Ms. Cassidy eventually closed her six DARE outlet stores in major cities across the nation and moved the entire DARE operation into cyberspace via the Internet. One of the key motivations was to focus on the formation of "virtual communities" around the leading artists under her sponsorship. She now provides Web space for anyone who wants to evaluate any artist's work and/or comment on that work or the artist in general. She also provides Web chat rooms where an artist can communicate at scheduled times in spontaneous dialog with admirers, critics, customers, students, and fellow artists.

There are actually two virtual communities that form around each DARE artist. The "output" community centers on the past, present, and future works of art of a given artist. That is the community described above. The second virtual community is called the "input" community. The latter community attempts to bring the artist into communication with anyone who can help an artist improve upon his or her craft. For example, persons keen on tracking disabilities technologies can communicate with artists about leading edge and emerging products for such disabilities as sight impairment, hearing impairment, motor control impairment, and other types of impairments that make it difficult but not impossible to generate high quality pieces of art and music.

DARE profits both from purchases of hardware/software to assist artists and from sales of works from artists. DARE has brokerage contracts with various vendors of products for disabled persons and brokerage contracts with the artists attempting to sell their crafts. DARE has been successful because of trust and professionalism on all sides of transactions. DARE tests vendor products and, on occasion, hires independent testing firms to evaluate newer types of inventions. DARE has a staff of two professional art critics and also hires independent consultants to appraise the works of art displayed in various galleries at the DARE Web site. DARE also holds several patents on devices intended to aid artists with certain types of disabilities. In addition, DARE conducts both onsite and online training courses for artists.

A PHONY DARE HAND IN THE COOKIE JAR

Carmen Cassidy received a disturbing message on March 9, 1998. A customer who had purchased several items in February revealed that, by using a Web search engine, he had stumbled onto two domain names with identical DARE opening pages. Ms. Cassidy discovered that an unscrupulous scoundrel had downloaded all of the DARE documents and images in order to create a phony DARE Web site.

The customer complained that a telephone solicitation had been received announcing a changed DARE phone number and offering a discount based upon the amount of the February purchase. The customer started to place another order but became suspicious after being informed that "DARE" would no longer accept credit cards. Only cash and money orders were to be transmitted. The fact that "DARE" encouraged sending cash though the mails is what made the customer suspicious enough to conduct a Web search for DARE sites.

Ms. Cassidy expressed deep gratitude to the customer for discovering the phony DARE site. The customer, however, remained irate about privacy issues. What made the customer especially upset with Carmen Cassidy is that the phony "DARE" con artist somehow had DARE's cookie data regarding the customer's name, address, phone number, e-mail address, and details regarding the February purchase from the legitimate DARE Web site. Somehow unauthorized hands were in the DARE cookie jar. The systems engineers that designed and installed the DARE Web site made it possible to send out cookies to customer and artist computers.[3]

Even though authorities in New Jersey shut down the phony DARE Web operation in a matter of days, Carmen Cassidy grew exceedingly distraught. She had closed all of the DARE outlet stores around the nation and plunged heavily into the virtual DARE Web site. Not until March 9 did she discover how truly vulnerable her virtual DARE was to fraud and corruption. When the word spread, her long-established goodwill with artists and the public might take a plunge from which she could not recover without abandoning her Web business and reopening outlet stores at considerable trouble and expense.

[3]Cookies are explained at *http://www.trinity.edu/rjensen/245glosf.htm#Cookies1*

As chance would have it on March 9, Sam Burke was in her office working on both her corporate and personal tax returns. Sam worked out of the Dallas office of the A&K LLP public accounting firm. Sam informed Ms. Cassidy that his firm had an assurance service team that could help save her online DARE.

CARMEN CASSIDY SEEKS ASSURANCE

Deborah Coulter received a call from her colleague Sam Burke on March 9. Sam put his client, Carmen Cassidy, on the line. Ms. Coulter informed the distressed Carmen Cassidy that, by using the AICPA's WebTrust℠ Electronic Seal, A&K will authenticate that designated Web site is the official DARE site. The service for logo authentication is termed LogoTrust by A&K. The accounting firm also offers its DataTrust assurances to users that DARE cookie information on customers and artists would remain confidential. DataTrust is the term used by A&K for assurances that privacy rights to information are protected. DataTrust is the third principle under the AICPA's WebTrust℠ Electronic Seal. Furthermore, DARE could purchase other assurance services that would provide the world with greater confidence when dealing with DARE over the Internet. Among these services are TransTrust from A&K. TransTrust is the term used by A&K to depict the second principle of the WebTrust℠ Electronic Seal.

On March 11, Deborah Coulter organized a team of professionals to meet with both employees of DARE and the systems engineers who designed the online DARE operations. Getting the engagement would only be half the battle for Ms. Coulter. The other half of the battle in this new line of business was in convincing A&K partners that the initial and annual fees eventually agreed upon for the DARE assurance services outweighed the risks to A&K in providing such services. This new line of business was still looked upon with skepticism by most audit and tax partners.

On the up side, there is a driving force of change in public accounting practices around the nation. Consulting revenues of large international accounting firms like A&K are growing at much faster rates than traditional audit and tax services. In addition, consulting profit margins are enormous compared to thinning margins from audit and tax engagements.

On the downside, A&K partners feel more in control of the lawsuit and reputation risks in auditing and tax services. Some newer assurance services do not pose a serious threat in the eyes of A&K partners. For example, elder care assurance services do not appear to be especially risky since A&K can schedule random visits to care centers and pay whistle blowing rewards to employees of care centers.

Deborah Coulter is keenly aware that what worries her superiors the most are the inventive ways in which hackers and crackers are able to break into the most secure computer and networking systems on earth, including the most secure systems in the Pentagon.[4] Whereas hackers invade systems as a challenge without evil intentions, crackers break into systems intending to steal from or otherwise injure the system. Stealing can be parasitic over time or a single-incident theft. Smart crackers are patient and resist stealing or otherwise letting intentions be known for long periods of time. Sometimes there is only information theft from the host (e.g. stealing cookies) that is later used to steal from or otherwise harm innocent third parties. If Pentagon systems can be cracked by whiz kids, what is the risk of A&K assurance services to DARE? Also what is the risk that a disgruntled employee will leave the cookie jar open or sell passwords or other confidential information to criminals?

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[4]For example, on April 22, 1998 the following was reported by Reuters on CNET.News at *http://www.news.com :*

> SAN FRANCISCO — A shadowy group of computer hackers has apparently succeeded in breaking into a U.S. computer system that controls military satellites, officials and security experts said. The group, calling itself MOD or Masters of Downloading, has proof of its electronic snooping-secret files allegedly pirated from the Information Systems Network (DISN), computer security expert John Vranesevich said. Lt. Col. Tom Begines, a Defense Department spokesman, said military officials were "aware of the intrusion and looking into the matter."

REQUIREMENTS

1. What is the WebTrust℠ Electronic Commerce Seal that is now offered by an increasing number of public accounting firms who provide assurance services? What are the three broad categories of WebTrust℠? How did WebTrust℠ come about and what is the AICPA/CICA relationship with VeriSign?

   [Hint: Start your search at the AICPA Web site at *http://www.aicpa.org/news/p091697a.htm* and then go to the VeriSign Web site at *http://www.verisign.com*]

2. How do the logo assurance services of the BBB Online program at *http://www.bbb.com* and the Truste DataTrust assurance services at *http://www.truste.com* differ? What comparative advantages do public accounting firms have vis-à-vis these two competitors who are not public accounting firms?

   [Hint: See G.G. Gray and R. Debreceny, "The Electronic Frontier," *Journal of Accountancy*, May 1998, 32–38.]

3. What are the risks to consider when providing WebTrust℠ assurance services to DARE?

4. What are the risks to consider when providing DataTrust assurance services regarding confidentiality of DARE cookies?

   [Hint: Cookies are explained at *http://www.trinity.edu/rjensen/245glosf.htm#Cookies1*]

5. What types of computing and network assurance services might the A&K CPA firm contemplate providing to DARE? Discuss each service both in terms of comparative advantages of CPA firms in providing the service and the inherent risks of having CPAs offer that service.

   [Hint: See *http://www.aicpa.org/assurance/scas/newsvs/index.htm* and *http://www.us.kpmg.com/irm/main.html*]

6. Explain and illustrate the difference between information security policies versus security mechanisms.

   [Hint: See Appendix 3 by John Howland or go to *http://ariel.cs.trinity.edu/~jhowland/security/security*]

7. What are the advantages and drawbacks of a password encryption system?

   [Hint: See Appendix 3 by John Howland or go to *http://ariel.cs.trinity.edu/~jhowland/security/security*]

8. Explain how the Internet works in terms of IP addresses, packets, and routers.

   [Hint: See Appendix 3 by John Howland or go to *http://ariel.cs.trinity.edu/~jhowland/security/security*]

9. Define the major network protocols and explain the role of each protocol.

   [Hint: See Appendix 3 by John Howland or go to *http://ariel.cs.trinity.edu/~jhowland/security/security*]

10. Discuss each of the following threats to network security:
    - Cracking Passwords
    - Sendmail
    - Denial of Service
    - Repeated Attack
    - CGI Scripts
    - Windows NT Security
    - Denial of Service
    - Weak Passwords, Authentication Attacks
    - Privilege Escalation
    - Noncaptive Environments
    - Cracking a Firewall

    [Hint: See appendix 3 by John Howland or go to *http://ariel.cs.trinity.edu/~jhowland/security/security*]

INCIDENT 2 (PHREAKING DATABASE SECURITY)
The Bombay Martini Bet:
How Did a CPA Firm's Assurance Team Phreak a Non-Networked Information System of a High Tech Client Needing a "Wake-Up Call"?

ABSTRACT

This incident can be read in ten minutes or less. Proposing a plan to penetrate an "impenetrable" information system will take much longer. Incident 2 really happened under slightly disguised circumstances in San Antonio. The solution to the case is written by the young man who proposed and executed such a penetration. The solution is so simple that it is frightening, especially for public accounting firms seeking to provide assurances that such things are not likely without insider conspiracies. Because the solution is so simple, technical facts in the case are kept at a minimum. Students best not get bogged down in devising highly technical plans geared to the specific type of information system. Focus should instead be placed upon a more general type of security risk that cuts across virtually all computerized database systems. The solution to the case that actually transpired reveals an immense weakness in virtually all technology systems that are in a never-ending state of change.

Incident 2 entailed a friendly wager that a CPA firm's assurance team could not crack or phreak an "impenetrable" database security system of a large client. When the lowest-ranking member of the team, a newly minted Trinity University graduate, phreaked the system with relative ease, it made the public accounting firm that hired him sit up and think about what can be safely "assured." For a discussion of phreaking, see Appendices 1 and 2.

The case is especially timely in this formative era of assurance services. Providing assurances of information system security is becoming a large and highly complex revenue growth area for public accountancy firms. Opportunities for profit are subject to risk caused by the vulnerabilities of centralized databases, networking, and incessant technological change.

> It is easy to run a secure computer system. You merely have to disconnect all dial-up connections and permit only direct wired terminals, put the machine and its terminals in a shielded room and post a guard at the door.
>
> F. T. Grampp and R.H. Morris
> Security Resources
> *http://www.cs.uidaho.edu/~horn8852/sec-main.html*

INTRODUCTION TO INCIDENT 2

Texmed Engineered Health Management Association (TEHMA) manages privately funded health insurance plans across Texas. Customers are mainly commercial and nonprofit organizations that underwrite their own employee health care plans managed by TEHMA, including prescription medication and dental insurance plans. Partly due to fears of the Year 2000 problem in its aging COBOL databases, TEHMA installed an IBM DB2 Universal Database (UDB). The UDB system is Web enabled. Customers can scale from desktop or laptop systems to massively parallel processors located in the TEHMA home offices in San Antonio, Texas.

"When the events of this case transpired, we had about 120 Gb of data residing on our UDB," says Albert Puentes, the Chief Accounting Officer at THEMA. In September of 1997, TEHMA contracted with IBM Corporation to become a Beta tester of the new DB2 Universal Database system. By the end of 1998, TEHMA expects to have almost one Tb (terabyte) of raw data coded into the system.

With IBM's new UDB system, TEHMA can build a data warehouse that integrates data from more than a dozen operational systems giving users the ability to do cross-service analyses. A side benefit is the ability of the UDB system to accommodate non-standard data types and object technology.

INTERNAL CONTROLS

What worries Albert Puentes most is the security of the new UDB system. The old COBOL smoke stacked systems were, in his opinion, highly secure. "The newer networked UDB system has many risk exposures that make it harder for me to sleep nights," he complains. "Our new Data Processing (DP) manager appears to be overconfident regarding the invulnerability of the security procedures in effect and one goal was to quickly invade the system as a much-needed wake-up call from outside experts."

Mr. Puentes was formerly an audit partner in the Dallas office of the A&K LLP international public accounting firm. He knows a great deal about internal control design, but he is not an expert on network database system controls. Internal controls in general can be either preventive controls or detective controls. Preventive controls aim to prevent the occurrence of errors and fraud; detective controls aim to detect problems after the fact. Historically, auditors focused primarily on detecting problems after the fact. This historical focus was due to the predominantly manual nature of accounting systems where little could be done to prevent human errors from occurring. Internal controls were always evaluated and recommendations were made to discourage fraud. For example, good internal control system had division of labor, rotation of duties, mandatory vacations, etc.

With new computerized information systems, the issue becomes one of designing software inside black boxes to minimize risks of fraud and errors occurring. Database technology allows a database oriented accounting system to have an extensive array of controls built into the system. Most errors are caught at the point of data entry. Mr. Puentes tends to worry about systems that he does not fully understand. The new UDB system is exceedingly complex and relies upon controls that only systems engineers can comprehend.

ALBERT PUENTES SEEKS ASSURANCE

His former CPA firm, A&K LLP, now offers a wide array of assurance services. Albert Puentes persuaded the CEO of TEHMA to engage A&K to independently test the internal controls in the new IBM UDB system installed in TEHMA by a highly reputable systems engineering company experienced in installation of IBM and other network database systems. Deborah Coulter headed a team of A&K professionals assigned to write an internal control assurance report on TEHMA's new UDB system. Her team included a recent Trinity University computer science graduate named Bruce Sidlinger.

Ms. Coulter and her team made a careful study of the Exhibit 1 aspects of the new UDB system (see page 8).

EXHIBIT 1

CONTROLS CHECKS

General Controls Checks

B1a01 Hardware controls — read after write check

B1a02 Hardware controls — echo check

B1a03 Hardware controls — parity check

B1a04 Hardware controls — dual read check, read-after-write check

B1a05 Access controls — physical controls

B1a06 Access controls — encryption

B1a07 Access controls — segregation of duties, authorization matrix

B1a08 Access controls — complex passwords

B1a09 Organization of the systems function — personnel firing procedures, logical access controls

B1a10 Program change controls — off-line testing of program changes

B1a11 Backup procedures — off-site backups, business continuity plan, hot or cold site identification

B1a12 Operations controls — daily data processing schedule, console log, review of operating statistics

B1a13 Backup procedures — backup power supply, dynamic backup

Input Controls Check

B2a20 Input control — completeness check, prompting, required field

B2a21 Input control — range check

B2a22 Input control — field check (numeric data type)

B2a23 Input control — valid combinations check

B2a24 Input control — validity check

B2a25 Input control — closed loop verification

B2a26 Input control — system generated data

TEHMA invested heavily in controls. Ms. Coulter pondered what her team could possibly recommend to improve the system. Physical controls were amazing. TEHMA installed physical controls that rival controls of a military installation. All employees entering TEHMA premises were admitted only if they were cleared by a high technology hand identification system that is vastly superior to picture ID hang tags. However, employees also are required to wear “active badges” that signal their locations at all times. All employees, especially those employees given data entry permissions in computer systems, are thoroughly screened and bonded.

Ms. Coulter had never encountered a system with better controls in every area listed in Exhibit 1. She lamented to her assurance services team that she could not imagine how the team could provide that DP security “wake up call” requested by Mr. Puentes. That evening, the newest and youngest member of the team, Bruce Sidlinger, asserted that he could phreak TEHMA’s information system. At that moment the team was in the midst of an attitude adjustment at The Frog Pond Lounge in a San Antonio hotel. On impulse while drinking her own diet Sprite, Deborah wagered an unspecified number of Bombay Martinis that Bruce could not plant a phony medical claim in the new TEHMA UDB database system. After receiving her tentative handshake on the deal, Bruce revealed his scheme to Deborah Coulter.

THE BOMBAY MARTINI BET

Following the scheme proposed in The Frog Pond, Deborah Coulter briefed Albert Puentes regarding the Bombay Martini wager that she made with Bruce Sidlinger. The TEHMA Chief Accounting Officer was delighted with the proposed "wake-up call" schemed by Sidlinger.

The challenger (Bruce Sidlinger) was given ten days to invade TEHMA's new UDB system. In that ten-day period, the entire Deborah Coulter team remained in Dallas. Ms. Coulter assured Mr. Puentes that prior to the team's departure from San Antonio, no phony claim was planted by the team into the TEHMA information system. To make the wager even more interesting, the TEHMA's Data Processing Manager was made aware of the Bombay Martini wager and was requested to make a daily search for a phony claim from a physician. The Data Processing Manager was, thereby, put on alert to take all possible security measures.

EPILOGUE

Albert Puentes reports that he had more than his usual trouble sleeping after "celebrating" Bruce Sidlinger's winning Bombay Martini Bet with Deborah Coulter's team in The Frog Pond Lounge. Bruce Sidlinger slept soundly that night. However, both he and Mr. Puentes downed aspirin tablets the following morning (for different reasons). The DP manger at TEHMA did not discover how a phony medical claim penetrated the system until Bruce Sidlinger explained the hoax.

TEHMA's DP manager resigned about three months after the incident, purportedly for reasons other than the embarrassment of Sidlinger's success in cracking the UDB security system. Albert Puentes looks more tired than usual since TEHMA expanded the UDB system. Deborah Coulter still works in technology security assurance services, but her once long fingernails have become bitten and stubby. Bruce Sidlinger now owns an information systems consulting firm in San Antonio, Texas. His company's Web site is located at *http://www.sidlinger.com/*

TEHMA is a disguised name for the real client in this case. That client did not want any publicity about this incident and did not want the incident registered with CERT® at *http://www.cert.org/*

> The CERT® Coordination Center is part of the Networked Systems Survivability program in the Software Engineering Institute. The Software Engineering Institute is operated by Carnegie Mellon University for the Department of Defense. CERT® maintains a database of all registered security violations (whether criminal or pranks) and descriptions of when and how the systems were breached. Since the incident in this case is not registered with CERT®, it is not possible to look up the solution to the case at CERT®. However, students are encouraged to visit the above CERT® Web site. Among other things, CERT® issues alerts to the world regarding security risks. There is also an emergency response team that will investigate incidents deemed serious to the security and economy of the United States. CERT® is interested in most any type of new and interesting scheme to invade computer and networking systems.

REQUIREMENTS AND RECOMMENDATIONS FOR INCIDENT 2

Given the facts provided in the case and assuming no conspiracy with a TEHMA employee, devise alternative proposals to win the Bombay Martini Bet. Show how computer security is not as "easy" as implied by the introductory quotation of this case that is repeated below:

> It is easy to run a secure computer system. You merely have to disconnect all dial-up connections and permit only direct wired terminals, put the machine and its terminals in a shielded room and post a guard at the door.
>
> F. T. Grampp and R.H. Morris
> Security Resources
> *http://www.cs.uidaho.edu/~horn8852/sec-main.html*

Readers may want to consult Appendices 1–3 plus Professor Jensen's Technology Glossary at *http://www.trinity.edu/rjensen/245glosf.htm*

Readers may read more about network databases and security issues and links at *http://www.trinity.edu/rjensen/260wp/260wp.htm*

In particular, consider the variety of ways that the TEHMA system might have been cracked by Bruce Sidlinger. These include Information Warfare Weapons discussed at *http://www.seas.gwu.edu/student/reto/infowar/info-war.html*

Weapons of particular note when learning about security assurance services are —

- Computer Viruses
- Worms
- Trojan Horses
- Logic Bombs
- Trap Doors
- Chipping
- Nano Machines and Microbes
- Electronic Jamming
- HERF Guns — EMP Bombs

It is recommended that students be divided into teams. In Class 1 each student team can make a presentation of that team's "best" proposed solution for winning the wager in this case. Presentation times can vary with class size, but with handouts and presentation aids it is possible to limit each presentation to fifteen minutes or maybe even less.

After Class 1, each team's solution can be assigned to another team. Class 2 can then be devoted to presentations by teams showing how the assigned security penetration solutions can be made to fail with proper prevention and detection security in the information system. Discussions should be allowed to spread to topics such as information warfare and assurance service risks.

THE TAMPA BAY RENEGADES

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TOKYO, JAPAN — JULY 1997

Masao Yamaguchi turned once again to the draft financial statements of the Tampa Bay Renegades. As CFO of Mitsumi Trading Corporation (MTC), he was responsible for monitoring all investments the company had made in other ventures. Just over a year ago, MTC had acquired a 22% interest in the ownership of the Renegades, a recent expansion team in the National Hockey League (NHL). As Masao studied the draft statements for the fiscal year ending June 30, 1997, he reflected on the number and diversity of the critical accounting and disclosure issues involved in these statements. Clearly, the combination of U.S. GAAP and the way in which sports franchises were operated created some very interesting accounting treatments.

THE BUSINESS OF SPORTS FRANCHISES

The Franchise Fee. From the very point when a sports franchise is acquired, accounting issues begin to arise. To purchase the franchise, the ownership group must pay a sizable fee to the league. The league, in turn, distributes this fee to the other clubs in the league. In part, the fee is paid for the right to have a team. In addition, a portion of the fee represents the right of the new team to take part in the expansion draft. Access to this draft provides the new team with a source for obtaining its initial roster of players. Beyond these obvious benefits, the fee could be thought of as giving a right to use the NHL logo, the right to receive a share in future expansion team franchise fees and similar valuable rights.

The league fee described above may involve $40 million dollars or more. The immediate questions are: How should this fee be classified in the buyer's balance sheet? Part of the fee would be debited to Franchise Fee and part to something like Expansion Draft Rights. Should a portion of the fee be allocated to any other accounts such as Goodwill? On what basis should the allocation be made? Should the recorded asset(s) be amortized, even though historically, over time, sports franchises tend to become worth far more than the buyer paid to acquire the franchise? If the franchise fee should be written off, what life expectancy should be used — 40 years or something less than that? If the fee is allocated between (a) the right to have a team, and (b) access to the expansion draft, should these component parts be amortized over different lives?

Is it even possible that the value of the franchise could become impaired as a result of, say, a poor won/loss record, and declining attendance, over a period of time? If so, should an impairment loss be recognized? It would seem that the answer should be "yes," but Masao recalled reading about the recent sale of the Tampa Bay Buccaneers, a National Football League (NFL) franchise. Hadn't they had a dismal won/loss record over a long period of time? And yet he thought he recalled reading that an entrepreneur named something like Glanzer (or Glazer) had bought the club for an extremely high price. Masao knew that a single event couldn't support a theory, but the Buccaneer sale event was certainly something to think about when considering the impairment question.

