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

LAKESHORE BANK: e-BUSINESS STRATEGY AND BUSINESS PERFORMANCE MEASUREMENT ASSURANCE SERVICES

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Case Overview

The setting for the case is Lakeshore Bank, a $300 million (total assets) community bank located in Chicago, Illinois. On June 18, 2000, a CPA client service team met with executive management of Lakeshore Bank (the Bank) to discuss: (1) the strategy of the Bank including Internet banking strategies and (2) performance measures used at the Bank. The team consisted of an assurance partner and a management consultant. The assurance partner had recently attended an in-house workshop on strategic performance measurement that included strategic assessment tools and the balanced scorecard framework. The workshop focused on the role of the assurance partner, as a business advisor, in the area of business performance measurement and assisting clients in developing business strategies, including e-business strategies.

The objective of the engagement was to introduce the executive committee of the Bank to strategic assessment tools and to assist the client in developing and refining its strategy. Another goal of the engagement was to present the Balanced Scorecard framework (Kaplan and Norton, 1996) to assess the existing performance measures at the Bank and to develop recommendations for improvement of the Bank's performance measurement system. The Balanced Scorecard is an approach to performance measurement that includes non-financial and financial performance measures linked to the organization's mission and strategy. It generally includes strategic objectives and performance measures in the following areas:

- Financial
- Customer
- Internal processes
- Innovation and growth

The authors would like to acknowledge the diligent work of George P. Anagnost, graduate research assistant at DePaul University, who assisted us in preparing this case.

BACKGROUND

Lakeshore Bank has exhibited superior performance in profitability and efficiency compared to its peer group, as shown by the benchmarking data in Appendix A. Profitability and efficiency have always been a hallmark of the Bank. However, the successes achieved by the Bank in efficiency and profitability may be in conflict with long-range performance and growth. Like a rubber band stretched to its limits, if an organization's resources, measured in both human and capital are stretched too taut, the organization will not have the ability to move and grow in new directions. There are situations when short-term profitability must be sacrificed to ensure there is sufficient infrastructure to support new strategic initiatives. This is a concern the management of the Bank wanted to address.

The Chairman of the Board of Lakeshore Bank has emphasized the importance of superior profitability and efficiency and has mentioned that Lakeshore Bank, with $300 million of assets, earns profits equal to that earned by banks that are three times larger. The Chairman believes that growth is an important goal for the Bank, but it must be "profitable growth".

After the initial meeting with the client, the client service team summarized the following observations:

- The Bank did not have a formal strategic plan or mission statement.
- The Bank had a growth target to attain $500 million in assets in two years, but did not have any specific growth strategies.
- The Bank has set a target to implement Internet banking by December 31, 2000.
- The infrastructure required to support Internet banking was not in place as of June, 2000.
- The Bank had been performing well in terms of profitability and efficiency.
- Management of the Bank focused primarily on lagging financial performance measures.
- The Bank did not have in-house training programs or support for outside training.
- The senior members of the Bank's management team work well together on operational matters.
- The management team was not always in agreement about strategic issues, i.e., outside training, growth strategies, etc.
- The management is internally focused.
- The Bank was very lean in resources.
- Management was always trying to accomplish too many strategic goals at once; this was extremely difficult to do with existing resources.

PROCESS USED BY THE CPA CLIENT SERVICE TEAM

At the beginning of the engagement, the client service team established the following goals to assist the client in:

- Developing and refining its strategy, including its Internet banking strategy.
- Developing an implementation plan for the Internet banking strategy.
- Using the Balanced Scorecard framework as a strategic management tool.

To accomplish the first two goals, the team planned the following engagement tasks:

- Assess the strengths, weaknesses, opportunities and threats (SWOT analysis).
- Develop a mission statement.
- Develop key strategic themes from the SWOT analysis.
- Develop an Internet banking strategy and action plan.

To accomplish the third goal, the team did the following tasks:

- Present the basic tenets of the Balanced Scorecard to management.
- Assess the existing performance measures using the Balanced Scorecard framework.

The engagement involved a series of six planning sessions with the executive committee of the Bank.

SWOT ANALYSIS

The client service team led the executive committee through an analysis of strengths, weaknesses, opportunities and threats (SWOT analysis). The following is a summary of the SWOT analysis and discussion with the executive committee during the first two planning sessions:

Strengths

- *Primary:*
- Strong capital position; highly profitable
- Quality/experienced management team
- Low turnover – senior management and management team commitment
- Strong customer relationships/loyalty by providing high touch/hands-on personalized service
- Chairman's business contacts and knowledge

- *Secondary:*
- Low cost core deposits (commercial deposits)
- Strong loan portfolio – quality size and mix
- Branch locations
- Culture (profit oriented, entrepreneurial)
- Management team (executive committee) works well together (democratic); strong committee structure
- Business intelligence and business experience

Weaknesses

- *Primary:*
- No strategic or technology plans
- Lack of formal marketing program
- Knowledge of competition needs improvement
- Lack of brand image
- Management team stretched to capacity
- Customer relationship/management systems
- No infrastructure to support sales organization
- Need to develop a sales culture
- Lack of outside perspective/internal focus

- *Secondary:*
- Customer profile – lack of demographics
- Do not measure customer profitability
- Customer relationships beyond top customers
- Weak internal communications
- Subchapter S status (may limit mergers or acquisitions)
- Outcome focused
- Need to foster innovation
- Low involvement in trade association/industry organizations
- Reluctance to "make investments" because of impact on short-term bottom line
- Employee career path; more education and training needed
- Compensation system

Opportunities

- *Primary:*
- Internet banking/use of technology
- Acquisition/merger
- Financial Modernization Banking Act – new allowable activities for banks (insurance, brokerage, CDCs, travel agencies)
- Increase share of customers
- Expansion to new markets
- Growing markets
- *Secondary:*
- Size allows personal service
- Retail banking
- Expand commercial lending – small business lending

Threats

- *Primary:*
- Competition from all directions
- Internet banks
- Ownership succession
- Technology revolution
- Tight market for labor services
- Possible economic downturn
- *Secondary:*
- Ability to grow
- Decreased cost to change banking relationships

The executive committee discussed how SWOT analysis is used to develop strategic objectives. The executive committee next drafted a mission statement and developed key strategic themes.

MISSION STATEMENT

One goal of the client was to develop a mission statement. After two planning sessions, which included a discussion of the Bank's strengths, weaknesses, opportunities and threats (SWOT analysis), values, and characteristics, the following mission statement was drafted:

> Lakeshore Bank is a leading, independent community bank that specializes in serving small and medium-size businesses in Chicago. By applying vigilance and utilizing superior business intelligence, we seek to create, identify and serve niche markets consistent with our expertise. We are committed to provide personalized service beyond the expectations of our customers by developing and leveraging close, long-term relationships. We will optimize shareholder value. We retain a knowledgeable employee base and strive to provide a fulfilling and supportive environment.

This mission statement captures the essence of Lakeshore Bank and reflects some of the characteristics that have led to the Bank's successes:

- Personalized services
- Close, long-term customer relationships
- Superior business market intelligence

The challenge was to develop strategies that would leverage existing strengths and harvest emerging opportunities.

KEY STRATEGIC THEMES

The executive committee used the SWOT analysis to develop key strategic themes. Their goal was to leverage strengths, address weaknesses, harvest opportunities and attack threats. Based on the SWOT analysis, the executive committee developed the following four strategic themes.

1. ***Establish Corporate Direction:***

    a. ***Develop a strategic plan:*** The strategic plan will address growth, marketing and the organizational structure. The strategic plan will include: mission statement, statement of values, strategic themes, strategic objectives and initiatives. The strategic plan will be the base for developing a Balanced Scorecard framework.

    b. ***Develop a technology plan:*** This plan will leverage the value of technology and incorporate technology into its banking processes (credit scoring, imaging, etc.) as well as Internet banking.

2. ***Establish a Growth Strategy:*** There were many ideas on how Lakeshore Bank can grow (i.e., niche markets, acquisitions, mergers, new branches, retail banking, etc.) This is an area the strategic plan and the Balanced Scorecard would address. The growth strategy will require investments and the consideration of how short-term profitability will likely be affected.

3. ***Establish a Marketing Strategy:***

    a. ***Corporate Identity, Branding and Marketing:*** Establish a corporate identity and brand. The bank also needs to develop a marketing strategy, which would include cross-selling to accomplish its goals.

    b. ***Customer Knowledge and Business/Competitor Intelligence:*** Improve the knowledge base about customers. Customer profitability for example is an area to address in the strategic plan and Balanced Scorecard. Business/competitor intelligence is also important to monitor.

4. ***Refine Organizational Strategy:***

    a. ***Organizational Structure:*** Develop strategies to address ownership succession, employee retention, corporate structure, communication issues and negative employee perceptions. The corporate culture needs to be considered in the strategic plan.

    b. ***Human Resources:*** Efficient allocation of human resources to all niche markets also needs to be addressed. The strategic plan can refine the executive compensation plan. Training and professional and industry association networking are important strategic goals. The strategic plan and Balanced Scorecard can incorporate external conference and association networking and learning as well as internal seminars to foster learning. Training goals should also be established.

There were several strategic themes. The executive committee decided that since Internet banking was of paramount importance to their customers, they would focus their efforts in this area. The successful implementation of the Internet banking solution also encompasses many of the strategic themes.

INTERNET BANKING PLAN OF LAKESHORE BANK

The plan for Internet banking outlined the steps of the implementation process to increase the value of this decision to make the process more effective, efficient and thorough. According to the executive committee, the following reasons were behind implementing Internet banking:

- To support our customer relationship focus, we need Internet banking to expand convenience and meet customer expectations.
- Lack of Internet banking was not an option. The question was when and what products would be offered.

Management believed that implementing Internet banking in the current year was important for two reasons:

- It shows customers that the Bank will provide products they want to make their jobs/lives easier.
- The products may reduce our service delivery costs over time, although upfront costs are significant.

According to the executive committee, the strategic plan for Internet banking should adequately address each of the following areas:

1. Target customers
2. Marketing and image—branding
3. Training
4. Communications
5. Operational issues
6. Customer support/service
7. Resources needed—dollars and manpower
8. Legal and compliance issues

CONSULTANTS' COMMENTS ON INTERNET BANKING STRATEGY

Lakeshore Bank determined that it needs to offer electronic banking services to its customers to keep its position as a leading and highly profitable community bank serving the needs of commercial banking customers in the Greater Chicago area. Its customers must make greater use of technology themselves in order for them to continue to be competitive. They (the bank's customers) will associate themselves with service providers (the Bank) who can provide them with the most cutting edge tools, for example, electronic banking services. Lakeshore Bank has little choice in offering these services if it wishes to remain competitive in the marketplace. In addition, the strategy of "cannibalizing your markets" (see p.88, Downes and Mui, Unleashing the Killer App Digital Strategies for Market Dominance) is a motivating factor for Internet banking.

A major issue is there must be adequate infrastructure in place to support the Internet banking initiative. The consultants made the following observations:

- The Bank does not have sufficient internal or external marketing skills in place to support an Internet banking initiative. The bank has no internal marketing resources to help in the implementation of its eStrategy. Experience has shown that marketing is critical to establishing an eStrategy. Since there are no "bricks and mortar" for people to see and visit, a virtual business relies on marketing and advertising to get its message to its customers. Additionally, as with any new initiative, electronic or otherwise, communications within the organization are critical.
- The Bank lacks a "sales culture". First, there is a need for general sales training for the entire management team. What has been successful in developing new business in the past will not work without formal training. A coordinated effort is required.
- There is no system of internal training in place to support a training initiative. The Bank has devoted few resources to the continued development of its management team and staff. Training (Learning) is a critical tenet of the Balanced Scorecard philosophy as it drives superior performance. Unless people are trained, they cannot be expected to execute strategic initiatives. Training is needed in several areas to ensure the success of the Bank's eStrategy.
- The Bank has historically focused on results rather than strategic drivers. The Bank has been an organization that focuses on profitability. This is typical of an organization that has achieved success by stretching itself to maximum capacity.
- The implementation of eCommerce initiatives is no different from any other strategic business implementation. Basic management skills and training are needed to carryout the strategy.

The discussion with the client generated the following ideas for tasks that need to be completed to implement the Internet banking strategy:

- Assign a project leader and team members.
- Develop project tasks.
- Assign duties, target dates, and a meeting schedule.
- Build/strengthen infrastructure and training.
- Determine eCommerce Products
- Develop marketing strategy.
- Develop web site and testing.

ASSESSMENT OF PERFORMANCE MEASURES AT LAKESHORE BANK

Lakeshore Bank has focused primarily on lagging, financial performance measures as discussed below. The Bank has been very successful in profitability and efficiency performance. However, to set the strategic direction of the Bank, the executive committee believes they need to also focus on leading, strategic performance measures that will drive future profitability and growth. The client service team introduced the Balanced Scorecard framework as a management tool.

The following lagging financial performance measures were the focal point of Bank management:

- Efficiency ratio – noninterest expense/net interest income plus noninterest income
- Return on assets (ROA)– Net income/Assets
- Net earnings
- Total assets
- Personnel to asset ratio

These measures are excellent short-term indicators of a bank's success, but they can hold an organization back from building the infrastructure necessary to support growth if they are not balanced with a long-term perspective.

The Bank considered the following performance measures:

- Training hours per quarter in strategic topics.
- Number of hours spent by senior management team discussing strategic issues.
- Dollars spent on electronic network infrastructure supporting Internet initiatives.
- Number of internal and external marketing events held.
- Building detailed timeline for Internet bank implementation.
- Number of training hours spent introducing Internet banking product to employees.
- Having senior officers participate as test subjects during trial phase.
- Survey customers' preferences for "design and feel" of Internet banking website.
- Review and compare competitors' websites for "best practices".

The characteristics of the Balanced Scorecard framework were used to develop the following questions for developing recommendations for improving the performance measurement system:

- Do the performance measures include non-financial measures and financial performance measures?
- Do the performance measures include leading indicators (performance drivers) and lagging indicators (outcome measures)?
- Are there cause and effect linkages between performance measures and goals?

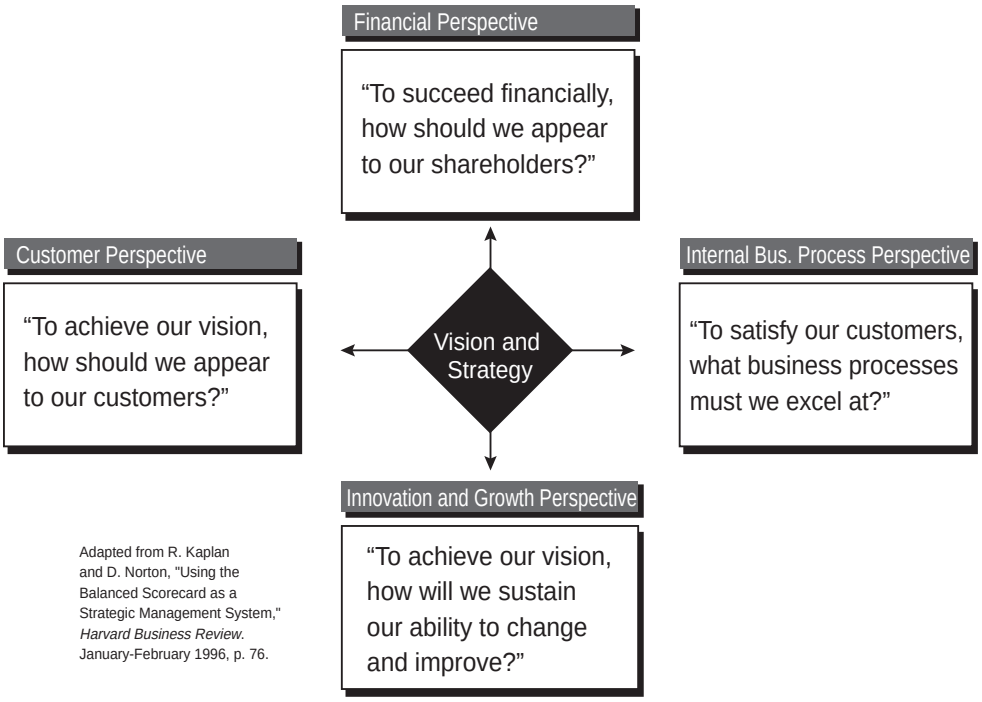
One of the basic characteristics of the Balanced Scorecard framework is there should be a balance between performance drivers (leading indicators) and outcome measures (lagging indicators). Kaplan and Norton (1996, p.150) provide a good summary of their point as follows:

> "A good Balanced Scorecard should have a mix of outcome measures and performance drivers. Outcome measures without performance drivers do not communicate how the outcomes are to be achieved. They also do not provide an early indication about whether the strategy is being implemented successfully. Conversely, performance drivers (such as cycle times and part per million defect rates) without outcome measures may enable the business unit to achieve short-term improvements, but will fail to reveal whether the operational improvements have been

translated into expanded business with existing and new customers, and, eventually, to enhanced financial performance. A good Balanced Scorecard should have an appropriate mix of outcomes (lagging indicators) and performance drivers (leading indicators) that have been customized to the business unit's strategy."

The following shows the Balanced Scorecard framework:

Balanced Scorecard Framework



Adapted from R. Kaplan and D. Norton, "Using the Balanced Scorecard as a Strategic Management System," *Harvard Business Review.* January-February 1996, p. 76.

The Balanced Scorecard includes strategic goals and related performance measures within four categories: financial, customer, internal process and learning and growth. The client service team wanted to use this framework to assess existing performance measures and to make recommendations for improving the performance measurement system at Lakeshore Bank.

CLIENT SERVICE TEAM OBJECTIVES

After the first series of meetings with the Bank executives, the client service team set four objectives:

- Summarize the strengths, weaknesses, opportunities and threats of Lakeshore Bank using the attached SWOT matrix. Evaluate the Internet banking strategy at Lakeshore Bank. Is it consistent with the strengths, weaknesses, objectives and threats of Lakeshore Bank?
- Evaluate the strategic impact of the Internet banking strategy by using the Balanced Scorecard framework to show how the Internet banking strategy can drive return on assets and profitable growth.
- Using the following Balanced Scorecard worksheet, develop strategic goals and performance measures within the four dimensions of the Balanced Scorecard that Lakeshore Bank could use.
- Develop a recommendation for Lakeshore Bank on improving their performance measurement system, using the following:
  - Observation
  - Recommendation
  - Benefits of the recommendation

Appendix A: Benchmarking Data for Lakeshore Bank vs. Peer Groups

	Lakeshore Bank	Chicago Metropolitan Peer Group	Illinois Peer Group
BALANCE SHEET:			
Total Assets (000)	295,000	245,432	244,675
Change in Assets, Year-to-Date	4.54	5.64	5.21
Tier 1 Capital/Avg. Assets (Leverage Ratio)	10.15	8.14	8.76
Tier 1 Capital/Risk Weighted Assets	12.76	12.10	13.34
Total Capital/Risk Weighted Assets	14.02	13.28	14.46
PROFITABILITY:			
Return on Average Assets	2.51	1.22	1.18
Return on Average Equity Capital	25.64	14.77	13.20
Net Interest Margin	5.12	3.74	3.61
Provision for Loan Losses/Average Assets	0.18	0.15	0.14
Non-interest Income/Average Assets	0.94	0.84	0.86
Non-interest Expense/Average Assets	3.33	2.80	2.75
Dividends/Net Income	57.76	61.79	56.46
ASSET QUALITY:			
Nonper. Loans+ORE/Total Loans+ORE	1.40	0.96	0.89
Nonperforming Assets/Equity+LLR	9.01	6.51	5.72
Loan Loss Reserve/Total Loans	2.02	1.21	1.14
Loan Loss Reserve/Nonperforming Loans	144.58	142.88	147.73
Net Charge-offs/Average Loans	-0.02	0.15	0.15
LIQUIDITY:			
100+ Time Deposits/Total Deposits	19.03	15.79	14.73
Loan to Deposit Ratio	84.41	70.06	70.91
Int. Earnings Assets/Int. Bearing Liabilities	152.65	119.74	118.68
Average Earning Assets/Avg. Total Assets	93.85	93.37	93.47
KEY EXPENSE RATIOS:			
Efficiency Ratio	54.70	59.36	59.36
Salaries and Benefits/Average Assets	1.79	1.39	1.39
Number of Full Time Equivalent Employees	97	76	81
Occupancy Cost/Average Assets	0.66	0.43	0.40
Total Number of Branches	5	3	3

Peer Groups: Thirty-seven and fifty-three banks in these Peer Groups, respectively, with assets between $200 and $300 million.

REFERENCES

Assurance Services

American Institute of Certified Public Accountants Assurance Services Web Site (www.aicpa.org/assurance)

Elliott, R. and D. Pallais. 1997. "Are You Ready for New Assurance Services?" *Journal of Accountancy* (June), 47–51.

Elliott, R. and D. Pallais. 1997. "First: Know Your Market," *Journal of Accountancy* (July), 56–63.

Elliott, R. and D. Pallais. 1997. "Build on Your Firm's Strengths," *Journal of Accountancy* (August), 53–58.

Stone and Frigo. 1995. *Advisory Comments for Growth and Profitability: A Guide for Accountants and Consultants* (AICPA and Irwin Publishers)

Pallais, D. 1996. "Identifying New Service Opportunities," *Journal of Accountancy* (July), 10.

Primary: Strategy and Business Performance Measurement

Frigo, M. L., et al, "Boston Community Bank: Business Performance Measurement Assurance Services" *AICPA Professor/Practitioner Case Program* (1999).

Frigo, M. L., P. G. Pustorino and G.W. Krull, Jr., "The Balanced Scorecard for Community Banks: Translating Strategy into Action" *Bank Accounting and Finance* (Spring 2000)

Kaplan, R.S., and D.P. Norton. (1997) "Why Does a Business Need a Balanced Scorecard?" *Journal of Cost Management* (May/June), 5-18.

Kaplan, R.S., and D.P. Norton. (1996) "Using the Balanced Scorecard as a Strategic Management System," *Harvard Business Review* (January/February), 75-85.

Pallais, D., et al. *Steering Client Services Through Performance Measurements* 1999, Practitioners Publishing Company, Inc.

Secondary: Strategy and Business Performance Measurement

Downes, Larry. and Mui Chunka. *Unleashing the Killer App Digital Strategies for Market Dominance,* 1998. Harvard Business School Press.

Frigo, Mark L. and K. Krumwiede. 1999. "Balanced Scorecards: A Rising Trend in Strategic Performance Measurement," *Journal of Strategic Performance Measurement* (February/March), 42-48.

Kaplan, R.S., and D.P. Norton. 1992 "The Balanced Scorecard—Measures that Drive Performance," *Harvard Business Review* (January/February), 71-79.

Kaplan, R.S., and D.P. Norton. 1996. *The Balanced Scorecard: Translating Strategy into Action* (Harvard Business School Press)

Kaplan, R.S., and D.P. Norton. (1993) "Measuring Corporate Performance: The Balanced Scorecard: Managing Future Performance" (Video) Harvard Business School Publishing.