Player Contracts. Masao next turned his attention to player contract issues. The cost of player contracts was the major cost component of a sports franchise and these costs were escalating significantly. Masao knew that the Renegades had just acquired a new goalie, Francois Allouette, from the New York Rangers. The contract with Allouette had more wrinkles than a 90-year-old retired Sumo wrestler. Masao mentally ticked off the terms of the contract:

- An up front signing bonus of $1.2 million.
- A guaranteed base salary of $800,000 for the next three years.
- A no cut, no trade stipulation for the next eight years.
- An incentive payment of $25,000 per game in which Allouette plays at least the equivalent of two full periods.
- An incentive payment of $50,000 for each complete game in which Allouette plays and in which the opposition scores no goals.
- An incentive payment of $100,000 if the Renegades qualify for the divisional playoffs.
- An incentive payment of $200,000, additionally, if the Renegades win the divisional championship.
- An incentive payment of $300,000, additionally, if the Renegades win the Stanley Cup.

The Allouette contract raised a number of questions in Masao's inquisitive mind. Should the signing bonus be expensed currently, or should it be capitalized and amortized over three years (or eight years) or the expected career life of Allouette? Since the first three years' salary was guaranteed, whether Allouette played or not, should an asset be recorded, as well as a corresponding liability, at the current balance sheet date? If so, should the recorded amounts be the full contract value or the present value of the obligation? If the present value should be used, what discount rate would be appropriate? Should the incentives be recorded on an "as earned" basis or when the probability that they will be earned is sufficiently high? What facts about this player contract, and other player contracts, ought to be disclosed in the Renegades' financial statements?

Advanced Revenues. Approximately 35% of the Renegades' annual revenue comes from ticket sales, a sizable portion of which is from season tickets. The hockey season in the U.S. runs from October through April. Obviously, all of the ticket revenue for the completed season has been earned. However, most of the season ticket sales for next year have already been made. Since these ticket proceeds are not refundable, couldn't they be recognized as revenue in the year of receipt?

What about the deposits local companies have put down on club seats? Each deposit is for 10% of the total price of $10,000. Ninety-five percent of these deposits are acted upon by the depositor, with the full price being paid. The other 5% of the deposits is lost; i.e., the club does not refund the deposits if the depositor foregoes the right to acquire the club seats. Seats on which the deposit expires are sold to the next party on the waiting list for such seats. Currently, Masao knew that the Renegades were only recording the $1,000 deposit as an asset with an offsetting credit to deferred revenue. But should they gross the asset up to the full $10,000 by recording a receivable for the remaining $9,000? Masao had looked at available information from other sports franchises and noted that they did not gross up the asset. But it seemed to him that this treatment understated the asset base of the club.

The Arena. Masao next moved to the myriad issues connected to the Renegades' involvement in the construction of a new playing arena in Tampa. Originally, the team had played its games in the Sun Dome arena on the University of South Florida campus. However, for a variety of reasons (including seating capacity, configuration and concession contracts), the Renegades had sought a new home. Thus, the owners had entered into an agreement with Hillsborough County to build a new arena at the juncture of Interstate

Highways 4 and 75. This new facility, called PowerPlay Arena, had been completed at a cost of $170 million just in time for the start of the 1996–7 hockey season. Funds to pay for the arena had been raised through the sale of Hillsborough County bonds. The funds needed to service the debt (i.e., pay the annual interest of 8%, and then retire the debt at its maturity) were to come from a variety of sources. These sources included local county sales taxes, corporate fees paid for the right to lease a luxury box in the new arena, and contributed funds from the Renegades (partially derived from a loan from Mitsumi Trading Corp.). To assure that funds were available to liquidate the bonds at their maturity, the bond indenture required that the Renegades (or the guarantors of the debt — Renegades stockholders) make annual payments into a bond sinking fund.

In exchange for its role in lining up some of the arena financing, negotiating with prospective building contractors and coordinating the arena construction, the Renegades have been given a 25-year lease with a bargain renewal option for an additional six years. During the life of the lease, the Renegades have rights to all arena revenue from concessions, advertising, parking, etc. Technically, this new arena has an estimated life of 40 years. However, Masao is very much aware of the fact that relatively new arenas in American cities such as Miami and Charlotte (both built in 1988) are considered technologically obsolete. In fact, both the Florida Panthers and the NBA's Miami Heat intend to leave the Miami Arena. The Panthers already have a deal to move to a new arena in Broward County. Dade County plans to build a new complex for the Heat before the year 2000.

Masao knew that the life expectancy of an arena could be a significant issue for the financial statements of the Renegades, depending on the accounting treatment of the Renegades' lease. Should the construction costs paid for by the team be considered a leasehold improvement, booked at the direct cost of the Renegades' construction contributions? Or should the lease be considered a capital lease, with both a lease asset and a lease liability being booked in accordance with FAS 13? Under either scenario, what should be the amortization period for any booked asset?

TAMPA, FLORIDA USA — JULY 1997

Heidi Ruprecht sat at her desk on the 14th floor of the SunTrust Bank Building in Tampa. Heidi was a senior with an international CPA firm. She was the in-charge for the annual audit of the Tampa Bay Renegades Hockey Club. At the moment she was compiling a list of significant issues for consideration by the manager on this engagement, Jennifer Steinway. The list was going to be somewhat longer than Heidi would like it to be at this point in the engagement — but the facts were the facts. She needed to get some guidance on these issues so that she would know how her superiors wished to deal with them and whether she, Jennifer, or the partner on the engagement (Axel Williams) would discuss them with the client.

Heidi reflected on the fact that her client was not publicly held. The owners were a group of individuals plus the 22% foreign investor, Mitsumi. Nonetheless, her firm would be issuing an opinion on the Renegades' financial statements. She knew that these statements were reviewed by all of these owners, as well as Tampa State Bank which had extended a line of credit to the Renegades.

To be sure that her firm could issue an unqualified opinion, it was imperative that several issues be cleared up. Each issue was critical to a successful completion to this engagement.

The Construction Loan Commitment. The first item on her list dealt with the Renegades' commitment to make periodic payments toward the construction loans for the PowerPlay Arena. Funds to honor this commitment were to come principally from arena revenues. However, the Renegades' obligation had been guaranteed by the ownership group, including Mitsumi. Heidi also knew that the construction funds that had been provided to the Renegades by Mitsumi were supported by a demand note payable by the Renegades to Mitsumi.

As of June 30, 1997, arena revenues had been sufficient to pay the interest on the construction bonds but were inadequate to cover the legally mandated sinking fund deposit. Heidi knew that Hillsborough County had asked the guarantors to make up the short fall. Renegades' management had assured her that both the majority and minority owners intended to, and were financially capable of, making this payment. However, Heidi wondered if more audit work was necessary. In essence, should she:

1. Request personal financial statements from the U.S. owners?
2. Request audited financial statements from Mitsumi?

3. Confirm the intent of these parties to make the necessary payment?

If the client did not want her to ask Mitsumi for more than its written assurance that it would contribute its share to the sinking fund, how hard should she push on this issue? The Renegades Club was a high profile client. Every CPA firm in the city would give its eyeteeth to have this engagement. Could she, or her superiors, risk losing the client over some procedures that might not even be necessary to comply with generally accepted auditing standards?

In addition, even if she got Mitsumi's financial statements, they would be in the Japanese language and would be prepared in compliance with Japanese accounting standards. How would she or anyone else in the firm be able to use that information? Could they hire a local consultant who could read Japanese to interpret the statements for them? If she did send a confirmation letter to Mitsumi, should it be written in English with the hope that someone at Mitsumi could interpret it and assure that an accurate response was returned? Or again should she try to find a local consultant who could take her English-worded confirmation letter and translate it into Japanese for her prior to mailing the request? The same questions also applied to any attempt to make inquiry with Mitsumi regarding whether or not it intended to demand payment of the Renegade note within the next reporting period. The answer, of course, would determine the proper classification of this item in the current Renegade financial statements.

Negative Cash Flows. The second issue for Heidi stemmed from the fact that the Renegades, despite all of their revenue sources, had experienced negative cash flows from operations for the past two years. The essential reason for this trend was the high payroll, a condition that would not change in the foreseeable future. So far, the negative cash flows had been primarily covered by large infusions of funds from the owners. But the critical question was, how long could or would this support be continued? Should there be a going concern footnote in the financial statements? Should her firm mention this situation in the audit report?

The Related Party Issue. The final issue for Heidi concerned the relationship between the Renegades and local TV station WTRS. All of the Renegades' games are televised by WTRS under an exclusive contract that covers the current and next three years. The Renegades' club derives 25% of its annual revenue from this TV contract. WTRS is wholly owned by Thomas Rene who also owns 30% of the Renegades. The relationship between the TV station, Rene and the Renegades is obviously a related party one. The disclosure issues were fairly clear on this matter. However, one provision in FAS 57 concerned Heidi. That provision requires that the related party agreements be reviewed to determine if they were entered into on an equivalent arms' length basis. In other words, does the effect of these agreements on the financial statements of the Renegades have the same impact that free market driven agreements would have produced? Heidi could read those words easily enough but, she wondered, how could she make that determination?

One particular provision of the WTRS TV contract states that the Renegades are to receive an up front bonus payment of $100,000 on September 1 of each contract year. Although TV revenue is generally recognized as the games are played, the Renegades have recognized the full amount of the bonus as revenue for the year ended June 30, 1997. Heidi wanted Jennifer and Axel to consider that fact and discuss with her the legitimacy of this "early" recognition.

QUESTIONS FOR DISCUSSION

1. From Edgar, Compac Disclosure or any other source, obtain a copy of the Boston Celtics Limited Partnership financial statements and notes (NYSE ticker symbol is BOS). For any of the issues facing the Renegades in this case, determine how the Celtics account for, and disclose, those issues.

2. How should the accounting treatment given to an issue by a NBA, NFL, or major league baseball franchisee compare with the proper treatment by the Renegades? In other words, what is the industry for comparison purposes? Is it professional sports or is it a specific sport such as hockey?

3. Provide your answers for the questions that Masao Yamaguchi raised?

4. Assume that you are Jennifer Steinway or Axel Williams. What answers and/or guidance would you give Heidi in response to the issues she has raised?

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ROWE POTTERY WORKS, INC.

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At the end of 1996, Rowe Pottery Works, Inc. (RPW) had been losing money for over two and a half years (see table 1).This case challenges students to identify and evaluate alternatives that lead to Rowe's return to profitability.RPW's pottery operation is the main source of the losses.The pottery operation provides a majority of the company's revenue leading the company to depend heavily upon its success. Attempts to control costs have reduced but not eliminated the continued losses. The losses perplex the company's president as he believes there is a strong market for RPW's products.

Management recently hired a new controller but is skeptical whether or not an accountant can help turn the company around. The previous controller told the president on numerous occasions: "I just report the results." Nonetheless, the president hopes the new controller can help find a way to return the company to profitability.

COMPANY HISTORY

Jim and Tina Rowe purchased a historic blacksmith shop in 1975. They turned it into an antique shop and soon discovered there was quite a demand for 19th-century salt-glazed pottery. Jim studied art in college and was familiar with the salt-glazed technique. He and Tina began producing handmade salt-glazed pottery and selling it in their store. As demand grew, the Rowe’s began selling their pottery to gift shops across the country. Today RPW sells more salt-glazed pottery than any other producer in the country.

RPW also operates a retail store and a wholesale decorative ironworks business. The focus of this case is on RPW’s salt-glazed pottery business. Information about the store and iron works has been removed from the financial data presented.

THE PRODUCT

The company’s main product is salt-glazed pottery. Skilled artisans hand-make a majority of the pottery at a potter’s wheel. After forming, workers allow the pieces to air dry, then add a protective glaze and decoration before firing the pieces in a kiln. Salt added during the firing process produces a blue and gray color with unique “kiln” spots of brown and orange. The decorative and useful pottery is dishwasher, microwave, and oven safe. Products include crocks, plates, mugs, lamps and Christmas ornaments.

Artists decorate the pottery with traditional cobalt blue glaze prior to firing. Simple standard designs such as hearts, stars and blueberries adorn the pieces. Hand decorating also allows the production of customized pottery. For example, throughout the wedding season, customized wedding crocks decorated with the names of the bride and groom and their wedding date enjoy steady demand.

RPW also sells pottery especially designed for the Christmas season. The holiday line includes plates and crocks decorated with painted Christmas scenes and symbols, as well as Christmas ornaments and figures. The company prides itself in developing a few unique pieces each Christmas season. RPW's artists date stamp their work to ensure authenticity and enhance collectibility.

PRODUCTION

Overview of the production process:

Step 1. Workers combine clay with water and ice in a large mixer.

Step 2. Potters form each piece on a potter's wheel.

Step 3. Each piece is dried at room temperature for 24–48 hours.

Step 4. Decorators apply decorative paint as well as a protective glaze.

Step 5. After a brief drying period, workers stack the pieces onto a cart to be placed into one of the company's two kilns.

Step 6. Workers wheel a cart full of pottery into a kiln. A supervisor then fires the kiln to approximately 2,000 degrees after which the kiln must cool back to room temperature before removing the cart.

Step 7. After a brief inspection, pieces are ready to be shipped to the customer.

Employees mix clay daily for use as the main ingredient in the pottery. The price of clay purchased from RPW's network of suppliers has been stable over the past five years and is expected to remain stable into the future.

Skilled potters provide the key value added labor. The company currently employs six full-time potters and one part-time potter. On average each potter currently produces product worth approximately $6,000 in sales per week, although individuals vary in their skills and capacity. Approximately half the week potters concentrate on forming pieces at a potter's wheel. The remainder of the week is dedicated to less skilled tasks such as attaching handles to mugs and making covers for the crocks. Potters cannot work much overtime due too the physically demanding forming process. Management has observed a decrease in quality when potters work more than eight hours per day.

It takes approximately six months to train an artist to effectively use the potter's wheel—longer if the artist has had little or no prior training. RPW pays the potters relatively well, and many have been employed by the company for a number of years. Occasionally potters leave to branch out on their own or to work for one of RPW's smaller competitors. The company is currently aware of two former potters who may be willing to return to the company under the right terms.

Decorators apply a glaze and painted designs on the pottery after it is air dried. The painting process requires a certain amount of artistic skill. But, decorators need much less training than potters. The company has more than enough decorators to maintain current production volume. In some instances, the decorators have helped the potters by placing handles on mugs and by making crock covers.

After decorating, the pottery is loaded onto a large cart and rolled into a kiln for firing. During the process, the kiln heats the pottery to approximately 2,000 degrees. Thirty-six hours after placing a cart in a kiln, it can be rolled out and immediately replaced by another full cart (RPW own four carts—two for each kiln). The cart can not be removed until the pottery has cooled—removing it earlier can cause breakage. The firing process requires attention by a skilled technician during the first six hours of the process. Upon completion of the firing and cooling process a kiln automatically shuts-off. Each kiln firing (i.e., a full cart) produces pottery worth approximately $10,000 in sales.

PRODUCTION SCHEDULING

The company's sophisticated computer system schedules production based upon promised delivery date. Upon receipt of an order, the sales clerk enters the order into the computer system along with a promised delivery date. The computer then allocates production based upon the items ordered and the promised delivery date. For example, the computer system schedules a crock to start production two weeks before the promised delivery date because a crock takes two weeks to flow through the production process including shipping.

The production department sticks closely to the schedule generated by the computer system. The department follows the schedule in order to maintain relatively low levels of inventory. The production department experienced layoffs from late-December through January each of the last three years. The workers view the layoffs as a disincentive to build extra inventory that then could be used to impose a longer layoff.

All departments work 6:00 a.m. to 3:30 p.m. Monday through Thursday and 6:00 a.m. to 10:00 a.m. on Friday. There is little overtime although some departments (e.g., shipping) work overtime during the Holiday season. Generally the culture that has evolved discourages overtime.

The workers do not belong to a union and have a good relationship with RPW's management. However, recently the workers have expressed concern about the financial condition of the company. Management has not attempted to hide the fact the company has been losing money. There have been no significant wage increases over the last two years due to the losses.

SALES AND DISTRIBUTION

The company sells its products to retail gift shops throughout the United States. It markets to these retailers through showrooms maintained at a few different wholesale trade shows and a wholesale catalogue. The two main trade shows occur in mid-January and mid-July. Approximately 30% of the company's sales result from its participation in these shows. Retailers ordering from the catalogue make up an additional 60% of sales. A small group of commissioned sales representatives generates the remaining sales.

RPW receives orders from gift shops throughout the year. Sales are heaviest prior to the holiday season with a smaller spike during the summer wedding season. A typical gift shop places an order for $300 to $1,000 worth of pottery when it runs out of inventory. Shops order two to three times a year. RPW usually delivers within 8–12 weeks of receiving an order. Orders received during the Holiday season take the longest to fill.

Management has received few shipping related customer complaints. The company ships via UPS or alternate ground carrier. Each order includes a 6% shipping and packaging charge. Historically, this charge has been sufficient to cover shipping costs. Approximately 1% of pottery breaks during delivery. The company has developed a packaging technique using cardboard boxes and foam to guard against breakage.

Sales clerks enter all sales into the company's computer system at the time of order. The sales clerks assign a delivery date at this time based on their judgment. A daily report showing the amount of inventory scheduled for production for each of the next ten weeks provides a basis for the sales clerks judgments. See figure 1.

FIGURE 1

TYPICAL PRODUCTION SCHEDULE
(AMOUNTS IN SALES DOLLARS)

Week	**1**	**2**	**3**	**4**	**5**
Backlog	$40,200	$38,550	$39,905	$34,335	$26,879

Week	**6**	**7**	**8**	**9**	**10+**
Backlog	$21,126	$12,841	$5,463	$3,248	$1,382

RPW's gift shop customers have expressed strong support for the company's product. However, there have been some complaints about RPW's refusal to accept orders for Christmas delivery after October 15 each year. Customers also complain about the length of time between when an order is placed and when it is received.

Most gift shops report strong demand for the company's product at current prices. An attempt to raise prices in 1993 resulted in a significant number of complaints and a reduction in demand. The company responded by returning prices to previous levels. Prices since 1994 have only increased slightly.

The company has only a few direct competitors. They are all much smaller than RPW. However, in a broader context the company competes with a wide range of companies and products in the gift and home decorating markets. In addition, the company indirectly competes with local artists throughout the country. Overall, competition does impose some limits on the nature of the products the company can effectively market and its pricing strategy.

THE ACCOUNTING SYSTEM

RPW relies on a fairly sophisticated accounting system. RPW assigns each product a standard cost based upon estimated material, labor and overhead costs. Material costs account for about 10% of the total standard cost. The remaining 90% represents labor and overhead.

The kiln represents a significant fixed cost to the company. Management also considers a significant portion of its labor costs (80%) to be fixed. Potters and decorators take a long time to train and management is very careful not to lay off these important employees more than once a year. By limiting the number of layoffs management reduces the risk that these skilled employees will leave the company. As a result, labor costs act more like fixed costs.

The pottery contains relatively few variable costs. Variable costs include the costs of all materials (i.e. , clay and glaze) and approximately 20% of overhead costs. The remainder of overhead costs do not vary with production levels.

RPW values pottery inventory at standard cost. It tracks variances and charges them to cost of goods sold throughout the year. Table 1 lists the costs of goods sold for each of the last five semi-annual periods broken down into standard costs and total variances. The company has been actively cutting costs. Evidence of this reduction can be seen in the reduced variances and production costs over the five periods.

A NEW KILN

RPW is considering purchasing a new kiln. It currently operates two kilns, each of which can process $10,000 worth of pottery per firing. The company received a quote of $500,000 for the materials to build a new kiln and the space to house it. Costs to erect the kiln, build the necessary additional space, and prepare it for production are projected at an additional $250,000. A new kiln will take one year to prepare for production.

RPW will have to finance the kiln with debt. The company's current interest rate is 10% (2% over prime). RPW's bank is reluctant to make such a large loan given RPW's current financial position. However, the bank believes it may be able to put together a group of area banks to finance the kiln with a 13% fixed rate loan requiring annual payments over five years. RPW estimates its required rate of return at 15% for this project.

The expected life of a kiln is seven years after which a major overhaul will be necessary. The kiln and additional space will be essentially worthless without the major overhaul. Assuming the kiln is fired twice a week, 50 weeks a year, with an average firing producing $10,000 worth of product (in sales dollars), the kiln would increase sales capacity $1,000,000. The company expects it could sell half of this increase in the first year with additional increases of $100,000 per year afterward. RPW estimates the cost to produce goods with a new kiln excluding depreciation at 45% of sales. Current marketing related costs average 20% of sales. RPW expects marketing expense to remain 20% on the additional sales because variable selling expenses will increase, but fixed marketing expense will be spread over more sales. Administrative and general expenses should be unaffected by adding a new kiln.

QUESTIONS

Main Questions: How can Rowe Pottery Works, Inc. stop its current losses and return to profitability? How can the new controller help RPW return to profitability?

The following question may help in identifying RPW's options.

1. Explain the variance included in cost of goods sold. What are potential causes of this variance?
2. Which cause(s) of the variances you listed in question 1 seems most likely given the information included in the case?
3. Calculate the production costs for each period.
4. The number of pieces produced each period are listed in table 2. What inferences can you make about fixed and variable costs based upon production costs and the number of pieces produced each period?
5. Evaluate the purchase of a new kiln.
6. Should the company purchase a new kiln? Do you think the bank should finance purchasing a new kiln? Do you think the bank will finance a new kiln?
7. What other options does the company have to improve its profitability? Evaluate these options and compare them to purchasing a new kiln. What option makes the most sense?
8. What constraints does the company currently face in attempting to improve its productivity? How can the company mitigate these constraints?

TABLE 1

ROWE POTTERY WORKS, INC.
INCOME STATEMENT

	Jan.–June 1996	**July–Dec. 1995**	**Jan.–June 1995**	**July–Dec. 1994**	**Jan.–June 1994**
Pottery Sales	$732,900	$900,277	$ 701,924	$896,883	$ 732,332
Cost of Goods Sold					
Standard Cost	402,654	471,571	406,452	482,806	417,227
Variance	50,393	71,808	74,048	77,215	139,038
	453,047	543,379	480,500	560,021	556,265
Gross Profit	279,853	356,898	221,424	336,862	176,067
Selling General and Administrative					
Marketing Expense	178,800	174,400	161,539	190,800	150,600
Administration Expense	101,500	103,200	99,600	102,300	101,100
Expense					
General Expense	44,700	45,300	46,430	44,350	41,780
	325,000	322,900	307,569	337,450	293,480
Interest Expense	54,200	53,000	47,000	40,000	37,000
Net Income (loss)	$(99,347)	$(19,002)	$(133,145)	$(40,588)	$(154,413)

Semiannual data is provided rather than quarterly or annual data because the company's first and second quarters were very similar as were the company's third and forth quarters. Semiannual data captures seasonal difference between the first and second halves of the year in a concise manner.

TABLE 2

INVENTORY AND PRODUCTION

	6/30/96	12/31/95	6/30/95	12/31/94	6/30/94	12/31/93
Inventory						
WIP	$ 86,060	$ 49,505	$ 60,050	$22,777	$30,107	$ 33,679
Finished	71,241	52,003	63,927	64,865	57,692	67,237
Total	157,301	101,508	123,977	87,642	87,799	100,916
Pieces Produced	34,334	38,262	36,284	39,352	33,455	n/a

Pieces produced represent the number of pieces made during the six month period.

INDIANA CHEMICAL ARGENTINA, S.A. (ICASA)

Juan M. Rivera, Professor
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Douglas K. Osthimer, Partner
Kruggel, Lawton & Company, LLC, South Bend, Indiana

THE PARENT COMPANY. BRIEF HISTORY AND BACKGROUND

Indiana Chemical, Inc. (ICI) is a privately owned business engaged in the production, distribution and sale of oil-based liquid pigments for the general industrial market in the United States. Prior to starting this company in1968, Charles (Chuck) Honeywell, a chemical engineer, had worked five years in coatings and dying processes in the paint industry. Mr. Honeywell is still the sole stockholder of the corporation, which is located in South Bend, Indiana. In addition to producing chemical pigments, Indiana Chemical, Inc. is an exclusive distributor of vegetable-based powder pigments that are manufactured by two separate and unrelated companies located in the eastern U.S.

ICI has its only manufacturing facility on 10 acres of a 25 acre site located in South Bend, Indiana. The facility occupies approximately 90,000 square feet that comprise production area, raw material storage, finished goods storage, maintenance, quality control, and general administration. The production area houses several small reactors and revolving tanks with a combined capacity to produce 300,000 pounds of chemical pigments annually. All of the bulk stored oils and solvents are in properly diked above-ground storage tanks. The entire facility is securely fenced with night lighting and 24-hour manned security staff.

ICI employs 100 people, 80 in the production process and 20 in sales, finance and administration. The current general manager, Shelton Miles, a corporate lawyer by profession, has been with the company for approximately ten years. Other key members of the company's directorship are the owner, Charles Honeywell, who is in charge of production; Michael Still, director of finance; and Bob Pendergast, director of sales and development. Annual sales of the company were $19 million in the most recent year, and the business has an outstanding loan of $2.9 million with a local bank. A summary of ICI's audited Financial Statements and selected Footnotes for 1996 and 1995 are presented in **Schedule 1**.

ICI'S ARGENTINE BUSINESS VENTURE

Chuck Honeywell and Shelton Miles, owner and general director, respectively, of Indiana Chemical, Inc., were attending an industry sales convention in Orlando, Florida in mid-February of 1996. During their flight to Orlando, they went back to their thoughts and conversations about expanding sales of chemical and organic pigments abroad. The market for their products in the US had become very competitive, highly saturated and there was always the increasing concerns of environmental hazards and clean air requirements associated with their manufacturing process. Up to then, their company had sporadically exported small shipments to Mexico and Brazil at good margins, but they felt it was time to embark in a stronger sales effort abroad.

It was then only by coincidence that Luis Perez, an Argentine-born, U.S.-citizen and alleged businessman entered the picture. He was introduced to Chuck and Shelton by Fritz von Bertrand, one of ICI's sales representatives who lived in Miami and was Luis Perez's neighbor and bowling pal. Mr. Perez related that he came from a very prominent family in Argentina that had been in the textile industry. He was a mechanical engineer who left his native country during the "troubled years," relocating first in Germany and then in Miami where he had married and resided for the past five years. He then talked about the very attractive business and economic conditions in Argentina, where inflation had been reigned in, the peso was at par with the U.S. dollar and the government was pretty serious about privatizing state enterprises. On top of that, the implementation of Mercosur as a free-trade zone among Argentina, Brazil, Uruguay and Paraguay would increase the opportunities for successful business ventures in the area.

Luis expressed his eagerness to go back and do business for ICI in Argentina. He was a promoter and a salesman and he stated that he did not need, nor was he seeking, a salaried position. He only needed reimbursements for expenses and his compensation would be taken as a partial ownership of the new business. Fritz von Bertrand, his friend at ICI, vouched for his credibility.

Not having any contact whatsoever with Argentina, the company had no way to verify Luis' statements concerning his family's history and could only conduct a credit check on his Miami address. The report contained nothing to alert the company to any character defects or criminal behavior. The company advised him that it would consider his proposal very seriously and encouraged him to refer potential customers to the company as a goodwill gesture of his ability to "open" markets. Within two weeks of the initial meeting in Orlando, Luis proved himself by bringing approximately $6,200 in cash sales from two customers, one in Costa Rica and the other in Argentina. There was another sales prospect in Nicaragua, but that did not materialize because of that country's economic and monetary instability and the unwillingness of the customer to provide an irrevocable letter of credit. Through all these transactions, Luis did not request any commission or bonus for the recorded sales.

Subsequently, Luis Perez felt that it was time to embark on ICI's efforts in Argentina, where he had many business relations and was ready to settle back. Thus, in May of 1996, Indiana Chemical, Inc. provided him with funds for his initial trips and expenses aimed to start a new business unit in Buenos Aires and thus attend to the promising market.

INDIANA CHEMICAL ARGENTINA, S.A. INITIAL PHASE

Luis Perez was invited first to ICI's corporate headquarters in South Bend, Indiana, where he was shown the facilities and was introduced to key administrators and personnel. While meeting with the Directorship of the company, Luis was instructed to contact potential customers to start taking orders for the chemical pigments line as soon as feasible. He was provided with a list obtained from the American Chamber of Commerce in Buenos Aires, with about 30 firms that were in the paint, solvent, textile and plastic industries as potential customers. Mr. Perez asserted that he already had done some homework and had contacted two or three of his old business buddies in Buenos Aires with sales targets in mind. He told the Board of Directors that he would work on setting up shop as soon as he arrived in Buenos Aires, but that he needed full support and company representation from Indiana Chemical, Inc. in order to do a good job.

In a Board of Directors meeting, Luis was given ample powers of attorney and company's representation to charter an affiliate of ICI in Argentina. After the power-of-attorney papers were notarized and validated by the Argentine consulate in Chicago, Luis Perez was ready to relocate with his family to Buenos Aires, Argentina. Before departing from South Bend, he reiterated that there was no need for him to have an assigned salary as long as the company provided funds for his moving expenses and the start-up costs of the Argentine affiliate.

Funding for Mr. Perez's reallocation and business organizational expenditures were made through direct personal checks or wire transfers to Luis in both Buenos Aires and Miami. In Buenos Aires, Luis found a combination office and storage facility that rented for $5,000 a month. He hired some local lawyers to register Indiana Chemical Argentina, S.A. (ICASA) as a fully owned affiliate of Indiana Chemical, Inc. of Indiana. He also hired the professional services of an Argentine Public Accountant, Flavio Weber, who would do the compilation and reporting of ICASA's local transactions based on documentation that Mr. Luis Perez would provide on a monthly basis. A checking account for Indiana Chemical Argentina with Luis Perez as the only authorized signatory was opened by Mr. Perez himself in Banco Latino at a branch conveniently close to the offices of ICASA. Mr. Perez also hired a secretary and two salespeople who were to start with the company in July or August of 1996. The sales employees were to double-up as delivery and account collection people since the expected initial level of operations did not call for additional personnel. Between May and July, Luis made payments to buy a delivery truck and also purchased a desk computer, a copy machine, a laser printer, a fax machine and office furniture for the new Argentine corporation. The transmittals of cash to fund all these expenditures are reflected on **Schedule 2**. Luis Perez provided receipts and documentation for all these pre-operation expenditures, as listed in **Schedule 3**, some of which represented his personal travel and moving expenses from Miami to Buenos Aires.

INDIANA CHEMICAL ARGENTINA. BUSINESS CONDITIONS AND INITIAL SALES

Shelton Miles, the General Manager of ICI in Indiana, was present for the ribbon-cutting ceremonies signaling the start of operations of ICI's affiliate in Buenos Aires in mid-August. During this visit Shelton met Alberto Marino, one of Luis' friends, who owned Coltex, S.A., a company that produced textiles for the apparel industry in Argentina. Coltex was already using vegetable-based pigments and was ready to place purchase orders of this product with Indiana Chemical Argentina if a constant supply could be guaranteed. Mr. Marino had already tested the product and had found it of excellent quality for the coloring of the textile materials that his company produced. Shelton assured him that the supply would be no problem since Indiana Chemical, Inc. was the exclusive distributor of Vortec®, a patented organic pigment produced in the USA.

During the following months of 1996, ICI kept pumping funds and shipping inventory of Vortec® pigment to ICASA for sale to Coltex, S.A. and other smaller customers in Argentina. **Schedule 4** reports the dollar value of cash and inventory channeled to Indiana Chemical Argentina from September to December of 1996. In total, there were $396,419 of fresh new resources syphoned out to the Argentine unit between September and December of 1996.

AFFILIATE'S REPORT. MIXED RESULTS AND LIMITED ACCOUNTABILITY

During the first months of operation, the Argentine unit of Indiana Chemical showed a lot of promise but not encouraging results. Luis Perez, its manager, kept asking for inventory shipments with the promise of future sales, always arguing that the Argentine customers expected not only a diverse spectrum of pigments, but also continuity in the flow of merchandise from ICI. When called to supply information about purchase orders, bank statements, sales collections, or expense reports, Mr. Perez became evasive and apologetic. He said that Mr. Flavio Weber, the external accountant hired to keep the books, was behind in processing the information that Mr. Perez had supplied to him.

Luis Perez frequently referred to the way business operations were conducted in Argentina. He argued that, as was common in many Latin American countries, businesses do not record all their transactions in the "official" company accounts. For instance, he explained, even though there was a secretary and two salesmen working in the affiliate, only the secretary was kept on the payroll. The other two employees were being paid "under the table" or, as it was called in Argentina, were "in the black." He related that everybody played the tax evasion game in Argentina. Employees preferred to be paid off-the-records so as to avoid tax and social security withholdings. Luis added that he was inclined to continue with this practice because it helped the affiliate to save on worker compensation and other employee-related expenses. He added that there were many other service expenses that were not to be recorded, under the same principle of "tax avoidance."

The management of Indiana Chemical, Inc. in South Bend was increasingly concerned because the importation of US pigment products into Argentina was an onerous affair, as they had already experienced. First, there were freight and insurance expenditures for the material transported in special containers.

Secondly, there were 14% import duties and a 3% statistical tax applied on the CIF (cost, insurance and freight) value of the imported product. Thirdly, the value added tax (VAT) system in the country had been adjusted in 1991 to prevent tax evasion. Thus, a pre-payment of VAT and income taxes was required before the imported merchandise could be introduced into Argentina. The prepayment is equivalent to 30% of the merchandise's total landed cost, and an additional 3% on landed cost is a prepayment for the expected income tax. The corporation can recoup those taxes only when it has sales, at which time a 21% VAT is computed and collected by the vendor. The 3% prepaid income tax is compensated as a credit to the company's Argentine income tax for the year.

All the funds and merchandise remitted to ICASA in Argentina had been reported in ICI's accounting books as part of the inventory, as shown in the financial statements in **Schedule 1**. The prepaid VAT tax credits from the imported merchandise were kept in a separate current asset account.

After insisting for several weeks for the financial statements of ICASA, these were faxed to ICI in South Bend in the middle of March 1997 by Mr. Flavio Weber, the external public accountant retained by the affiliate in Argentina. These statements and their selected Footnotes are found in **Schedule 5**. Mr. Weber reiterated that not all the actual transactions of the business were actually recorded, but only those that had been submitted with proper documentation by Mr. Luis Perez. Since he had been retained for a compilation and minimal review service, and not as an external auditor, he could not provide an opinion on the completeness and reasonableness of the financial accounts of ICASA, nor on the administrative effectiveness of its management. Also in March, upon Shelton's insistence, Luis faxed a list of typical actual monthly expenses incurred in the affiliate. These are reported on **Schedule 6**.

INDIANA CHEMICAL ARGENTINA. SECOND PHASE: 1997. ACCOUNTING AND MANAGEMENT NIGHTMARES

At the beginning of 1997 some sales of pigment inventory in Argentina started to materialize. Unfortunately, the cash flow to ICI headquarters was only a trickle compared to the infusion of more funds that the Argentine unit demanded and received, as evidenced from remittances listed on **Schedule 7**. Sales of vegetable-based pigments to Coltex S.A. stabilized at an average of $30,000 per month, and there were other small sales of chemical-based pigments that oscillated between $10,000 and $15,000 monthly. Unfortunately, the terms of credit extended to customers were normally 90 days, and the Argentina affiliate was still hungry for cash from ICI. Chuck Honeywell in South Bend was constantly asking Luis Perez when the additional sales, and more importantly, the cashing of prior sales would materialize.

In January of 1997, Luis Perez conveyed assurances of good business prospects with two new customers that he had taken away from the competition. One of them was a manufacturer of plastic components who used chemical pigments on a big scale. This business had made lab tests of the ICI's product line with excellent results and had placed an order for $125,000 of the pigments shipped by ICI as part of the October 2 dispatch (see Exhibit 4). The merchandise had arrived in Buenos Aires and Luis informed ICI that all duties and taxes had been paid and delivery to the customer was about to start. The $125,000 sales order represented a two-month demand for the interested client and the only inconvenience was that Indiana Chemical Argentina had to keep the inventory and do partial weekly deliveries during the span of two months. On account of this expected inventory movement, Luis Perez had gone ahead and bought a used forklift to facilitate product deliveries. He had purchased the forklift without any consultation with the company's headquarters, but again, it was not the first time that he had made decisions on his own. On account of all this, Luis requested more funds from ICI in Indiana.

The other prospective client was a pharmaceutical company in Buenos Aires that needed the chemical pigments to coat pills and tablets that they were producing in Argentina. This company had requested specially formulated pigments that had been shipped from the ICI's plant in Indiana on December 2, 1996. The CIF cost of this material was $85,845 and the sales price was $205,000. In January 1997, Luis advised ICI that the material had arrived in Buenos Aires and he needed about $70,000 to prepay the VAT, import duties and other customs charges. The customer was going to need this material in March. In addition, he had to pay $30,000 for the forklift that he had purchased. ICI reluctantly agreed to send more cash to Luis Perez — as the list on **Schedule** 7 referred to earlier shows — in the hopes of tying up long-term sales contracts with those new Argentine customers.

When the 1996 financial statements of Indiana Chemical Argentina arrived in ICI's headquarters in mid-March of 1997, there were big concerns from both the directors of the company and the company's external auditors. The reported numbers from ICASA did not match with its counterpart's accounts at ICI. The financial statements of the Argentine affiliate were not really audited because the Argentine CPA signing them had been hired to do only the record keeping and reporting on behalf of the Argentine unit. Flavio Weber, the local external accountant, asserted that he had recorded those transactions for which Mr. Luis Perez had submitted proper and valid documentation, and nothing else. He was aware that the Argentine affiliate had other transactions that were unreported, or "in the black," but that was a choice taken by Mr. Perez. In one instance related to the lift truck that Mr. Perez claimed he had purchased for $30,000, there was really no invoice to support that acquisition and the asset was missing from ICASA's balance sheet.

Additionally, more worrisome management problems began to surface in mid-March of 1997. Mr. Perez related to Shelton Miles, the general manager of ICI, that the $125,000 sale of pigments to the plastic company in Buenos Aires was made in January, but the customer was delinquent in making the first $40,000 payment as originally agreed. Luis Perez had to cover up the problem and had remitted $40,000 to ICI using his own personal funds. The customer had become evasive and unwilling to discuss further payments with Luis Perez. In addition, the $205,000 promised sales to the pharmaceutical company had been suspended. After the pharmaceutical business tested the material shipped to them, they found out that the chemical specifications were not those that they had requested. Consequently, they were reluctant to accept the merchandise without its proper reformulation to comply with their written specifications. Luis claimed that he had advised ICI's quality control department at headquarters about those detailed specifications. However, there was no evidence of a fax or any other document to substantiate Luis' statement. It would be very costly to reformulate the chemical pigments using somebody else's facilities in Buenos Aires, and bringing the product back to South Bend was out of the question.

Given all these new developments, Chuck Honeywell instructed Shelton Miles to go down to Buenos Aires to sort things out and initiate corrective action. Since some issues involved financial matters, Shelton decided to take along a junior accountant from their local CPA auditors, and a trip to Argentina took place in April, 1997. Upon arrival in Buenos Aires on April 14th, Shelton Miles, the general manager, and Frank Martinez, the junior accountant from the CPA firm in South Bend took two different approaches to the Indiana Chemical Argentina situation. Shelton was to concentrate on visiting the customers and try to salvage any business relations for future sales. Frank Martinez was to do some forensic accounting on the operations and controls — or the lack thereof — of the Argentine affiliate and its general manager, Luis Perez.

Shelton's meeting with the representatives of the pharmaceutical company confirmed that they were not willing to accept any pigment products without proper reformulation to comply with their requested specifications. According to Luis, the imported inventory was at the customs agent pending some paperwork after he had paid the import duties and other taxes required for its release. Regarding the other major customer, the plastic manufacturing firm that supposedly owed $125,000 to ICASA, Luis was very opposed to Shelton visiting them. Luis related that he had to use a lot of diplomacy and sales tact to assure collection, but that they should pay pretty soon. Furthermore, Luis explained to Shelton that because the sales to new customers had not progressed as expected, he was not generating enough cash to sustain the operations in Argentina. There were always the "special commissions" to customs inspectors to get the merchandise processed rapidly at the Port of Buenos Aires, plus promotional expenses to seek sales, and trips to the interior of the country to try to open new markets. He advised Shelton that effective that April he would cancel the lease contract on the office and storage facility to save expenses. He had already given an indefinite leave to his secretary and the two salesmen, and he was doing what he could to keep expenses to a minimum. The bulk of the inventory of the affiliate had been transferred to a warehouse owned by his friend, Alberto Marino of Coltex, S.A., the one company that remained a loyal customer. Luis complained to Shelton that ICI headquarters had not come through with good financing to propel ICASA into a more prominent presence in Argentina. He said that oftentimes he had to use his own personal funds to pay for the company's expenses and that ICI should compensate him with stock in lieu of the salary that he never received. Luis complained that there was barely one penny left in the company's bank account.

Frank Martinez's inquiries painted a different picture. After visiting ICASA's facilities and finding an empty warehouse and a scantily equipped office, Frank found the location of Alberto Marino's warehouse facility. There Frank found the inventory of imported pigments that belonged to ICASA, although the people in charge at that storage building did not allow him to take a detailed physical count. At Banco Latino, Frank Martinez found out that ICASA had not one, but two checking accounts, and the balance of both at April 15th amounted to $27,530. He also visited at length with Flavio Weber, the Argentine accountant who had kept the books for ICASA. Mr. Weber revealed that he had recorded invoiced sales of $84,515 for the first three months of 1997 ending on March 31st, and that did not include the sale of $125,000 to a plastic manufacturing company because Mr. Perez had not provided the corresponding invoice. He had not recorded operating expenses for that period other than the rent and the secretary's salary, which were $2,500 and $1,650 per month, respectively. While he knew that the rent of the leased facilities was $5,000 per month, Luis had apparently arranged for the landlord to invoice the company only $2,500 to thus help the owner save some income taxes. Mr. Weber recorded on the books only what could be substantiated with valid tax-supported documentation. Another example was the delivery van, which he had not recorded in ICASA's reported assets because the invoice had been issued in the name of Luis Perez and not the company's. For all practical purposes, Mr. Perez was the owner of that van and its special equipment.

Mr. Weber acknowledged that Luis had supplied him with a list of expenditures for the first quarter of 1997 that had been allegedly paid with the company's funds at Banco Latino. However, there was no supporting documentation to record and classify these expenditures which apparently included advances to custom agents, purchases of supplies and several miscellaneous expenses. Frank Martinez annotated the total amounts paid, which were $52,405, $45,172 and $41,284 for the months of January, February and March of 1997, respectively. Also, by discerning the type of accounts that the amounts were tentatively allocated to, Frank could sum the estimated expenses of each month as follows: $15,364 for January, $22,411 for February and $15,793 for March. He was nevertheless intrigued when he observed items like the following in the list of business expenditures:

Travel and Entertainment Expenses:

Date	Description		Amount
01/13	Amazon Tours		$1,270
01/21	Casino Club Hotel		1,546
02/04	Airplane tickets		989
02/07	Marriott USA		582
03/01	Unclassified		444
		TOTAL	$4,831

Miscellaneous Expenses:

Date	Description	Amount
01/21	General expenses	$ 1,388
02/28	American Express (no details)	3,662
03/15	American Express (no details)	6,164
	TOTAL	$11,214

When Luis was confronted with Frank's findings over a dinner meeting in Buenos Aires, he became ostensibly upset and responded that "he was not a crook" and that he had given a lot of his time and resources to make Indiana Chemical stronger in the long-run in Buenos Aires. Afterwards, Shelton and Frank met alone to assess the whole situation and they both concurred that there was enough evidence to relieve Luis Perez from his management responsibilities and, upon lawyers' counsel, to initiate a criminal process against him.

The revocation of Luis Perez's powers-of-attorney papers, duly legalized and notarized, were received in Buenos Aires promptly after Shelton Miles had contacted and hired some Argentine lawyers to work on the case. The initial documents of a criminal process for fraud, defalcation and misrepresentation were filed at the Argentine courts, and at the end of that week, on Friday, April 18th, Mr. Perez was presented with the official forms stripping him of his power-of-attorney representation of Indiana Chemical and citing him to appear in court. That was the last time that Indiana Chemical, Inc. heard from Mr. Luis Perez.

FURTHER DEVELOPMENTS

After Mr. Flavio Weber was advised of Mr. Perez's dismissal, he was more willing to share whatever limited financial information he had on file about ICASA's operations. Flavio had filed the monthly tax declaration forms with the Argentine fiscal authorities and could confirm that as of April 15th the company had $82,520 in Prepaid Value Added Tax credits, which could be recovered through future sales in Argentina. He also said that Mr. Perez kept custody of the company's sales register and checkbook, though no additional sales had been recorded after Frank Martinez's first visit a few days earlier. He knew that a check for $15,000 had been received in February for sales to a plastic manufacturing company. Frank realized that the $15,000 deposit was the one shown on the bank statement of April 14th. At this point Banco Latino had already been advised that Mr. Perez was no longer representing the company, and the accounts of ICASA had been closed after cashing the $27,000 balance available on April 15th. All the regular customers had been contacted too. Flavio Weber was also aware that Luis Perez had withdrawn $20,000 and $40,000 from the bank in January and February, respectively, and had notified him that those funds were to pay for business expenses and that he would later bring the supporting documentation to Mr. Weber, which never occurred.

When Frank Martinez went to Coltex's premises to try to recover ICASA's inventory, Alberto Marino refused to deliver any of it. He said that he needed to use those pigments in his textile manufacturing operations, plus he had lent money and a lift truck to Luis to help him during ICASA's trying times. Luis had borrowed $40,000 in December to pay some duties and VATs associated with imported merchandise, though Mr. Marino did not have a signed document from Luis because he had done this solely on good faith and because of their long friendship. Mr. Marino felt that this was just like lending money to ICASA or Indiana Chemical, Inc. and he claimed to have a valid right against the inventory under his custody. It then became evident that Mr. Perez had never purchased a lift truck, and that recovering the inventory from Mr. Marino's warehouse would need the intervention of the appropriate authorities. With the help of the police department, a notary public prepared an official list of the company's inventory stored at Coltex. Assigning the CIF cost and import duties to each inventory item, Indiana Chemical arrived at a total of $233,183 of vegetable-base pigment inventories at the facilities owned by Mr. Marino. On the next day, a court order forced Mr. Marino to release the inventory to Shelton Miles who then found an alternate storage space for it in Buenos Aires. However, the chemical pigments that had been shipped in December for the pharmaceutical manufacturer were nowhere to be found. As it turned out, that inventory was still held at the customs warehouse in the Port of Buenos Aires, because Mr. Perez had never paid the corresponding VATs and import duties necessary to clear customs and take legal possession of the merchandise.

QUESTIONS

Financial Accounting Issues:

1. Was the amount of expenditures incurred by Indiana Chemical Argentina, S.A. during the months of May to August, 1996 (Schedule 3) appropriately classified in the financial statements of that affiliate at December 31, 1996 (Schedule 5)?
2. Do you consider it appropriate to report, as part of Inventories, the remittances of cash (Schedules 2 and 4, Panel B) and merchandise (Schedule 4, Panel A) that Indiana Chemical, Inc. (ICI) had sent to its affiliate in Argentina, as explained in the footnote to ICI's financial statements (Schedule 1)? What other accounting reporting options could ICI have followed?
3. Reconstruct, as best as you can given the circumstances described in the case, a balance sheet of Indiana Chemical Argentina, S.A. as of April 1, 1997.
4. Estimate the amount of resources (cost of inventories and cash funds) that Luis Perez might have illegally appropriated from Indiana Chemical Argentina, S.A. during the time of his tenure as general manager of that Argentine affiliate.
5. Estimate the amount of losses that Indiana Chemical, Inc. would report for the year ending on December 31, 1997, which originate from the operations of its Argentine affiliate.