Kaplan, R.S., and D.P. Norton. (1993) "Putting the Balanced Scorecard to Work," *Harvard Business Review* (September/October), 134-142.

Kaplan, R.S., and D.P. Norton. (1996) "Linking the Balanced Scorecard to Strategy," *California Management Review,* Vol. 39, No.1, (Fall), 53-79.

General Questions on Assurance Services

1. What are assurance services? Why is business performance measurement considered an assurance service?
2. Describe business performance measurement assurance services.
3. Performance measurement systems in organizations will vary in their degree of development. Describe the spectrum of assurance services that CPAs can perform for clients that have (or do not have) performance measurement systems.

Questions Related to Lakeshore Bank

1. Summarize the strengths, weaknesses, opportunities and threats of Lakeshore Bank using the attached SWOT Matrix. Evaluate the Internet banking strategy at Lakeshore Bank. Is it consistent with the strengths, weaknesses, opportunities and threats of Lakeshore Bank?
2. Evaluate the strategic impact of the Internet banking strategy by using the Balanced Scorecard framework to show how the Internet banking strategy can drive return on assets and profitable growth.
3. Using the following Balanced Scorecard worksheet, develop strategic objectives and performance measures within the four dimensions of the Balanced Scorecard that Lakeshore Bank could use.
4. Develop a recommendation for Lakeshore Bank to improve their performance measurement system. Use the following components in developing your recommendation:
    - Observation
    - Recommendation
    - Benefits of the Recommendation

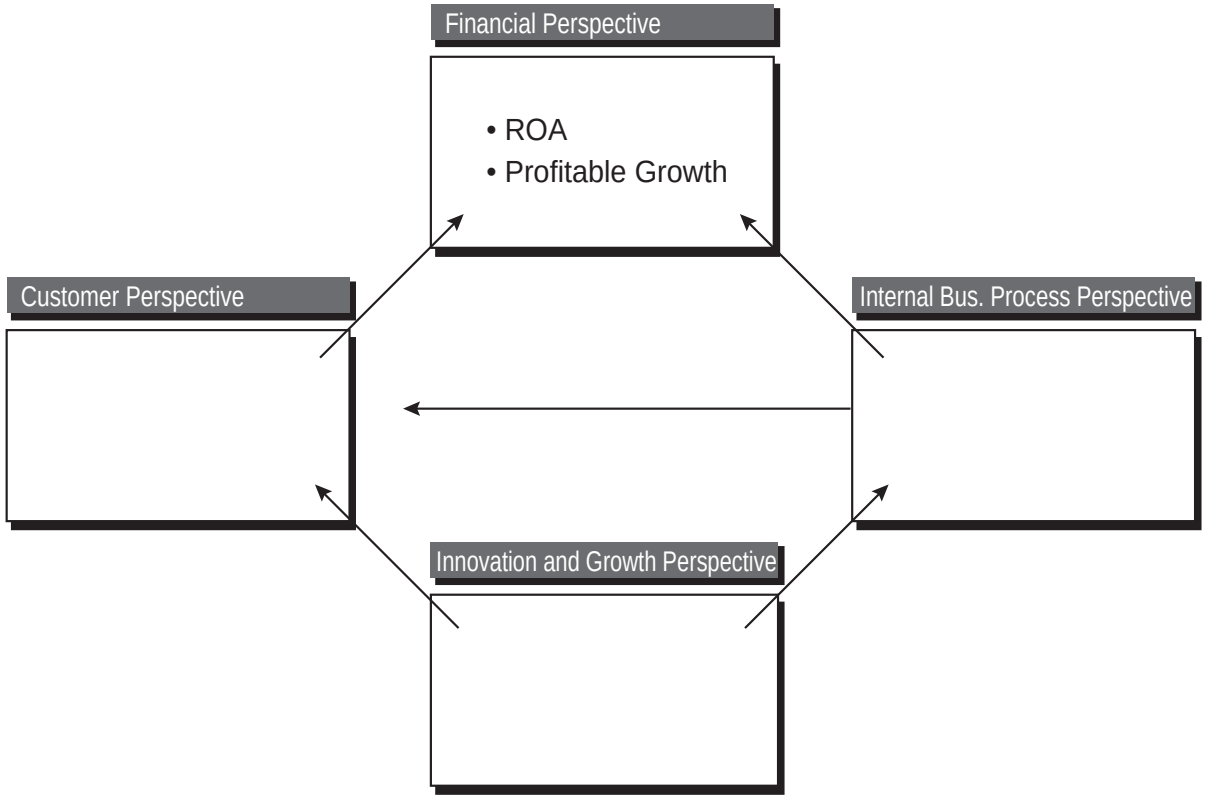
1. Summarize the strengths, weaknesses, opportunities and threats of Lakeshore Bank using the attached SWOT Matrix. Evaluate the Internet banking strategy at Lakeshore Bank. Is it consistent with the strengths, weaknesses, opportunities and threats of Lakeshore Bank?

SWOT ANALYSIS

Strengths:	Weaknesses:
1. 2. 3. 4. 5.	1. 2. 3. 4. 5.
Opportunities:	**Threats:**
1. 2. 3. 4. 5.	1. 2. 3. 4. 5.

2. Evaluate the strategic impact of the Internet banking strategy by using the Balanced Scorecard framework to show how the Internet banking strategy can drive return on assets and profitable growth.

Internet banking Scorecard Linkages



3. Using the following Balanced Scorecard worksheet, develop strategic objectives and performance measures within the four dimensions of the Balanced Scorecard that Lakeshore Bank could use.
4. Develop a recommendation for Lakeshore Bank to improve their performance measurement system. Use the following form in writing your recommendation:
    - Observation
    - Recommendation
    - Benefits of the Recommendation

Balanced Scorecard Worksheet

Strategic Objectives	**Performance Measures**
Financial F1 F2 F3	
Customer C1 C2 C3	

Internal Processes I1 I2 I3	
Innovation and Growth L1 L2 L3	

RECREATION, INC.
AN INFORMATION TECHNOLOGY RISK ASSESSMENT CASE STUDY OF ENTERPRISE RESOURCE PLANNING (ERP) SYSTEMS

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The Information Technology (IT) function[1] of a business organization is responsible for many aspects of the firm's computer, communication, and information processing systems. With respect to the latter, the IT department plays a key role in (1) ensuring complete and accurate processing of accounting transactions, (2) protecting and maintaining security over one of the organization's most valuable resources (information), and (3) assuring that relevant decision-making information is available to appropriate individuals when needed. Because most financial information is processed and maintained within a company's IT environment, the IT function is a critical focus area whenever a financial audit is performed. Many accounting firms have developed specialized practice areas that focus on assessing and managing various risks associated with the IT function. The purpose of this case is to familiarize you with a number of risk and control considerations related to an organization's IT environment.

Part I of this case is designed to acquaint you with the case company (Recreation, Inc.) and to provide an overview of the company's IT environment. The case questions at the end of Part I are not necessarily specific to Recreation, Inc., as the risks and controls you are asked to consider are applicable to most business organizations. The next three parts of the case decompose the IT infrastructure of Recreation, Inc. into the network and operating system (Part II), database system (Part III), and application system (Part IV). While the case questions presented at the end of each of these sections are somewhat specific to the circumstances of Recreation, Inc., the issues and considerations involved are nevertheless applicable to IT functions in a wide array of profit, not-for-profit, and governmental entities.

[1]The IT function, often referred to as the 'IT Department,' may also be labeled the 'Information Systems (IS) Department', 'Management Information Systems (MIS) Department', and 'Computer Information Systems (CIS) Department', among other similar terms.

Part I: Overview of Recreation, Inc.

Recreation, Inc., located in Tampa, Florida, is the parent company for three subsidiary organizations that sell recreation vehicles (RVs). The subsidiaries are located in St. Petersburg, Florida, Miami, Florida, and Atlanta, Georgia. Recreation, Inc. manufactures RVs at two plants: one located in Columbia, South Carolina and the other in Birmingham, Alabama. Recreation, Inc. is preparing to issue an initial public offering (IPO) later this year; therefore, its financial statements for the past three years are being audited.

In accordance with the AICPA's Generally Accepted Auditing Standards, the financial audit team is properly complying with the ten Standards of Fieldwork as they perform their audit of Recreation's financial statements. As they prepare for the audit, the team considers the second Standard of Fieldwork, which states that *"a sufficient understanding of internal control is to be obtained to plan the audit and to determine the nature, timing, and extent of tests to be performed."* The audit manager realizes that Recreation, Inc. depends heavily on its IT function to capture and process the accounting information that is ultimately reported on the financial statements. Therefore, in order to obtain a sufficient understanding of internal control, an assessment of the company's risks surrounding the IT function must be performed.

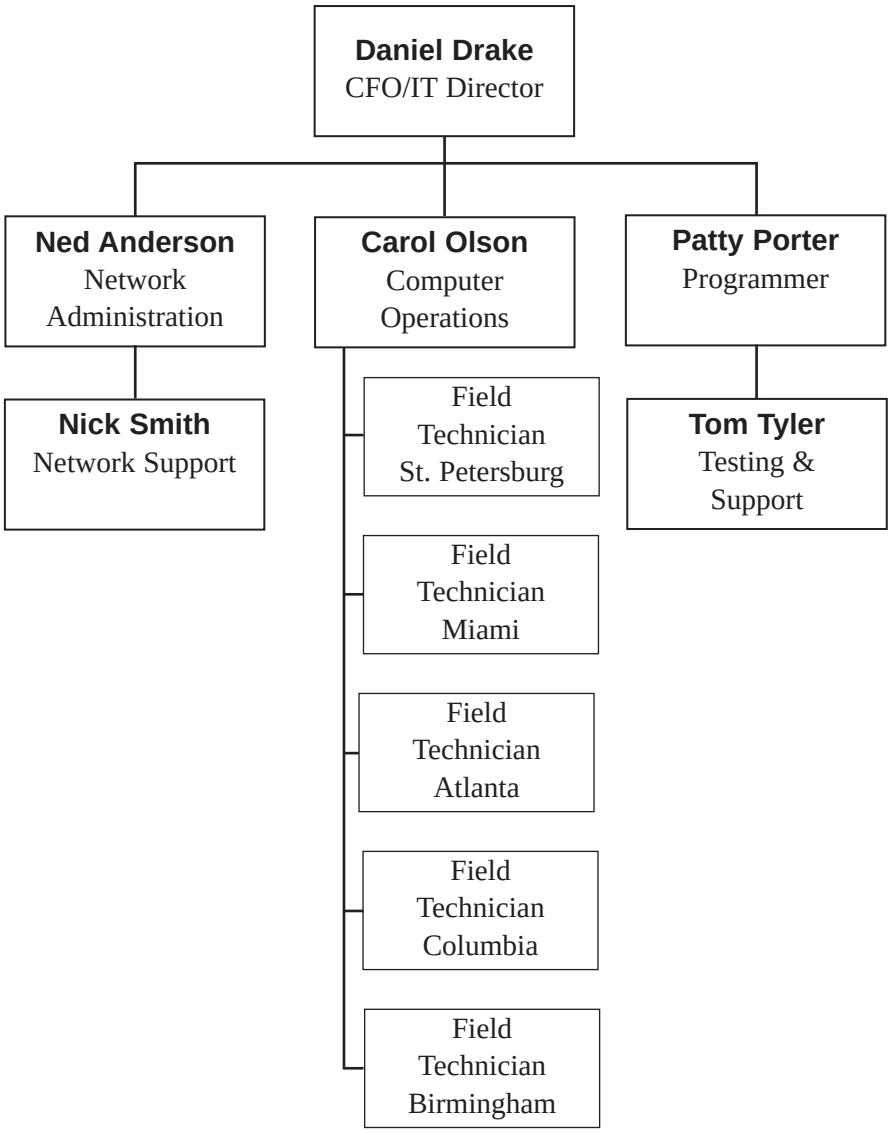
Assume that you are a first-year staff member on the audit team and that you have the responsibility for conducting an IT risk assessment of Recreation's computing environment. A risk assessment is a process whereby risks are identified and their potential effects are evaluated.[2] You have been charged with reviewing facts associated with the IT environment, identifying the general and specific risks within the IT environment, determining the significance level that each risk poses to Recreation's account balances, and recommending appropriate internal controls designed to mitigate the identified risks.

IT MANAGEMENT

Recreation's IT department is managed by Dan Drake, Chief Financial Officer (CFO) and IT Director. Dan has been with the company for 14 years. His education and experience are concentrated primarily in the areas of accounting and finance. Dan was promoted to CFO two years ago. At that time, he also assumed the role of IT Director. He spends the vast majority of his time in dealing with CFO related issues, as his financial management skills are excellent. Dan has developed his IT knowledge 'on the job.' Dan has a staff of ten employees. The corporate office is supported by five IT personnel, including Network Administration and Support, Computer Operations, Programming and Testing, & Support functions. Additionally, there are five IT personnel (Field Technicians) who support the regional IT systems located at the three sales subsidiaries and two manufacturing sites. The organization chart (see Figure 1 on the next page) illustrates the personnel structure of the IT department.

[2]Information Systems Audit and Control Association, Use of Risk Assessment in Audit Planning Guideline, Version I-1.0, 2000.Chart of the Information Technology Department

Figure 1: Organizational Chart of the Information Technology Department



IT STRATEGY AND OTHER CRITICAL IT POLICIES

Recreation, Inc. does not have a formal IT strategy, but it intends to incorporate IT upgrades and enhancements into its overall corporate growth strategy as time and resources permit. Formal policies and procedures exist for general user interaction with each software application, such as logging into an application or querying a database, but policies and procedures directly addressing IT functions, such as application development and maintenance, do not exist. However, procedures for these functions are informally followed. Additionally, a formalized business contingency plan does not exist, although some informal procedures have been established.

BACKUP & RECOVERY

Recreation performs weekly incremental backups of its servers and monthly full system backups. Incremental backups save all files that have been updated since the last incremental backup. A full backup saves all data. Two copies of the backup tapes are made. One copy is maintained in a fireproof vault in the corporate offices and the second copy is sent via courier to the St. Petersburg sales dealership. Furthermore, the St. Petersburg server can be used as a backup server in the event one of the corporate servers becomes unavailable.

APPLICATION DEVELOPMENT AND MAINTENANCE

Development of new applications and changes to existing applications are submitted to Dan Drake. Dan reviews the requests for appropriateness and compliance with corporate IT strategies, then forwards the requests to Patty Porter (the programmer). When making modifications to existing programs, Patty first copies the applicable source code from the production environment, modifies the code via her desktop computer, and then sends the modified source code to the test server. Once in the test server, Patty and Tom Tyler (Testing and Support) compile the modified code and test the code for functionality and processing integrity. Once the code has been tested and approved, Patty copies the modified source code into the production environment and compiles the source code into object code. As a result, the new changes take effect immediately. On a monthly basis, Dan reviews code changes made the previous month for appropriateness. With respect to new application development, the same basic processes take place. That is, Patty writes the code, Patty and Tom test the code, Patty places the new application into production, and Dan reviews new applications each month.

COMPUTER ROOM SECURITY

Recreation maintains its critical computing equipment, namely its servers and routers, in a separate computer room. The computer room, which is located along a main hallway on the second floor of Recreation's headquarters, is not locked, but the door is usually closed by the data entry clerk whose desk is also located in the computer room. The floors in the computer room are not raised and there are no water detection devices. Most servers are stored above the floor on racks, but some are sitting on the floor. Recreation's management does not feel that water detection devices or raised floors are necessary since the computer room is on the second floor of the building. An automatic fire suppression system has not been installed because hand-held fire extinguishers are located in the computer room. Also, all of the computer equipment is plugged into outlets along the computer room walls, with no visible signs of power surge protection. There is an uninterruptible power supply (UPS) system that provides 20 minutes of alternative power to the servers in the event the main power supply is unavailable. However, Carol Olsen (Computer Room Operations) is not sure whether the UPS provides surge protection, and if it does, she is not sure that it is adequate for the servers and routers.

Part I: Case Questions

Based on the facts presented, your first objective is to assess and evaluate general IT risks associated with Recreation's IT environment. Focus your responses on the previously described areas of (1) IT management, (2) IT strategy and policies, (3) backup and recovery, (4) application development and maintenance, and (5) computer room security.

1. **What are the inherent risks associated with Recreation's IT environment?** Inherent risks are defined as the susceptibility of account balances to unintentional material misstatements before considering the effectiveness of the related internal control structure (SAS 47). Inherent risks are present regardless of the industry in which the company conducts business, the size or nature of the organization, or the type of processing performed; however, their precise nature and magnitude can vary from across companies.

2. **Ideally, what controls would you recommend to mitigate each inherent risk just identified?** Inherent risks are mitigated when one or more controls reduce the risks to acceptable levels. Controls may be manual, computerized, or a combination of both. It is important to recognize that, in many cases, inherent risks can not be totally eliminated; however, they can be lowered to tolerable levels via internal controls. Please categorize your responses into preventive and detective controls. Preventive controls are designed to ensure compliance with prescribed or desired events and behaviors, such as passwords and edit checks (e.g., ensuring that the customer number entered on a sales order matches a valid customer). Detective controls are designed to identify and expose undesirable events and behaviors that slip through the preventive controls, such as audit logs and comparison of inputs (e.g., cash receipts) to bank deposits. Thus, preventive and detective controls are applied before and after the fact, respectively.

3. **What are the control risks associated with Recreation's IT environment?** Control risk is defined as the risk that the client's controls will fail to prevent or detect material misstatements (SAS 55 & 78). When answering this question, match Recreation's existing controls with the corresponding inherent risks identified above, then assess the remaining control risk, also known as residual or net risk (gross inherent risk minus risk mitigated by existing controls).

4. **How would you test the effectiveness of existing controls surrounding Recreation's IT environment?** Internal controls can be tested in various ways, such as direct observation, interviews, and audit trails. Please list each existing control identified above and describe the ways in which you might test each control.

5. **What specific control changes and improvements would you recommend to manage the residual risk associated with Recreation's IT environment?** When answering this question, first identify the 'high residual risk' areas, then determine how you would augment existing controls and/or implement new controls such that residual risk is lowered to acceptable levels.

Part II: Network & Operating System

IT INFRASTRUCTURE

A company's IT infrastructure is multi-dimensional, consisting of various layers, with the bottom layers supporting those above them. Figure 2 illustrates the layers of a typical IT infrastructure. Note that this is a high-level example; additional layers may be included and each layer can be divided into many sub-layers. For purposes of clarity and understanding, the IT infrastructure of Recreation, Inc. is depicted in terms of the three layers shown in Figure 2. This part of the Recreation, Inc. case focuses on the first layer—network & operating system.

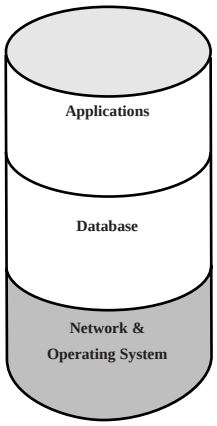


Figure 2: IT Infrastructure

NETWORK & OPERATING SYSTEM

The operating system is the foundation of the IT environment and is considered the real "brain" of a computer. Computers cannot function without an operating system. An operating system is software that, after being initially loaded into the computer, manages all of the computer's internal resources, such random access memory, video cards, disk drives, pointing devices, and so on. In addition, users can interact directly with the operating system through an interface known as a command language. Familiar operating systems are Windows and UNIX.

A network is a series of nodes interconnected by communication paths. Networks can interconnect with other networks and contain sub-networks. In a network, a node is a connection point, either a redistribution point (e.g., a router, hub, or switch) or an end point, such as a computer or some sort of peripheral equipment (e.g., printers, fax machines, scanners, and routers). The network serves as the backbone of an IT environment. Without a network, the organization's IT environment would consist of a number of stand-alone computers which could not communicate with each other. All applications and data would be restricted to only the computer on which they are stored, and peripheral devices could only used by the computer to which they are physically connected. Networks enable a nearly unlimited number of computers to share resources, including applications (software), directories, files, data, printers, and Internet connections. Networks can be characterized in terms of spatial distance, such as local area networks or wide area networks:

- ❑ Local Area Networks (LANs) connect computers and other hardware located in a limited geographic area, such as an office or a building. Typically, nodes in a LAN are physically connected to each other via copper wire or optical fiber; however, some LANs use infrared light and radio frequencies as the connection media.
- ❑ Wide Area Networks (WANs) provide connectivity over large geographic areas, indeed worldwide, using a combination of media, such as microwaves, telephone lines, satellites, and the Internet itself.

Network software is installed on all linked computers in the network. Basically, network software is classi-

fied as either server or client. Network server software provides 'services' (e.g., data retrieval, data storage, data access, and node connections) to other computers throughout the network. The computer on which network server software is loaded is often called the server. There may be multiple servers on a network, as a given server can communicate with other servers. Network client software is loaded on all non-server computers throughout the network, which are called *clients*. Client software is designed to request 'services' from servers throughout the network. Some network software is separate from but linked to the computer operating system (e.g., Novell), while other network software contains its own operating system (e.g., Windows NT).

Recreation, Inc. uses Windows NT software on all network servers. The client computers use Windows 95, wherein Microsoft has incorporated network client software designed to communicate with Windows NT.