Auditing and Control Issues:

1. What should Indiana Chemical, Inc. have done before entrusting funds to Mr. Luis Perez for the start of operations in Argentina?
2. What internal control weaknesses can you detect in the process of remitting cash and merchandise to Mr. Perez and the Argentine affiliate? What would you have done differently?
3. What criticism can you advance to Indiana Chemical, Inc. for the financial recording and reporting shortcomings uncovered in its Argentine affiliate? What would you have done differently?
4. Do you suspect that the company is in violation of the Foreign Corrupt Practices Act?
5. Are there any contingent liabilities that Indiana Chemical Argentina, S.A. or its parent company Indiana Chemical, Inc. would be subject to? If so, could you identify and quantify them? How would you disclose them?
6. Should Midwest Bank, with an outstanding loan receivable from Indiana Chemical, Inc., be concerned about the recent developments in the company's Argentine unit?
7. Would you endorse the practice of keeping transactions off the books to save taxes, as the Argentine manager of the affiliate predicated?

International Accounting and Taxation Issues:

1. Which other avenues or options could Indiana Chemical, Inc. have taken to do business in Argentina?
2. How does the value added tax system differ from the tax system currently used in the U.S.?
3. Do the financial statements of Indiana Chemical Argentina, S.A. have to be translated into U.S. dollars?
4. Do you know of any U.S. Federal Government programs or mechanisms to protect or reimburse U.S. corporations from losses derived from business operations in foreign countries?
5. What would be your final recommendation to Indiana Chemical, Inc. in regards to the current state of affairs of its Argentine affiliate?

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SCHEDULE 1

INDIANA CHEMICAL, INC.
BALANCE SHEETS
DECEMBER 31, 1996 AND 1995

ASSETS

(Numbers in U.S. $000)	1996	1995
Current Assets		
Cash	$ 50	$ 113
Marketable Equity Securities Available for Sale (net of allowance for unrealized gains of $43 and $29 for 1996 and 1995, respectively)	386	350
Accounts Receivable (net of allowance for doubtful accounts: $75 in 1996 and 1995)	2,450	2,325
Inventories (Note 1)	3,350	2,810
Refundable Income Taxes	106	—
Deferred Income Taxes	15	8
Prepaid Expenses	165	36
Total Current Assets	$ 6,522	$ 5,642
Property, Plant and Equipment		
Land	$ 135	$ 135
Buildings and Improvements	2,850	2,850
Machinery and Equipment	3,600	3,400
Transportation Equipment	1,650	1,575
Furniture and Fixtures	465	440
Total Cost	8,700	8,400
Less Accumulated Depreciation	4,335	4,154
Net Property, Plant and Equipment	4,365	4,246
Other Assets		
Cash Value of Life Insurance (note 2)	500	500
Total Assets	$11,387	$10,388

SCHEDULE 1 (cont.)

INDIANA CHEMICAL, INC.
BALANCE SHEETS
DECEMBER 31, 1996 AND 1995

LIABILITIES AND EQUITY

Current Liabilities	1996	1995
Accounts Payable	$ 1,580	$ 752
Current Maturity of Long-Term Debt (note 3)	2,900	—
Salaries and Wages Payable	85	78
Property Taxes Payable	95	80
Other Current Liabilities	65	75
Total Current Liabilities	$ 4,725	$ 985
Long-Term Debt	—	$ 3,360
Shareholders Equity		
Common Stock, $10 par value: 50,000 shares authorized and 20,000 outstanding	$ 2 00	$ 200
Retained Earnings	6,419	5,814
Net Unrealized Gain on Marketable Securities	43	29
Total Shareholders Equity	$ 6,662	$ 6,043
Total Liabilities and Equity	$11,387	$10,388

INDIANA CHEMICAL, INC.
STATEMENT OF RETAINED EARNINGS
FOR THE YEARS ENDED DECEMBER 31, 1996 AND 1995

	1996	1995
Balance, Beginning of the Year	$ 5,814	$ 4,900
Income (Loss) for the Year	605	914
Balance, End of the Year	$ 6,419	$ 5,814

SCHEDULE 1 (cont.)

INDIANA CHEMICAL, INC.
INCOME STATEMENTS
FOR THE YEARS ENDED ON DECEMBER 31, 1996 AND 1995

(Numbers in US $000)	**1996**	**1995**
Sales	$19,275	$19,520
Cost of Goods Sold		
Materials	12,100	11,900
Direct Labor	1,260	1,275
Manufacturing Overhead	1,320	1,300
	14,680	14,475
Gross Profit	$ 4,595	$ 5,045
Operating Expenses		
Selling	$ 1,750	$ 1,860
General and Administrative	2,150	2,100
Total	3,900	3,960
Income (Loss) from Operations	$ 695	$ 1,085
Other Income:		
Investment Income	$ 43	$ 50
Gain on Sale of Fixed Assets	28	7
Total Other Income	71	57
Income Before Provision for Income Taxes	$ 766	$ 1,142
Provision for Income Taxes	161	228
NET INCOME	$ 605	$ 914

SCHEDULE 1 (cont.)

INDIANA CHEMICAL, INC.
SELECTED NOTES TO THE FINANCIAL STATEMENT

Note 1. Significant Accounting Policies

Foreign Division — The company commenced doing business in Argentina in 1996. Activity in the country has been concentrated on developing a customer base and assessing the company's potential in the market. No significant sales have been generated since operations began. There is inventory at this location of approximately $519,000, which is included in the company's total inventory. Sales for 1996 were $40,970 and expenses were $68,900 resulting in an operating loss of $27,930.

Marketable Securities — The company adopted FASB Statement No. 115, Accounting for Certain Investments and Debt and Equity Securities, which requires marketable securities to be accounted for at fair value. The company classifies its marketable debt and equity securities as "held to maturity" if it has the positive intent and ability to hold the securities to maturity. All other marketable debt and equity securities are classified as "available for sale." Securities classified as "available for sale" are carried in the financial statements at fair value. Realized gains and losses, determined using the first-in, first-out (FIFO) method, are included in earnings; unrealized holding gains and losses are reported as a separate component of shareholders' equity. Securities classified as held to maturity are carried at amortized cost.

Inventories — Inventories are valued using the lower of cost (determined on the last-in, first-out (LIFO) method) or market.

Note 2. Cash Value of Life Insurance

The company is the owner and beneficiary of two life insurance policies on the owner, Mr. Charles Honeywell, where the total cash surrender value is $500,000.

Note 3. Long-Term Debt

Long-Term Debt consists of the following at December 31, 1996 and 1995:

	1996	**1995**
Note Payable to Midwest Bank at prime with a borrowing limit of $4,000,000. The borrowing is secured with accounts receivable, inventory, equipment, and real estate. This note is due December 1, 1997	$2,900,000	$3,360,000
Current Maturities	2,900,000	—
Long-Term Debt	—	3,360,000

SCHEDULE 2

INDIANA CHEMICAL, INC.
LIST OF CASH REMITTANCES TO SET UP THE OPERATIONS
OF INDIANA CHEMICAL ARGENTINA, S.A.
MAY — AUGUST, 1996

ACCT. VENDOR	DATE	VOUCHER#	AMOUNT	CREDIT	EXPLANATION
1	5/2/96	18484	$ 2,500	Cash	Check to Luis
2	5/3/96	18534	2,500	Cash	Western Union Cash
3	5/6/96	18753	800	Cash	Check to Luis
4	5/7/96	19548	5,000	Cash	Check to Luis
5	5/8/96	19549	2,000	Cash	Check to Luis
6	5/10/96	20095	5,000	Cash	Western Union Cash
7	5/13/96	20093	7,000	Cash	Wired to Buenos Aires
8	5/15/96	20094	5,000	Cash	Wired to Buenos Aires
9	5/17/96	20218	5,000	Cash	Check to Luis
10	5/20/96	20217	5,000	Cash	Check to Luis
11	5/23/96	21332	1,742	Cash	Check to Luis
12	5/27/96	21972	1,428	Cash	Check to Luis
13	5/31/96	22890	5,000	Cash	Wired to Buenos Aires
Total in May, 1996			$47,970		
14	6/3/96	22819	$ 1,000	Cash	Check to Luis
15	6/7/96	23118	3,500	Cash	Check to Luis
16	6/10/96	23805	2,000	Cash	Check to Luis
17	6/12/96	23995	10,000	Cash	Wired to Buenos Aires
18	6/17/96	24463	5,000	Cash	Check to Luis
19	6/21/96	25008	9,310	Cash	Check to Luis
20	6/28/96	25193	1,430	Cash	Wired to Buenos Aires
Total in June, 1996			$32,240		
21	7/8/96	25451	$ 3,722	Cash	Wired to Buenos Aires
22	7/16/96	25541	1,223	Cash	Wired to Buenos Aires
23	7/22/96	25586	2,000	Cash	Check to Luis
24	7/29/96	25734	4,300	Cash	Check to Luis
Total in July, 1996			$11,245		
25	8/5/96	25832	2,500	Cash	Check to Luis
26	8/12/96	25994	3,000	Cash	Check to Luis
Total in August, 1996			$ 5,500		
Total Remittances			**$96,955**		

SCHEDULE 3

INDIANA CHEMICAL ARGENTINA, S.A.
PRE-OPERATIONAL EXPENDITURES*
FOR THE PERIOD OF MAY TO AUGUST, 1996

Year 1996	Concept	Amount
May 7, 8	Lawyers' fees to incorporate business in Argentina	$ 5,000
May 10	Lawyers' fees for power of attorney to Luis	800
May 20	Purchase of delivery van	25,000
May 23	Travel expenses Miami — South Bend visit	1,430
May 5	Travel expenses Miami — Argentina – Miami	2,500
June 10	Special equipment and shelves for van	2,300
June 3	Guarantee deposit on leased facility	5,000
July 3	June rent of office warehouse	5,000
July 15	Purchase of office equipment	10,000
July 20	Purchase of office furniture	9,310
July 31	August and September rent of facilities	10,000
July 25	Purchase of TV set for personal use	890
Aug 3	Shelving and remodeling office and warehouse space	3,500
Aug 1	Relocating expenses in B.A.	3,170
Aug. 15	Air fare Miami — B.A. for family	2,223
Aug. 7	Guarantee deposit for phone and utilities	1,250
Aug. 15	Business entertainment	2,366
Aug. 15	Advertisement in local newspaper	720
Aug. 15	Air cargo of personal effects Miami — B.A.	3,880
Aug. 15	Other incidentals	2,616
	Total Expenditures	**$96,955**

*Documentation to support these expenditures was provided by Luis Perez.

SCHEDULE 4

INDIANA CHEMICAL, INC.
A. INVENTORY SHIPMENTS TO INDIANA CHEMICAL-ARGENTINA
SEPTEMBER — DECEMBER, 1996

Date	Voucher	Amount	Account	Concept
9/3/96	29192	$ 8,331	Inventory	CIF cost
9/11/96	29826	18,719	Inventory	CIF cost
9/21/96	60416	24,991	Inventory	CIF cost
9/28/96	60418	5,227	Inventory	CIF cost
10/2/96	8926	90,183	Inventory	CIF cost
10/7/96	31194	8,261	Inventory	CIF cost
10/14/96	31195	4,164	Inventory	CIF cost
11/5/96	32453	2,643	Inventory	CIF cost
11/18/96	32454	8,916	Inventory	CIF cost
12/2/96	8738	85,845	Inventory	CIF cost
Total		**$257,280**		

B. CASH REMITTANCES TO INDIANA CHEMICAL-ARGENTINA
SEPTEMBER — DECEMBER, 1996

Date	Voucher	Amount	Account	Concept
9/5/96	33,021	$ 8,858	Cash	Wired to B.A.
9/15/96	33,076	11,815	Cash	Wired to B.A.
10/11/96	333,095	5,722	Cash	Western Union-Cash
10/21/96	33,111	6,845	Cash	Wired to B.A.
11/14/96	33,214	6,655	Cash	Wired to B.A.
11/22/96	33,222	9,244	Cash	Wired to B.A.
12/1/96	33,218	48,000	Cash	Wired to B.A.
12/18/96	33,375	42,000	Cash	Wired to B.A.
Total		**$139,139**		

SCHEDULE 5

INDIANA CHEMICAL ARGENTINA, S. A.
BALANCE SHEET
AT DECEMBER 31, 1996
(IN PESOS)**

ASSETS

Current Assets	
Cash and Banks	Ps. 7,930
Accounts Receivable (Net of Ps 1,200 allowance for doubtful accounts)	26,950
Imported Inventories (note 1)	163,300
In transit — Merchandise (note 1)	124,140
Advances to Custom Agent	14,370
Credits for Pre-Paid VATs (note 1)	75,310
Total Current Assets	Ps. 412,000
Non-current assets	
Furniture and Fixtures	Ps. 9,310
Leased Property Improvements	3,500
Office Equipment	10,000
Deferred Organizational Expenditures	5,000
Total Cost	Ps. 27,810
Accumulated Depreciation and Amortization	5,560
Net Non-Current Assets	Ps. 22,250
Other Assets	
Guaranteed Deposit for Leased Property	5,000
Total Assets	Ps. **439,250**

**The exchange rate is the Argentine peso is one to one: Ps. 1 = $U.S. 1.

SCHEDULE 5 (cont.)

INDIANA CHEMICAL ARGENTINA, S.A.
BALANCE SHEET
AT DECEMBER 31, 1996

LIABILITIES AND EQUITY

Liabilities	
Accounts Payable, ICI — Inventories	Ps. 287,440
Accounts Payable, ICI — Remittances	158,140
Other Liabilities	6,060
Total Liabilities	Ps. 451,640
Shareholders' Equity	
Common Stock, $10 Par Value: 5000 Shares Authorized and 1,500 Outstanding	Ps. 15,000
Accrued Losses	(27,930)
Total Shareholders' Equity	Ps. (12,390)
Total Liabilities and Owners' Equity	Ps. **439,250**

SCHEDULE 5 (cont.)

INDIANA CHEMICAL ARGENTINA, S.A.
INCOME STATEMENT
FOR THE FIVE MONTHS ENDING ON DECEMBER 31, 1996

(IN PESOS)

Sales	Ps. 40,970
Cost of Goods Sold	22,770
Gross Profit	Ps. 18,200
Operating Expenses (**)	
Marketing Expenses	16,750
Administration Expenses	29,230
Financing Expenses	150
Total Expenses	Ps. 46,130
Net (Loss)	Ps. **(27,930)**

(In Pesos)	Total	Marketing	Administration	Financing
Professional Fees	Ps. 5,800		Ps. 5,800	
Depreciation and Amortization	5,560		5,560	
Rent	15,000	Ps. 7,500	7,500	
Advertising	2,380	2,380		
Insurance	1,260		1,260	
Salaries and Wages	6,000		6,000	
Travel and Entertainment	8,850	6,870	1,980	
Utilities				
Bank Charges	150			Ps. 150
Miscellaneous	1,130	—	1,130	—
	Ps. 46,130	Ps. 16,750	Ps. 29,230	Ps. 150

** Analysis of Operating Expenses:

SCHEDULE 5 (cont.)

INDIANA CHEMICAL ARGENTINA, S.A.
SELECTED NOTES TO THE FINANCIAL STATEMENTS
FOR THE PERIOD ENDING ON DECEMBER 31,1996

Note 1. Significant Accounting Policies.

Valuation Basics

The financial statements of Indiana Chemical Argentina, S.A. are prepared and reported according to Technical Resolutions No. 8 and 9 of the Argentine Federation of Institutes of Professional Economists, in accordance with resolution No. 5/88 of the General Inspection Office of the Republic of Argentina.

By decree No. 316/95 of the Executive Office of the Republic of Argentina effective on August 15, 1995, all the control agencies of the Federal Government should not accept financial statements of corporations that are prepared under restatement methods based on price indexation or any other monetary adjustments for inflation. In compliance with this ordinance, the financial statements of Indiana Chemical Argentina, S.A. hereby reported have not been re-expressed in units of constant Argentine pesos or otherwise adjusted for inflation.

Inventories and Prepaid Value Added Taxes

The inventories reported are stated at acquisition cost at Buenos Aires, which includes the import duties and standard taxes added to the cost, insurance and freight to bring them to Argentina. The in-transit inventories are valued only at the cost, insurance and freight (CIF) incurred to import them to Argentina, based on the documentation received from Indiana Chemical, Inc. of the USA.

The pre-paid value added tax represents the assessment of this tax on the imported landed cost of the merchandise. It is equivalent to 30% of the total landed cost in Argentina and is paid before the merchandise can clear customs at the port of Buenos Aires. These pre-paid VATs can only be recouped through sales of the affected merchandise thus transferring the tax burden to the final customer. The VAT in Argentina is currently set at a 21% of the sale price of the product or service being sold.

SCHEDULE 6

INDIANA CHEMICAL ARGENTINA, S.A.
TYPICAL MONTHLY OPERATIONAL EXPENSES*
DECEMBER, 1997

(IN PESOS)

Concept	Amount
Rent of Office and Warehouse Facility	Ps. 5,000
Professional Accounting Fees to Mr. Weber	900
Payroll and Compensation to Employees	6,650
Insurance on Inventory and Facilities	450
Insurance on Delivery Equipment	325
Cellular Phone Monthly Rental	50
Phone and Utilities	800
Other Miscellaneous	825
Total Monthly Expenses	Ps. 15,000

SCHEDULE 7

INDIANA CHEMICAL, INC.
CASH REMITTANCES TO ICASA — ARGENTINA IN 1997

Vendor	Date	Voucher	Amount	Account	Transfer
L. Perez	01/10/97	32148	$ 69,809	Cash	Wired to Buenos Aires
L. Perez	01/31/97	32157	52,521	Cash	Wired to Buenos Aires
L. Perez	02/13/97	33004	20,125	Cash	Wired to Buenos Aires
L. Perez	02/28/97	33075	20,000	Cash	Wired to Buenos Aires
L. Perez	03/17/97	33111	61,912	Cash	Wired to Buenos Aires
L. Perez	03/31/97	33221	32,039	Cash	Wired to Buenos Aires
L. Perez	04/04/97	33302	4,000	Cash	Wired to Banco Latino
L. Perez	04/15/97	33415	8,579	Cash	Wired to Buenos Aires
	Total		**$268,985**		

*Based on information provided by Mr. Luis Perez.

REENGINEERING ACCOUNTING SYSTEMS AT CUMMINS ENGINE

Ted R. Compton, Professor
Ohio University, Athens, Ohio

Leon B. Hoshower, Professor
Ohio University, Athens, Ohio

Wayne H. Draeger, Vice President
Cummins Engine Company, Inc., Columbus, Indiana

For Cummins Engine Corporation, a Fortune 500 manufacturer of diesel engines and power generation equipment, the mid to late 1990s were excellent years. Sales exceeded $5 billion for the first time in their history, with each segment contributing to overall sales growth. Net income was high and stable. These prosperous times are in marked contrast with their struggles during the prior decade.

Faced with stiff foreign competition in the early 1980s, Cummins Engine witnessed a gradual decline in its traditional markets for much of the decade. As these markets declined, Cummins embraced the motto of "doing more with less." By the late 1980s, Cummins reduced its existing workforce by about 8,000 employees.

In the late 1980s, Cummins began to reinvent itself as it undertook strategies to increase market shares and develop a more competitive cost structure. The reengineering of its manufacturing processes was a major factor in its ability to control and reduce its manufacturing costs. With improving market shares and a more competitive cost structure, Cummins Engine was on its way to becoming a world-class organization.

Using the lessons learned from the reengineering of its manufacturing processes, the Finance group was now ready to redesign the accounting and finance areas. Probably the greatest challenge facing the accounting and finance areas was changing the culture of an organization that had a deep-rooted penchant for maintaining the status quo. It was preoccupied with transaction processing and not very responsive to users' needs. By using outside consultants and by borrowing the best practices of selected U.S. and Japanese companies, Cummins Engine began to move from a command/control paradigm, which features an "I make the rules; you follow them" attitude, to a new paradigm that embraced teamwork, cooperation, and customer service.

DEVELOPING GOALS AND STRATEGIES FOR THE REENGINEERING PROJECT

Before embarking on such an ambitious undertaking, a Finance Leadership Team (FLT) was formed. This team's main purpose was to oversee the reengineering project as it progressed from the drawing board to full implementation. Membership on the FLT was drawn from its worldwide finance organization with representation from MIS and important user groups.

The FLT's first act was to develop the following goals for the reengineering project:

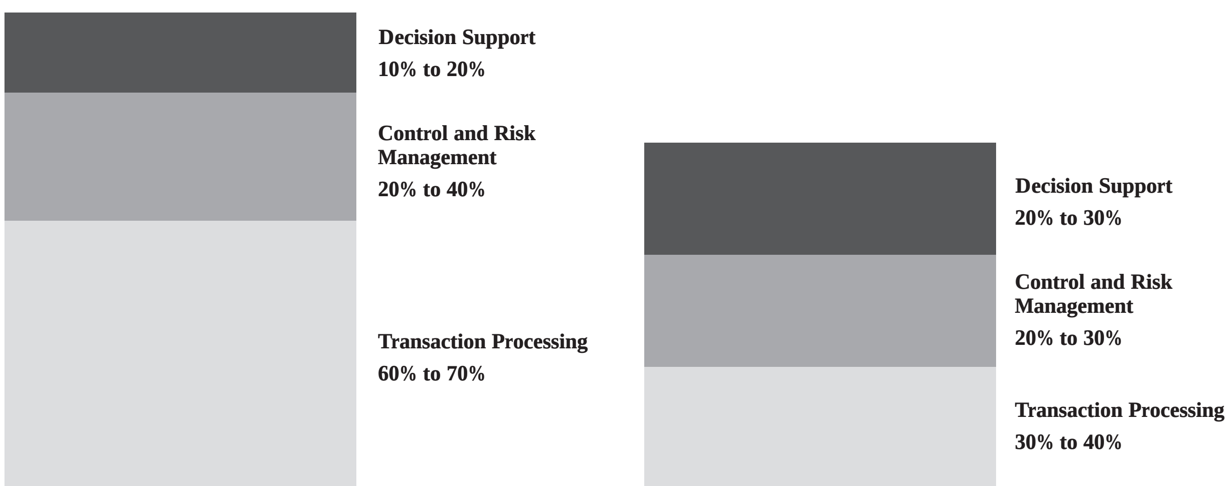
- Make our work more valuable to Cummins Engine
- Make our work more meaningful to us
- Reduce the cost of Cummins' financial operations over time and thus make Cummins Engine stronger

As these goals indicate, much emphasis was placed upon the value added aspects of accounting and finance and upon job enrichment. The issue of job security was addressed later.

The concept of Business Partnering became the basic theme for its reengineering undertaking. In essence, its accounting staff wished to be perceived as valuable members of the management team rather than being perceived as bean counters. In the current structure, Cummins Engine was spending about 60% to 70% of its accounting efforts with transaction processing, about 20% to 30% of its efforts with control and risk management, and about 10% to 20% of its efforts with decision supports. Its strategy was clear. If it were to become an effective business partner, it needed to redirect its resources while reducing costs as illustrated in Figure 1.

FIGURE 1

STRATEGY OF REDIRECTING ACCOUNTING AND FINANCE COSTS

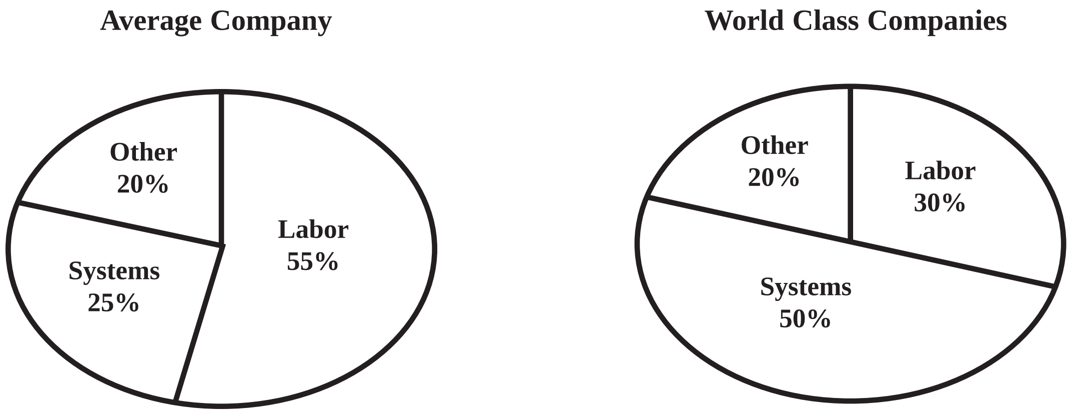


This meant that the accounting and finance function would be a smaller and flatter organization that would effectively lever technology. As shown in Figure 2 on p. 3, Cummins Engine is no different from other companies contemplating a move from a high labor intensive accounting and finance system to a high technology, low labor system.[1]

[1]This illustration was used by Gregory P. Hackett at a presentation at the Ohio Council of the IMA, April 19, 1996.

FIGURE 2

EFFECTIVELY LEVERAGED TECHNOLOGY IN ACCOUNTING AND FINANCE AREAS: SOURCES OF EXPENSES



As shown in Figure 1 on p. 2, the reduction of transaction processing costs must be Cummins' major thrust. Accordingly, the FLT's first initiative was to perform extensive benchmarking in order to determine the world's best practices for each of its transaction processes. Cummins would then adopt these best practices and standardize them throughout the organization. This would require the consolidation of transaction processing to one site in each major geographic area. This resulting consolidation of data would increase its ease of access by Cummins' various user groups. This would result in:

- **Higher quality** decisions than other organizations
- **Faster** decisions than other organizations
- **Standardization of Best Practice** for major decision processes

SELLING THE REENGINEERING WITHIN THE ACCOUNTING AND FINANCE AREA

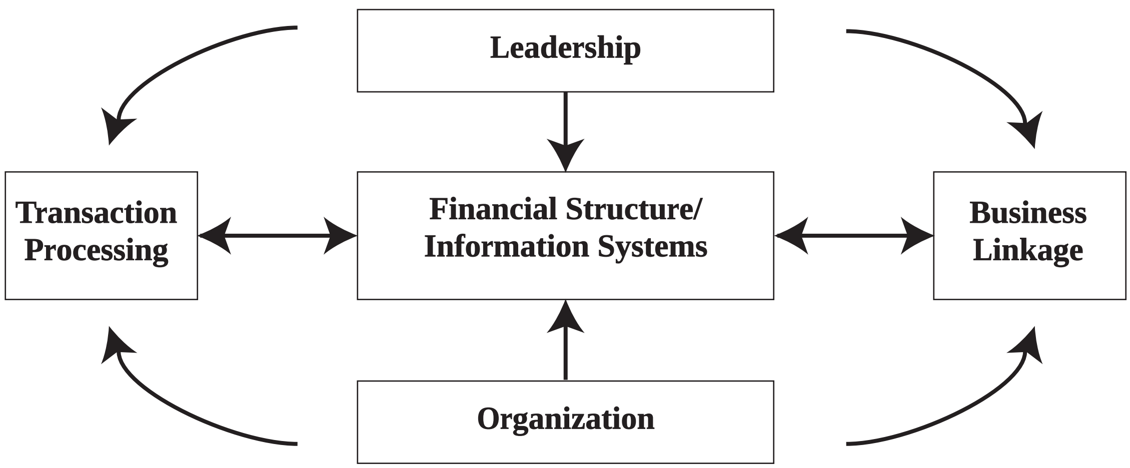
A major responsibility of the FLT was gaining acceptance of the reengineering project by the various accounting and finance operating groups. Probably the most important element of selling the idea was the unequivocal endorsement by top management. The FLT developed a worldwide educational campaign using high quality videos, pamphlets, and presentations whose focus was the likely benefits of the program to various operating units. This educational campaign became affectionately known as the "road show." Through a series of 77 meetings held with small groups worldwide, the program was discussed with Cummins' 900 accounting and finance personnel.

CUMMINS' REDESIGN MODEL

Cummins' model for affecting change is shown in Figure 3 on p. 4. The block in the center of the exhibit, Financial Structure/Information Systems, represents the essence or heart of their accounting and finance function that are its duties and the processes employed to accomplish its work.

FIGURE 3

CUMMINS' SYSTEMS REDESIGN MODEL



The outputs of accounting and finance's work is shown by the blocks on both the right and left sides of the exhibit. These are the products that are seen by accounting and finance's customers, the users of financial information at Cummins. Transaction Processing, shown on the left, is the traditional output of accounting, such as pay checks, tax returns, and general ledger information. Business Linkage, shown on the right, are those financial outputs that aid in the management of Cummins. These include:

- budgeting and planning
- providing management with readily accessible data for decision support
- redesigning or streamlining of operations.

The two-way arrows between the Financial Structure/Information Systems block and its two output blocks denote that the financial function should not produce the output that *it deems* important. But rather, it should produce the output that its *customers deem* important. This relationship between information provider and information user parallels both the demand-pull manufacturing philosophy, as well as the total quality management (TQM) philosophy of letting the customer define quality. These two-way arrows also signify that accounting and finance's output will change periodically as its customers' needs and as reporting requirements change.

The top block of the exhibit represents the executive leadership of accounting and finance, as well as the executive leadership of Cummins itself. The structure and daily operations of accounting and finance will ultimately reflect the attitudes and views of its leaders. If its leaders are preoccupied with command and control, a traditional function of accounting, the operations, structure, and output of accounting will ultimately reflect this view. This would result in an emphasis on rigid procedures and multiple internal controls, with transaction processing and financial safeguards as its major output.

In contrast, if the leadership's attitude is that accounting and finance should be a partner with the other operations of Cummins, then the daily operations of accounting and finance will also reflect this. Transaction processing will be de-emphasized and more resources will be devoted to decision support and to providing its customers with readily available information. In fact, leadership's attitude will determine whether accounting and finance views the other functions at Cummins as a mob to be controlled and overseen or as customers to be served. In the situation where the other functions are viewed as customers, controls would be relaxed and flexible to facilitate, rather than strangle, the operations of other functions.

The bottom block represents the organizational structure of accounting and finance. This includes the resources devoted to accounting's various tasks and the skills and training of its staff. As transaction processing is streamlined, resources currently devoted to it can be transferred to the business linkage functions. Simultaneously, as the job requirements of accounting and finance personnel change, the skills required to perform these new tasks will change, thus requiring retraining of current staff and new hiring criteria for new staff.

The Achilles Heel at each site was the issue of job security. Although the job security issues were different at each location, Cummins Engine was committed to reengineering the accounting process with no forced reduction of their workforce. At sites where reengineering efforts were to take place, a three to five year human resource schedule was developed. It detailed which jobs would be eliminated and how and where the resulting displaced workers would be absorbed in other areas of the company. The transaction processing staff would be reduced by attrition, retirements, and voluntary transfers to other operating functions, and by retraining staff to fill the business linkage jobs that would be created. Many employees remembered Cummins' forced staff reductions of the '80s when Cummins was unprofitable. Well-planned and orderly improvements now could improve Cummins' well being and avert harsh, hasty staff reduction in the future. Cummins Engine's plan to retain individuals whose jobs were being eliminated was the cornerstone of its educational program.

BENCHMARKING EFFORTS AT CUMMINS ENGINE

Benchmarking played a significant role in the reengineering efforts at Cummins Engine. Beginning in 1992, Cummins Engine participated in a major benchmarking program with companies such as Alcoa, Ford, Motorola, Hewlett-Packard and several Japanese firms. Results of the benchmarking efforts revealed that Cummins Engine was in the middle of the pack in terms of its total accounting related costs as a percentage of sales, averaging around 2% of sales. The best practice companies reduced their accounting and finance costs to about 1% of sales. This became the ultimate goal for Cummins Engine. Table I summarizes the benchmarking results of four major accounting applications.

TABLE I

AVERAGE TRANSACTION PROCESSING COST OF PARTICIPATING COMPANIES FOR SELECTED ACCOUNTING FUNCTIONS

	Accounts Payable	Invoicing and Collections	Payroll	General Ledger
Average for Large Companies	$8.00	$16.00	$6.00	$1.10
Average for Shared Service	4.44	7.80	2.77	.34
Average for Cummins Engine	3.17	7.16	2.18	.06
Best Practice	$ .80	$ 5.60	$ .72	$ .12

As shown in Table I, Cummins benchmarked the cost of four of its transaction processes against the costs of other large companies, shared services, and the world's best practices. Although Cummins' costs are all below those of the average of other large companies and those of shared services, they were generally above those of the best practices. Cummins interpreted this as meaning that its current practices were better than average, but there was much room for improvement. In particular, its costs of processing of accounts payable were about four times greater and its costs of processing payroll were about three times greater than those of best practices. Consequently, it was these two areas that Cummins chose initially for reengineering.

GETTING ORGANIZED FOR REENGINEERING

In January 1994, a project team, consisting of corporate office and operating unit personnel who had a strong commitment to "business partnering," was assembled and charged with reengineering accounts payable processing. This team was assisted by part-time personnel and outside consultants as required. Being consistent with the corporate leadership's philosophy of de-emphasizing transaction processing while increasing opportunities for business linkage (or partnership), the project team's overriding goal was to decrease processing costs by 75% while seeking opportunities to improve and support the operations of Cummins' other business functions.

The project team knew that the best practice organizations processed their accounts payable at a single location. The task force realized that a central location of purchasing information could provide better information for supplier management and could ultimately be integrated with Cummins' entire procurement process, thus dramatically reducing total procurement costs. These two auxiliary benefits became the "business linkage" portion of this reengineering endeavor. The task force also studied the possibility of integrating Cummins' employee payments, such as reimbursement of moving expenses, with its redesigned accounts payable process. So the new accounts payable process would be designed with these possible benefits in mind.

Thus the task force decided to centralize the accounts payable processing at its corporate headquarters in Columbus, Indiana. The data from Cummins' 50 various sites across the U.S., which currently process their own accounts payable independently, would be transmitted to Columbus. However, each independent site currently processed and stored its accounts payable data in slightly different ways. This posed a major obstacle. The process would have to be standardized at all 50 sites. The task force realized that forced standardization would create three major problems. First, employees at the sites could fear the loss of their jobs as their work is transferred to corporate headquarters. Asking the site employees to cooperate with such a project is like asking condemned prisoners to build their own scaffolds. Second, the various sites could resent interference from corporate headquarters, resulting in non-cooperation or passive resistance. Third, the various sites often employed different systems to accommodate their own unique situations and service their own data requirements.

THE REENGINEERING PROCESS

Because of the enormity of the project, the task force decided to implement the new system at a few selected pilot sites initially. This allowed the task force to use the experiences of the pilot sites to refine the new system, test the technology, gauge the organization's culture and readiness, and estimate implementation costs. With pitfalls charted and shortcomings addressed, the task force would be in a good position to transfer the new system to other sites. The reengineering of accounts payable consisted of four phases: baselining, vision, design, and implementation.

Baselining Phase — During the baselining phase, the project team's goal was to study the legacy (current) accounts payable system through analysis of flowcharts, operating procedures and interviews with customers. The legacy system, which was built around an IBM mainframe running IMS, had proven to be inflexible, very costly, and somewhat labor intensive. At the completion of the baselining phase, the project team arrived at the following conclusions:

- The reengineering of the accounts payable process would include invoicing and cash disbursement systems.
- The current accounts payable systems were highly integrated with purchasing and inventory.
- Report writing was difficult and ad hoc information requests required the assistance of additional systems personnel.
- The current process had a transaction cost of $4.00 per invoice and was highly labor intensive.
- The volume of transactions was likely to double from 25,000 transactions per month to 50,000 per month in the near future.

Vision Phase — The vision phase took approximately two months and resulted in a basic framework with enough specificity to enable the design of the new process to begin. With the aid of outside consultants, the project team conferred with the staff and user groups of each of the sites to explain the project's goals and to enlist their support. The staffs at the various sites were asked to rethink their "unique" information needs and were expected to give up their non-essential needs for the sake of the project. However, the new accounts payable processing systems would be designed to meet each site's more critical information needs. The vision for the new accounts payable was as follows:

- Extensive use of standardized EDI (electronic data interchange) procedures
- Greater linkage with existing purchasing operating systems
- Use of a client server computing system that would enhance the timeliness, quality, and relevance of its data processing activities
- Outsourcing of non-value-added functions such as printing checks and selected data entry activities
- Redesigning the process measurements used to assess the efficiency and effectiveness of the new system. This involved the extensive use of statistical quality control techniques.

The Design Phase — During this phase, the project team attempted to synthesize the design requirements into a cohesive and focused information framework. It was important for the project team to be practical and to consider constraints such as available resources and technology. The design phase provided the project team with the physical details of each of the system's components, such as reports, data, and controls. After the physical specifications of the new system had been clearly defined, the project team's next major consideration was software selection. The following criteria were used during software selection:

- The new accounts payable software must be compatible with existing Cummins Engine system's architecture.
- The new accounts payable software would not be modified at the source code level. Due to time constraints and cost, the project team felt that most of their time and effort should be directed at developing a custom interface link for the new software and the existing legacy system.
- The new software must be competitively priced with reasonable licensing standards that allow for future growth.
- The new software should support an open database format that would allow easy access to data.

Whenever possible, EDI standards were chosen as a common interface between client and server. This allowed the accounts payable system to interface with other groups throughout the organization with a well-defined common set of EDI standards that maintained the integrity of the data and provided an adequate system of internal controls. As an example, the payroll department was able to make payments to employees for relocation expenses by creating an invoice for each employee expense voucher. These invoices were filed as vendor invoices with immediate terms and used electronic funds transfer (EFT) to transfer the money to the employee checking account.

Just after implementation, about 70% of the invoices had to be converted into an EDI format. Substantial cost savings were realized by outsourcing this very expensive data entry process. Within two to three years most invoice and payment processing will be done with EDI technology, thus providing additional benefits from reduced data entry costs and the reduction of data input errors.

Table 3 below contrasts some of the important features of the new accounts payable system and the legacy system.

TABLE 3

COMPARISON OF IMPORTANT DESIGN CHARACTERISTICS OF THE LEGACY AND NEW SYSTEMS

Feature	Legacy System	New Process
Software	Mainframe IMS	Oracle Client/server
Invoice processing	Manual	80% EDI
Cash disbursement	Locally produced checks	EFT, Wire, Checks all produced off-site
Data timeliness	Updated monthly	Real-time
Reporting	Mainframe based FOCUS	GUI, End-user application

Implementation Phase — The activities that take place during a system's implementation, which is often called the "action" phase, vary widely from project to project. It is important to note that the nature of the activities performed and the sequence in which the activities are executed cannot be standardized. It is in that context that the discussion below presents an overview of the major implementation activities and issues that took place during the implementation of the new accounts payable system.

Throughout the process, the project team felt that communication was a key to dealing with resistance to change. Consequently, the task force held biweekly departmental lunches with employees and monthly meetings with senior management and made several mass mailings to vendors in an effort to keep both users and employees informed about the benefits and the progress of the project.

Target completion dates were established for all facets of the project. Strict adherence to the dates meant that the project team was "under the gun" to go ahead with implementation without being absolutely sure the correct procedures were being followed. More foresight in establishing an implementation schedule or more flexibility with completion dates would have helped in dealing with that issue.

During the testing phase, parallel computer systems were used. The purpose of the testing was to (1) detect all errors and problems and make needed adjustments and corrections and (2) demonstrate to all concerned that all components functioned together smoothly as a viable system.

The ability to process an increasing number of transactions with a smaller accounts payable organization was one of the stated goals of the reengineering project. The project team's goal was to reduce the number of employees required for this work by 80%. As stated earlier, job security became an overriding issue during the project. Properly addressing this issue was critical to the success of the project. It is clear that the size of the organization would be decreased drastically over the next five years. Employees whose positions were eliminated were given opportunities for jobs in other parts of the organization, absorbed through normal attrition, or through normal job changes. At some locations, the project team worked closely with union representatives as to the status of the implementation and staffing arrangements. In the end a few people did leave the accounts payable area because they felt that they did not want the challenge of dealing with a new accounts payable system.

Cummins began the process of retraining personnel early in the implementation phase with a series of formalized classroom training sessions, group training sessions, and a large amount of on-the-job-training. However, Cummins Engine did encounter some serious staffing problems because of a tremendous shortage of capable client server developers and analysts. Cummins dealt with this problem by using some creative staffing and recruiting arrangements.

By the middle of 1998, the company was heavily immersed in its implementation program and had completed 30% of its planned EDI applications. As the implementation progressed, transaction processing costs decreased. For instance, the cost of paying a vendor declined from $3.17 per payment to $2.25 per payment. Cummins' management feels confident that when the planned EDI applications are 80%

implemented, the cost to pay a vendor will drop to $1.65 per payment. This increased use of EDI will accelerate when a new version of the Oracle AP system becomes available in mid 1999. Cummins believes that its cost will ultimately drop to $1.05 per payment as it increases the use of EDI and the new process is implemented in more of its operating units.

IMPLEMENTATION PROBLEMS

The implementation phase has experienced its share of problems. In 1996, the executive management of Cummins promised the financial markets that it would decrease its G&A by 1% of sales, its product coverage expense by 1%, and its R&D by 1%, thus improving Cummins' overall profit margin by 3% of sales. In contrast to management's predictions, the actual costs of both G&A and product coverage have increased as a percentage of sales. Furthermore, these costs are higher than those of Cummins' competitors and other benchmarked companies.

Based on management's predicted cost reductions, one individual has increased his holdings in Cummins to between 10% and 15% of Cummins' outstanding stock. This major shareholder is concerned about the trend in Cummins' cost structure and has become increasingly insistent that Cummins Engine reduce its costs. As a major shareholder he may have the power to force a change in top management personnel if his demands are not met.

One way of cutting G&A costs in the short run is to curtail spending on the reengineering of the accounting system. However, Cummins Engine recognizes that such short term cost cutting actions can seriously undermine its ability to decrease transaction processing costs in the future. Cummins needs to balance the demand of its disgruntled shareholder for immediate cost reductions with its ability to make long term cost reductions.

There are several major issues resulting from the reengineering that have caused relations with the union to be adversarial at times. None of these issues were anticipated in the planning stage. One issue is whether the redesigned jobs are union or non-union positions. Once a position was established as a union job, the rigid union rules greatly reduced management's flexibility to staff the redesigned positions with the most qualified candidates. The union contract stipulated that the most senior employees who could pass the basic tests had to be selected for the newly created positions.

The second issue was that the union required that overtime work be divided equally among a broad group of employees. This resulted in employees working in unfamiliar situations in which they were not fully trained. Another problem was Cummins' inability to deal quickly with job performance issues. The normal time for settling a performance issue with the union was about three months — far too long to be effective. However, perhaps the most perplexing union issue facing the project team was that some workers' allegiance was to the union first and to the "customers" last. This was a direct contradiction of the Business Linkage Model that was the centerpiece of the reengineering project.

To date, the Cummins management team is asking the union for a supplement to the contract to address the above issues. At this time it appears the union will not agree, but the issues are still being negotiated.

SUMMARY

The experiences learned from the reengineering efforts at Cummins Engine can provide valuable insights for both practitioners and academicians. As the Cummins Engine case illustrates, advances in information technology have made a significant impact on the way companies are performing many of their accounting activities. As Cummins Engine nears the completion of the reengineering of its new accounts payable systems, the results look promising. Processing costs per invoice transaction are rapidly approaching the benchmark of the best practice company, error rates are down, and user satisfaction is increasing.

The Cummins case illustrates that human resources issues, not technology, are likely to be the major stumbling block during reengineering engagements. Firms must find creative ways to deal with job security issues and union work rules. At the same time, effective use of technology has made creative organizations very dependent on personnel who have certain skills. Although not everyone is an advocate of reengineering, the Cummins case does indicate, if a well-conceived approach to reengineering is followed, tremendous benefits can be realized.

ACCOUNTING INFORMATION SYSTEM QUESTIONS

1. Cummins' goal is to decrease its transaction processing costs. Appendix I outlines the major processes of a typical accounts payable system. Such systems usually include a purchase requisition form and a search for the best quality/price supplier; a receiving report which requires the number of units received to be counted before moving the materials to inventory; materials are later removed from inventory as needed by the manufacturing process; later the purchase requisition and the receiving report are matched with the supplier's invoice to generate a voucher; the voucher is then processed which produces a check and the remittance advice; the check and a copy of the remittance advice are mailed to the supplier; a copy of the remittance advice is attached to the voucher/invoice/receiving report/purchase requisition to show that the bill has been paid. In the above system, identify the non-value-added activities that could be eliminated. Assuming that Cummins uses a JIT inventory/manufacturing system, how would you reengineer the accounts payable system?

2. What are the benefits of using manufacturing philosophies (just-in-time, TQM, demand-pull, ABM, and ABC) to develop the information systems and accounting processes? How or when do these techniques tend to work in harmony? Explain.

Human Resource Management

3. Job security was of great importance to the employees of Cummins. How can management deal with the job security and union issues discussed in this case?

Stockholder Relations

4. It is apparent that in its quest to deal with the short-term cost-cutting concerns of the disgruntled stockholder, Cummins may be jeopardizing its overall reengineering efforts. How should management deal with this issue?

Auditing Issues

5. What special concerns will auditors have concerning the reengineering process of Cummins when conducting the year-end audit? EDI and EFT are major components of the modern-day reengineered accounts payable system. It requires that two or more trading partners agree to use a specific standard data format to conduct routine business transactions. However, EDI and EFT presents numerous audit and control implications. What types are the resulting audit and control implications (both positive and negative) from the extensive reliance on EDI and EFT?

APPENDIX I*
Major Processes in Original Accounts Payable System

- Originator initiates requirement
- Purchasing makes purchase decisions including price/schedule arrangements
- Supplier ships, sending shipment information to the receiving point and Accounts Payable
- Gains approval from Purchasing/originator for payment
- Processes payment and sends funds to supplier
- Accounts Payable transmits information to General Ledger

* This illustration was used by Gregory P. Hacket at a presentation at the Ohio Council of the IMA, April 19, 1996.

EVALUATING THE VALUATION ALLOWANCE

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Brett Jones is a senior accountant with the accounting firm of BGW. On a recent audit engagement, Brett was assigned the task of evaluating the deferred tax accounting for Packer Inc. The company, founded in 1962, is a large heavy machinery manufacturer. Packer's balance sheet at December 31, 1997 includes a deferred tax asset of approximately $22 million related to net future deductible temporary differences. However, realization of the deferred tax asset is dependent upon profitable operations in the U.S. and abroad, and future reversals of existing temporary differences. Although realization is not assured, Packer management in the past has been pretty sure that such benefits will be realized through the reduction of future taxable income. Management has carefully considered various factors in assessing the probability of realizing these deferred tax benefits.