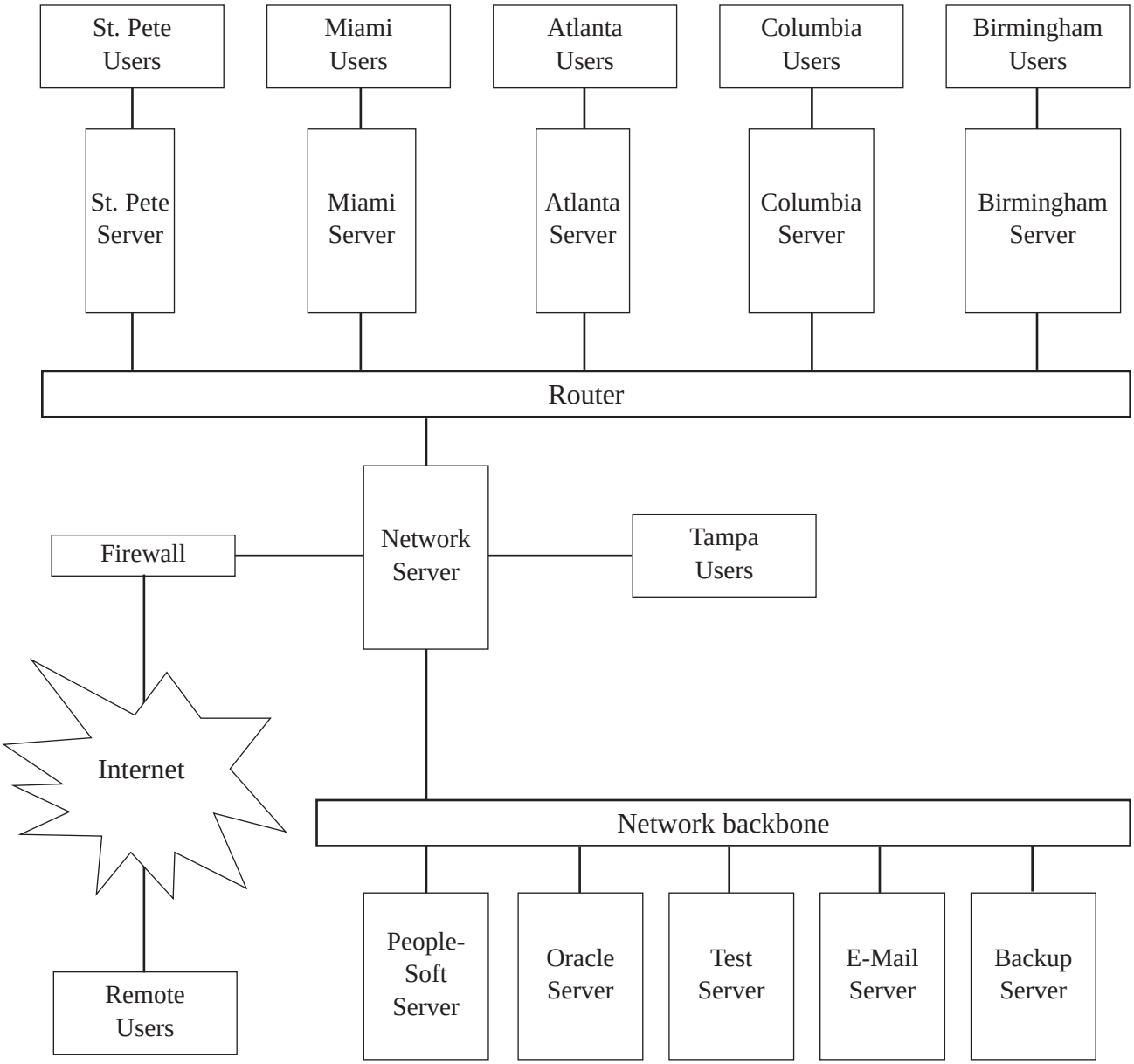
Recreation, Inc. manages its network from the corporate headquarters, where seven servers are located. These servers are named as follows:

1. Peoplesoft Server:	Maintains Peoplesoft applications,
2. Oracle Server:	Holds the Oracle database and related software tools,
3. Test Server:	Tests new applications and software changes/upgrades,
4. E-mail Server:	Processes e-mail requests and stores e-mail messages,
5. Backup Server:	Stores backup data,
6. Firewall Server:	Houses firewall software for remote access purposes,
7. Network Server:	Accommodates Windows NT local area network (LAN) software and provides user authentication.

Five additional servers are utilized, one located at each of the three sales dealerships and one at each of the two manufacturing sites. Due to the close proximity to the corporate offices, the server located at the St. Petersburg sales dealership serves as a backup should any of the corporate servers fail. Each corporate server is physically connected to the LAN. The remote servers at the sales dealerships and the manufacturing sites are connected to the LAN via a router, thus creating a WAN. Remote users can access the network using the Internet; however, a firewall server is used to ensure only authorized personnel gain access to the network.

There are approximately 100 personal computers (PCs) within the Recreation, Inc. organization, where each is assigned specifically to a Recreation employee. See Figure 3 (next page) for an illustrated diagram of Recreation's network configuration.

Figure 3: Recreation's Network Configuration



WINDOWS NT NETWORK

Windows NT controls access to and functionality of Recreation's network. Ned Anderson manages the network. Ned grants user access privileges after the users' submit written requests describing their position, responsibilities, and access requirements. Network tracking tools have been installed to monitor network activity. Unauthorized access attempts and network violations are written to an audit log. Dan Drake reviews the log whenever abnormal activity is suspected. All unauthorized attempts are researched and appropriate action is taken as necessary.

Recreation, Inc. personnel may access the network in various ways. Local users, who are those accessing the network from their respective offices in Tampa, St. Pete, Miami, Atlanta, Columbia, and Birmingham, are simply presented with a network logon screen whenever their computer is turned on. A user must provide a valid User ID and password in order to gain network access. Employees are assigned unique User IDs consisting of their last name and first initial. For example, Dan Drake's ID is "draked." The network is configured to enforce certain password parameters, as follows:

Parameter	Recreation Network Setting
Minimum password length	4 characters
Character representation	Alpha-numeric (passwords must contain both letters and numbers)
Expiration period	365 days (passwords must be changed every 365 days)

Once a user provides a correct User ID and password combination, the network authenticates, or verifies, the identity of the user. After authentication, the network grants users access to network functions to which they have been authorized, including applications, files, data, printers, etc.

While most Recreation users access the network from their offices, there are times when they may need to gain access to Recreation's network from a remote location. In these circumstances, users must go through the Internet to establish a connection to the network. Remote users first dial a designated phone number to the network server from their remote computer. Once a connection is made, the users are not yet presented with the network login screen. Rather, they are required to authenticate to a firewall[3], which, like the network itself, requires a valid User ID and password. The User ID and password are the same combination as the users' network authentication combination. Once the firewall authenticates the users, they are presented with the network login screen as previously described.

All Recreation employees have access to the Internet. Internet usage is deemed a necessary part of conducting business. Marketing personnel research market trends and monitor competitors' websites for promotions, new products and features. Finance executives monitor financial markets for interest rate fluctuations, market performance, and trend indicators. Human Resources personnel use the Internet to post job openings, to review on-line resume repositories, and research salaries to ensure they offer competitive employment opportunities. Since Recreation's policy is to enable all employees to "surf the web," they do not feel that a special policy should be implemented regarding Internet usage that might restrict certain users from accessing web-based information.

[3]A firewall represents a type of computer software designed to protect computer systems from unauthorized intrusions when connected via telephone lines or the Internet. Firewall software is a necessary precaution when connecting a business computer network to the telephone system or the Internet via a dedicated router, or any other system designed to control traffic between corporate networks and the public. Firewalls can restrict certain types of traffic and can log all network accesses.

Part II: Case Questions

1. **What are the inherent risks associated with Recreation's network configuration?** Inherent risks are defined as the susceptibility of account balances to unintentional material misstatements before considering the effectiveness of the related internal control structure (SAS 47). Inherent risks are present regardless of the industry in which the company conducts business, the size or nature of the organization, or the type of processing performed; however, their precise nature and magnitude can vary from across companies.

2. **Ideally, what controls would you recommend to mitigate each inherent risk just identified?** Inherent risks are mitigated when one or more controls reduce the risks to acceptable levels. Controls may be manual, computerized, or a combination of both. It is important to recognize that, in many cases, inherent risks can not be totally eliminated; however, they can be lowered to tolerable levels via internal controls. Please categorize your responses into preventive and detective controls. Preventive controls are designed to ensure compliance with prescribed or desired events and behaviors, such as passwords and edit checks (e.g., ensuring that the customer number entered on a sales order matches a valid customer). Detective controls are designed to identify and expose undesirable events and behaviors that slip through the preventive controls, such as audit logs and comparison of inputs (e.g., cash receipts) to bank deposits. Thus, preventive and detective controls are applied before and after the fact, respectively.

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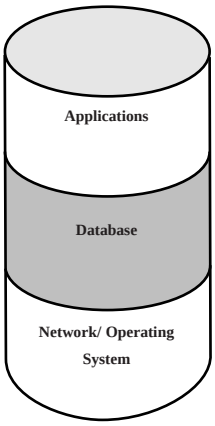
4. **How would you test the effectiveness of existing controls surrounding Recreation's network configuration?** Internal controls can be tested in various ways, such as direct observation, interviews, and audit trails. Please list each existing control identified above and describe the ways in which you might test each control.
5. **What specific control changes and improvements would you recommend to manage the residual risk associated with Recreation's network configuration?** When answering this question, first identify the 'high residual risk' areas, then determine how you would augment existing controls and/or implement new controls such that residual risk is lowered to acceptable levels.

Part III: Database

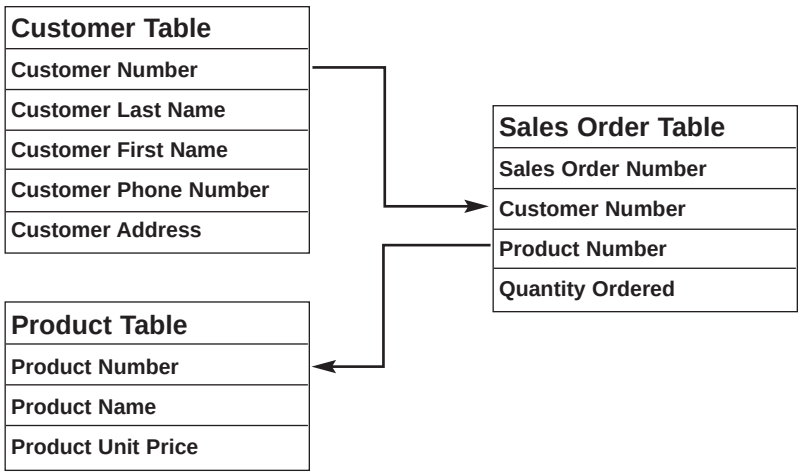


In this section of the case, the second layer in the IT infrastructure is examined. Specifically, you will learn about database software and how such software fits into an organization's overall IT environment.

DATABASE

A database is a repository wherein all of the organization's data is stored in an orderly fashion. The data itself is stored in numerous tables, which are organized according to a predefined structure that describes the relationship among tables. An example of the relationship among tables is shown in Figure 4 (below). As shown, the 'customer' table is related to the 'sales order' table, which is related to the 'product ' table. Notice that one table is related to another via a common attribute. For instance, the customer table contains an attribute called 'customer number'. When, say, customer '0098' submits a sales order, this number is also recorded in the sales order table. If the customer orders product number '23454' then this product number is recorded in both the sales order and product tables. In this manner, tables are 'related' to each other via common attributes, which are typically expressed in numeric form.

Figure 4: Example of Database Relationships



It is the 'relationship' aspect of databases that has given rise the most common type of database structure called a *relational database.* There are many benefits ascribed to a relational database. For instance, a relational database improves the reliability of organizational information because each data item, say a customer name, is stored only once in the database. This way, data items are not duplicated across departments, say marketing and accounting, which eliminates any chance that the data item is incorrect in one or more of the duplicate locations. Another benefit of relational databases is that the data is independent from the applications. As such, changes can be made to applications and new applications can be brought on-line without impacting existing data structure. Conversely, changes to the data structure can be made without affecting existing applications. While a database can reside on a single computer, it is most effective when placed in a network environment, where authorized users throughout the entire organization can access the database.

There is a suite of database tools (software) associated with a relational database. For example, one database tool is designed to optimize the performance of the database; that is, the software is designed to 'tune' the database to run at an optimal speed. A database security tool is used to restrict access to specific data items and database tables to authorized users. A 'query' tool is available whereby authorized users can directly access database tables and perform ad hoc queries. For instance, a user can query the database to find out how many widgets have been sold in region A from January through May, or the dollar amount of outstanding accounts receivable from customers over the age of 50 in city B, and so on. While the database tools are very useful, they also pose a security problem because if unauthorized individuals gain access to the tools, they can bypass the applications and directly view confidential information, change data values in the database, alter the database structure, and so on.

In most organizations, a database administrator (DBA) manages the company's database. This does not mean that the DBA is responsible for the data values contained in the database; rather, the DBA manages the data dictionary (which describes the configuration of each data item and table), database structure (which defines the relationships among tables), database performance, and database security. As such, the DBA has access to the entire suite of database tools.

Responsibility for data itself is assigned to *data owners*, who are specific individuals within each functional unit of the organization to which the data applies. For example, the Accounting Director is the 'owner' of accounting data and the Sales Manager 'owns' the sales data. In larger organizations, data ownership may be further delegated, e.g., the Payroll Manager might own the payroll data and the Accounts Payable manager might own the accounts payable data. Data owners are responsible for maintaining the integrity of the data that falls within their span of control.

Dan Drake has been designated as Recreation's DBA. Nick Smith (Network Support) is the data owner for all data retained in the database. If users have inquiries regarding data values, they must submit requests describing the purpose of the inquiry and the applicable data. Otherwise, Nick performs independent data integrity checks on a periodic basis to ensure that data is processed properly.

Recreation, Inc. stores all organizational data in a database application developed by Oracle, Inc. Oracle is just one of a number of database products; some other products are MS Sequel Server, Sybase, and IBM DB2. Recreation's Oracle database contains a repository of financial, customer, inventory, manufacturing, and service agreement information. The information contained in the Oracle database is accessed primarily by Peoplesoft applications, which are described in Part IV of the case. However, other software vendors have developed database tools that can link to the Oracle database, such as Microsoft Access and SQL Plus. As such, these tools can be used to gain access to data contained in Oracle tables. In many cases, these tools are handy, as they are used to access data that is not referenced by the Peoplesoft applications.

Each Oracle table, and the data contained therein, can be restricted from users. For instance, the Payroll Administrator might be assigned 'read-write' access to the payroll table while payroll clerks may be restricted to 'read-only' access. This security feature is especially important when considering proper segregation of incompatible functions. For example, a payroll clerk who has been granted 'update' and 'add' privileges to the payroll register table should not be able to generate paychecks. If this were to happen, the payroll clerk could then produce erroneous paychecks, e.g., by modifying his/her hours worked, adding a new timecard for a friend, adding a fictitious employee with a post office box address to which the payroll clerk possesses the key, and so on. This type of security represents a *logical* separation of duties. *Manual* separation of duties is also important, such as restricting the payroll clerk from possessing blank payroll checks.

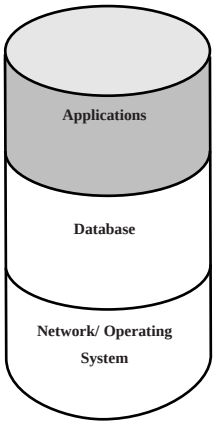
Recreation's IT department has determined that data access has been appropriately restricted via security tools built into the Peoplesoft applications. For example, the Peoplesoft general ledger application requires an authorized password and ID before allowing access to general ledger data. Accordingly, additional data restrictions within the Oracle database are not imposed, as they would be redundant, inefficient, and unnecessary.

Part III: Case Questions

1. **What are the inherent risks associated with Recreation's Oracle database?** Inherent risks are defined as the susceptibility of account balances to unintentional material misstatements before considering the effectiveness of the related internal control structure (SAS 47). Inherent risks are present regardless of the industry in which the company conducts business, the size or nature of the organization, or the type of processing performed; however, their precise nature and magnitude can vary from across companies.
2. **Ideally, what controls would you recommend to mitigate each inherent risk just identified?** Inherent risks are mitigated when one or more controls reduce the risks to acceptable levels. Controls may be manual, computerized, or a combination of both. It is important to recognize that, in many cases, inherent risks can not be totally eliminated; however, they can be lowered to tolerable levels via internal controls. Please categorize your responses into preventive and detective controls. Preventive controls are designed to ensure compliance with prescribed or desired events and behaviors, such as passwords and edit checks (e.g., ensuring that the customer number entered on a sales order matches a valid customer). Detective controls are designed to identify and expose undesirable events and behaviors that slip through the preventive controls, such as audit logs and comparison of inputs (e.g., cash receipts) to bank deposits. Thus, preventive and detective controls are applied before and after the fact, respectively.
3. **What are the control risks associated with Recreation's Oracle Database?** Control risk is defined as the risk that the client's controls will fail to prevent or detect material misstatements (SAS 55 & 78). When answering this question, match Recreation's existing controls with the corresponding inherent risks identified above, then assess the remaining control risk, also known as residual or net risk (gross inherent risk minus risk mitigated by existing controls).
4. **How would you test the effectiveness of existing controls surrounding Recreation's Oracle database?** Internal controls can be tested in various ways, such as direct observation, interviews, and audit trails. Please list each existing control identified above and describe the ways in which you might test each control.
5. **What specific control changes and improvements would you recommend to manage the residual risk associated with Recreation's Oracle database?** When answering this question, first identify the 'high residual risk' areas, then determine how you would augment existing controls and/or implement new controls such that residual risk is lowered to acceptable levels.

Part IV: Applications

APPLICATIONS



Software applications are the most common 'portal' through which users enter, store, and retrieve organizational information. As such, applications represent the 'front-end' tools[4] that enable users to manage enterprise data. Software applications can range from simple to complex. Applications may be used by a single user in stand-alone computer or shared by multiple users in a network environment. Software applications can be purchased and installed 'out of the box', purchased and then modified to meet the specific needs of the company, or written entirely in-house by developers and programmers. Commonly used generic software applications are word processors (e.g., Word and WordPerfect) and spreadsheets (e.g., Excel and Lotus).

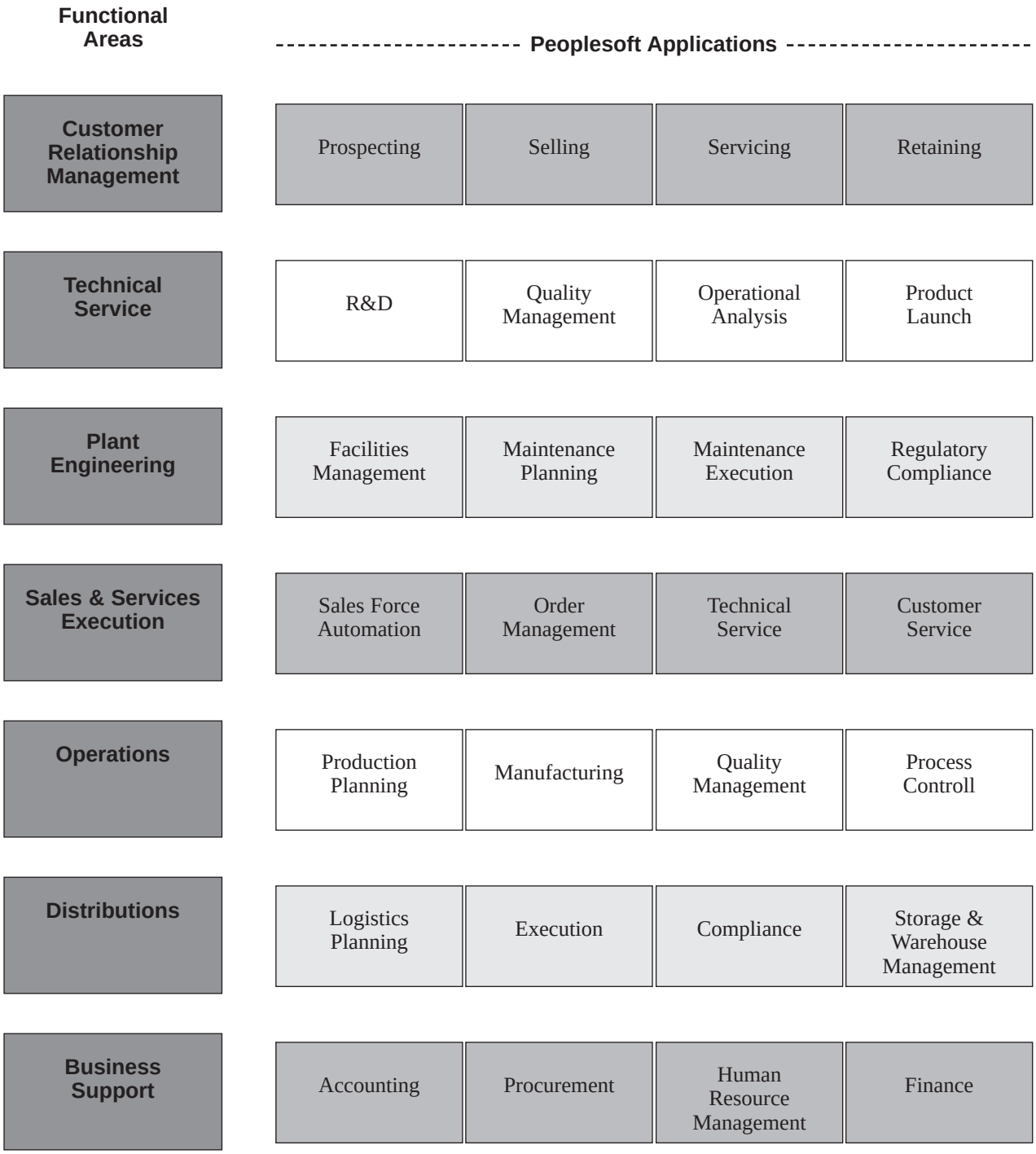
In the business world, there are many vendors of financial and accounting software, such as Great Plains, Macola, MAS 90, Peachtree, and QuickBooks. Most financial and accounting software is packaged with a suite of typical applications, e.g., general ledger, accounts payable, accounts receivable, inventory, and so on. Some financial and accounting software packages are designed to store data in their own pre-defined file structures, while other packages are developed such that they integrate with a relational database software, such as Oracle, MS Sequel Server, Sybase, and IBM DB2.

During the 1990's, expanded suites of business software applications became popular, known as enterprise resource planning (ERP) systems. ERP systems are designed to integrate the entire enterprise's data into a single database. In this manner, authorized users throughout the organization can access relevant decision-making information across all functional areas. The applications built into ERP systems cover the entire spectrum of business functions, e.g., accounting, customer relationship management, distribution, marketing, sales, warehousing, etc. Some of the more prominent ERP vendors are SAP, Oracle, Peoplesoft, Baan, and J. D. Edwards. All ERP systems are designed to integrate with relational database software. For instance, the ERP system offered by SAP can interface with several databases, such as Oracle and MS Sequel Server. Oracle's ERP suite is not to be confused with Oracle's database application. That is, Oracle's ERP and Database are two different, yet related product lines.

Recreation, Inc. has implemented the ERP system offered by Peoplesoft. The extensive suite of Peoplesoft applications used by Recreation is reflected in Figure 5 (next page). Recreation, Inc. is comprised of seven (7) functional areas, which are further subdivided into 29 applications. As shown, Recreation is extensively integrated within and across functional areas.

[4]The database software tools described in Part III are often referred to as 'back-end' tools.

Figure 5: Peoplesoft Applications Used by Recreation, Inc.



PEOPLESOFT APPLICATION MAINTENANCE

Carol Olson (Computer Operations) is responsible for the functional maintenance of Peoplesoft, including periodic upgrades and troubleshooting. Upgrades for the Peoplesoft applications are released twice each year and the upgrades must be installed as part of Peoplesoft's customer service agreement. Because Carol has been so busy lately, she is behind by two upgrades. Meaning, she has not installed the Peoplesoft upgrades for a year. However, the current applications are running just fine, so Carol feels no urgency in implementing the upgrades. It takes Carol a considerable amount of time to install upgrades because Recreation, Inc. has made many functional modifications to the Peoplesoft applications over the years to accommodate its specific information processing and reporting needs. Modifying ERP applications to fit a given company's circumstance is not an uncommon practice; however, it does mean that upgrades are more difficult and time consuming. Thus, each time an upgrade is performed, Carol must involve the programmer (Patty Porter) to ensure that the functional modifications are properly inserted into the applicable applications. Then, Carol, Patty, and Tom Tyler (Testing & Support) must check each application before implementing it into production.