Brett recalls the complexity surrounding the judgmental nature of accounting for deferred taxes under generally accepted accounting principles. Under Statement of Financial Accounting Standard No. 109 (FAS 109), Packer could be required to record a deferred tax asset for future deductible amounts and carry-forwards and record a valuation allowance, if it is likely that the tax asset will not be realized. Brett also recalls that FAS 109 provides some examples of negative evidence to support recording a valuation allowance, and positive evidence to avoid recording a valuation allowance. If assessed in an unbiased fashion, reliance on such evidence should result in a valuation allowance that is representationally faithful to the uncertainty of the underlying deferred tax asset.

Discussion with Packer Inc.'s President, Mike Holm, reveals the following information about the Company. Packer has never lost deferred Federal tax benefits due to the expiration of a U.S. net operating loss carry-forward. Post-retirement benefits become tax deductions over periods up to 50 years. Packer has the ability to utilize tax planning, such as capitalization of research and experimentation costs for tax purposes, so that Packer does not have, and does not expect to generate in the near future, any significant U.S. Federal tax net operating loss carry-forwards. Based on this information and the following selected financial information for Packer Inc., Brett must decide how to advise Packer Inc. on the accounting for its deferred taxes.

Packer, Inc. — Selected Financial Highlights

Packer Inc.
Consolidated Statement of Income

Years Ended December 31, (Dollars in thousands)

Income Statements	1997	1996	1995
Sales and Revenues	$150,666	$134,760	$119,686
Other Income	25,162	20,191	18,533
Total Revenues	$175,828	$154,951	$138,219
Cost and Expenses			
Cost of Sales	126,536	117,221	106,422
Selling, General, Administrative Expense	13,515	12,234	11,532
Interest expense	5,302	5,432	5,674
Depreciation expense	8,554	7,124	6,576
Amortization	3,467	3,127	2,865
Other deductions	1,678	1,460	2,575
Total Costs and Expenses	159,052	146,598	135,644
Pre-Tax Income	$ 16,776	$ 8,353	$ 2,575
Tax Expense	2,844	2,695	110
Net Income	$ 13,932	$ 5,658	$ 2,465

Packer, Inc.
Consolidated Balance Sheet
(Dollars in thousands)

Assets	**1997**	**1996**
Cash	$ 11,044	$ 10,939
Other marketable securities	5,599	5,137
Receivables — Net	68,720	63,055
Inventories	11,530	10,128
Contracts in Progress	2,469	2,265
Net Equipment — Leases	27,702	30,062
Deferred Income Taxes	21,975	20,377
Net Real Estate, Plants, and Tools	29,569	27,221
Special Tools	8,171	7,559
Intangible Assets	11,899	11,914
Other Asset	21,392	20,626
Total Assets	$220,070	$209,283
Liabilities		
Accounts Payable	$ 11,899	$11,635
Notes Payable	83,323	73,730
U.S., Foreign and other Income Taxes	3,232	2,721
Non-Pension Post-retirement Benefits	41,595	40,018
Pensions	6,842	14,353
Other Liabilities	46,887	42,868
Total Liabilities	$193,778	$185,325
Common Stocks	1,310	1,294
Additional Paid-in Capital	13,871	13,149
Retained Earnings	12,185	1,786
Other Adjustments	− 1,074	7,729
Total Equity	26,292	23,958
Total Liabilities and Equity	$220,070	$209,283

Note 1 — Significant Accounting Policies

Depreciation and Amortization

Depreciation is provided generally on a straight-line basis.

Inventories

Inventories are stated generally at cost, which is not in excess of market. The cost of substantially all U.S. inventories is determined by the last-in, first-out (LIFO) method.

Note 6 — United States, Foreign, and Other Income Taxes — Deferred and Payable

(Dollars in thousands)	**1997**	**1996**
Tax Expense — Current		
U.S.	$1,431	$1,030
Foreign	254	614
Total Payable	1,685	1,644
Deferred		
U.S.	1,023	942
Foreign	136	109
Total	1,159	1,051
Total Tax Expense	$2,844	$2,695

Deferred income tax assets and liabilities in 1997 and 1996 reflect the impact of temporary differences between the amounts of assets and liabilities for financial reporting purposes and the bases of such assets and liabilities as measured by tax laws.

Realization of the net deferred tax assets is dependent on future reversals of existing taxable temporary differences and future taxable income exclusive of reversing temporary differences and carry-forwards. Although realization is not assured, management believes that it is more likely than not that the net deferred tax assets will be realized. The amount of net deferred tax assets considered realizable, however, could be reduced in the near term if actual future taxable income is lower than estimated, or if there are differences in the timing or amount of future reversals of existing temporary taxable differences. Annual tax provisions include amounts considered sufficient to pay tax assessments that may result from examination of prior years tax returns; however, the amount ultimately paid upon resolution of issues raised may differ materially from the amount accrued. The alternative minimum tax credit can be carried forward indefinitely. The U.S. state net operating loss will expire in the years 1999–2012 if not utilized; however, a substantial portion will not expire until after the year 2002. The foreign tax credit carry-forwards will expire in the years 2002–2012 if not utilized.

Deferred tax assets and liabilities and the temporary differences and carry-forwards which give rise to them are shown as follows:

(Dollars in thousands)	1997		1996	
	Assets	**Liabilities**	**Assets**	**Liabilities**
Pensions and Other Post-employment Benefits	$22,450		$21,300	
Policy and Warranties	2,085		1,981	
Depreciation		$ 5,034		$ 4,903
Capitalized R & D	571		780	
AMT and State NOL Carry-forwards	1,178		1,055	
Foreign Credit Carry-forwards	537		130	
Other	9,803	13,964	8,506	11,338
Sub-Total	36,624	$18,998	33,752	16,241
Valuation Allowance	(14,649)		(13,375)	
Total Deferred Tax Amounts	$21,975	$18,998	$20,377	$16,241

Supplementary Information — Selected Financial Data (unaudited)

(Dollars in millions)

	For the years ended December 31,									
	1997	**1996**	**1995**	**1994**	**1993**	**1992**	**1991**	**1990**	**1989**	**1988**
Net Sales	$176	$155	$138	$132	$123	$125	$127	$124	$115	$116
Net Income (loss)	$14	$6	$2	($23)	($5)	($2)	$4	$5	($7)	($9)

Basic Requirements: Use the financial information that follows to prepare responses to the following requirements.

1. Compute the following for Packer for 1997: (a) return on assets, (b) return on equity, (c) debt to equity ratio. Note: You should use average assets and equity (based on 1997 and 1996 data) when they are used in the denominator of ROA and ROE.

2. Describe briefly how the sources of deferred taxes, as revealed in the tax footnote, arise for Packer, Inc.

3. Reconstruct the journal entries to record the increase in the gross deferred tax asset and valuation allowance at December 31, 1997.

4. Assume that Packer's tax rate on all income is currently 35%. How would Packer's deferred taxes, income and financial position be affected if the tax rate was reduced to 30%?

5. Some disagreement has arisen about the valuation allowance currently recorded for Packer, Inc. Mike Holm suggests that the valuation allowance could have ranged anywhere between 20% and 60% of the gross deferred tax asset. Packer Management has asked you to prepare an analysis for them related to their proposal to record an allowance of 60% of the deferred tax asset. Prepare a memorandum to Mike Holm that addresses whether recording a valuation allowance of 60% of their deferred tax asset could be supported by generally accepted accounting principles. Use information from the following analyses to provide support for your recommendation:

a. Consider the impact of a 60% valuation allowance on Packer's reported financial position (recast your analysis in No. 1, assuming Packer records a 60% valuation allowance).

b. Reference the guidance found in the accounting literature. For the requirements for this part, be certain to reference the appropriate accounting literature to support your position and attach a copy of the relevant paragraphs from the Standard.

c. Examine the tax disclosures of two companies that have recorded a deferred tax asset. Document whether these companies recorded a valuation allowance and the magnitude of the allowance relative to the deferred tax asset. What evidence did the companies provide to support the valuation allowance? Is the evidence provided consistent with the valuation allowance recorded? Why or why not?

Advanced Requirements

1. Packer's management may be motivated to record either a high or a low valuation allowance. Based upon your answers to No. 5 above, please explain Packer's motivation for recording a (a) high valuation allowance and (b) low valuation allowance.

2. Packer Inc. has asked Brett Jones and the other staff at BGW to develop FAS 109 tax planning strategies for the firm. Describe two tax planning strategies that Packer could use. What guidelines must the tax planning strategy follow?

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DOW CORNING CORPORATION:
SILICONE BREAST IMPLANT PRODUCT LIABILITY (A)

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Spencer Tillinghast hung up the phone and sighed. Christmas was only a few weeks away and the winter of 1991 had, so far, been mild. However, his employer, Dow Corning Corporation (DCC), was faced with another disappointment with respect to the silicone breast implant product. The legal department had just informed him that a judge awarded a sizable amount to another woman who had sued for leakage of silicone breast implants. This time, the award was $7.3 million!

Spencer had been a controller at Dow Corning in Midland, Michigan for the past ten years, starting at the company in 1981. As the controller, he had the responsibility to make final decisions about several financial reporting issues to prepare the annual report to the company's bondholders. In addition, it was his responsibility to work with the external auditors at Price Waterhouse. Since this last lawsuit had resulted in an adverse verdict against DCC, he anticipated recording a liability and writing a footnote to the financial statements to explain the outcome of the litigation. His more immediate problem was how to report other claims that were already pending, and other unasserted claims that he anticipated might materialize when news of the judgment broke. At this point, the lawyers would be involved with filing appeals. He was not sure whether they would be able to assess possible losses under future claims.

BACKGROUND

Dow Corning Corporation was incorporated in 1943 as a joint venture of Corning Glass (now Corning Incorporated) and Dow Chemical to develop, produce and market silicones. Corning, Inc. provided the silicone technology and Dow Chemical provided the manufacturing processes. Silicone is a man-made product that is formed from quartz rock, a form of silica. Dow Corning purchases the raw material, silicon, from various domestic and foreign producers. The chemical properties of the material (i.e., electrical insulating properties, resistance to extreme temperatures, resistance to aging, water repellency and lubricating characteristics) allowed its use in a broad spectrum of products, from lubricants, to implants for reconstructive surgery, to semiconductors. In 1991, Dow Corning manufactured and sold more than 4,500 silicone-based products to 45,000 customers worldwide, and was considered a leader in the industry. About 1% of total sales in 1991 came from the silicone breast implant product.

Dow Corning's production facilities are located in several states including Indiana, Kentucky, Michigan, and North Carolina, and several countries around the world. Midland, Michigan is the site of its corporate headquarters. In 1991, Dow Corning employed 8,300 people.

Dow Corning began production of silicone breast implants during the 1960s. The product was used for cancer patients for reconstructive surgery and for cosmetic purposes for breast augmentation. In 1983, the United States Food and Drug Administration (FDA) recommended further study on the use of implants, and in 1984, Dow Corning lost a $1.5 million judgment to a woman who sued the company for its breast implant product. The court records were sealed.

In 1990, a federal judge criticized Dow Corning for withholding health and safety information about the silicone implants. The FDA held hearings during 1990 and 1991 to gather further information about safety and efficacy of the silicone breast implant product. Dow Corning submitted 30,000 pages of information to the FDA during July 1991 that included 30 years of safety studies. At that time, Dow Corning decided to continue to sell the product to meet market demand.

On January 6, 1992, the FDA asked silicone manufacturers and medical practitioners to halt the sale and use of silicone breast implants, pending further study. Dow Corning voluntarily suspended shipment of the product. Finally, during 1992, the Board of Directors replaced L.A. Reed as President and Chief Executive Officer and appointed Keith McKennon, formerly of Dow Chemical, to the post of Chairman of the Board and CEO. Mr. McKennon took Dow Corning out the implant business in 1992.

LIABILITY VALUATION AND DISCLOSURE

Year Ended December 31, 1991

For the year ended December 31, 1991, the company reported the $7.3 million judgment in a footnote to the financial statements without accruing any liability for the loss. The disclosure read:

> Post trial motions have been filed, and appeal of the verdict is anticipated. A number of claims and lawsuits have recently been filed related to the breast implant business, including several styled as class actions, concerning which the Company has only had the opportunity to make a preliminary assessment. Based on the Company's historical experience with this type of litigation and management's present assessment of the merits of pending claims, management believes that the disposition of matters which are pending or which may reasonably be anticipated to be asserted will not have a material adverse effect on the Company's consolidated financial position.

A $25 million charge to earnings was recorded in the income statement to cover implant inventories, dedicated equipment and other costs including those associated with confirming safety of the product (see financial statements). On December 31, 1991, about 125 cases were pending.

Year Ended December 31, 1992

During the first quarter of 1992, twenty class action lawsuits were filed in Federal District Courts for breast implant products liability. By year end, this total reached thirty-six, and nine class action suits were brought in various state courts. In a Pennsylvania Federal District Court, a lawsuit claimed monetary damages of more than $75,000 for each plaintiff. Other district court actions claimed $50,000 in compensatory damages and $50,000 in punitive damages for each plaintiff. In Dade County, Florida, a state class action claimed $500 million in damages for the class.

At the same time, by the end of 1992, individual lawsuits numbered 3,600. Individual claims ranged from $100,000 to approximately $140,000,000. Plaintiffs claimed specified ailments, including autoimmune disease, joint swelling and chronic fatigue. Many of the lawsuits were consolidated for case management in federal and state courts. In addition, Dow Corning commenced a program to pay up to $1,200 per patient to cover the costs of removing implants from patients who wanted the procedure but could not afford the surgery.

The Company believed that insurance would cover a substantial portion of indemnity and defense costs related to the breast implant lawsuits. However, depending on the insurance policy language, and the type of damages (i.e., compensatory or punitive), the damages may or may not have been covered in whole, or in part. As of the end of 1992, the Company had $250 million or more in insurance coverage with respect to lawsuits filed.

The Company decided to report a $69 million charge to income; $24 million related to litigation and $45 million related to discontinued implant products. At the same time, the Company had reserves recorded in other current liabilities of $46.2 million on the balance sheet (net of accrued insurance proceeds). At December 31, 1992, the Company had accrued approximately $300 million in anticipated insurance proceeds to offset these breast implant reserves. The 1992 contingency footnote read (in part) as follows:

> Although there are similarities among the cases, there are also differences which can significantly affect the cost of defending and disposing of each case, and many cases are at such a preliminary state that the Company has not yet been able to obtain information relevant to the evaluation of each case. For these same reasons, the amounts involved in prior dispositions of breast implant cases are not necessarily indicative of the amounts that may be required to dispose of such cases in the future. The Company is vigorously defending this litigation asserting, among other defenses, that there is no causal connection between silicone breast implants and the allegations by the plaintiffs in these cases.

DEFERRED TAX ASSETS AND LIABILITIES

In 1992, DCC adopted SFAS No. 109, Accounting for Income Taxes, and added $16.4 million to income by reporting a cumulative effect of a change in accounting principle.

By Christmas 1993, Spencer felt overwhelmed. He stared at a memo from top management that lay on his desk. Although the Company was still expecting many of the costs to be covered by insurance, management wanted his opinion about whether to record additional liabilities and related insurance recoveries. In fact, management thought that it might be appropriate to report the liabilities and receivables on a present-value basis.

Dow Corning had been named in 11,800 individual lawsuits and 41 class action lawsuits for breast implant product liability. According to the most recent information from the legal department, more claims were anticipated to be made in the future. In addition, approximately 2,800 women had made use of the $1,200 reimbursement program to have the implants removed. Several companies that were named as defendants in the lawsuits, along with Dow Corning, were considering the establishment of a settlement fund to pay pending and future claims. This fund would total approximately $4 billion with Dow Corning's share to be approximately half that amount.

DISCUSSION QUESTIONS

1. Should Dow Corning have continued to sell silicone implants until 1992?
2. Comment about Dow Corning's policy for contingent liabilities related to silicone implant product liability litigation in 1992 under the provisions of SFAS No. 5, *Accounting for Contingencies and SAB 92, Accounting and Disclosures relating to Loss Contingencies*.
3. Comment about Dow Corning's policy for recording insurance recoveries related to lawsuits for silicone breast implants in 1992.
4. How should contingent liabilities and insurance recoveries be reported for 1993?
5. Why do you think that Dow Corning elected "cumulative effect of a change in principle" rather than "retroactive restatement of income for prior years" for deferred income taxes in 1992 under the provisions of SFAS No. 109, *Accounting for Income Taxes*?
6. How should deferred taxes be reported in 1993? Consider temporary differences related to product liability litigation.

DOW CORNING CORPORATION: SILICONE BREAST IMPLANT PRODUCT LIABILITY (B)

In 1994, Dow Corning entered into a settlement agreement to contribute $2.02 billion to a $4.2 billion pool to cover claims. The company deposited $42.5 million into a trust in 1994, and no further deposits have been made since.

By December 31, 1994, deferred tax assets reported on the balance sheet reached $435.6 million, after adjusting for a $1 million valuation allowance (current $252.9 million and long-term $182.7 million). $288 million of the total was related to litigation accruals for implant product liability.

On May 15, 1995, Dow Corning filed for protection under Chapter 11 of the U.S. Bankruptcy Code because it was (a) not satisfied with the rate of progress toward resolving breast implant litigation outside the 1994 Settlement, (b) was not satisfied with the rate of progress toward achieving commitments from certain of the Company's insurers relative to insurance recovery and (c) was concerned by the uncertainty associated with the Court's conclusions relative to the 1994 Settlement.

As of December 31, 1995, 19,000 individual lawsuits had been filed along with 46 class action lawsuits. In addition, the Company received $71.4 million in insurance recoveries in 1994 and $163.5 million in 1995.

DISCUSSION QUESTIONS

1. What is the appropriate accounting treatment for Chapter 11 reorganization, according to SOP 90-7, *Financial Reporting By Entities In Reorganization Under the Bankruptcy Code*?
2. Explain the proper reporting of contingent liabilities and insurance recoveries for the year ended December 31, 1995.
3. Comment about Dow Corning's treatment of deferred tax assets as of December 31, 1994.

DOW CORNING CORPORATION: SILICONE BREAST IMPLANT PRODUCT LIABILITY (C)

Corning, Inc. and The Dow Chemical Company are each 50% owners in Dow Corning. Until Dow Corning filed for bankruptcy protection in 1995, the shareholder organizations ". . . have adopted a hands-off posture" to Dow Corning (Driscoll et al. 1995). Finally, in 1995, Corning, Inc. and The Dow Chemical Company both recorded charges against income to write off their equity in the joint venture.

Corning, Inc.

Corning, Inc. management recorded an after-tax charge of $365.5 million to write-off its investment in Dow Corning in the second quarter of 1995 (see income statement and related notes that follow). Management also decided to discontinue recognition of equity earnings from Dow Corning. Information about this write-off was described in the "Investments" footnote to the financial statements. In 1994 and 1993, Corning recognized equity losses from Dow Corning losses of $2.8 million and $144.5 million, respectively.

Corning, Inc. is also a defendant in two types of cases related to the silicone breast implant product. First, persons claiming injury from the silicone implant product have sued Corning, Inc. as individuals or in class actions. By December 31, 1995, Corning had been named in 11,400 state and federal tort lawsuits, although several state courts have dismissed Corning from over 6,400 tort cases. Second, shareholder lawsuits have been instituted under federal securities laws charging that Corning, Inc. misrepresented and omitted material facts related to Dow Corning's silicone-gel breast implant business. Corning, Inc. has not accrued any losses related to either of these categories of lawsuits.

The Dow Chemical Company

The Dow Chemical Company recorded a pretax charge against income of $330 million to write-off its investment in Dow Corning in the second quarter of 1995, and will not recognize its share in equity earnings while Dow Corning remains under Chapter 11 (see income statement and related notes that follow). In 1993 and 1994, Dow Chemical recorded its 50% share of Dow Corning's product liability losses, net of expected insurance recoveries, which resulted in a charge of $192 million for 1993 and $70 million in 1994 against income.

As is the case with Corning, Inc., Dow Chemical is also a defendant in product liability cases. More that 13,000 implant lawsuits have been filed directly against Dow Chemical. In 1993, a federal judge ruled that Dow Chemical was not liable for claimed defects in breast implants manufactured by Dow Corning, although laws in some states may give rise to claims against Dow Chemical under negligence theories. Several state product liability cases remain. Management feels that there is only a remote probability of a loss under breast implant litigation and has not recorded any contingent liabilities for product liability.

CORNING INCORPORATED AND SUBSIDIARY COMPANIES
CONSOLIDATED STATEMENTS OF INCOME
(in millions, except per-share amounts)

	1995	1994 Restated	1993 Restated
Revenues			
Net Sales	$5,313.1	$4,770.5	$4,004.8
Royalty, Interest and Dividend Income	33.0	28.7	29.9
	5,346.1	4,799.2	4,034.7
Deductions			
Cost of Sales	3,386.0	3,060.9	2,597.0
Selling, General and Administrative Expenses	1,093.5	871.7	774.0
Research and Development Expenses	179.7	176.9	173.1
Provision for Restructuring and Other Special Charges	67.0	82.3	207.0
Interest Expense	117.8	110.4	88.2
Other, Net	36.2	37.5	38.7
Income Before Taxes on Income	465.9	459.5	156.7
Taxes on Income	154.7	170.1	35.3
Income Before Minority Interest and Equity Earnings	311.2	289.4	121.4
Minority Interest in Earnings of Subsidiaries	(66.8)	(50.7)	(16.6)
Dividends on Convertible Preferred Securities of Subsidiary	(13.7)	(6.1)	
Equity in Earnings (Losses) of Associated Companies:			
Other than Dow Corning Corporation	66.5	51.5	24.5
Dow Corning Corporation	(348.0)	(2.8)	(144.5)
Net Income (Loss)			
(Per Common Share, ($0.23)/1995; $1.32/1994; ($0.09)/1993)	$ (50.8)	$ 281.3	$ (15.2)
Weighted Average Shares Outstanding	$ 226.6	$ 211.8	$ 192.0

EXCERPT FROM NOTES TO FINANCIAL STATEMENTS

Corporate Investments

Dow Corning is expected to file a reorganization plan with the Federal Bankruptcy Court in the first half of 1996; however, the plan is not expected to be approved by the creditors and the Court for some time. As such, Corning continues to believe that it is impossible to predict if and when Dow Corning will successfully emerge from Chapter 11 proceedings.