INFORMATION SECURITY

Peoplesoft accesses data stored in the Oracle database tables. As stated previously in the database discussion, Recreation, Inc. relies on the security application built into Peoplesoft to protect access to company data. This is accomplished by assigning users to pre-defined classes. Within a given class, user privileges are restricted to certain data, tables, and database tools. When users log on to Peoplesoft, they must enter valid passwords and IDs, which in turn assigns them to their designated class. Tom Tyler (Testing and Support) manages the user list and class definitions.

FINANCE AND ACCOUNTING APPLICATIONS

Peoplesoft's financial and accounting applications are primarily used in Recreation's corporate office. In particular, Dan Drake is the primary user. Although Peoplesoft applications are designed such that multiple users can access data in a single database, each Recreation, Inc. location maintains its own separate Peoplesoft database for financial information. All non-financial information, such as customer relationship management, technical service, plant engineering, etc., is maintained in the corporate database and is shared by all functional areas and locations. When corporate accounting requires consolidated financial information, an ad hoc query retrieves financial information from the individual locations and consolidates the information into the corporate financials. Other than corporate accounting personnel, only accounting and sales personnel at each location have access to their respective Peoplesoft financial databases.

Part IV: Case Questions

1. **What are the inherent risks associated with Recreation's Peoplesoft applications?** Inherent risks are defined as the susceptibility of account balances to unintentional material misstatements before considering the effectiveness of the related internal control structure (SAS 47). Inherent risks are present regardless of the industry in which the company conducts business, the size or nature of the organization, or the type of processing performed; however, their precise nature and magnitude can vary from across companies.
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4. **How would you test the effectiveness of existing controls surrounding Recreation's Peoplesoft applications?** Internal controls can be tested in various ways, such as direct observation, interviews, and audit trails. Please list each existing control identified above and describe the ways in which you might test each control.
5. **What specific control changes and improvements would you recommend to manage the residual risk associated with Recreation's Peoplesoft applications?** When answering this question, first identify the 'high residual risk' areas, then determine how you would augment existing controls and/or implement new controls such that residual risk is lowered to acceptable levels.

Appendix A

Glossary of Computer and Network Terms Used Throughout the Case

Access—The privilege or ability granted to a user to retrieve computer information, gain entry into specific software applications, and/or utilize computer hardware and communication devices. Various access levels may be granted based on user need. Common access levels for data include read-only (a.k.a. inquiry), read-write (a.k.a. update, modify), delete, execute, and save.

Audit Log—A list of recorded, historical activity. Audit logs may be generated for nearly any type of computer activity, including application, database, network, and operating system activity. Audit logs are used to analyze historical computer activity and to determine which users performed which functions at a given time.

Authentication—The process of identifying a user, typically based on a user-name and password combination. Authentication merely ensures that the individual is who he or she claims to be, but says nothing about the access rights of the individual.

Authorization—the process of granting access rights to system objects (e.g., files, computers, networks, etc.) based on the user's identity.

Availability—Ensuring that important information resources, such as computers, applications, networks, and data files are accessible when needed.

Business Continuity Plan—A plan designed to ensure that key business processes are not interrupted for a relatively lengthy period of time due to a computer/network system failure. Such a plan typically defines hardware and software needs, alternative processing sites (hot-sites/cold sites), required resources for short-term processing, and telecommunications re-routing plans for on-line processing. Related to a business continuity plan, a *disaster recovery plan* defines the specific actions to be taken in the event of a computer/network system interruption due to natural disaster or malicious destruction.

Client—The client part of a *client-server architecture*. Typically, a client is an application that runs on a personal computer or workstation and relies on a server to perform some of the more CPU intensive operations.

Data—Distinct pieces of information, usually formatted in a specific manner. Data that has been transformed into something meaningful is referred to as *information*.

Firewall—Hardware and/or software systems designed to prevent unauthorized access into or out of a private network. Firewalls are frequently used to prevent unauthorized Internet users from accessing private networks connected to the Internet, especially intranets. All messages entering or leaving the intranet must pass through the firewall, which examines each message and blocks those that do not meet the specified security criteria.

Infrastructure—The hardware and communication components that make up a computer system/network.

Integrity—The quality and accuracy of data. Loss of integrity in the management of the information system infrastructure may result in unauthorized access to data, irrelevant data, and/or the untimely delivery of data. Additionally, loss of integrity in the application systems that support the organization's business processes may result in unauthorized, incomplete, or inaccurate processing of transactions.

IT Strategy—A long-range Information technology plan that defines future enhancements and developments in the IT environment, such as human resources, software, hardware and communication systems.

Node—In a network, a node is a specific processing location. A node can be a computer or some other peripheral hardware device, such as a printer, fax, or scanner. Every node has a unique network address, sometimes called a *Data Link Control* address or *Media Access Control* address.

Object Code—Object code arises from a computer process known as 'compiling', where human readable code (see *Source Code* below) is transformed into machine readable code. The purpose of compiling source code into object code is to gain processing speed, as computers can process object code much faster than source code. Unfortunately, humans can not read object code, so they must program in source code.

Privileges—The ability to access and use computers, networks, and information in some pre-specified manner.

Production Environment—A special location within a computer that houses all applications that are used for daily business operations. In other words, all programs that are actually used to process company information are stored in the production environment, a.k.a. the production library.

Relevance—The extent to which information created or summarized by an application system is useful in making business, investment, and strategic decisions.

Router - A device that connects any number of LANs. Routers use headers and a forwarding table to determine where packets of electronic information go.

Server - A computer or device on a network that manages network resources. For example, a *file server* is a computer and storage device dedicated to storing files. Any authorized user on the network can store files on the server. A *print server* is a computer that manages one or more printers, and a network server manages network traffic. A database server is a computer system that processes database queries.

Source Code—Human readable programming code, e.g., COBOL, C++, HTML and Java, used by programmers to develop computer applications.

Appendix B

Suggested Background Readings

Hayes, D. C. and Hunton, J. E., Working With Databases, *Journal of Accountancy*, Volume 189 (5), 2000: 70-79.

Hayes, D. C. and Hunton, J. E., Building a Database From Scratch, *Journal of Accountancy,* Volume 188 (5), 1999: 63-73.

Hayes, D. C. and Hunton, J. E., What You Better Know About Databases, *Journal of Accountancy*, Volume 187 (1), 1999: 61-65.

Kimbrough, R. B., Jr., High-Tech Audits of LANS, IS *Audit & Control Journal,* Volume III, 1998: 50-53.

Lilly, R. S., Client/Server Database Security, IS *Audit & Control Journal,* Volume VI, 1997: 50-51.

Manello, C. and Rocholl, W., Security Evaluation: A Methodology for Risk Assessment, IS *Audit & Control Journal*, Volume VI, 1997: 42-46.

Pfenning, R. S., An Introduction to Auditing SAP, IS Audit & *Control Journal,* Volume II, 1999: 43-45.

Santos, R. A., Internet Security, IS Audit & *Control Journal,* Volume I, 1999: 33-37.

Turner, T., Implementing and Enhancing Data Security in a PeopleSoft Environment, IS *Audit & Control Journal*, Volume III, 1999: 51-52.

Wilson, C., Using Oracle Tools to Audit Oracle Logical Security, *IS Audit & Control Journal,* Volume IV, 1998: 15-22.

ABC AND ABM IN GOVERNMENT

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BACKGROUND

In 1995, the Texas State Auditor's Office developed and issued a handbook to provide guidance in cost accounting to the State's 254 agencies. At the same time, at the federal level, the Federal Accounting Standards Advisory Board disseminated an exposure draft on cost accounting in the federal government, promulgating it as standard number four in July, 1995, "Managerial Cost Accounting Concepts and Standards for the Federal Government. The two works were complementary in nature, with the federal standard providing a set of principles to guide the development of a strong costing system and the state auditor's handbook giving step-by-step directions for system creation and use in decision making. The then executive director of the Federal Accounting Standards Advisory Board wrote a letter to the principal author of the handbook, stating that the handbook aligned with the new federal standard and recommending its use in federal agencies as the agencies attempted to implement the new standard.

During the next state legislative session, Texas lawmakers, acting on the suggestion of the Texas State Auditor's Office, mandated nine state agencies to conduct pilot study projects in activity-based-costing (ABC). The legislature, however, did not appropriate funds for these projects so the agencies either performed the studies themselves or found discretionary funds to hire a consultant. The State Auditor did provide copies of the handbook to the nine agencies.

The Texas Commission on Law Enforcement Officer Standards and Education (TCLEOSE), a state agency that sets standards and monitors compliance related to the education and ongoing certification of law enforcement officers, was one of the nine targeted agencies. With an annual budget of some $2.4 million dollars, the agency employs between 40 and 45 workers, all permanent salaried employees. The executive director of the organization contracted with a consultant team representing a public accounting firm and an academic/practitioner to assist in the pilot study in that agency. The academic/practitioner had been the primary author of the state auditor's handbook on cost accounting. Another state agency, the Texas Department of Housing and Community Affairs, also contracted with this group of consultants for assistance with its required ABC pilot study. While the TCLEOSE initially contracted for an ABC study of its audit and evaluation process, it subsequently extended its ABC initiative to the entire agency.

A followup contract with the academic/practitioner focused on the development of a timekeeping system for the ongoing use of ABC and on the determination of standard costs and productivity measures for use in budgeting, developing an ABC budget for fiscal year 2001. Subsequent analysis of budgeted to actual data divided labor cost data into rate and efficiency variance.

Phase One: Pilot study of the audit and evaluation process

In their first meeting with the TCLEOSE core ABC team, the consultants ascertained from the organization answers to the following questions:

- Which process did the organization want to cost?
- What was the organization's intended use of the data in decision making?
- For what timeframe did the organization wish to collect data?
- What questions did the organization want answered through the cost data?
- How quickly did the organization want the project completed?
- Did the organization want support services identified and allocated to the direct service where a logical association could be made?

The Commission stated its interest in costing the audit and evaluation functions, operated out of the Audit and Evaluation Division, with audits and evaluations as the global cost objects. The functions include several processes:

- The evaluation of police academies to ensure that the academies are training officers in accordance with training regulations and are reporting information related to the training of students accurately to the Commission.
- The audit of law enforcement entities to determine if all officers are properly licensed to perform the activities for which they were hired.
- The audit of individual officer records to determine if officers are in compliance with regulations.
- Investigations of possible rule or criminal violations.

The division overseeing these functions also performs some ancillary activities such as hosting Commissioner meetings, answering non-jurisdictional calls for assistance, and maintaining and updating officer records for education courses taken.

The Commission believed that because its audits and evaluations assess compliance, it was not necessary to job cost each engagement. Averages over each category would be sufficient.

The Commission, beyond its interest in complying with the mandate to perform a pilot ABC study, was in the process of reorganization and sought guidance toward an optimal organizational configuration. As with most organizations, the Commission was division, not process structured, although many of its processes were completely contained within individual divisions.

The groups agreed to use data from the first four months of the 1998 fiscal year since some shift in functions had occurred as an outgrowth of the 1997 legislative session. This reduced the applicability of data from the previous fiscal year. The consultants agreed to extrapolate results to the entire current fiscal year. The Commission also wanted indirect costs identified and allocated to the extent that such allocation was reasonable. Finally, the organization wanted the study to be completed by the end of the month if possible.

The consultants explained their ABC procedure, suggesting that the organization gather together workers representing each phase of the audit and evaluation process so that the consultants could flowchart the processes. They informed the agency of the type of data they would need and when they would need it in order to complete the project on such a short schedule. They also welcomed suggestions for possible cost objects and explained that they would seek to identify other possible cost objects during the flowcharting phase.

THE FIELDWORK PHASE

During the next meeting, the consultants flowcharted the processes as workers explained what they do. The consultants gathered information on input and output measures as well as organizational units that performed the tasks and subsets of the cost objects. The consultants typically construct flowcharts by organizational units although it was not necessary in this application. There are no subunits in the Audit and Evaluation Division. The flowcharts of the audit and evaluation processes are given in Appendix A-1.

During the discussion, a number of workers initially appeared hesitant to talk. The consultants assessed possible reasons for the hesitancy and remediated accordingly. Possible reasons included:

- concern for how the supervisor would respond to what the worker said
- lack of a real process
- the worker has no real job
- the worker is new
- the worker is wary of the consultant
- the worker is trying to protect his or her territory
- the worker has difficulty verbalizing what s/he does

From the flowcharts, the consultants then developed an initial set of activity pools, identifying activity drivers for each pool. With the agreement of agency management, the consultants eliminated the work of the Regulatory Division from further ABC analysis.

The next day, the consultants met with the core team to review their results, firming up cost objects, activity pools and drivers, and the driver data needed for the analysis (Appendix A-2). Because of the short time frame, they agreed to gather time data using employee/manager estimates of time spent on activities. They discussed the various resources used for each of the activities and determined appropriate resource drivers. Using the organizational flowchart, the consultants, together with the core team, identified support services to the audit and evaluation processes and how these services would be linked to the target processes. The meeting concluded with the team setting a date for delivery of relevant data to the consultants.

Because this was a pilot project, the consultants decided to enter the data into Excel spreadsheets for review and analysis. One spreadsheet captured time data, another cost information, by activity both on a total and a per unit basis. The consultants generated graphs illustrating time and cost per unit output and unit cost object, first using only direct costs and then incorporating indirect costs.

RESULTS

The results of the ABC pilot study, using direct costs only, are given in Appendix A-3. Direct costs included labor and fringe benefits for work performed directly on the given activity, computer usage, cost of facilities used for the service, postage, and supplies.

Questions for discussion:

1. Reviewing the flowcharts, how might the organization improve its processes? What other information would be useful in assessing this?
2. Why do the consultants generally flowchart processes by organizational units? What information can this provide?
3. What is your assessment of the consultants' approach to developing activity pools and drivers? Compare this with the rapid prototyping method used by some organizations.
4. Do you agree with the reasons cited for why a worker may be hesitant to discuss what s/he does? How could you determine the correct reason for the hesitancy? How would you handle each scenario?

Phase Two: Organizationwide implementation

The executive management implemented several changes based upon the results of the pilot study and wishing to derive further benefit from such an in-depth scrutiny of operations, the organization immediately contracted with the consultants to develop an organizationwide ABC system. The consultants discussed with the chief the application of ABC to support services as well as direct services. The Commission agreed that all services would receive an ABC review. These services are rendered out of eight divisions: Audit and Evaluation, Licensing, Curriculum, Field Assistance, Examinations, Regulations, Management Information Systems, and Business Services. Because the Commission wanted the results within the next six weeks, the consultants agreed once again to use manager/employee estimates of time on activity. The organization had purchased a commercial ABC software package that the consultants agreed to use in this phase. Unfortunately, while the package was well-equipped to collect ABC data it had a poor reporting mechanism. The consultants created data files from the ABC software package and brought them into Excel for further analysis and report building.

When the consultants presented the activity pools to the chief, the chief was surprised, reminding the consultants that the activities for the audit and evaluation pilot study were far more detailed than those currently presented by the consultants. The consultants explained that they had combined some activities to facilitate the ongoing use of the system for decision making. Information on selected activities, total and per unit time and cost information are given in Appendix B-1. The transmittal letter is provided in Appendix B-2.

Questions for discussion

1. Do you agree with the activity pools developed during this phase? Are they too global or too detailed? Answer specifically for the audit and evaluation processes, comparing phase one activity definitions with those of phase two. Explain your answer in the context of the cost/benefit and materiality principles. How do the definitions of activities affect decision making? Note that all roster processing activities have been subsumed into the activity "Develop/maintain database".
2. How were the costs of support services such as accounting handled in this system? What information does such a treatment provide over traditional costing systems?
3. Can you identify opportunities for improvement based on the results provided? What are they?
4. Review the transmittal letter. What significant limitation did the consultants cite in their study? Why is it important for the consultants to emphasize this limitation? Explain this in terms of the impact of such a limitation on the validity of conclusions from the study?
5. What elements are necessary for an effective ABC/ABM software package?

Phase Three: Activity-Based Budgeting

Subsequent to this initial ABC system development, a subcommittee of the legislative budget committee held a hearing, asking the pilot agencies to testify regarding their initiatives. The two agencies who had contracted with the consultants in this study readily agreed to present, eager to share with the legislators how the study had helped them identify opportunities for improvement and had provided a far more accurate costing of services for budgeting purposes. However, before the agency representatives could say much, one of the legislators interrupted to ask how much of the agency budget could be cut as a result of the study. Although the agency representatives attempted to explain that that was not what they found, the legislator continued to seek the amount of a budget cut, stating that if they had not identified a way to cut their budget, there was no savings. A number of other state agencies had sent representatives to the hearing. They walked away from the meeting with their fears that the legislature would use this tool only as a mechanism to cut budgets confirmed and vowed not to use ABC unless mandated to do so.

However, the management of the TCLEOSE decided to put the ABC system into operation for ongoing decision making. The consultant agreed to continue with the organization as long as the agency gave the consultant the right to use the data for educational purposes.

In this stage, the academic consultant suggested that employees keep timesheets for the activities. The agency management wanted to reduce the number of activities from those developed previously so that they would all fit on one side of a page. That way, employees could all use the same form to keep their time.

The ABC team and the consultant agreed on a half-hour rubric, that is, if an employee spent more than fifteen minutes on an activity during the day, the employee would count it as a half hour. It also follows that if the employee spent two hours and fifty minutes, the activity time would be counted as three hours. They believed that, in the long run, this would fairly accurately capture the percentage of time spent on various activities. Because most employees had only four or fewer activity categories, timekeeping should consume only a small amount of time during the day.

The organization then decided to program the timekeeping system into a database program to which all employees had access through their personal computers rather than to use paper forms. Using the activity dictionary developed during phase two but somewhat modified to reflect the collapsing over activity categories, the consultant trained employees in the timekeeping system. Employees began recording their time. After the first month, the consultant and ABC team discussed modifications or clarifications needed to the activity definitions.

The results for the months of January through April, 1999, are given in appendix C-1 and C-2. Given are the unit labor cost and productivity measures for each activity.

Questions for discussion:

1. Compare the activity pools at this stage with those developed in phase two. What are the advantages and disadvantages of the phase three activity pool definitions?
2. Compare the unit times for each activity with those identified during phase two. Are there significant differences, what might account for these differences? Identify the various ways of collecting time data and critique them in terms of ease of collection and accuracy of results.
3. Compare the monthly unit time and cost for each activity during the timekeeping phase. How do you assess the reliability of the data? What questions would you ask of managers and employees in trying to understand the fluctuations from month to month?
4. Discuss how the political environment can impact the success of an Activity-Based Costing initiative.

Phase Four: Monitoring the budget

After lengthy interviews and discussions with managers and employees, the consultant identified standard time and cost per output for each activity. With this and projections from managers regarding activity level for the upcoming fiscal year, the consultant developed an activity-based budget. The results, for labor time and cost only, are given in Appendix D-1, along with the division labor budget developed using the traditional approach (that is, a budget generated as an increment to current division personnel levels, not by expected activity level).

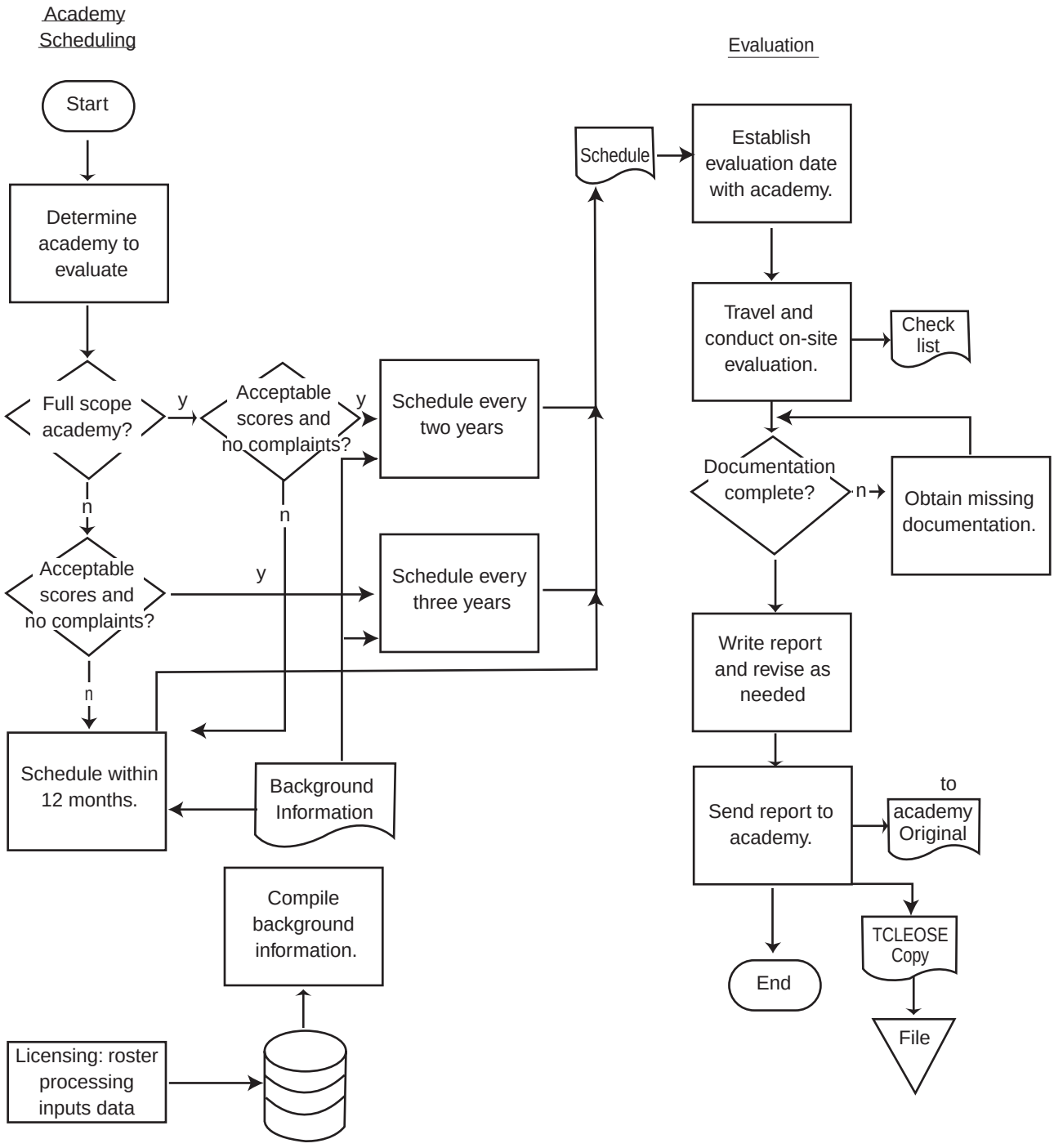
Budgeted to actual unit time and cost data for selected activities for the month of January is given in Appendix D-2.