THE DOW CHEMICAL COMPANY AND SUBSIDIARIES
CONSOLIDATED STATEMENTS OF INCOME
(in millions, except for per share amounts)

	1995	1994 Restated	1993 Restated
Net Sales	$20,200	$16,742	$15,052
Operating Costs and Expenses			
Cost of Sales	13,337	12,131	11,370
Insurance and Finance Company Operations, Pretax Income	(61)	(40)	(98)
Research and Development Expenses	808	783	786
Promotion and Advertising Expenses	416	411	367
Selling and Administrative Expenses	1,771	1,594	1,485
Amortization of Intangibles	38	43	68
Total Operating Costs and Expenses	16,309	14,922	13,978
Operating Income	3,891	1,820	1,074
Other Income (Expense)			
Equity in Earnings (Losses) of 20%–50% Owned Companies	70	29	(127)
Interest Expense and Amortization of Debt Discount	(434)	(362)	(413)
Interest Income and Foreign Exchange — Net	289	98	140
Net Gain (Loss) on Investments	(330)	(42)	592
Sundry Income (Expense)— net	43	83	(8)
Total Other Income (Expense)	(362)	(194)	184
Income Before Provision for Taxes on Income and Minority Interests	3,529	1,626	1,258
Provision for Taxes on Income	1,442	654	514
Minority Interests' Share in Income	196	200	171
Preferred Stock Dividends	7	7	7
Income From Continuing Operations	1,884	765	566
Discontinued Operations			
Income from Pharmaceutical Businesses, Net of Taxes on Income	18	166	71
Gain on Sale of Pharmaceutical Businesses, Net of Taxes on Income	169	–	–
Net Income Available for Common Stockholders	$2,071	$931	$637
Average Common Shares Outstanding	268.2	276.1	273.6
Earnings per Common Share from Continuing Operations	$7.03	$2.77	$2.07
Earnings per Common Share	$7.72	$3.37	$2.33
Common Stock Dividends Declared per Share	$2.90	$2.60	$2.60

EXCERPT FROM NOTES TO FINANCIAL STATEMENTS

Commitments and Contingent Liabilities

> The Company's maximum exposure for breast implant product liability claims against Dow Corning is limited to its investment in Dow Corning which, after the second quarter charge noted above, is zero. As a result, any future charges by Dow Corning related to such claims or as a result of the Chapter 11 proceeding would not have an adverse impact on the Company's consolidated financial statements. . . .
>
> It is the opinion of the Company's management that the possibility is remote that plaintiffs will prevail on the theory that the Company should be liable in the breast implant litigation because of its shareholder relationship with Dow Corning. The Company's management believes that there is no merit to plaintiffs' claims that the Company is liable for alleged defects in Dow Corning's silicone products because of the Company's alleged direct participation in the development of those products, and the Company intends to contest those claims vigorously. Management believes that the possibility is remote that a resolution of plaintiffs' direct participation claims, including the vigorous defense against those claims, would have a material adverse impact on the Company's financial position or cash flows.

DISCUSSION QUESTIONS

1. According to generally accepted accounting principles, how should shareholder organizations, Corning, Inc. and Dow Chemical Company, account for the product liability litigation against its joint venture, Dow Corning?
2. Comment about the accounting treatment that Corning, Inc. and Dow Chemical did adopt with respect to Dow Corning's product liability litigation.
3. Do you think that shareholders will prevail in their lawsuits against the shareholder organizations? Why or why not?

NOVARTIS A.G.

Jack Gray, Professor
Michigan State University, East Lansing, Michigan

Mark Matthews, Partner
PriceWaterhouseCoopers, Detroit, Michigan

In May 1996, Malcolm Cheetham, director of finance, needed a document to explain how Novartis would do its budgeting for 1997. Cheetham felt that the companies would need considerable lead time in developing budgets for 1997. All financial systems would be new to the organization. Even developing beginning unit balance sheets would be difficult.

CREATING A NEW COMPANY

Novartis began business on December 23, 1996, as a merger of Sandoz and Ciba. The financial press reported it as merger of equals. Before the merger, Ciba's total revenues were $17.5 billion and Sandoz's were $13 billion. Former Sandoz shareholders received 55% of the shares of Novartis and former Ciba shareholders received 45%.

A three-page addendum to the merger agreement spelled out the management principles that the new company would apply. Among other things, the management principles addendum specified the group (corporate) management structure, the role of the sectorial (eight major business lines) companies, and the role of country presidents (regional organization). The addendum with the management principles is an appendix to this case.

Sandoz and Ciba had different management systems. The new company had to decide whether to adopt the system of one of the predecessor organizations or to develop a new system for the new global company. Resolving some of these differences through the management principles addendum required considerable negotiation effort.

Both companies had long successful histories. Ciba traced its founding to 1758 and Sandoz to 1866. Both had grown through mergers and internal product development. Ciba's notable recent acquisitions included a minority interest in Insite Vision (1991). Ciba purchased Ricky Contact Lenses and the lens business of Triton Diagnostics (1992). Ciba acquired a 49.9% interest in Chiron Corporation, a large biotechnology firm (1994). Two of Sandoz's important acquisitions were Northrup King & Company in Minneapolis (1976) and Gerber Products Company, a leading provider of infant and baby foods (1994).

Acquisitions were only a part of corporate strategy. In June, 1995, Sandoz spun off its specialty chemicals subsidiary as Clariant in order to focus on pharmaceuticals and nutrition. After the merger, Novartis spun off the former Ciba's chemical operations so that it could focus on its chosen product lines. It also divested Master Builders (main product cement blocks) and McClaren Engineering (environmental control systems).

The new company was organized into eight sectors according to product lines. The sectors are:

- Pharmaceuticals
- Consumer Health
- Generics
- CIBA Vision
- Crop Protection
- Seeds
- Animal Health
- Nutrition

The Management Discussion and Analysis section of the 1996 annual report for Novartis said:

> The forward looking merger of two equally strong world-class companies with an outstanding strategic fit enabled Novartis to gain worldwide leadership positions in Life Sciences —healthcare, agribusiness, and nutrition. The commitment to innovation and an impressive lead in emerging technologies constitute the basis for solid and sustainable growth. We will benefit from broader marketing reach as well as from the great potential for productivity gain.

At the time of the merger, Ciba was the 10th largest drug company in the world. Sandoz ranked 12th. Novartis was the largest health food producer in Europe and a global leader in medical infant and baby nutrition. Novartis was number one in crop protection in the world with almost double the share of the next largest producer. They were number two in seeds and animal health.

The size of the companies drew attention of regulatory officials around the world. Most important were the European Commission and the United States Federal Trade Commission, each of whom required concessions for their approval of the merger. The European Commission required that Novartis grant non-exclusive two-year licenses for production and sale of Sandoz's methoprene, the active ingredient in cat and dog flea-control products. They also asked Novartis to use its influence with Chiron to grant non-exclusive licenses for its viagen gene-therapy patents.

The Federal Trade Commission required Sandoz to sell some of its important crop protection business in the United States — principally its strong corn herbicide product line.

Dr. Marc Moret, president of Sandoz, was quoted as saying, "Novartis will be a dynamic and forceful industry leader, based on a foundation of strong commitment and our common cultural heritage."

The companies, both based in Basel, Switzerland, had different organizational and reporting structures. Novartis' management was aware that cultural differences created problems in the 1995 merger of the Swedish and American pharmaceutical companies, Pharmacia and Upjohn. Their merged company settled on a new matrix organizational structure with three major markets and three pharmaceutical product centers. A survey of employees in January 1997 showed that fewer people responded positively to the statement, "I understand the structure and principles of Pharmacia and Upjohn," than had in May 1996.

THE CIBA MANAGEMENT CONTROL SYSTEM

Ciba had strong Swiss/German roots and was a highly centralized company with most management functions performed either at corporate headquarters or in large country organizations. Corporate headquarters and the country organizations had large groups that provided common services to the operating units. Operating units were evaluated based on direct contribution and little effort was made to allocate central services costs to the various lines of business. This organization structure provided limited line-of-business information.

In 1983, Ciba-Geigy used a matrix organization.[1] (The company later adopted the name Ciba.) One side of the matrix was seven product divisions (divided into a total of 41 strategic business units). The other side of the matrix was 120 group companies responsible for a specific geographical area. In large countries there were multiple group companies. Many group companies had responsibility for sales and production and the larger group companies also controlled their own research and development.

At the time of their merger in 1971, Ciba and Geigy chose accounting methods that they thought best presented their true economic picture. They felt that the merger would reduce resistance to new accounting methods since the merger required some changes anyway. They decided to use current cost accounting for fixed assets and inventories. They felt that current cost isolated “fictitious profits” resulting from subtracting historical costs from current revenues in the income statement.

They also used direct costing that included only variable production costs in inventory and cost of goods sold. Fixed production costs were charged directly to the income statement. They preferred direct costing because profits varied more directly with sales. Also, net income cannot be manipulated by building or depleting inventories as it can be in full costing.

For divisions, Ciba measured division performance by contribution and a contribution-based performance factor. All of a division’s variable expenses were subtracted from revenue to give divisional marginal contribution. Transfer prices were of little significance since local management was evaluated on direct costs alone. Fixed costs, variances and other income and expenses of the division were subtracted to give a divisional contribution before services. Company employment policies made direct labor a fixed cost. Contribution before services reflected all revenues and expenses that originated in the division. Finally, the costs of any corporate services that were clearly originated in the unit and that could be objectively measured were subtracted to reach the division’s contribution after services.

In addition to calculating each division’s contribution, Ciba calculated a performance factor for each division. The performance factor was the division’s contribution after services divided by the average assets directly employed (at their current cost) multiplied by 10. The result was multiplied by ten so that the number would not be confused with a return on investment. The performance factor was not calculated for group companies because many did not control all of the factors that went into the performance factor.

Finally, Ciba calculated a return on assets to measure the economic performance of its divisions. The numerator of the return on assets calculations took the divisional contribution after services, subtracted allocations of indirect function expenses and taxes and added back interest expense. They then divided the numerator by the total divisional assets plus an allocation of corporate assets. Each division had medium and long-range financial targets for return on assets and its performance factor. Ciba felt this was the most important measure of overall performance.

Ciba did similar analyses for group companies and individual products.

THE SANDOZ MANAGEMENT CONTROL SYSTEM

Prior to 1990, Sandoz had an organization structure similar to Ciba’s. During the late 1980s, however, Sandoz decided to break up its large country and headquarters operations into a line of business structure. “Sandoz 90” became the acronym for this action, which created an organization that had relatively few functions at corporate headquarters and the majority of costs and functions operating at the business segment level. Transfer prices were debated frequently and designed to provide a reasonable margin on local market sales. Sandoz’s management felt the new structure facilitated its ability to react to changing market conditions and divest its heritage — the specialty chemical business.

[1]Based on the Ciba-Geigy Case written by Kenneth A. Merchant and published by the Harvard Business School, Boston, 1984.

Sandoz managed seven operating divisions from its headquarters in Basel, Switzerland:

- Pharmaceuticals
- Crop Protection
- Seed
- Nutrition
- Specialty Chemicals (which was spun off as Clariant)
- Master Builders (main product cement blocks)
- McClaren Engineering (environmental control systems)

There were a number of regional companies that provided services to companies located in their region. For example, the holding company in New York provided legal, federal tax, insurance, hedging, and cash management services to the United States and Canadian operations. Annually, the New York holding company prepared consolidated financial statements based on U.S. generally accepted accounting principles.

The primary measure of financial performance for the operating divisions were earnings before interest and taxes, return on sales, and return on net assets. Because of the organizational structure, corporate charges and allocations were much less significant than at Ciba.

THE NOVARTIS MANAGEMENT CONTROL SYSTEM

Group (corporate) management supervises four divisions: Health Care, Agribusiness, Nutrition, and Corporate services.

The Health Care division includes four sectors: Pharmaceuticals, Consumer Health, Ciba Vision, and Generics. The Agribusiness division includes the Crop Protection, Animal Health and Seeds sectors. The Nutrition division includes Gerber and other health nutrition units.

In selected countries or regions, country presidents promote corporate image, support attainment of country objectives, and efficiently perform certain central tasks. For example, when more than one division operates in a country, the country presidents arrange financing, manage foreign exchange, and take care of legal matters, taxes and insurance.

While both Sandoz and Ciba had activities in the various sectors, their strengths varied. For example Sandoz was stronger in seeds and Ciba was stronger in crop protection. Corporate managers decided executive placement, but it naturally followed the strength of the sector.

The primary measures of financial performance of the business sectors are earnings before interest and taxes and return on net assets. Management is also concerned with return on sales and cash flow. Companies are expected to achieve leading position in their market and business segments.

Accounting definitions, budgeting and reporting practices follow International Accounting Standards. Cost of goods sold uses full costing and includes variances and inventory write-offs. Research and development is expensed as incurred.

The Group (corporate management) charges companies with operating interest calculated by multiplying average net current assets used during the period times a country specific interest rate. Net current assets is the current assets minus all non-interest-bearing liabilities. (The interest charge can be either positive or negative). In a similar manner, the Group charges companies with an operating income tax. Operating income tax is the company earnings before interest and taxes minus operating interest multiplied by an operating tax rate for each country.

All foreign exchange gains and losses are reported at the corporate level.

Late in 1996, Novartis began the multi-year process of reorganizing the businesses into legal entities aligned with the Management Principles agreed to in the merger. It also began implementing a database system for all units. For the first half of 1997, the biggest management reporting challenge was preparation of a combined budget and subsequent financial reporting. Determining the consolidated opening balance sheet required considerable effort primarily due to the need to assign Ciba central accounts to the business segments. Business segment leaders wanted no part of costs they didn't clearly need and refused to accept arbitrary unjustified assignment of costs. Legal entities bore no relation to business segments. The financial reporting experts in Novartis were adept at budgeting and reporting on a legal entity basis and had to think about how to organize a budget around these "virtual" business segments.

CASE QUESTIONS

1. Go to http://www.novartis.com, click on "Investors." What has been the trend of operating results compared to 1996 results? Prepare a brief summary.
2. Compare the organizational structures of Ciba, Sandoz, and Novartis.
3. Compare the financial performance measures of Ciba, Sandoz, and Novartis.
4. How does the Novartis system compare to the old systems of Ciba and Sandoz?
5. It's May 1996 and you have just been named the director of financial reporting and budgets for Novartis. Prepare a list and brief discussion of the major reporting issues that would have to be included in the 1997 budget instructions. (Don't forget about the importance of return on asset measures and the need to get the Business Sector leaders to agree to their opening net asset position.)

APPENDIX
Novartis AG Case

Management Principles

1. GROUP MANAGEMENT STRUCTURE

The management structure of the Novartis Group consists of a Group Executive Committee whose members are the Heads of the four operational Divisions and the Heads of the three main functions under the authority of the President, Head of the Executive Committee. The legally autonomous sectorial companies report to their respective Divisional Head. The management structure is independent of the legal structure of the Group, the latter being governed by tax and funds flow considerations.

Within the competence settled in the Terms of reference of Novartis Inc., it is the responsibility of the Group Executive Committee to:

- Develop strategies for the Group
- Decide on implementation of these strategies
- Supervise, support and verify their implementation
- Procure and optimally allocate the resources required (finances, management capacity), according to agreed strategies
- Set and monitor Group principles and strategies, particularly in the areas of executive personnel, finance, technology, safety and environmental protection, and external relations

Furthermore, in all Novartis companies, the Group Executive Committee:

- Participates in the selection and evaluation of executives for functional positions
- Maintains and increases the know-how and competence of all persons in positions of functional responsibility
- Intervenes in important cases

In some countries, the Group Executive Committee is supported by the local presidential organization.

2. STRATEGIC MANAGEMENT

Strategic management within the Novartis Group consists mainly of setting clear long term objectives and ensuring their attainment.

The basic principles of strategic management are to:

- Review the business portfolio periodically (namely about once a year) in order to strengthen core businesses
- Maintain entrepreneurial options by a continuous review of strategic objectives and plans. With respect to planning, the following applies:
  - The common planning horizon is five years (longer where necessary)
  - The strategic plan is updated annually (to reflect changes in the environment)
  - A fundamental revision of the plans is carried out in case of significant deviations or necessary realignments

- Set focus and priorities:
  – Clearly define objectives and priorities
  – Concentrate efforts on these priorities
  – Proceed step by step in a manageable fashion
- Closely link plan and action:
  – Derive annual objectives, action programmes and budgets from the strategic plans
  – Regularly review progress in achieving objectives

In addition it is ensured that relevant internal and external developments are reported and presented clearly.

3. FINANCIAL MANAGEMENT

Funds procurement and allocation are carried out at the Group level in accordance with the strategic objectives.

The objectives of Group financial management are:

- To minimize financing costs and to optimize market capitalization.
  The Group function Finance is therefore responsible for:
  – Proposals relating to the financing structure
  – Financial results, taking into account tax planning
  – Financing of companies in the Novartis Group
  – Forex exchange risk management of Group level
  – Central administration of financial resources
- To ensure that business performance of the Group is reported and presented clearly through
  – Appropriate task and responsibility oriented Group reporting
  – Group controlling which supervises and monitors progress against the sectorial and financial strategies, action programmes and budgets, and prepares reports for the Group Executive Committee

4. MANAGEMENT RESOURCES AND GROUP PERSONNEL POLICY

Basic principles of personnel policy especially regarding executives are established at Group level.

The individual companies implement the Group personnel policy and supplement it based on their specific local requirements. In general, they also have their own personnel function.

The promotion and compensation if executives are based primarily on performance against objectives, their efforts, initiatives and flexibility.

The human resources function of Group Management is in charge of top management and expatriates' compensation policy worldwide as well as executive personnel in Switzerland.

Novartis Group Executive Committee implements an effective management development policy with the following goals:

- To develop and provide qualified executive personnel
- To develop executive and junior executive talent optimally in accordance with the needs of the individual as well as the company

It is therefore the responsibility of the Group function Management Development to:

- Define duties and coordinate overall management development within the Novartis Group
- Assess the extent and quality of the Group's executive resources
- Prepare proposals for appropriate development of executive personnel to ensure competitiveness
- Promote company-to-company and country-to-country job rotation, particularly of junior executives
- Design and operate the Group Management Development Centre

5. ROLE OF GROUP TECHNOLOGY

The function Group Technology caries out assignments from both Group Executive Committee as well as from divisional or sectorial companies. It serves exclusively the Novartis Group.

- Group responsibilities of Group Technology are to:
  – Develop Group principles and standards in accordance with the state of the art
  – Chair technology-oriented committees such as "Oekologie und Sicherheits-Ausschuss" (OSA), Research Advisory Board (RAB), Technology Advisory Board (TAB)
- Group assignments are:
  – Technical and safety-oriented audits in the sectorial companies
  – Other assignments decided case by case by the Group Executive Committee

The unit has to provide its services on a break-even level.

6. ROLE OF CH-SERVICES

The function "CH-Services" carries out assignments from both Group Executive Committee as well as from divisional or sectorial companies, when the following conditions are realized:

- It is impracticable to assign infrastructure tasks to a Division/Sector
- Economics of scale or corporate clout can be gained

"CH-Services" task is to provide support, such as:

- Multidivisional works infrastructure
- Engineering services
- Information systems
- Patents and brand names
- Purchasing and transportation
- Personnel administration

"CH-Services" must charge out their services at competitive rates to be negotiated. They must be profitable or at least break even. In certain cases outsourcing will be considered. CH-Services serve exclusively the Novartis Group.

7. ROLE OF SECTORIAL COMPANIES

As legally and operationally autonomous entities, the sectorial companies are responsible for the successful management of their business within their industries. In particular, they are responsible for products/markets, sales and profits. They manage the following business functions:

- Research and development
- Production and purchasing
- Marketing and sales
- Human resources and administration.

The main objective of companies is to achieve a leading position in their markets and business segments and to secure long term growth through innovation and optimum use of the Group resources. The success of the companies is measured by financial ratios (EBIT/RONA) and the degree to which they attain strategic objectives given by Group Management.

The companies are responsible for all operating management tasks not explicitly reserved for Group Management, CH-Services, Group Technology or the presidential organization in the countries. In particular, it is the task of each company to:

- Develop strategic plans for submission to the Group Executive Committee
- Develop action plans to implement their strategies including acquisition and divestment programmes
- Maintain entrepreneurial options by continuous review of strategic objectives in light of external developments
- Ensure, through their own controlling function, that the status of the entire division is reported and presented fairly and clearly
- Enhance management development to provide young executive talent for the sectorial company and the Group
- Manage the affiliated companies of the division
- Cooperate with all departments on Group level for optimum utilization of Group resources
- Guarantee the required level of environmental protection and safety in their operating units worldwide

It is the prerogative of the Group Executive Committee to determine the legal structure of the divisional companies and sectorial companies and their affiliates as well as their financing.

8. PRESIDENTIAL ORGANIZATION IN COUNTRIES

In selected countries or regions, a Country President represents the Group Executive Committee internally and externally.

The main objectives of a presidential organization are to promote the image, to support the attainment of objectives in the country and to efficiently perform certain central tasks.

The responsibilities of each Country President are adapted to the local conditions by Group Management. His tasks are, in general, to:

- Represent the Group externally and support the companies in contacts with authorities and other external relations
- Represent the Group externally and support the companies in contacts with authorities and other external relations
- Perform supradivisional tasks within Group guidelines for all companies, such as:
  – Financing (short and long-term), foreign exchange management
  – Services in areas such as legal matters, taxes and insurance, and — if applicable — local pension and other employee benefit schemes, real estate management as well as patent and trade marks
  – Management development and salary administration for selected executives
  – Monitoring requirements in the field of environmental protection and safety
  – Monitoring external developments, particularly with respect to new risks and opportunities
  – Organizing board and coordination meetings
  – Auditing
  – Local emergency management
- Monitor compliance with Group guidelines and limits of authority and supplement these according to country-specific requirements in selected areas such as environmental protection and safety, accounting, information technology, human resources, external relations, legal and auditing
- Represent the country or region at corporate level
- Monitor for Group Management the implementation of strategies in the country based on key benchmarks

- Support the companies in assuming their responsibilities:
  - Adaptation of strategy and key objectives to country-specific possibilities and limitations (priorities, timing)
  - Identification, evaluation and execution of acquisitions
  - Timely assessment of capital expenditure projects/plans/budgets from an overall perspective

In countries without a Country President structure, some of these tasks may be assigned to one of the Group companies as a service function.

NEW FASB STATEMENT, LET'S CHANGE THE CONTRACT

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James Hasselman, Partner
PricewaterhouseCoopers, Honolulu, Hawaii*

David Roberts clenched his fingers tightly, trying desperately to stop his hands from trembling. He always dreaded being summoned into the office of Alice Halston, the chief financial officer of Sheridan Finance, Inc. He nervously waited for the secretary to announce that Alice would see him.

As the newest member of the Sheridan accounting staff, David seemed to be in a state of perpetual anxiety. The struggle to prove himself as more than just a naive rookie never ended. He was very grateful to be an accountant at one of the most profitable financial institutions in the Northwestern United States. The company had earned a prestigious place among small scale, public lending institutions. The key to Sheridan's success was the company's willingness to back many emerging biotechnology companies which later became highly lucrative enterprises. David was determined not to do anything to jeopardize his position in the company.

"David, Ms. Halston will see you now," the secretary announced.

David rose and entered Alice's office.

Alice greeted David cordially as he entered the room.

"I've been looking over the balance sheet for September 30, 1998 and I noticed that the value of our total assets increased by approximately 4.5 percent and our total liabilities have increased about 4.7 percent. According to the accounting records, the value of the securities pledged as collateral on our loan to Genoma Ltd. is recognized as an asset and our obligation to return the collateral to Genoma in the future is recognized as a liability," Alice stated.

David tried frantically to remember the details of the transactions that had involved Genoma, a leading manufacturer of molecular biology research equipment. He remembered that Genoma had applied for a loan a couple of years ago and received approximately $150 million in order to develop a new machine that could speed up the process of amino acid sequence identification and replication at least three-fold. The implications of such a device would be tremendous for Genoma. A device that speeded up the task of cloning the structure of amino acids, the building blocks of proteins, would enable scientists to artificially construct proteins that certain individuals could not produce naturally such as insulin, growth hormones, or estrogen. These proteins could then be produced in much greater quantities in less than half the time. In addition, the device could speed up the process of identifying the structure of other human proteins whose amino acid sequences are currently unknown. This information would be crucial to the

*We wish to thank Ms. Kristi L. Arakaki for her help in developing the story and Ms. Frances Griffin for her editorial help.

development of more effective treatment strategies for many types of diseases. Genoma seemed likely to succeed in manufacturing such a valuable scientific tool.