Questions for discussion

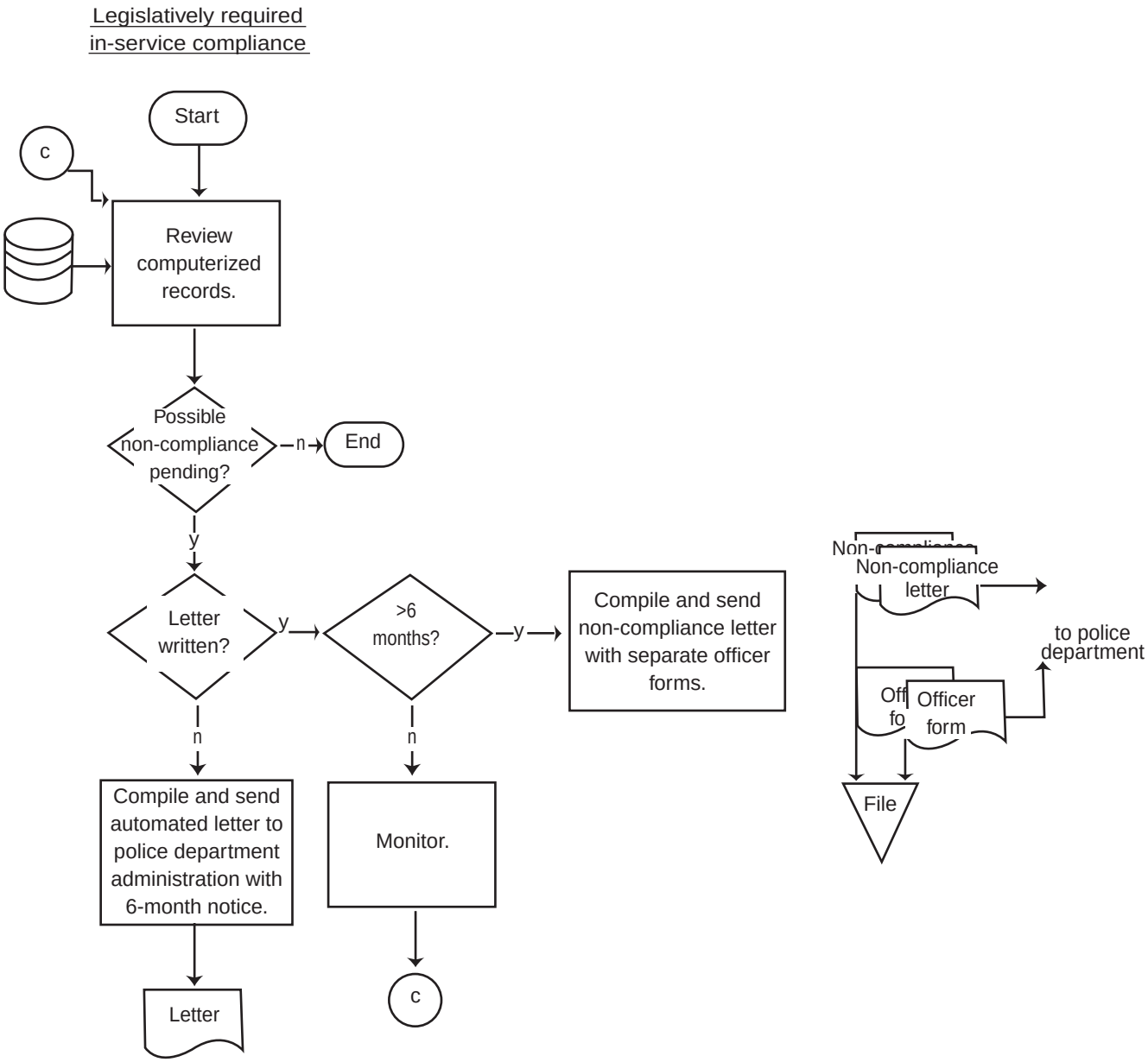
1. For the first four activities listed in Appendix D-2, calculate the labor rate and efficiency variances. What do they tell the agency about who is performing the activities and how efficiently the activities are being performed? Is the traditional labor variance analysis still useful today?
2. Compare the traditional approach to budgeting and the activity-based budget, noting similarities and differences. Is there value added with an activity-based costing system to use in budgeting? Explain.
3. What improvements would you suggest to the ABC system overall and the activity-based budget?
4. This study and implementation took place over the period of 15 months. Services offered by government organizations do not change significantly within short periods. Compare this with a high tech company. Do you believe that ABC can be useful to a high tech company? Why or why not?
5. Do you believe that contracting with an external consultant is critical to the success of an ABC system development project? Why or why not?

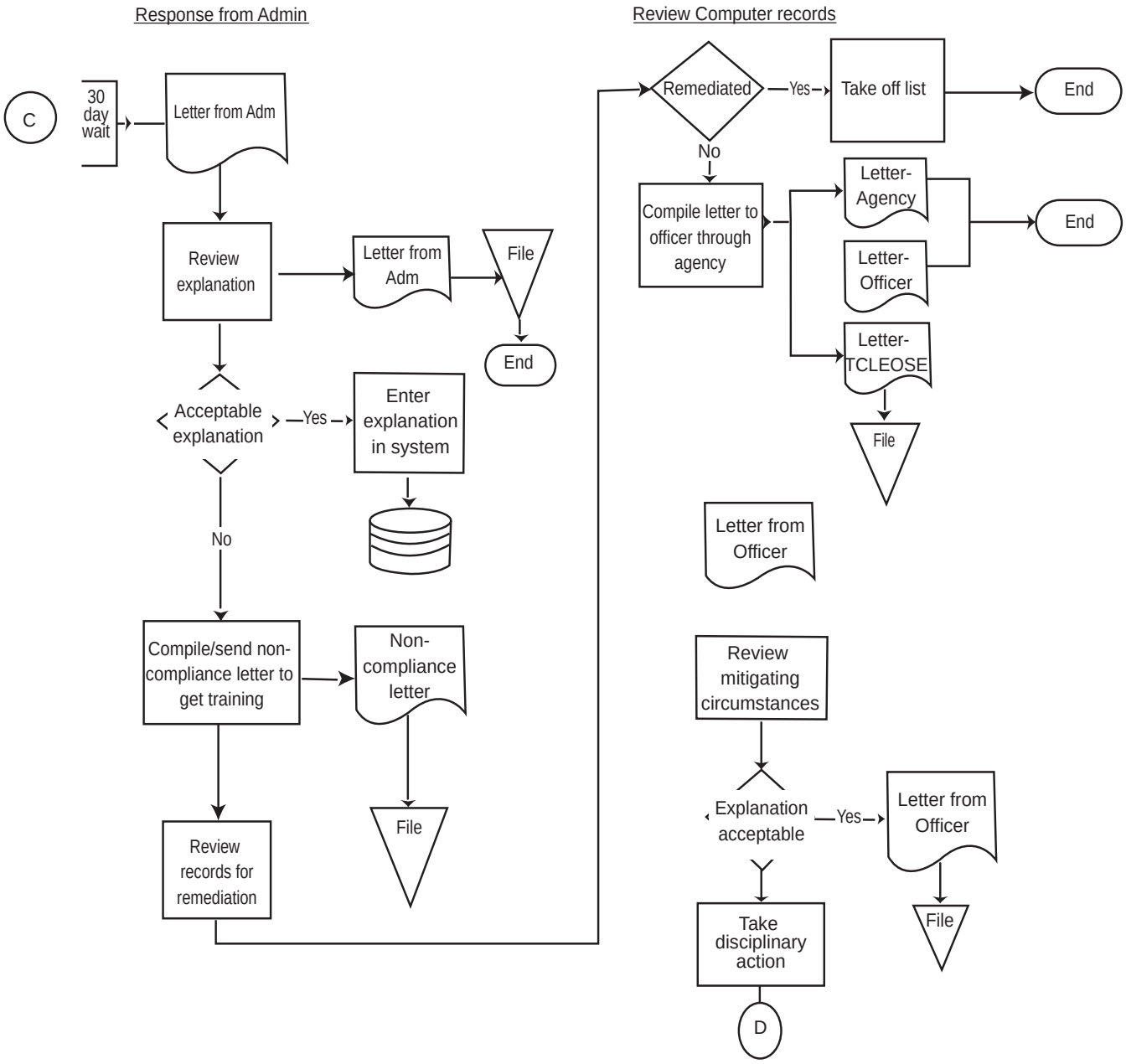
Appendix A-1

COST OBJECT ONE: ACADEMY EVALUATIONS

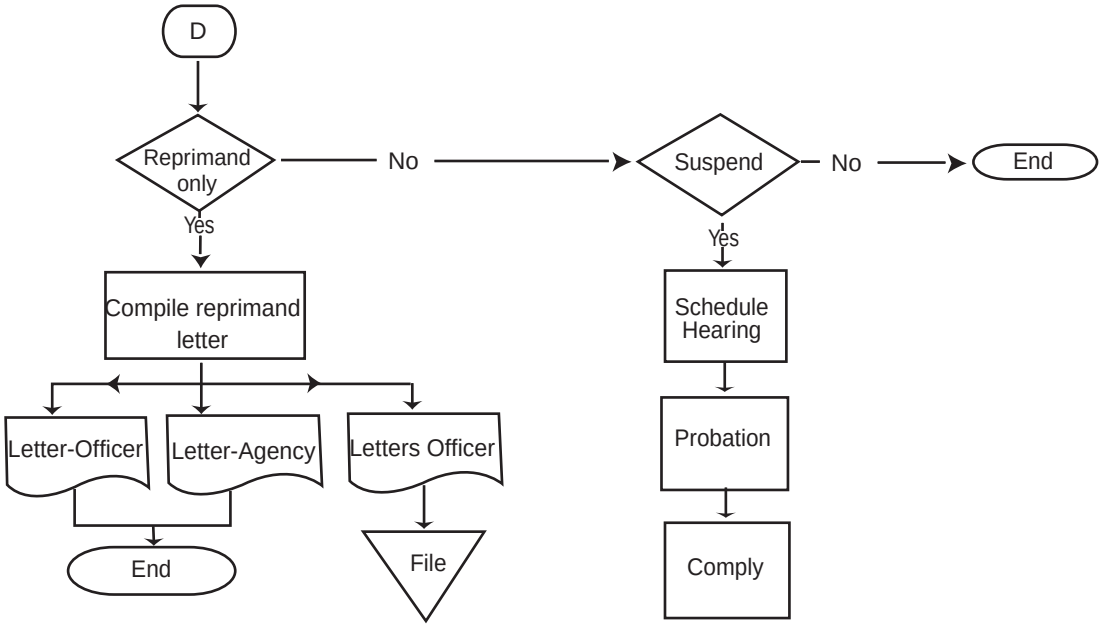


COST OBJECT TWO: IN-SERVICE COMPLIANCE REVIEWS

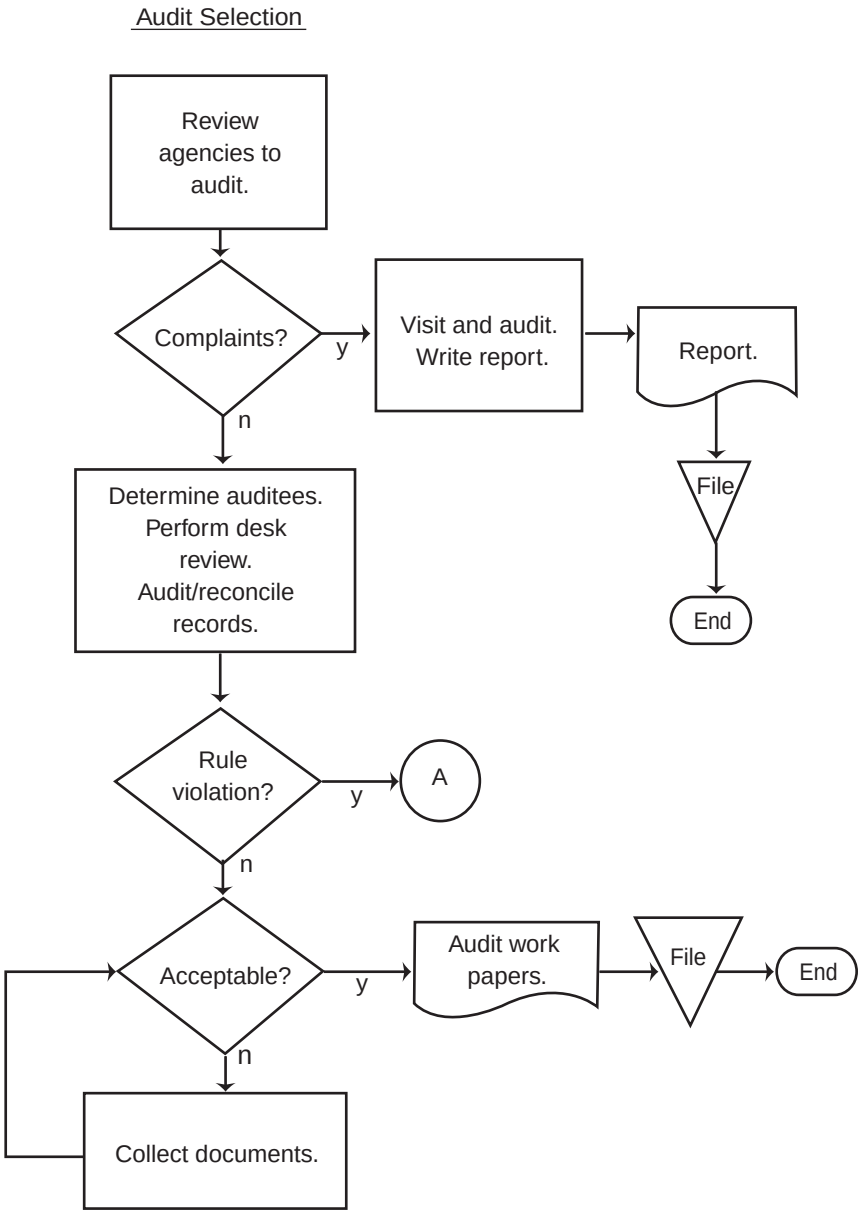



Response from Admin
Review Computer records
C
30 day wait
Letter from Adm
Review explanation
Letter from Adm
File
End
Acceptable explanation
Yes
Enter explanation in system
No
Compile/send non-compliance letter to get training
Non-compliance letter
File
Review records for remediation
Remediated
Yes
Take off list
End
No
Compile letter to officer through agency
Letter-Agency
Letter-Officer
Letter-TCLEOSE
End
File
Letter from Officer
Review mitigating circumstances
Explanation acceptable
Yes
Letter from Officer
File
Take disciplinary action
D

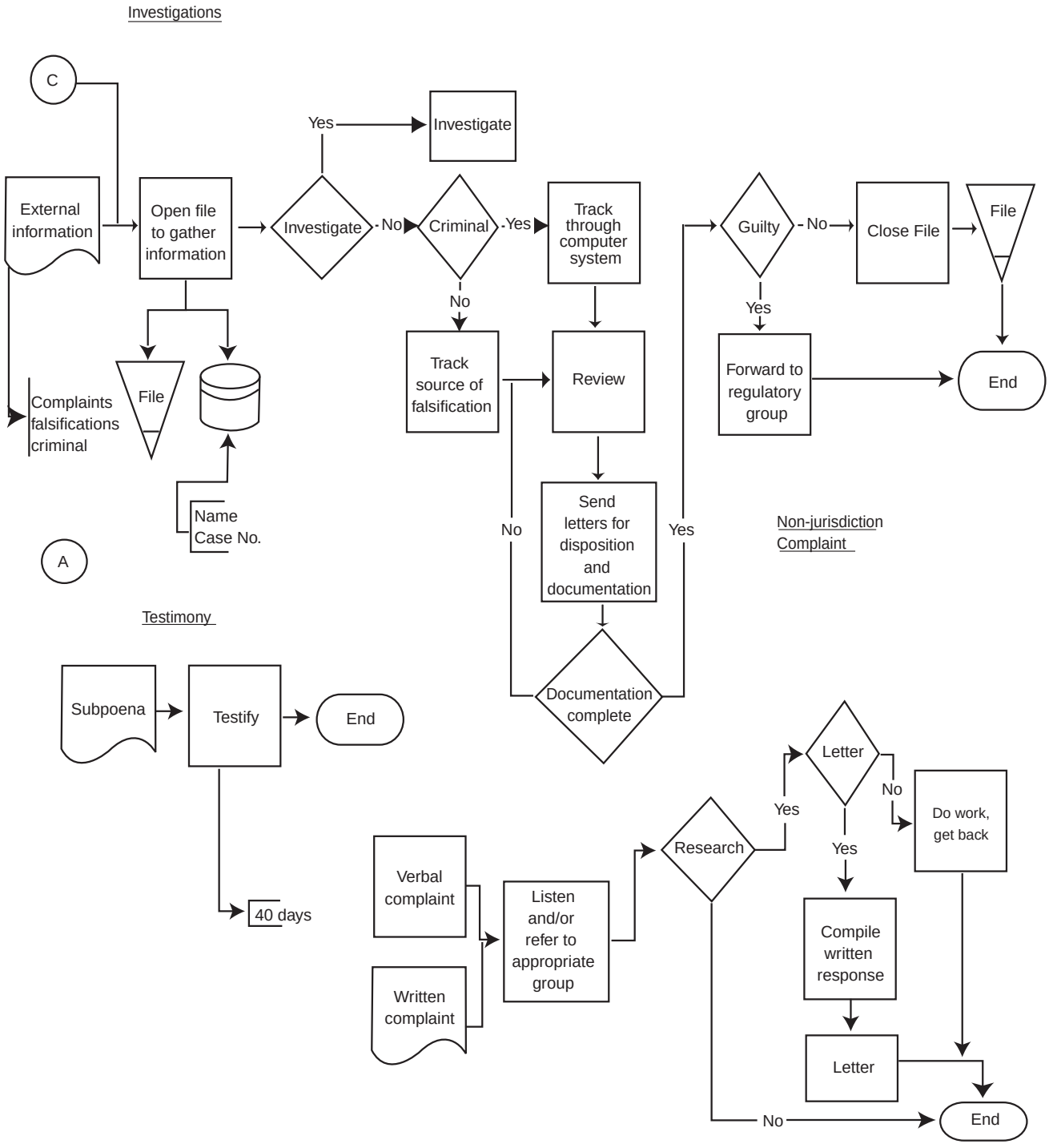
REGULATORY DIVISION



COST OBJECT THREE: POLICE DEPARTMENT AUDITS



COST OBJECT FOUR: INVESTIGATIONS



Appendix A-2

Cost object	Activity	Activity driver
Academy evaluation	Schedule	No. of evaluations scheduled
	Plan	No. of evaluations planned
	Conduct	No. of evaluations conducted
	Report	No. of reports prepared
Police department audit	Select	No. of field audits selected
	Review	No. of desk reviews
	Conduct	No. of field audits completed
In service compliance review	Monitor to non-compliance pending letter	No. of potential non-compliance entities identified
	Monitor to remediation letter	No. of remediation letters sent
	Monitor to reprimand letter and suspension	No. of reprimands and suspensions initiated
Investigations	Open file and monitor	No. of files monitored
	Investigate	No. of investigations conducted
	Testify	No. of testimonies
Roster entry	Review, analyze, complete and correct	No. of attendees
	Create, enter, and update	No. of attendees
	Sort and file	No. of rosters
	Respond to inquiries	No. of inquiries
Other	Phone calls – licensing/ certification	No. of phone inquiries – licensing / certification
	Responding to non-jurisdiction requests	No. of non-jurisdiction complaints responses
	Conferences	No. of conferences
	Record and dub	No. of events recorded and dubbed

Appendix A-3

Object/Activity	Total cost	Unit cost	Hours/Output
Academy evaluation			
Schedule	2,286	65.31	2.33
Plan	7,035	200.99	7.58
Conduct	21,715	620.42	21.59
Report	12,933	369.52	14.00
Police department audit			
Select	2,829	28.29	1.02
Review	6,072	60.72	2.25
Conduct	29,116	291.16	10.21
In-service compliance review			
Monitor to non-compliance pending letter	36,242	.55	.02
Monitor to remediation letter	18,349	1.56	.06
Monitor to reprimand letter and suspension	5,398	62.04	1.41
Investigations			
Open file and monitor	36,887	90.41	3.10
Investigate	3,124	312.44	6.13
Testify	10,842	492.81	14.85
Entered Roster			
Review, analyze, complete and correct	14,521	0.04	0.001
Create, enter, and update	35,712	0.10	0.001
Sort and file	6,626	0.32	0.02
Public services			
Respond to non-jurisdiction requests	6,660	15.03	0.55
Host Commission meetings	6,980	2,326.76	88.49
Record and dub meetings	2,395	149.71	6.38

Appendix B-1

Object / Activity	Activity Driver	Total Cost	Unit Cost	Hours/Output
Police department audit				
Prepare for audit	No. of audits prepared	13,222.43	264.45	8.98
Visit auditee	No. of visits	13,243.77	264.88	9.16
Follow-up on Audit	No. of reports written	6,414.07	128.28	4.28
Large evaluation				
Prepare evaluation	No. of evaluations planned	8,484.84	2,828.28	102.0
Visit academy	No. of visits	7,680.39	2,560.13	89.33
Follow-up on evaluation	No. of reports written	5,941.99	1,980.66	65.67
Smaller evaluation				
Prepare evaluation	No. of evaluations planned	9,602.48	640.17	23.20
Visit academy.	No. of visits	9,008.88	600.59	21.47
Follow-up on evaluation	No. of reports written	8,157.20	543.81	15.93
In-service compliance review				
Review info for compliance audit	No. of reviewed records	13,840.67	2.36	0.05
Write compliance audit report	No. of letters sent	8,913.34	0.27	0.01
Other				
Develop/maintain database	No. of officer records	49,275.26	0.75	0.04
Public services				
Answer non-jurisdictional calls	No. of non-jurisdictional calls	9,743.26	38.97	1.63
Record/dub meetings	No. of meetings	2,334.35	145.90	6.38
Host Commission meetings	No. of Commission meetings	18,970.86	9,485.43	229.50
Business services				
Manage fixed assets	No. of fixed assets	2,108.58	4.88	0.14
Process payroll	No. of payroll warrants	12,357.06	46.46	1.61
Prepare/ make deposit	No. of deposited checks	5,288.74	2.57	0.07
Journalize/post	No. of transactions	5,709.03	0.93	0.03
Process timesheet	No. of timesheets	1,472.45	6.29	0.22
Process benefits	No. of employee records maintained	1,472.45	30.68	1.06
Perform travel-related services	No. of travel warrants	6,129.33	37.37	1.55

Appendix B-2

Dear Executive Director:

I am pleased to transmit to you the Activity Based Costing Pilot Project Report for the Texas Commission on Law Enforcement Officer Standards and Education (Commission). This report provides a summary of the assistance performed by our firm.

The objective of our assistance was to:

1. Define the objects to cost.
2. Define activities related to processes used for those objects.
3. Identify resources and allocating associated costs of activities to the end objects.
4. Allocate other associated costs to the end objects.
5. Analyze results.

We did not audit, verify or corroborate the financial or operational information used in our analysis. We compiled information primarily through focus group meetings and discussions with key individuals involved in the activities of the Commission.

We also requested and received financial and operational information relating to those activities and objects. Since the Division does not currently track and maintain certain output measures and time spent on activities used in our analysis, the time and outputs were estimated. The underlying data for this ABC model may not be precise given that many of the on-time tasks and output numbers represent first time estimates. During our review we noted certain areas that may require further attention from the Commission:

- Processing of Payroll
- Processing of Timesheets
- Purchasing Goods and Services
- Performing Personnel Updates
- Maintaining Fixed Assets
- Processing Travel Warrants
- Maintaining Library/Acquisition of Books
- Amending Internal Software Programs
- Maintaining Multiple Non-Interfaced Databases
- Compiling Budget Reports

Because the results of this project are the foundation or framework for activity based costing, we recommend that the Commission consider updating/strengthening this analysis in the next six months by undertaking the following:

- tracking output and object measures
- tracking and monitoring time spent on activities
- combining low-cost activities

Our firm is pleased to have assisted the Commission management with this project and we appreciate the cooperation received from the Commission's personnel. If you should have any questions or need any additional information, please call our representative.

Appendix C-1

Actual Hours per Output by Month

Activity	Output	Average: January to April	January	February	March	April
Audit/Evaluation						
Perform large audits	Large audits	24.57	24.57	0.00	24.57	24.57
Perform small audits	Small audits	6.01	27.50	2.10	27.50	27.50
Perform evaluations	Evaluations	46.86	40.44	18.83	31.17	31.17
Perform investigations	Investigations	0.86	0.74	0.93	0.86	0.97
Develop/monitor data base	Records maintained	0.00464	0.00541	0.00322	0.00467	0.00526
Monitor compliance	Records monitored	0.00131	0.00066	0.00145	0.00221	0.00091
Answer non-jurisdictional inquiries	Inquiries answered	0.04	0.00	0.05	0.07	0.05
Finance						
Manage fixed assets	Fixed assets managed	0.07	0.13	0.01	0.13	0.11
Process payroll	paychecks	0.64	0.81	0.75	0.81	0.14
Do deposit	deposits	2.03	1.58	2.63	1.67	2.40
Journalize/post transactions	journal entries	0.05	0.04	0.03	0.03	0.10
process timesheets	timesheets processed	0.29	0.39	0.24	0.33	0.21
Process employee benefits	benefits processed	1.33	5.10	4.10	0.66	0.75
Perform travel-related services	travel services performed	1.47	0.73	2.00	2.83	2.12

Appendix C-2

Actual Cost per Output by Month

Activity	Output	Average: January to April	January	February	March	April
Audit/Evaluation						
Perform large audits	Large audits	609.71	609.71	0.00	609.71	609.71
Perform small audits	Small audits	109.91	449.74	50.43	614.59	124.98
Perform evaluations	Evaluations	530.41	864.56	419.03	864.56	864.56
Perform investigations	Investigations	15.32	18.97	23.37	20.87	21.62
Develop/monitor data base	Records maintained	0.05292	0.06710	0.03875	0.05456	0.07666
Monitor compliance	Records monitored	0.02054	0.01278	0.02829	0.07047	0.01878
Answer non-jurisdictional inquiries	Inquiries answered	1.58	0.00	1.44	1.79	1.51
Finance						
Manage fixed assets	Fixed assets managed	1.05	2.46	0.35	3.09	2.19
Process payroll	paychecks	15.53	15.69	15.38	16.54	2.46
Do deposits	deposits	49.29	36.25	62.33	39.97	56.20
Journalize/post transactions	journal entries	0.74	0.79	0.66	0.59	1.25
process timesheets	timesheets processed	5.43	6.80	4.11	6.86	4.52
Process employee benefits	benefits processed	3.68	104.61	84.10	13.52	12.06
Perform travel-related services	travel services performed	15.96	10.81	32.62	34.32	32.93

Appendix D-1

	Budgeted time per output	Budgeted cost per output	Estimated outputs	Total budgeted cost	Total budgeted time
Investigations and Audits					
Audit Exam Sites	12.00	$294.00	9	$2,646	108
Perform Investigations	0.74	18.13	1800	32,634	1,332
Perform Large Audits	25.00	625.00	5	3,125	125
Perform Smaller Audits	9.00	220.50	100	22,050	900
Respond to Non-Jurisdictional complaints	0.30	7.35	1800	13,230	540
Conduct evaluations	40	875.00	60	52,500	2,400
ABC budget				$126,185	5,405
Traditional budget				139,605	5,960
Finance, Internal Audits, Safety & Security					
Manage Fixed Assets	0.07	1.67	6000	10,017	420
Process Payroll	0.75	16.50	680	11,220	510
Do Deposits	2.00	52.00	140	7,280	280
Journalize/ Post Transactions	0.05	1.00	18,200	18,200	910
Process Timesheets	0.33	7.26	550	3,993	182
Process Employee Benefits	1.50	33.00	50	1,650	75
Perform Travel Related Services	2.00	26.00	330	8,580	660
Purchase Goods And Services	1.33	16.27	550	8,946	732
Handle Security	10.00	220.00	12	2,640	120
Do AFR	160.00	3,428.50	1	3,428	160
Develop Budget Reports	1.75	45.50	192	8,736	336
Develop ABC Budget Reports	15.00	330.00	12	3,960	180
Develop Other Reports	1.00	24.00	100	2,400	100
ABC Budget				$91,050	142,046
Traditional budget				4,664	7,120
Other services					
Develop, maintain officer records	0.005	0.05	960000	48,000	4,416
Monitor compliance	0.002	0.03	960000	19,200	1,248

Appendix D-2

Activity	Output	Actual Hours /Output	Budget Hours /Output	Actual Cost /Output($)	Budgeted Cost /Output($)
Perform Large Audits	1	24.57	25.00	609.71	625.0
Perform Smaller Audits	27	27.50	9.00	660.00	220.50
Conduct Evaluations		None performed in January			
Perform Investigations	431	0.02	0.74	0.49	18.13
Perform in-service	80,343	0.002	0.002	0.03	0.03
Develop/Maintain Database	80,343	0.001	.005	0.01	.0
Manage Fixed Assets	432	0.03	0.07	0.62	1.67
Process Payroll	48	0.31	0.75	5.61	16.50
Process Timesheets	4	1.50	0.33	36.43	7.26
Process Employee Benefits	4	6.50	1.50	133.33	33.00
Perform Travel Related Services	20	0.75	2.00	17.27	26.00

BIBLIOGRAPHY

Brimson, James, *Activity-Based Budgeting*, New York: McGraw-Hill, 1999.

Cokins, Gary, "Using ABC to Become ABM", *Journal of Cost Management*, 1, 2/99.

Cooper, R, R. Kaplan, L. Maisel, E. Morrissey, and R. Oehm, *Implementing Activity-Based Cost Management: Moving from Analysis to Action*, Chicago: Irwin Professional Publishing, 1992.

Federal Accounting Standards Advisory Board, Managerial Cost Accounting concepts and Standards for the Federal Government: Staement of Accounting Standards, No.4, Washington, DC: Federal Accounting Accounting Standards Advisory Board, 1995.

Institute of Management Accountants, Statements on Management Accounting, Implementing *Activity-Based Management: Avoiding the Pitfalls*, Montvale, NJ, 1998.

Kehoe, Joseph, William Dodson et al, *Activity-Based Management in Government*, Washington, DC: Coopers & Lybrand, LLP, 1995.

Keller, Joyce, et al, *Guide to Cost-Based Decision Making*, Austin, Tx: Texas State Auditor's Office.

Keller, Joyce, *Activity-Based Costing and Management Tools in Government and the Private Sector*, Altamonte Springs: The Institute of Internal Auditors, 1997.

Miller, John A, Arthur Andersen's *Implementing Activity-Based Management in Daily Operations*, New York: John Wiley & Sons, 1996.

Ostrenga, M, T. Ozan, R. McIlhattan, and M. Harwood, *Ernst & Young's Guide to Total Cost Management*, New York: John Wiley & Sons, 1992.

WEB LINKS

Federal Accounting Standards Advisory Board, (http://www.financenet.gov/financenet/fed/fasab)

Texas State Auditor's Office (http://www.sao.state.tx.us)

Consortium for Advanced Manufacturing-International, (http://www.cam-i.org)

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PART A - INTRODUCTION

"It was the best of times, it was the worst of times...." As Drew Sievers sat as his desk and contemplated the action that he and two of his friends were taking, these words from Dickens' *Tale of Two Cities* suddenly passed through his mind. Until two months ago, Drew had been a highly successful VP for Information Technology at a Fortune 1000 retail business. Pam Maggio, a marketing executive with a Silicon Valley software developer, and Steve Roper, a manager in the Business Advisory Services division of a large CPA firm, would soon be leaving their positions and joining him. The three of them had formed a new company, SUPREM-e, INC., that would offer services in the business to business (B2B) e-commerce market. Each of the founders had been given shares of the company's $0.10 par value common stock, issued at par, in exchange for their initial investments in the company. Drew and Pam had both received 400,000 shares and Steve had received 200,000 shares. The founders agreed that these shares would "vest" at the rate of 10% at the end of the first year of operations and then 2.5% per month for the next three years. The company reserved the right to buy back any "unvested" shares at par if a founder left the company early.

Drew knew that the rewards from this business, as well as the risks, were potentially great. The stock prices of many e-commerce businesses had gone sky high in recent months, but the landscape was also littered with the carcases of ventures which had failed soon after they had begun. Even a giant like Disney had folded its e-commerce toy business after only nine months of operation. Similarly, Viacom had shut down its Internet-based toy retailer and Boo.com, a British clothing retailer, had closed its Web site. In addition to these significant failures, funding resources for Internet start-ups had been rapidly drying up.

But the good news for Drew was that, unlike the retail side of e-commerce, the B2B component was flourishing. Every day it seemed that a new company entered this field. Some companies were providing the software that Internet business activities required. This software allowed companies to do such things as link manufacturers with on-line catalogues of their suppliers. Other companies supplied the software, but also functioned as e-commerce middlemen. In this role, the dot-com company searched the Internet for the best prices on whatever items their customers needed and also sold surplus plant, equipment, inventory or other assets for the companies in their client base. Some e-commerce facilitator companies also served as the Web site host for entities which wanted to outsource that activity to a company with the expertise to both design and maintain the site.

Another major Internet-driven development involved the combining of industry rivals into alliances, such as the ones recently announced by tire manufacturers and a consumer products consortium (transora.com). The latter alliance links together 49 of the largest consumer products companies in the world. According to the press release related to this alliance, "Transora will enable consumer products companies across the world to streamline business transactions with their suppliers, buyers and distributors via the Internet. Investor companies account for approximately $350 billion of the $900 billion annually spent by the industry on goods and services to operate their businesses." Although Drew did not anticipate being able to provide services to an alliance as large as Transora, he knew that there were thousands of other potential alliances in the marketplace that would need a company like his to make the alliance functional.

Financing. The original capital for SUPREM-e had come from savings of the three founders of the company. Additionally, several friends of Drew and Pam had made equity investments or loans in order to help get the business afloat. Now, however, software development costs and marketing efforts were starting to increase at a rapid rate. The company needed additional funds fast and Drew was considering possible sources. He had compiled a list of "angels." These were wealthy individuals who would invest as much as several hundred thousand dollars in start-up companies. These investors favored companies that appeared to have strong prospects for a quick rise in their stock valuation. Drew certainly felt that SUPREM-e was in that category. But he had also been investigating possible interest by venture capitalists (VCs). He had recently sent an e-mail to 40 VCs, outlining the goals of SUPREM-e and asking for responses from those who might be interested in pursuing this investment opportunity. If neither of these sources panned out, Drew and his founding partners planned to look into both domestic and foreign incubators. Incubators were businesses that, like VCs, provided funding for start-up businesses. However, incubators also gave the new company founders more "hands on" assistance in developing their business. So far Drew had only heard from two of the 40 VCs. Both of these replies had asked that he send them a copy of his company's business plan. Drew knew that he and his colleagues needed to prepare such a plan. But with the rapidity of change in the B2B marketplace, they had felt the need to move quickly in getting their company started. Consequently, they had not had the time to develop a business plan in any "formal" sense

Infrastructure. As Drew considered the needs of his new company, his thoughts turned to the necessary infrastructure that the business needed. He had been reading that one of the biggest problems for a start-up company in the Internet arena was the need to strike an appropriate balance between the resources and structure it needed at its origination and the necessary changes in these elements as the company experienced potentially rapid growth. At the current time, he knew that he, his co-founders and their few current employees needed to develop strategies related to:

- The impact of various growth scenarios on scalability/availability constraints on the Web site they were developing.
- Their limited initial infrastructure (e.g., when should they anticipate orderly increases in this infrastructure?).
- A human resources plan (e.g., how are they going to attract and retain quality programmers, sales personnel and financial personnel at this early stage of development?).
- Activities they should consider outsourcing.
- Data integrity in their systems.
- Unlimited access to data by company staff.
- Anticipated customer privacy issues and customer prescribed restrictions on company use of data.
- Necessary legal assistance at this time (e.g., for drafting of stock option plan).

CPA firm. Drew did not anticipate needing any assurance services from a CPA during this first year of the company's operations. However, he and Pam had recently established a relationship with Terry Watson, a partner in the local office of Barton & Stiles, a national CPA firm. During their initial discussion, Terry had noted that the firm could advise the officers on proper accounting for complex accounting issues, provide business consulting services related to company operations, and supply tax planning and filing services. To Drew's great relief, Terry also agreed to heavily discount the first year's fees.

After leaving Terry, Drew and Pam had discussed the value of having such professional services at this early juncture, but wondered how they would pay for them. They both felt that cash flows needed to be directed toward direct business development costs. For example, they needed to hire some additional experienced programmers and systems designers. Given the current market for such people, they knew they would command high salaries, as well as other non-monetary consideration such as stock options. They wondered if the CPA firm, in addition to discounting its fees, would be willing to accept less cash if they

were offered an equity position, options, warrants or some other form of compensation. They also wondered if Terry could put them in touch with other potential investors, as well as other experts they would need in the future. In particular, they wanted to find a good, local attorney with SEC experience.

Questions for Part A:

1. Is it desirable for the founders of SUPREM-e to place "vesting" requirements on their original stock acquisitions? If you were one of the founders, would you have filed a section 83(b) election under the Internal Revenue Code? Why or why not?
2. Compare the pros and cons of seeking early capital from an angel, an incubator or a venture capitalist.
3. Discuss the essential issues that should be dealt with in a company's written business plan.
4. Identify the IT risks that you believe the company needs to address at an early point in its risk management plan. What are some possible ways to protect the company against those risks?
5. Will the proposed plans for compensating the CPA firm for its services create any professional or ethical problems for the firm?

PART B - EARLY OPERATIONS

During its first year of operations, SUPREM-e negotiated several important contracts. One contract involved designing and maintaining the Internet-based procurement system for an alliance of 12 private colleges operated by the Evangelical Lutheran Church in America (ELCA). Drew had received his bachelors degree in business from one of these colleges, Lenoir-Rhyne, in Hickory, North Carolina.

The alliance of the 12 colleges was dubbed One-Pur-All. Under the contract, SUPREM-e was to develop (and keep current) the Web site for One-Pur-All.com, produce (and keep current) the software needed for site operations, host the Web site, and serve as the basic e-commerce enabler for the alliance.

As the company entered into more and more complex business deals, the owners recognized that in-house accounting expertise was needed. As a result, Jan Toomy was hired as the company's CFO. Jan had been an audit manager with the national CPA firm of Touchet and Rossi. She had considerable experience with corporate mergers and e-commerce businesses. Drew was glad she was on board, given that a number of significant accounting questions had recently arisen.

Software and Web-site development. To the current date, SUPREM-e has spent several hundred thousand dollars on the development of the critical software it needs to supply customer services in the niche market it is targeting. Some of this software is now functional and, in fact, is being used in the One-Pur-All contract. Other software development is in the critical testing phase, while a few software projects are still in the initial design stage. In addition, $75,000 has been spent on the creation of SUPREM-e's own Web site. Drew has heard that many, if not most, high tech companies have been fully expensing their software development costs. He wondered why they were choosing that approach since the software should have future value for the enterprise. He thought that a better argument could be made for fully expensing the Web site development costs. It seemed obvious that rapid change in the industry would necessitate frequent revamping of, or total reconstruction of, Web sites that were geared to the e-commerce industry.

Equity transaction. The financing of much of year two's operating costs came from a cash investment made early in the current year by two local "angels." Ronald Benson and Jerry Amos were local entrepreneurs who had both become quite wealthy by creating successful companies of their own. Benson had invested $200,000 in SUPREM-e in exchange for 2,000 shares of $100 par preferred stock. This stock had a "guaranteed" dividend of 12%, liquidation preference, mandatory redemption in five years at $105 per share, and a conversion feature which allows Benson to convert the preferred into common at the rate of 20 shares of common for each share of preferred. Amos had invested $100,000 in SUPREM-e in exchange for 50,000 shares of common stock.

Employee compensation. In addition to cash compensation, SUPREM-e has granted a variety of stock options to its officers and other employees. The options, which have been issued at various dates, allow the employees to acquire company stock at prices ranging from $0.50 a share up to $3.00 a share. Even though these stock options comprised a significant component of total employee compensation, the cash portion was still one of SUPREM-e's major disbursement activities. As the number of employees had grown dramatically this year, Drew and the other officers had agreed to outsource this function to a com-

pany called E-Biz Pay Systems, Inc. [E-Biz is known in the high tech industry as an Application Service Provider (ASP). You can read about this type of service provider at http://www.aspconnection.com.]

Contract costs. Earlier this year, SUPREM-e entered into a contract with Professional Consultants, Inc. (PCI). Under this contract, PCI is providing a variety of services including assistance with (1) strategic planning for the company's future, (2) innovative marketing concepts, (3) recruiting of key personnel and (4) other critical planning issues. The contract is for a four-year term and will be open for renegotiation at its expiration. Because of SUPREM-e's outstanding prospects for growth, the officers of PCI agreed to be compensated as follows:

- 50% of the annual fee in cash in order to cover company payroll costs for the staff who are assigned to the SUPREM-e engagement.
- 50% of the annual fee in common stock with the number of shares to be determined by the estimated fair value of the stock at the end of the current year of the contract.
- In addition, PCI will receive warrants which will allow the company to buy 160,000 additional common shares at a price of $2 per share. Forty thousand warrants will expire at the end of each year, if they are not exercised by that date.
- PCI agreed to bill SUPREM-e at a 40% discount off of its regular rates.

Questions for Part B

1. If you were Jan, how would you account for the software development and Web-site development costs?

a. Should software development costs be defined as research and development costs and written off as incurred?

b. Should the SUPREM-e Web-site development costs be capitalized or expensed?

c. Assuming that the Web-site development costs should be capitalized, what factors would you consider in determining the life over which the costs should be amortized?

2. With respect to the equity transaction with Benson:

a. How would you account for the issuance of the stock?

b. How would you classify the stock in SUPREM-e's balance sheet?

3. How would you account for the options which have been granted by SUPREM-e to its officers and employees?

4. How would you account for the costs incurred under SUPREM-e's contract with PCI?

5. SUPREM-e has outsourced its payroll function to E-Biz Pay Systems, Inc. What work, if any, would need to be performed by SUPREM-e's auditors, Barton & Stiles, in order to assess the internal controls over the payroll function?

PART C – OBTAINING ADDITIONAL FUNDING

As the end of SUPREM-e's second year approaches, operating costs continue to escalate. Although revenues have constantly risen at a fast pace, the high start-up costs have taken their toll on the income statement. The company's accounting showed a large operating loss in year one. Year two's income statement will also reflect an operating loss, although Drew expects it to be less than the year one loss.

Net cash flows from operations have become positive in year two. However, the cash burn rate for cash from all sources has been very high. As a result, a rapid infusion of additional cash is needed to fund expansion of the business. Fortunately, Drew and Steve had carved out the time to produce an excellent write-up of their business plan. Drew had presented copies of this plan to about twenty different Venture Capitalists and two venture capital associations. Because of the contract backlog which SUPREM-e currently has, and its strong prospects for rapid future growth, several VCs have expressed interest in making an investment. However, all of them told Drew that their investment committees require that audited financial statements be reviewed prior to any final investment decision.

Drew arranged for Barton and Stiles to perform the necessary audit. When the team assigned to perform the audit conducted its preliminary review of the client, they found the following key facts that would have a bearing on the audit plan:

1. At two different times during the current year, SUPREM-e had acquired other businesses. FastWare, Inc., develops software applications that provide the critical interfaces for e-commerce transactions between manu-

facturers, their suppliers and their customers. FastWare was purchased in a stock-for-stock acquisition. Through this purchase, SUPREM-e had obtained valuable software products for its product line, additional key software developers, and the executive talents of the two co-owners of FastWare. These co-owners also brought significant market contacts, and a backlog of contracts in progress, with them. The other acquired company, BuyDent.com, had created a Web alliance of 1,200 dentists. BuyDent handled all aspects of purchasing supplies for the dentists' offices (the average dentist buys 1400 different items from 100 different suppliers, with weekly purchases of five items from 11 suppliers). BuyDent also serves as an auction house through which the dentists can sell their used equipment and office furniture. This acquisition was made in a 50% debt, 50% stock transaction. SUPREM-e hopes to add more dentists to this alliance and also use it as a springboard for creating alliances with other professional groups such as doctors, lawyers and accountants.

2. The year-end working capital position of the company is projected to be a negative $275,000 and the current ratio is projected to be .83 to 1. The income statement is expected to show a net loss of $2.6 million, which is an improvement from last year's loss of $3.5 million. If results are as estimated, the balance sheet will show a cumulative deficit of $6.1 million in the stockholders' equity section. Although the current cash situation is extremely tight, Drew told the auditors that he is not worried about this situation. If the hoped-for cash infusion from the VCs does not materialize, he noted that he "still has a few angels in my pocket."
3. Earlier this year, the internal audit department from the headquarters of the Evangelical Lutheran Church in America performed an IT audit of SUPREM-e's systems under which the One-Pur-All alliance operated. This audit tied up a significant amount of SUPREM-e's in-house resources during the audit period. This audit, however, did uncover some audit concerns related to data integrity and disaster recovery. SUPREM-e has addressed those problems, using the suggestions of the ELCA auditors. Late in the year, SUPREM-e was contacted by two other customers who requested permission for their internal auditors to review certain of the company's systems.
4. In discussions with one of SUPREM-e's Web site administrators, the audit staff learned that the company had experienced two breaches of customer privacy during the past year. In one instance, some hackers had accessed customer files through an undetected weakness in the company's firewall. That weakness has since been fixed. In the second breach, a company employee had sold some customer lists (and their profiles) to an outside party. That employee has been terminated.
5. A large portion of the company's original seed money had been spent on advertising and other promotional costs. These outlays were made with the intention of building critical marketplace recognition of SUPREM-e's comparative advantages vis-a-vis the numerous competitors the company faces in getting B2B contracts. Additional significant sums were spent to acquire lists of prospective customers for SUPREM-e's services.
6. Several of SUPREM-e's recently negotiated contracts with its customers cover multiple year arrangements. Under these terms, the company will provide the initial e-commerce transaction software to the customers and then provide necessary updates and/or customer specific modifications for the next two years at no additional cost. Several of these contracts involve multiple software products, some of which are deliverable in the first year of the contract with others being produced and delivered in years two and three of the contract. Finally, a few of the arrangements involving multiple products have been formally documented through separate contracts for each product (at the specific request of SUPREM-e). The reason for SUPREM-e's request was that Drew wanted to be able to record a separate revenue stream for each individual product.