In order to secure the borrowed funds, Genoma had transferred to Sheridan about $150 million worth of stocks from each of five different pharmaceutical companies to serve as collateral. The transaction was considered a secured borrowing, or repurchase transaction (repo).

"The transferred securities were pledged against the funds loaned to Genoma," Alice explained. "Genoma still maintains the right and obligation to repurchase those securities from us. Thus, Genoma retains effective control over these assets*. Why have we recognized the securities in our balance sheet account? We have a secured borrowing situation or a repo transaction. We did not actually purchase the stocks, right?" she inquired.

"The new SFAS 125 issued by FASB requires us to recognize the securities we have acquired even though we did not actually purchase these assets," David replied. "The new standard prescribes three conditions that must be met in order to consider assets pledged under a borrowing agreement to have effectively been purchased. This transaction meets only two of these conditions. First, the assets must be out of reach of the transferor (that's Genoma) and the transferor's creditors. Second, the transferor must not impose any restrictions upon the use of the assets by the transferee (that's us, Sheridan). Third, the transferor must not retain a right and obligation to repurchase the transferred assets," David stated. "Our transaction with Genoma satisfies the first two conditions since we have legally taken title to the shares and we are free to repledge or sell the assets if we so choose. However, because Genoma is contractually bound to repurchase the securities at the end of the contract, the third condition is violated. Thus, the pledging transaction is not a purchase transaction."

"Of course not. We agree that the securities were not acquired through an actual purchase. So why are the securities recorded on our books?" Alice persisted.

"SFAS 125 further states that certain assets acquired as collateral must still be recognized by the acquiring company. Although we do not have absolute control over the stocks, since we are bound to give them back, the new standard now demands that we record the value of securities received as a pledge for our financing as an asset, and our obligation to return them as a liability, on our balance sheet. In the eyes of FASB, we still have enough control over the stocks to warrant recognition of the assets, accompanied by disclosure that the stocks have been pledged by Genoma."

"This is terrible!" Alice announced. "Recognizing the value of the stocks will wreak havoc on our financial ratios. Our return-on-asset figure will decrease by 4.4 percent (from 0.068 percent to 0.065 percent). Investors may assume that we are operating less efficiently since the total asset denominator in that ratio will be inflated. More importantly, our liability shown in the balance sheet has increased by almost 5 percent, causing current and potential investors to assume we have less liquidity. Is there anything we can do to derecognize the securities?" she asked.

"I'm afraid not," David replied cautiously. "Our contract with Genoma meets both of the standard's conditions requiring recognition of the transferred assets by the lending company."

"What conditions are those?" Alice inquired.

"The first condition is that the secured party (our company) is permitted by contract or custom to sell or repledge the collateral. The second condition is that the borrowing company, Genoma, is not entitled to redeem or repurchase the collateral on short notice unless we agree to the repurchase. In other words, Genoma can neither substitute other collateral for the stocks it has already pledged to us nor can Genoma terminate the contract at will. The second condition prohibits Genoma from redeeming or repurchasing the collateral on short notice should we pledge the stocks to another party. Because our contract includes these two conditions, we have enough control over the assets to record their value on our books," David reported.

Alice sat pensively for a moment. Suddenly, her face brightened. "Why don't we simply alter our contract with Genoma?" she declared. "We could grant Genoma the nominal right to substitute securities for the securities they have already pledged."

*If collateral is transferred to the secured party, the custodial arrangement is commonly referred to as a pledge. Secured parties sometimes are permitted to sell or repledge (or otherwise transfer) collateral held under a pledge. According to the SFAS 125, the accounting for collateral by the debtor (or obligor) and the secured party depends on whether the secured party has taken control over the collateral and on the rights and obligations that result from the collateral arrangement.

"I'm sorry, but I don't see the advantage in doing that," David said, looking puzzled. "If Genoma substitutes securities that we have already repledged, that would hurt our company. We will have additional costs to replace the securities. Essentially, we will not have the ability to repledge any similar securities and that will increase our cost of obtaining financing."

"That's true," Alice replied. "However, we could also alter the contract in such a way as to entitle us to impose a severe penalty upon Genoma should they attempt to substitute securities. The financial consequence of substituting could be so harsh as to certainly discourage Genoma from ever acting upon this right. By changing the contract in this fashion, we will not be subject to the new FASB standard. We could then derecognize the securities because we would no longer have effective control over our collateral securities," Alice announced enthusiastically.

"Changing the contract would be an effective loophole out of SFAS 125 compliance," David said uneasily. "But wouldn't that be . . . well . . . unethical? We are still maintaining the same amount of control over the securities. It might be misleading to shareholders and creditors using our financial statements. We maintain the right to pledge, sell, and otherwise profit from the use of the securities. Doesn't that right require us to report the value of the assets on the balance sheet?"

"Ethics are important, but we have to keep our investors content. Recognition will force us to assume a liability and will damage our ratios, which have already suffered a great deal due to the state-wide recession," Alice said sternly.

David was gripped with fear. As an accountant he was well aware of his duty to portray the financial status of the company in the most honest and realistic light possible. Yet, his immediate supervisor was persuading him to "get around" a FASB standard. While he was not very sure if this action would violate his duty, he felt very uneasy.

"There could be some legal repercussions if we carry out this plan," David warned. "We are not being completely straightforward with financial statement users if we derecognize the assets."

"There's nothing to worry about," Alice assured him. "We have not violated any FASB standard. On the contrary, we are in complete compliance. The SFAS mentioned nothing about allowing a penalty-free substitution of the securities. Do you think Genoma will be receptive to new contract terms?"

"I'm confident that Genoma will be eager to support the change. The new SFAS also conflicts with Genoma's interests. The new standard forced Genoma to reclassify the securities as pledged collateral. They are probably not anxious to call attention to the restrictions and limitations imposed upon the securities as a result of pledging," David informed her.

"That's good news," Alice said cheerily. "I will call our attorney this afternoon and ask him to construct a draft of the new contract, including the changes regarding the terms of security substitution."

QUESTIONS

1. Consider the statement of financial condition (balance sheet) and statements of operation (income statement) for Sheridan Financial Corporation, provided in the next pages. Evaluate the effect of the disclosure of "securities received under repurchase agreements," and "obligation to return them." Specifically answer the following questions:
   - In what statement can the effect be observed?
   - Is Ms. Halston right when she says that the financial ratios of the corporation have been changed for the worse? If so, is it a change in substance or in form?
   - What other ratios have been affected by the change in the FASB statement? Do these changes provide a better picture of the corporation or a worse picture?
2. Do you think that the change in the FORM of the contract to continue not to recognize "securities received under repurchase agreements," and "obligation to return them," is appropriate? Is it legal? Do you think that the change is unethical, as David implied?
3. If you were David, what would be your final decision? Would you go along with Alice Halston's plan to change the contract or would you try to continue reporting both the pledged securities and the obligation to return them?
4. There are at least two schools of thought regarding providing information to the market. One group suggests that whether the company provides information regarding its contracts or not, the market (and market players) is (are) sophisticated enough to recognize the underlying economic effect of the contracts and cannot be fooled. The other group suggests that the market and its players could be fooled. Do you believe that the market value of the firm would be affected by the inclusion or exclusion of the additional assets and additional liabilities as required by paragraph 15 of SFAS 125?

SHERIDAN FINANCIAL CORPORATION
STATEMENTS OF FINANCIAL CONDITION
(Dollars in thousands)

	September 30, 1998 (Unaudited)	**September 30, 1997**
Assets:		
Cash	$ 13,168	$ 10,571
Securities received under repurchase agreements	130,000	–
Investments held to maturity (market value of approximately $14,612 at September 30, 1998 and $14,613 at September 30, 1997)	14,497	14,494
Investments available for sale, at market	8,168	10,166
Mortgage-backed securities, held to maturity (market value of approximately $10,946 at September 30, 1998 and $11,292 at September 30, 1997)	10,882	11,352
Mortgage-backed securities available for sale, at market	84,403	108,919
Loans receivable, net	2,579,433	1,661,381
Mortgage loans held for sale (market value of approximately $93,443 at September 30, 1998 and $105,980 at September 30, 1997)	92,224	104,342
Other interest earning assets	63,098	33,599
Office properties and equipment, net	8,682	7,371
Accrued interest receivable	22,743	16,261
Mortgage servicing rights	5,030	4,783
Prepaid expenses and other assets	20,813	18,582
Total Assets	$3,053,141	$2,001,821
Liabilities and Stockholders' Equity		
Liabilities:		
Deposits	$1,368,483	$1,082,329
Obligation to return borrowed securities	130,000	–
Advances from Federal Home Loan Bank	1,261,466	671,484
Company obligated mandatorily redeemable trust preferred securities of subsidiary trust holding solely junior subordinated deferrable interest debentures of the Company	116,000	116,000
Interest payable (primarily on deposits and advances from Federal Home Loan Bank)	5,770	3,844
Advance payments by borrowers for taxes and insurance	6,434	10,688
Accrued expenses and other liabilities	19,373	17,853
Total Liabilities	$2,907,526	$1,902,198
Stockholders' Equity:		
Class A Common Stock, $.01 par value. Authorized shares — 30,000,000; issued and outstanding shares — 13,923,022 at September 30, 1998 and 9,257,098 at September 30, 1997	139	92
Class B Common Stock, $.01 par value. Authorized shares — 3,000,000; issued and outstanding shares — 285,958 at September 30, 1998 and 275,685 at September 30, 1997	3	3
Additional paid-in capital	131,149	86,679
Retained earnings	13,632	11,988
Other accumulated comprehensive income, net of tax	692	861
Total stockholders' equity	145,615	99,623
Total liabilities and stockholders' equity	$3,053,141	$2,001,821

SHERIDAN FINANCIAL CORPORATION
STATEMENTS OF OPERATION
(Dollars in thousands, except earnings per share)

	YEAR ENDED SEPTEMBER 30, (Unaudited)	
	1998	**1997**
Interest Income:		
Interest and Fees on Loans	$36,893	$16,616
Interest on Mortgage-Backed Securities	2,192	1,309
Interest on Short-Term Investments	420	467
Interest and Dividends on Long-Term Investments and Other Earning Assets	1,945	1,099
Total Interest Income	41,450	19,491
Interest Expense:		
Interest on Deposits	17,584	8,882
Interest on Borrowings	11,591	3,505
Preferred Dividends of Trust Subsidiary	2,908	28
Total Interest Expense	32,083	12,415
Net Interest Income Before Provision for Loan Losses	9,367	7,076
Provision for Loan Losses	650	250
Net Interest Income After Provision for Loan Losses	8,717	6,826
Non-Interest Income:		
Service Fees, Net	452	575
Gain (loss) on Sale of Loans and Mortgage-Backed Securities	1,115	(11)
Other	77	36
Total Non-Interest Income	1,644	600
Non-Interest Expenses:		
Employee Compensation and Benefits	2,480	1,915
Occupancy and Equipment	886	886
Insurance	255	361
Professional Fees — Legal and Accounting	622	222
Other Operating Expenses	2,782	1,421
Total Non-Interest Expenses	7,025	4,805
Income Before Income Taxes and Preferred Stock Dividends	3,336	2,621
Income Taxes	1,361	1,022
Net Income Before Preferred Stock Dividends	1,975	1,599
Preferred Stock Dividends	332	672
Net Income After Preferred Stock Dividends	$ 1,643	$ 927
Earnings Per Share		
Basic	$ 0.13	$ 0.14
Diluted	$ 0.12	$ 0.13
Weighted Average Number of Common Shares Assumed Outstanding During the Period:		
Basic	13,012	6,807
Diluted	14,042	7,958

DRAIN-A-GAIN, INC.

Keith A. Moreland, Associate Professor
The University of Michigan-Flint

Barbara A. Waddington, Assistant Professor
The University of Michigan-Flint

Thomas B. Lillie, Principal
Lewis & Knopf PC, Flint, Michigan

INTRODUCTION

Trevor Andrews has been employed as a staff accountant by Murawa & Company, CPAs for slightly more than one year. He has worked on a variety of small and medium-sized manufacturing and service companies during that time. He recently learned of his next audit assignment — Drain-A-Gain, Inc., which operates in a unique industry.

BACKGROUND ON DRAIN-A-GAIN

Drain-A-Gain provides sewer and drain cleaning services to residential and commercial customers. Pete Craigson started the company 25 years ago in Peoria, Illinois and subsequently opened operations in Moline, Rockford, and Springfield. Each of these areas is served by a small office employing a group of drain cleaners, customer service representatives, and dispatchers.

Drain-A-Gain has been consistently profitable over that period. Mr. Craigson attributes the company's success to the inherent demand for the service and Drain-A-Gain's market strength. In his view, it is a simple truism that drains become clogged and need to be cleared. Through advertising and by focusing on fast, reliable service, Drain-A-Gain has been able to build strong name recognition and a solid reputation for service quality over the years.

TREVOR'S ASSIGNMENTS ON THE AUDIT

Trevor's assignments on this audit include substantive tests of sales and cash receipts, payroll, and other operating expenses. His audit objectives generally relate to testing the validity (existence), completeness, and accuracy of these recorded amounts. For the most part, Trevor will examine documents and records related to these transactions and perform analytical review procedures. Because revenues and service employee wages are closely related and recorded in the same records (e.g., weekly activity reports discussed below), most of this testing is performed simultaneously.

TREVOR'S DISCUSSIONS WITH CLIENT PERSONNEL AND REVIEW OF WORKING PAPERS

In discussions with client personnel and reviewing the internal control and audit planning working papers from this and the prior years' audits, Trevor learned the following about Drain-A-Gain's operations:

- Potential customers call and describe their situation to an hourly-paid *customer service representative* (CSR). Every call is listed in a phone log.
- The CSR informs the potential customer of the services Drain-A-Gain offers and its guarantees for prompt (within two hours) and high quality service. The promptness guarantee is backed up by a 10 percent discount if the service employee arrives up to one hour late and a 30 percent discount if more than one hour late. The quality guarantee is backed up by a promise to return to fix any related problems that re-occur within 90 days.
- If the CSR verbally "closes" the sale, the customer is informed of the pricing structure and terms of payment (cash, credit card, or check for commercial customers without established credit and for all residential customers). Job information, including the time of the customer call and promised arrival time, is inputted into the client's sales system and a job ticket is printed. An hourly-rate dispatcher then assigns the job to the "next available" service employee (generally via cellular phone or two-way radio).
- The assigned service employee performs the job and bills/settles the account with the customer as described above. The billed amount would also include any drain cleaning products that the service employee may have also sold to the customer.
- The service employee phones the office at the completion of the job, and reports the type of job, revenue, and form of payment to the dispatcher. This information is recorded in the Sales Journal. The service employee then receives the next job assignment from the dispatcher. At the end of the day, the service employee submits all cash, checks, credit card receipts, and sales invoices to the accountant (or dispatcher in small offices where one person serves both rolls).
- At the end of each day the accountant reconciles the information recorded in the Sales Journal to the invoices and payments received from the service employees and resolves any differences. The sales information is sent daily to the main office.
- Within a few days after a completed job, a "service courtesy call" is made to ask for the customer's perception of the company's performance. Customers are asked to rate overall service quality as "very good," "good," "fair," or "poor" and then are questioned regarding specific items they liked and did not like about Drain-A-Gain's services. Information received from the customer is recorded in a "customer comment log."
- Most service employees are compensated on a "commission" basis. They receive compensation equal to 42 percent of revenues generated, broken down into two components. These are commission wages consisting of 30 percent of revenue generated and a tax-free expense reimbursement of 12 percent of revenue generated. If a customer receives a "promptness" or mail-insert coupon discount, the service employee receives 42 percent on the non-discounted price, so long as the actions of the service employee did not cause the "promptness" discount.
- Employees pay virtually all of their own business expenses. Key employee business expenses include the cost of owning and operating the service vehicle, tools, and uniforms.
- Service employees also receive a 15 percent commission on sales of any drain cleaning products.
- The sales and payroll reporting system generates weekly activity reports, which summarize revenues generated and compensation for each employee, by office, by day, and company-wide.

- Advertising is a key non-employee-compensation operating expense. Yellow Pages directories are the primary advertising medium. Recently, in Peoria and Rockford, Yellow Pages advertising costs increased because competing Yellow Pages directories have emerged. Currently, Drain-A-Gain is placing ads in both competing directories in order to ensure that name visibility to all prospective customers. Other advertising dollars are spent on billboards and "mail box inserts." The focus of the advertising message in all media is fast service (within two hours) and guaranteed quality of service.

THE PRE-AUDIT PLANNING MEETING

Trevor was fortunate to be invited to attend the pre-audit meeting with Mr. Craigson, the Drain-A-Gain president; Simon Kelly, the Murawa partner; and Brad Stephens, the Murawa manager. During this meeting, Trevor listened to Mr. Craigson re-articulate Drain-A-Gain's business strategy. It was apparent that Mr. Craigson was very proud of his company, the service it provides to customers, and the treatment of its employees.

Drain-A-Gain competes on the basis of quality, reliability, and timeliness of service, as Mr. Craigson believes that customers insist on these service attributes. Further, he believes that price is not a key issue if these attributes are provided because most customers simply want a messy problem solved quickly. He often refers to the "dinner party with the boss mentality" where the stereotypical customer has a clogged drain at 4:00 and a dinner party scheduled at 8:00. Customers are concerned less with cost than with "How fast can you get here?"

Mr. Craigson emphasized the importance of training both CSRs and service employees. He believes the company's programs ably instruct CSRs on how to obtain a commitment from the customer (close a sale) by being informative about the service to be provided. Service employee training, which is primarily on-the-job with an experienced employee, is directed at having the new employee running independently within three weeks. This focus on knowledgeable, well-trained employees enables Drain-A-Gain to gain high customer satisfaction.

In addition, Mr. Craigson believes that service employees are motivated by money and that Drain-A-Gain can maximize the compensation it is able to pay service employees when pay is tied to output (jobs performed and revenue generated). Also, Mr. Craigson talked about the importance of personal responsibility and taking pride in one's work, which he believes is reflected in the company's approach to compensation and warranty work. For example, if a problem re-occurs during the warranty period, the employee who originally performed the job either (1) is responsible for returning to solve the problem, or if not available, (2) transfers the commission to the employee who performs the "re-work." Thus, service employees are directly responsible for the quality of their work.

Finally, Mr. Craigson mentioned that growth without an acquisition is difficult. The Company is in the top two in size in each of its four markets. Increasing market share in these four metropolitan areas has become increasingly difficult. Further, none of these cities is growing rapidly. He stated that he always is willing to seriously consider expansion into other medium-sized Midwestern cities.

NEW ASSURANCE SERVICES

Recently, Trevor has heard a lot about new assurance services. Murawa & Company identified business performance measurement assurance services as a potential growth area for the firm. Trevor recently attended a two-day workshop where staff accountants received guidance on analyzing client financial statements from a business perspective. Participants were encouraged to commit time and effort during "routine" compliance-type engagements to activities that enabled them to obtain a good understanding of the client's business, its strategies, and processes. This, it is hoped, will enable Murawa & Company to provide business measurement services to many of its clients.

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GENERAL QUESTIONS ON ASSURANCE SERVICES

[These general questions are based, to a great extent, on the primary references listed in the bibliography above.]

1. Define assurance services that might be performed by a CPA. Identify three types of these services.
2. Why do you think the American Institute of CPAs has placed significant emphasis on developing CPAs' abilities to perform assurance services?
3. In general, describe the advantages and challenges for CPAs in expanding into assurance services from traditional audit, accounting and tax services?
4. Describe business performance measurement assurance services. Compare and contrast these services to traditional audit and review services.
5. Performance measurement systems in client firms will vary greatly in the degree of sophistication. Describe the nature of services that CPAs can perform for client firms that have/do not have performance measurement systems.
6. In an engagement to develop, improve, and/or report on a client's business performance measurement system, identification of key performance measures is crucial. Describe the steps that the CPA and client might go through to identify these performance measures. What would you expect the specific role of the CPA to be (e.g., *identifier and designer* of business measurement system versus *facilitator* of the process involving client personnel)? Explain.
7. To be an effective consultant and to provide business measurement services, the CPA must know the client's business. What actions may a staff accountant working in a CPA firm take to gain an understanding of the client firm's operation, industry and environment?

8. CPAs who perform audits of financial statements need to be proficient in accounting and financial reporting and in the processes of testing and attestation. What proficiencies must a CPA performing performance measurement assurance services possess?

QUESTIONS RELATED TO DRAIN-A-GAIN

1. Based on the information that Trevor gathered in the pre-audit meeting and review of the working papers, describe Drain-A-Gain's business strategy and keys to its operating success.
2. For each of following key business areas, identify specific measures of activities that will contribute to successful execution of Drain-A-Gain's strategy and thus would be included in the performance measurement system.
   - Service Quality, Timeliness, and Quantity
   - Advertising, Marketing, and Sales
   - Production Output
   - Growth/Expansion of the Business
   - Personnel/Human Resource Management
3. Data collection is a key component of any performance measurement system. Assume that Drain-A-Gain wants to collect data about the efficacy of the alternative Yellow Pages directories and other advertising media. However, they are concerned that customers may become annoyed by questions from CSRs about how they became aware of Drain-A-Gain.
   (a) Devise a plan for Drain-A-Gain to collect information about the advertising source of each potential customer phone call without making direct inquiry of the customer.
   (b) What factors should Drain-A-Gain consider before implementing such a plan?
   (c) How would information on advertising media efficacy be used?
4. Assume that the percentage of customer calls turned into a sales order in an effective, courteous manner has been identified as the most important performance measure for customer service representatives. Identify how CSRs currently are compensated and briefly develop an alternative compensation scheme that may be more aligned with management's main objective for these employees.
5. Draft a letter to Mr. Craigson at Drain-A-Gain proposing services to develop a business measurement system. The letter should make reference to the genesis of the idea to propose these services (the audit), a description of your understanding of Drain-A-Gain's operating strategy, a description of the services to be performed (with a few examples), the extent of client involvement in the project, and the benefits that Drain-A-Gain can expect. With regard to the last point, the proposal letter should be responsive to items the client (Mr. Craigson) believes are important to Drain-A-Gain's success by suggesting performance measures directly related to those items. (When finalized, the letter would be signed by Simon Kelly, the Murawa & Company partner.)

Questions 6 through 9 refer to gathering data and constructing performance measures for Drain-A-Gain, using a relational database.

6. Drain-A-Gain currently has a computerized general ledger system to collect financial information and separate systems to collect operational information. Implementing performance measures will greatly increase the amount of operational information Drain-A-Gain needs to collect. Discuss the advantages and disadvantages of extending the separate collection of operating information versus implementing a relational database that would collect all information in one common system.
7. Identify the major events that occur in Drain-A-Gain's residential drain cleaning business (Hint: There are no accounts receivable). Use the Event-Relationship format or other database approach to diagram the revenue cycle. Next, suppose that two of the most important performance measures identified by top management are *Sales Ability* and *Service Quality.* Sales ability is measured by the percent of calls

turned into sales by a customer service representative. Service quality is measured by the percent of jobs that require rework and phone survey information that rates overall service quality as very good, good, fair or poor. What information should be collected in the database to enable management to analyze these major performance measures?

8. Drain-A-Gain is a 24-hour a day business. Management schedules employees on an ad hoc basis (scheduling more customer service representatives, dispatchers and service employees when they believe they are typically busier). How could the information gathered in the database for question 7 above be used to enhance the scheduling process?

9. Referring to question 3, how could you implement your advertising plan in a database structure? Be sure to include how you would organize the information to compare costs of advertising per source. Also, suppose the marketing manager thinks there may be a price war in certain markets. How could you link the database to find information that may help answer this question?