Questions for Part C

Note: In answering the following questions, assume that you are part of the Barton & Stiles team that planned and performed the current audit engagement of SUPREM-e.

1. Do you need to audit the prior financial statements of the acquired companies in order to express an opinion on the financial statements of your client? If so, how many prior years' financial statements need to be audited?
2. What work, if any, needs to be performed to be able to assess the effect on the entity's IT environment of the integration of the acquired companies?
3. How would you attempt to define materiality for this engagement?

4. What factors would you consider in deciding whether a going concern comment should be included in your audit report?
5. What accounting issues are raised in Items 5 and 6 above?
6. Does the result of the audit by the ELCA internal auditors create any audit issues for you? What recommendations would you make to SUPREM-e that would help them limit the number of such audits in the future?
7. Refer to the discussion of the security breaches in Item 4 above. What components of SUPREM-e's systems do you need to evaluate in order to assess the internal control environment related to security? Does the information in Item 4 raise any specific audit questions for you?

PART D – GOING PUBLIC

In year three, the cash needs of SUPREM-e have continued to grow as the company expands its customer base, research and development costs grow, and plans for future expansion accelerate. To finance current and future needs, and to provide the expected returns to the company founders, its other employees and its early investors, the company is considering its initial public offering (IPO). In fact, Drew had been getting some pressure from Ronald Benson and Jerry Amos, two of the company's early "angel" investors, to go forward with the IPO as soon as possible. Drew was a little concerned about making this move at this point in time. The IPO market had been really hot just a few months ago, but in recent weeks several high tech companies which had announced their intention to go public had either delayed that move or had announced a decision to continue as private companies.

If prospects for an appropriate share price for SUPREM-e common appear strong, Drew hopes to raise about $150 million in the IPO. Not only would this cover the company's cash needs for the foreseeable future, but it also would make the founders of the company very wealthy individuals. Drew knew that he needed expert advice from his CPA as well as others as he moved forward with the IPO idea. Consequently, he had made contacts with Jane Colley, a partner with the law firm of Rankin, Smalley and Kravitz (a firm with considerable SEC experience) and Terry Lowrence, a partner with Wolf, Stearns, a firm which specializes in underwriting high tech company IPOs.

In addition to the IPO decision, Drew had another important issue on his plate. He had recently been approached by a representative from the Textile Manufacturers Association. It seems that a large number of companies who belong to the association want to create an e-purchasing alliance. This alliance will be known as Purlantic.com. Under the contract, the integrator will be responsible for installing and maintaining vertically integrated e-procurement software at over 1,000 alliance locations throughout the eastern half of the U. S.

Although Drew would like to have SUPREM-e perform many of the services that this new alliance will need, he did not believe that his company had the necessary capacity at the moment to serve as the integrator for this alliance. A good solution, he thought, would be to have the business consulting group of Barton and Stiles (B&S), the CPAs who provided the company with all of their auditing, tax and consulting needs, perform this service under the aegis of SUPREM-e. He had approached Tom Dockery, a consulting partner with B&S, about this possibility. Tom had been very excited about this opportunity, especially with the size fees it would bring into the firm. The annual compensation proposed by Drew for B&S's services involved a payment of 50% cash and 50% in warrants to buy SUPREM-e common stock. That prospect dramatically increased the potential total return this engagement would bring to the CPA firm.

Tom discussed this prospective engagement with Terry Barton, the audit partner in charge of the firm's assurance services for SUPREM-e. He had been quite surprised when Terry had expressed some reservations about taking on this contract. Everyone in B&S knew that growth in consulting revenues represented the future for accounting firms. How could Terry have any doubts about this golden opportunity that had been so nicely dropped into their laps? Terry seemed to be concerned, in part, because another B&S audit client was a member of another textile industry alliance called Texpora.com. Texpora included many of the same companies that were creating Purlantic.com.

Questions for Part D

1. At what point in its life should a company establish a relationship with an attorney and an underwriter who have experience with the federal and state securities laws?
2. What risks are there for the current owners in going forward with an IPO at this time?
3. Does the IPO create any new accounting and/or auditing issues? If so, what are they?
4. Should the CPA firm accept the offer to become the integrator for the new e-commerce alliance? Provide your arguments either for or against becoming the integrator.

RESOURCE MATERIALS

Articles

"Angels of Death," *Wall Street Journal*, May 25, 2000, Page A1, Column 1 and Page A8, Columns 1-3.

Banham, Russ. "The B-to-B Virtual Bazaar," *Journal of Accountancy*, July 2000, 26-30.

Articles on the web

An interesting series of articles related to the "going public" question in Part D appeared in *Business Week* in 1998. Two of these articles were "A Cold Look at Going Public" and "Living With IPO Regrets." These articles are available on line at www.businessweek.com/smallbiz/news. Another interesting article from *Business Week* (same Web site source) is entitled "A Tale of Two High-Tech Tightwads."

Professional standards

American Institute of CPAs
AU 341, "The Auditor's Consideration of an Entity's Ability to Continue as a Going Concern"
Service Organizations: Applying SAS No. 70
Statement of Position 97-2, "Software Revenue Recognition"
Statement of Position 98-1, "Accounting for the Costs of Computer Software Developed or Obtained for Internal Use"

Financial Accounting Standards Board (or Predecessors)
APB Opinion 25, *Accounting for Stock Issued to Employees*
EITF 00-02, *Accounting for Web Site Development Costs*
EITF 00-3, *Application of AICPA Statement of Position 97-2, "Software Revenue Recognition" to Arrangements That Include the Right to Use Software Stored on Another Entity's Hardware*
FAS 86, *Computer Software to Be Sold, Leased, or Otherwise Marketed*
FAS 121, *Accounting for the Impairment of Long-Lived Assets and for Long-Lived Assets to Be Disposed Of*
FAS 123, *Accounting for Stock-Based Compensation*

Useful web sites

www.aspconnection.com
www.cpaindependence.org
www.growco.com
www.fenwick.com/pub/vencap
www.planware.org/bizplan.htm
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RAYCO'S AUTOMOTIVE DIVISION:
A CASE STUDY IN STRATEGIC BUSINESS DECISION MAKING

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PART ONE

INTRODUCTION

Joe Jones, a senior accountant with Tick and Tye, LLP (T&T), was in the office early on a bright August morning. Today he was to begin the planning for this year's audit of RayCo, which had been a client of T&T for several years. Joe had worked on the engagement last year as a staff accountant. Having been recently promoted to senior accountant, Jones was now in charge of the RayCo audit and was eager to get the engagement off to a good start.

As Joe was reviewing last year's engagement, Bill Bates appeared at his work cubicle. Bill was the partner on the RayCo audit and had news about their mutual client to share with Joe. "I see you're working on RayCo," Bill said. "What a coincidence. Yesterday evening I got a very interesting phone call from their controller, Chuck Cone. I knew you would begin planning soon so I thought I should come over and share the news first thing this morning."

"Yes, Bill," Joe replied, "I just started to think about the planning of the audit. I want to get everything going in the right direction. What is this big news anyway?"

"You remember the special product development task force RayCo set up a little over a year ago? Well, they have developed a new computer software system that Chuck is very excited about. In fact, he thinks that this new product is so important that its success is essential to the continued viability of the company's automotive division."

"Great," said Joe. "I know how important new product development is to RayCo. That really is good news. When do they expect this new product to be online?"

"Well, not right away," replied Bill, "and that's one reason I wanted to talk with you as soon as possible. As you might expect, these new systems will be very expensive."

Joe broke in, "But if they are so expensive how will RayCo ever sell them? The automotive dealerships that are their regular customers are typically very thinly capitalized and don't have much in the way of collateral to support the borrowing of enough money to make a major purchase like that."

"Precisely, that's the problem," responded Bill. "RayCo's plan is to loan money themselves to the dealers. They have the funds and see this as the best way to make sure their customers can buy the product. Chuck called to tell me their plans, get my reaction, and ask about financial statement and tax implications of their decision."

"Chuck is not the only one interested in your reaction," said Joe. "That sounds like a pretty ambitious plan. What did you tell him?"

"First of all, I asked him if he really wants to get into the finance business. RayCo is very good at

what they do, but financing their customers is stepping outside of their area of expertise. I suggested that they consider other options for the financing, and look at the financial statement and tax implications of each before making a final decision. After some convincing, he agreed and said he was sure he could hold off the top brass for at least a couple of weeks before they finalize their plans. We have a meeting set up with the RayCo people for one week from today. At that point we should be prepared to discuss financing options and their implications. We should look at this news from two perspectives. First, we have an opportunity to help our client solve a significant business problem and therefore add value to their operation. Secondly, in planning this year's audit, we have to consider any new engagement risks brought about by this situation. Will you be in the office tomorrow?"

Joe checked his appointment book and replied, "I'll be out at Montgomery Industries in the morning, but I should be in the office all afternoon."

"Lets get together tomorrow afternoon at about 2:00. That will give us both a chance to think more about RayCo's situation and we can start working up some preliminary ideas at that time. This year's audit should prove to be a very interesting one, don't you think, Joe?"

"Absolutely, Bill." responded Joe. "See you tomorrow at 2:00."

BACKGROUND ON RAYCO

RayCo (the company) is a corporation with stock actively traded on the NYSE. The company has provided business forms to the general business market since its founding in 1875. Beginning in the 1980s and continuing through today, RayCo has greatly expanded its business, both through internal growth and acquisitions. Although printed business forms are the company's leading revenue source, RayCo is moving toward higher value-added and technology-enhanced document management services for medium and large-sized organizations. A major new product provides fully integrated client-server information management which includes an internet-based document management service that facilitates the procurement and management of documents as well as the optimization of customer work processes. The company has done well over the years and believes it is successful because its products and services add value to their customer's businesses and their use of current technology improves business processes, from developing and nurturing sales opportunities to serving customers after the sale. Because of the company's long history of success it has strong capitalization with a very low debt to equity ratio. Its existing products generate significant cash flows. This combination of factors gives RayCo a very good credit rating and significant borrowing power.

THE AUTOMOTIVE DIVISION

The company established a niche for itself in the 1920s by providing auto dealerships across the U.S. with standardized business forms. Since the 1960s the company has provided automated business forms to auto dealers. RayCo currently has a leading market share in the automotive forms business.

Special teams established in late 1998 to study the unique information needs of the retail automotive market have proposed new products that would represent complete information management solutions for automotive dealers. These information management solutions would include integrated hardware, software and data communications systems; e-commerce solutions; a complete line of paper-based and electronic business forms; integrated document management systems; ongoing customer service and support; and a full suite of consulting and training services. RayCo is convinced that they can lead the market in information management solutions for automotive retailers because they specialize in this particular niche market and they have established a reputation of reliable service, industry knowledge, and products designed to meet their customer's needs.

THE BUSINESS PROBLEM

RayCo believes that entry into the market for complete information management solutions for automotive retailers is a business opportunity that may be essential to the continued viability of the automotive division. The company now enjoys a competitive advantage in this market and needs this product to maintain it. The problem is that complete information management solutions for automotive retailers are very expensive and auto dealers are typically very thinly capitalized. The auto manufacturers often capitalize automotive dealerships, at least in part, and the typical auto dealer invests very little money to get into a dealership. Their only assets are a building and an inventory of cars which are almost totally financed by borrowing. Therefore, the typical dealership has high leverage (a balance sheet showing assets, a lot of debt, and very little equity) resulting in a high debt-to-equity ratio. If they are to buy RayCo's expensive new product they will have to borrow further. This will be hard to do because banks want collateral and the dealers have none. Banks are typically not willing to make large loans collateralized by computer software and hardware because the value of these assets declines rapidly. If the dealers were able to obtain financing, the interest rates would be extremely high. What RayCo would like to do is find a way to use a previously unused asset, their credit worthiness, to help their customers get the financing they need at a reasonable interest rate.

Assignments for Part One

1. To prepare for tomorrow's meeting with Bill Bates
   a. List the relevant issues that should be explored.
   b. Develop a list of possible solutions to the business problem and their implications
2. What should be the CPA's role in the final decision of which option to implement?

PART TWO

The next day promptly at 2:00 Joe appeared at the office of Bill Bates. "Hi, Joe. Come in," was Bill's greeting. "How is everything going today?"

"Well, I spent the morning with Montgomery Industries. They've got some interesting things going on out there. However, none of it is as exciting as what is happening with RayCo. I'm looking forward to discussing their issues with you. I have to admit, though, that despite the fact that I have given quite a bit of thought to their situation, I'm not sure I know how to solve their problem."

"That's okay, Joe. You're not supposed to have all the answers at your tender young age. Solving a problem like this is really an exercise in taking what you've learned from experiences with other clients over the years and molding those things that have worked before into a workable solution to the current client's problem. You simply haven't had enough experience yet, but it will come. I've asked Donna Davis, our technical review partner, and Lori Lansing, a tax partner, to join us today. Donna gets involved in one way or another in almost all major problems faced by our clients. Her problem-solving experience and my years as an engagement partner should enable us to identify several possible solutions for RayCo. Lori's experience in the tax area will be very valuable in exploring the implications of the alternatives we identify. They are meeting us in the conference room, so unless you have any questions let's head on down the hall."

THE MEETING OF THE MINDS

Donna and Lori were waiting for Bill and Joe when they walked into the conference room. After trading greetings they got down to work. First, Bill and Joe gave Donna and Lori background information on RayCo's automotive division and its customers. Then they outlined the current business problem and listed the major issues to be considered in arriving at a possible solution.

Once the pertinent issues had been identified Bill, Donna, Lori, and Joe started brainstorming possible solutions. The practical experience and technical expertise of Bill, Donna, and Lori proved to be valuable assets in this process. They talked about similar client problems they had seen in the past and how the firm had come up with satisfactory solutions in these previous situations. The emphasis of the conversation was not on finding the one solution to this problem, but on identifying a set of possible solutions that could be presented to the client.

After a very lively hour of give and take the group had identified three possible solutions to RayCo's problem. They felt that each of the three options would work and was sensitive to the specific client issues brought about by the problem being faced by RayCo. The three possible solutions are outlined below.

Internal Solution: Captive Financing Subsidiary (Exhibit 1)

Option one represents an internal solution to the problem and is a variation on RayCo's original plan to provide financing themselves. This option calls for RayCo to establish a fully-owned subsidiary, SubCo, to finance the dealers' purchases of the new product. SubCo would be started with an equity investment from RayCo with additional financing coming in the form of bank loans. SubCo would then provide financing to the dealers enabling them to buy the product.

External Solution: Guaranteed Financing (Exhibit 2)

Under this option RayCo would take advantage of their strong financial position to guarantee bank loans to their customers. Because of RayCo's guarantee and their low debt to equity ratio and strong cash flows, banks would be willing to extend credit to the dealers at a reasonable borrowing rate and without requiring collateral.

Internal/External Solution: Joint Venture (Exhibit 3)

This option calls for RayCo to form a joint venture with a lending institution. The bank would manage the joint venture, which would, in turn, provide the financing necessary for the dealers to purchase the product.

AFTER THE MEETING

As they returned to Bill's office Joe remarked to Bill, "I'm really impressed with the way that meeting went. You, Donna, and Lori have a wealth of experience and your internal "meeting of the minds" produced some really good ideas for helping RayCo. I know you said earlier that my experience will come, but I wish I could have contributed more in the meeting."

"Don't worry, Joe," Bill responded, "as the in-charge accountant on this engagement, you are going to contribute a great deal to our client and to the firm. Speaking of which, what we need to do now is prepare to present these three options, and their implications, to RayCo. Part of our service to our clients is to help them with decisions like this by presenting to them all the relevant facts. However, we don't make the final decision. That is the client's job. It's their business that will be affected and, therefore, their decision. Besides, we have to maintain our independence. We can't make decisions for our clients. We give them the best advise we can, help them implement their decisions, and hope that everything works out."

"What do you want me to do?" inquired Joe.

"Your immediate job will be to begin to put together the client presentation," Bill responded. "We want to make sure RayCo understands the three options we have outlined. How would each work? How would they be implemented? What are the financial statement and tax implications of each? In short, how would each option affect their business?"

"How about software revenue recognition?" asked Joe. "It seems that the type of financing would have an effect on that."

"Right, Joe," said Bill with a smile on his face. "See, you're contributing already. I'll actually make the presentation, but you will be right there with me. We have a meeting set up with RayCo for next Wednesday. I suggest you get to work on this and we'll meet again on Monday afternoon to see where we are and put the presentation together. In the meantime, if any questions or concerns come up, give me a call."

"Okay, Bill. I'll get right on it. I can tell this engagement is going to be one of those learning experiences you have been talking about."

Assignments for Part Two

1. Do the research necessary for the client presentation. For each option explore:
   a. Strengths, weaknesses, risks, and rewards for RayCo
   b. Alternative financing arrangements
   c. Software revenue recognition issues
   d. Income tax implications
   e. Financial statement implications
   f. Implementation issues
2. Make the presentation. Present to the class the results of your research. Include a discussion of each alternative, their implications, and all relevant issues the client must consider in making the final decision.

THREE

"Hello, Joe Jones," Joe said into his car phone.

"Hi Joe, its Bill Bates," was the response. "I've been looking for you here in the office. They told me you were on your way out to Montgomery Industries so I thought I'd try your car phone. I just got a call from Chuck Cone. He said RayCo was impressed with our presentation and that they have decided to pursue further two of the options we laid out for them. They will take it from here and use their internal resources to determine whether they can make them happen. Chuck is a good man and I'm sure he will get the job done in a very professional manner. Still, I reminded him of the importance of talking to all of the significant players involved in implementing each option and to keep a sharp eye out for any "deal breakers." I know how eager you are to get going on the planning of the engagement, so I'll let you know what they decide as soon as I find out. Thanks for all you've done so far. You helped make our presentation very effective and I know you will be a big asset to this engagement."

Assignments for Part Three

1. In pursuing the final two options
   a. Who are the significant players that Chuck Cone must communicate with? What roles do they play in solving this business problem?
   b. What is a deal breaker? Give examples of how this deal might be broken.
2. From a lender's point of view, what factors should be considered in determining whether to participate in the proposed financing arrangements?
3. After the final decision has been made, what remains for the auditors to do? How do they proceed?
4. Write an internal memo discussing the implications of the final decision on engagement risk and the planning

Exhibit 1
Internal Solution: Captive Financing Subsidiary

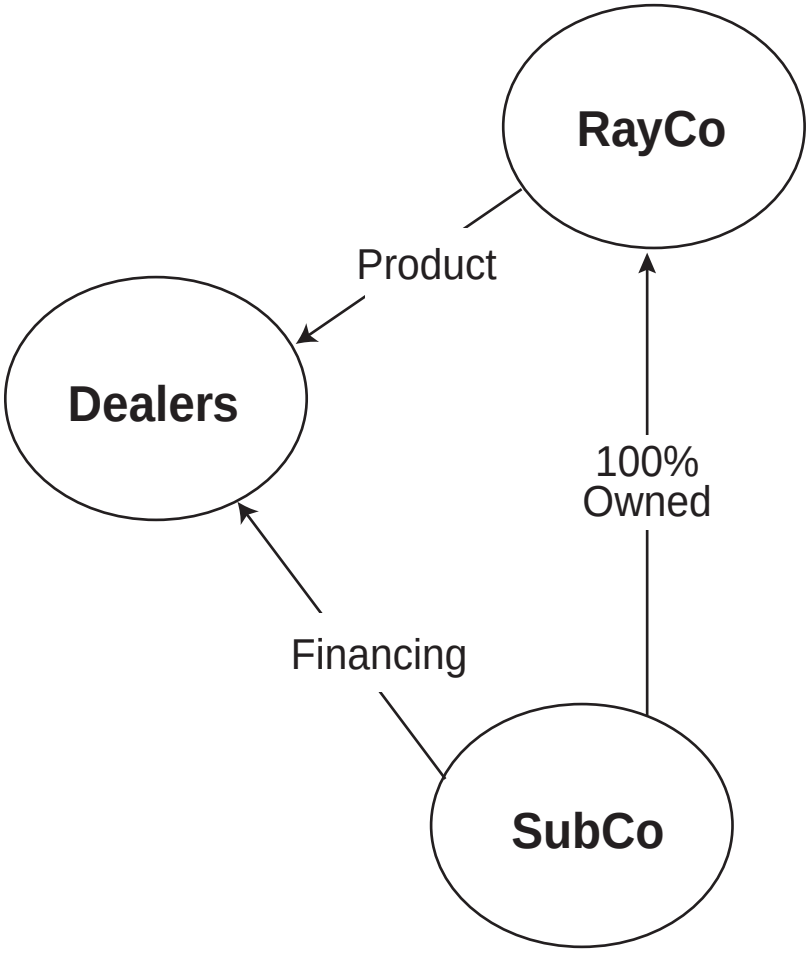


Exhibit 2
External Solution: Guaranteed Financing

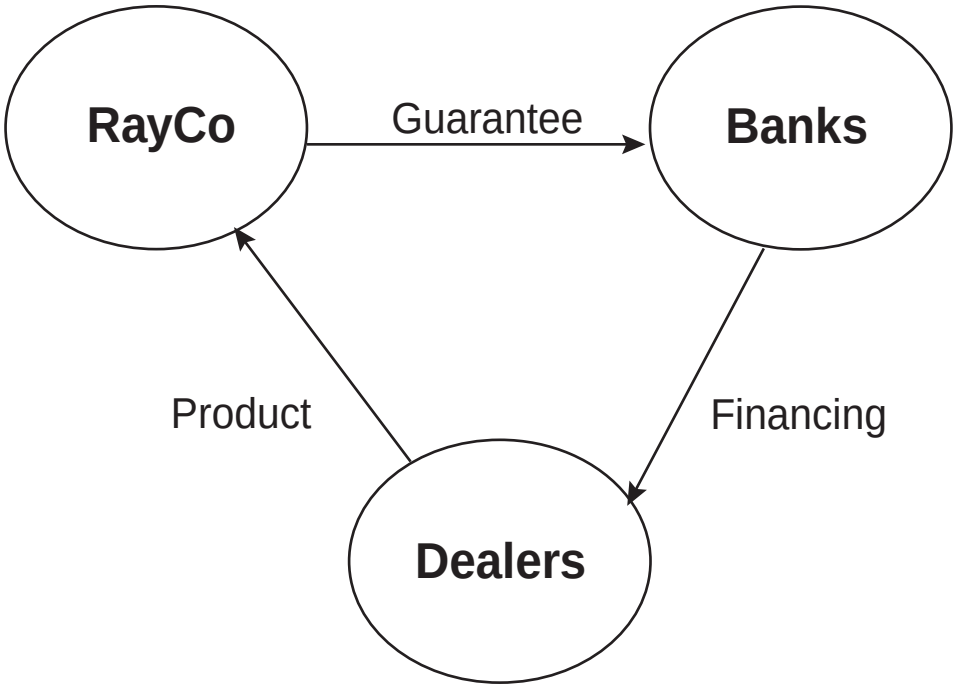
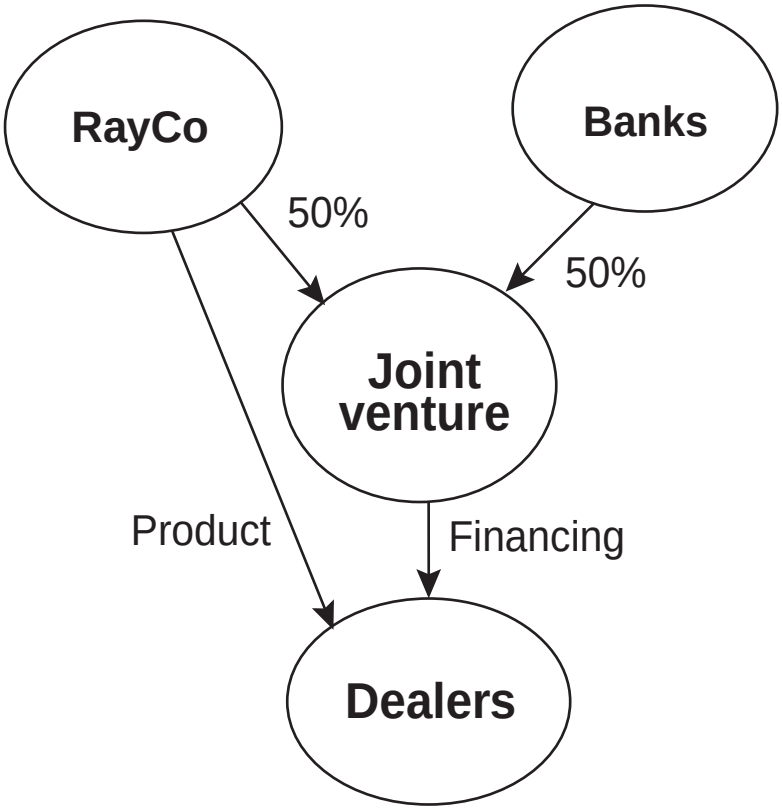


Exhibit 3
Internal/External Solution: Joint Venture



SOUTHERN PACIFIC FUNDING

SUB-PRIME LENDING – A RISK WORTH TAKING?

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Part A

You have wanted to invest in the stock market for some time. This year, you decide, is the year you will finally find your fortune in the market. Rather than invest in some of the blue chip stocks, you want to invest in a new field. The industry of sub-prime lending interests you. Among the recent companies specializing in sub-prime lending is Southern Pacific Funding.

Southern Pacific Funding (SPF) is a home-equity mortgage lender headquartered in Lake Oswego, Oregon. Southern Pacific Funding began operations in 1993 as a subsidiary of Imperial Credit Industries. SPF specializes in sub-prime loans, loans made to borrowers with risky credit. Individual credit risks are rated from A to E. Individuals with good credit are rated as A. Individuals who are rated B to E have missed past mortgage or credit card payments, have a poor job history, or have other significant debt. SPF originates and purchases loans made to persons in the B to D category. Borrowers use the loan proceeds to purchase homes, to consolidate debt, finance home improvements, or fund education. SPF charges a higher interest rate on these loans than lenders charge borrowers with good credit risk. The borrowers pledge their residential real estate as collateral for the loans. If the loans are not repaid, SPF can sell the homes, and the proceeds would pay off the loan.

In June 1996, SPF is having an initial public offering of five million shares of stock. SPF will issue three million shares of stock, and Imperial Credit Industries (Imperial) will sell part of its interest in SPF, offering two million shares of its SPF shares. The IPO stock price is $17 per share. After the IPO, Imperial will own 62.2% of the outstanding common stock of SPF, and the chairman of Imperial will be chairman of SPF.

You do not have time to read the publicly available information about SPF, but you have a good feeling about this IPO. Sub-prime lending companies are growing fast and generally show big profits. While traditional banks trade at only 1.5 to 2.5 times book value, many specialty finance companies trade at 3 to 4 times book. SPF's current owner, Imperial, has a good reputation for being a creative company in the mortgage world, and after the IPO Imperial would continue to maintain a large stake in SPF and be active on the board. You like what you hear about the sub-prime industry in general and Imperial in particular. You want to get in on the ground floor of an investment, so you decide to purchase stock in SPF.

1. What risks does SPF incur by lending to sub-prime borrowers?

Part B

You are happy with your stock purchase. By the first quarter of 1997, Imperial has sold additional shares, reducing its interest in Southern Pacific Funding to 46.9% of the company, and SPF's stock price has increased to $26. SPF has also grown incredibly during its first few years. Some of this growth has been funded by SPF's issuance of two unsecured debt offerings totaling $175 million. A brief summary of its revenues and income is as follow:

YEAR	TOTAL REVENUES (IN THOUSANDS)	NET INCOME (IN THOUSANDS)
1993	**$1,625**	**$431**
1994	**11,708**	**4,331**
1995	**22,300**	**7,337**
1996	**73,475**	**27,632**
1997	**189,345**	**53,775**

To better understand the sub-prime business, you read the material SPF filed with the SEC. You learn that SPF does not hold the mortgages it originates and purchases. Rather, SPF pools the loans and resells them as mortgage-backed securities to investors. Packaged loans are geographically diverse, spread over 50 states with many different individual borrowers. Therefore, the likelihood of default by many borrowers within a portfolio is relatively small. SPF packages and sells the loans, offering an interest rate lower than the rate paid by the home creditors to SPF. SPF is able to pay a lower rate to investors since securitization reduces the risk of a material default. A major rating company rates the most senior securitized offerings as AAA, evidence of the low perceived risk of these securities.

The difference between the interest received by SPF from the borrowers and the interest paid by SPF to securitized purchasers is called a residual interest. This residual interest is kept by SPF and recorded as an asset on SPF's financial statements. The residual interest is valued at the present value of future cash flows with assumptions made about loan prepayment, default, and losses suffered from the defaults.

SFAS No. 125 governs the recording of sales of mortgage-backed securities. SFAS No. 125 permits finance companies to recognize an immediate gain when the loans are pooled and sold. SPF records a gain or loss equal to the selling price of the loans plus the present value of the residual interest receipts less the cost of purchasing or originating the loan. While the full amount of the gain is recognized, cash receipts are spread over the life of the loans.

A hypothetical example of a typical business transaction is as follows:

A third party lender originates 10, 10% 30 year loans for $100,000 each. SPF buys the loans for $107,000 per loan, requiring $1,070,000 cash. (SPF has paid a premium for the loans.) To finance the purchase, SPF obtains the funds from a warehouse lender. The lender gives SPF $102,000 per loan, or a total of $1,020,000. SPF places the loans into a trust, which sells senior interests in the loans as bonds. The bonds have a face value of $1,000,000 (the total principle of the mortgages) and pay 6% interest. The bonds are sold for $950,000. The senior bonds are less risky than the individual loans, as the loans have been packaged to diversify risk and the senior bonds have priority cash flows from the loans. While the loans average a 10% interest rate, the bonds pay only 6% interest. The residual interest is valued at $150,000, and it is recorded as an asset on SPF's balance sheet.

2. Prepare the journal entries to record:
   a. The receipt of cash from the warehouse lender.
   b. The purchase of the loans for $1,070,000.
   c. The sale of the loans for $950,000 and recognition of a gain on the sale of the bonds.
   d. Repayment of funds from the warehouse lender, assuming the loans were outstanding one month and interest charged by the warehouse lender is 8%.
3. How much cash is generated/used by the transactions?

4. Assume the transactions above are representative of the transactions of SPF. What risks exist for the continued operation and significant growth of the business?
5. Do you think that the method of recording the entire gain on sale at the time of the sale is appropriate or misleading to the investors? Explain.

Part C

You obtain the 1997 10K report as well as the second quarter 10Q report for June 30, 1998. The balance sheets, income statements, and cash flow statements are included in the accompanying tables. Knowing the risks you identified earlier, you decide to analyze the actual financial statements of the company.

6. Prepare common size financial statements for the income statement and the balance sheet. (Your instructor may provide you with this information.)
7. Prepare an analysis of the percentage changes in the company's accounts between years. (Your instructor may provide you with this information.) The percent changes in income statement accounts from 1997 to 1998 are not relevant, as 1997 information represents an entire year of operations while 1998 amounts represent just six months of operations.
8. Identify the trends of the business. What changes appear unusual and would warrant further investigation?
9. Based upon this analysis and the risks you identified earlier, would you consider investing additional money in this company or do you want to sell your stock investment? Explain.

Part D

SPF announced record net earnings of $27,272,164 for the first six months of 1998. Yet, despite the increase in net income, SPF developed severe cash flow problems. To fund the cash flow deficit, SPF has in the past issued high yield unsecured debt securities and sold stock. Yet, in 1998 both of these options are not available. The stock price of SPF dramatically declined in 1998 to $12 by August. Therefore, cash was not available through equity. In addition, companies no longer seemed willing to purchase unsecured debt securities of sub-prime lending institutions. With the significant growth in the business, SPF needed to find new sources of cash to maintain the growth of the business.

During the summer of 1998, SPF asked Wilshire Real Estate Investment Inc. (Wilshire) for $80,000,000 of short term financing. SPF was willing to use its residual interest as collateral for the financing. At that time, SPF residual interests were valued at close to $400,000,000 on SPF's balance sheet. Wilshire separately valued the residual interest, using its own assumptions to value the residual interests. With the residual interests as security, Wilshire would loan SPF only $40,000,000.

10. The residual interest is estimated using a present value of future cash flows. What estimates are required to compute this amount? Considering that the majority of the revenues recorded are from the sale of mortgage-backed securities, what impact would a change in estimates have upon the reported net income?

11. Discuss the probable reasons for differences between Wilshire's and SPF's residual interest valuation.

Southern Pacific Funding Corporation Consolidated Balance Sheets

	DECEMBER 31, 1996	DECEMBER 31, 1997	JUNE 30, 1998
ASSETS:			
Cash	$ 14,175,566	$ 7,886,412	$ 14,622,731
Loans held for Sale	223,059,102	264,384,993	248,554,326
Interest only & residual certificates	87,016,900	277,156,343	396,830,091
Mortgage serving rights			8,143,128
Accrued interest receivable	3,181,499	4,568,977	3,152,875
Premises and equipment, net	3,036,388	7,660,691	11,426,955
Goodwill, net of accumulated amortization	4,742,571	6,615,080	6,326,918
Other assets	5,165,048	21,072,897	40,781,819
Total assets	$340,377,024	$589,345,393	$729,838,843
LIABILITIES:			
Borrowings under warehouse lines of credit	152,680,395	205,031,055	253,141,860
Notes payable		3,431,972	43,382,738
Deferred tax liability	18,445,495	48,074,988	63,637,374
Long-term debt	75,000,000	175,000,000	175,000,00
Other liabilities	9,164,901	18,652,471	28,452,659
Total liabilities	255,290,791	450,190,486	563,614,631
Shareholders' equity:			
Preferred stock, none issued			
Common stock, no par value, 75,000,000 shares authorized, 20,744,400, 20,760,450, and 20,737,500 issued and outstanding at June 30, 1998, and December 31, 1997 and 1996, respectively	53,798,099	54,100,622	53,866,921
Contributed capital	247,500	247,500	247,500
Translation adjustment		(8,745)	22,097
Retained earnings	31,040,634	84,815,530	112,087,694
Total shareholders' equity	85,086,233	139,154,907	166,224,212
Total liabilities and shareholders' equity	$340,377,024	$589,345,393	$729,838,843

Southern Pacific Funding Corporation Consolidated Statements of Earnings

	Years Ended December 31			6 months ended
	1995	1996	1997	June 30, 1998
Revenues:				
Gains on sales of loans	$16,328,621	$55,360,515	$148,403,866	$95,923,525
Interest income	4,304,760	13,848,976	39,306,759	30,891,651
Securities valuation and other income	1,666,682	4,265,285	1,634,175	7,054,772
Total revenue	22,300,062	73,474,776	189,344,800	133,869,948
Expenses:				
Interest	3,413,652	7,799,986	27,613,103	27,363,850
Personnel and commission	4,190,566	10,996,713	45,027,704	38,081,288
General and administrative	2,153,220	6,599,474	24,685,987	21,819,627
Total expenses	9,757,438	25,396,173	97,326,794	87,264,765
Earnings before taxes	12,542,625	48,078,603	92,018,006	46,605,183
Income taxes	5,205,190	20,446,614	38,243,110	19,333,019
Net earnings	$ 7,337,435	$27,631,989	$ 53,774,896	$27,272,164
Net earnings per share:				
Basic	$ .47	$ 1.49	$ 2.59	$ 1.31
Diluted	$ .47	$ 1.37	$ 2.23	$ 1.14
Weighted average number of shares outstanding				
Basic	15,562,500	18,552,500	20,747,665	20,742.944
Diluted	15,562,500	20,511,936	25,358,202	25,277,087

Southern Pacific Funding Corporation Consolidated Statements of Cash Flows

	Years Ended December 31			6 months ended
	1995	1996	1997	June 30, 1998
Cash flows from operating activities:				
Net earnings	$ 7,337,435	$ 27,631,989	$ 53,774,896	$27,272,164
Adjustment to reconcile net income to net cash used in operating activities:				
Depreciation and amortization	51,448	615,258	2,714,870	2,686,588
Amortization of discount on note payable			163,972	
Translation adjustment			(8,745)	30,842
Securities valuation		(4,265,285)	427,799	
Deferred tax expense		20,446,614	29,629,493	15,562,386
Changes in certain assets and liabilities net of effect of acquisitions and contribution transaction:				
Mortgage loans held for sale	(63,536,648)	(143,632,836)	(41,325,891)	15,830,667
Net change in interest only and residual certificates (18,235,099)	(71,493,840)	(186,767,242)	(122,198,312)	
Loans held under repurchase agreement	(12,800,565)	12,800,565		
Accrued interest receivable	(928,119)	(2,204,075)	(1,387,528)	1,416,102
Other assets	(282,831)	(1,387,556)	(12,465,420)	(19,708,922)
Other liabilities	3,186,942	3,787,856	9,487,570	9,921,892
Capitalized mortgage servicing				(6,051,118)
Net cash used in operations	(85,207,397)	(157,701,310)	(145,756,226)	(75,237,711)
Cash flows used in investing activities:				
Purchases of premises and equipment	(436,853)	(3,028,897)	(5,649,989)	
Purchase of interest-only and residual certificates			(3,800,000)	
Payment of acquisitions		(5,000,000)		(5,732,136)
Payment for long-term investment and loan commitment		(525,000)		
Net cash used in investment activities	(436,853)	(8,553,897)	(9,449,989)	(5,732,136)

Cash flows from financing activities:				
Net change in:				
Borrowings under warehouse lines	96,130,120	56,550,275	52,350,660	48,110,805
Borrowings from SPTL (12,940,537)	332,053			
Due to affiliates	1,585,150	(1,504,984)		
Bank overdraft	619,517	(619,517)		
Proceeds from long term debt		72,162,436	96,263,878	
Proceeds from issuance of common stock		53,798,099	302,523	255,484
Contribution transaction		(277,589)		
Proceeds from issuance of note payable, net of repayments				39,829,062
Net cash provided by financing activities	85,394,250	180,430,773	148,917,061	87,706,166
Net change in cash	(250,000)	14,175,566	(6,289,154)	6,736,319
Cash at beginning of year	250,000		14,175,566	7,886,412
Cash at end of year		$14,175,566	$ 7,886,412	$ 14,622,731
Supplementary information:				
Interest paid	2,129,369	6,330,097	25,540,511	
Taxes paid		1,213,252	9,105,917	

RIVENDEHL CONSTRUCTION
REVENUE RECOGNITION: WHEN? AND HOW MUCH?

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Rivendehl Construction, Inc. was started by the Dehl family in the early 1990s and is currently located in Bennett, Colorado, a rural suburb near the new Denver International Airport. The Company is primarily involved in new commercial construction but also undertakes some remodeling projects. The Company manages all of their construction projects. The major part of the Company's recent work has been remodeling and constructing service stations and convenience stores in eastern Colorado.

The following information describes Rivendehl's accounting policies for revenue and cost recognition pertaining to its construction activity:

> The Company recognizes revenues from their fixed-price and modified fixed-price construction contracts on the percentage-of-completion method. The percentage of completion is measured using the input method calculated as the costs incurred to date divided by the current estimated total costs on a contract by contract basis. This method is used because management considers costs incurred to date relative to the estimated total costs to be the best available measure of progress on the contracts.
>
> Changes in job performance, job conditions, and estimated profitability may result in revisions to total estimated costs and anticipated income. These changes are recognized in the period in which the information is determined. At any time an overall loss on a contract becomes known, the full amount of the loss is recognized within the percentage of completion calculations and reflected as such on the income statement.
>
> The asset account, "Costs and estimated earnings in excess of billings on uncompleted contracts," represents revenues (costs plus income) recognized in excess of amounts billed, i.e., the company has invested more value in the project than has been billed to the customer. The liability account, "Billings in excess of costs and estimated earnings on uncompleted contracts," represents billings in excess of revenues recognized, i.e., the company has received payment over the amount of the costs incurred and owes the customer additional value.
>
> Although the company uses percentage of completion method to recognize revenue for financial reporting purposes, revenue from contracts is recorded using the completed contract method for tax purposes.

Rivendehl has hired the Marner CPA firm to compile its balance sheet and income statement, including a supplementary schedule of contracts, and to prepare its annual federal tax return for the year 2001. Rivendehl's accounting department has tracked the new construction starts and completions during 2000 and 2001 as well as the related contract prices, construction costs, billings, and change orders. Rivendehl has asked the accounting firm to provide supplementary information so that they can understand the accounting policies and the effects of their actions on the financial statements.

Michele Bailey, a senior accountant for the Marner CPA firm, has been assigned the task of gathering the information necessary to prepare the balance sheet and income statement for the year ended December 31, 2001. Michele knows that construction accounting involves compiling information pertaining to work-in-process at the end of the previous year and has asked the Rivendehl controller for this information. Rivendehl's accounting department assigns a job number to a contract with the first two digits of the job number equal to the year that the contract was started. For example, a contract started in 1999 would have the prefix 99 and one started in 2000 would have the prefix 00.

The Rivendehl controller delivered the following project information:

	December 31, 2000		**Work-In-Process**	
Contracts:	Contract Price	Construction Costs incurred since the project was started	Estimated costs to complete	Total Estimated Costs
0010	$740,450	$663,341	$3,627	$666,968
0035	$852,632	$773,429	$22,000	$795,429
0041	$4,055,674	$834,770	$2,897,143	$3,731,913
0066	$76,987	$2,672	$69,413	$72,085

Contracts:	Billings since the project started	Collections received on the contract
0010	$653,313	$473,800
0035	$767,684	$560,300
0041	$717,629	$267,490
0066	$0	$0

Using the data provided, Michele has asked you to assist her in preparing the necessary background from 2000 before she prepares the 2001 financial statements for Rivendehl. In each case, provide justification and numerical support for your answer.

Required: (In all calculations with percentages, use four decimal places. Round all dollar amounts to the nearest whole dollar.)

1. Since Rivendehl has asked Michele to provide background information on accounting practices within the construction industry, she asks you to draft a memo to present to the company management. She asks you to include the following:
   a. Describe the criteria for using the percentage of completion method to record revenue from construction activities.
   b. Describe the criteria under which revenue can be recognized using the completed contract method.
   c. Given that the requirements for using the percentage of completion are met, discuss the advantages to the company of using this method. Discuss the disadvantages.
   d. Although Rivendehl uses the costs incurred to date to determine the percentage of completion, what other method could they use to make this determination? What are the pros and cons of these alternatives?
   e. Discuss the reasons that GAAP may suggest the use of the percentage of completion method while the IRS permits the use of the completed contract method.

f. GAAP suggests that if the requirements for the percentage of completion method are met, this method must be used. Are there circumstances under which a construction firm could use the completed contract method of recognizing revenue even though the requirements for the use of percentage of completion were met. If so, discuss when and why this is permissible.

2. Calculate the percentage of completion for each contract listed.

3a. Calculate the gross profit earned (recognized) in 2000 under the percentage of completion method.

3b. Even though Rivendehl uses the percentage of completion method, calculate the gross profit to be recognized for 2000 under the completed contract method.

4a. Reconstruct the ending balances at 12/31/00 in the asset, Construction-in-Progress (CIP) account and the liability, Billings on Contracts account.

4b. Prepare the balance sheet presentation for these accounts.

5. Access the financial statements of several publicly-held commercial construction contractors on the Internet. Currently available examples include Morrison Knudsen and URS Corporation. Examine their balance sheets and significant accounting policies footnotes. Explain what the construction related balance sheet accounts tell you. Compare and contrast the disclosures and explain the differences.

The controller provided the following information for construction work in 2001. All of the contracts that had been begun in the year 2000 were completed. Prior to completion in 2001, several change orders were submitted by customers that required modifying the construction. These change orders also resulted in alterations in construction costs. On the modified fixed-price contracts, these change orders resulted in changes in the related contract prices. The following table shows these changes:

Contract	Additional (reduction) in construction costs from the estimated costs to complete amounts at 12/31/00	Additional (reduction) in contract price from the estimated contract price at 12/31/00
0010	$16,893	$18,750
0035	$89,704	$17,776
0041	$710,692	$105,370
0066	($4,830)	$12,489

Billings and Collections on Year 2000 Construction Contracts

Contract Job #	Billings in 2001	Collections in 2001
0010	$105,887	$285,400
0035	$102,724	$310,108
0041	$3,443,415	$3,893,554
0066	$89,476	$89,476

In addition to completing the projects begun in 2000, Rivendehl began work on several new projects during 2001. Some of these projects were completed by the end of the year and some of the projects were still in process at year-end.

Contract	Contract Price	Construction Costs incurred during 2001	Estimated Costs to Complete
0101:Completed	$201,801	$147,132	$0
0103:Completed	$50,126	$24,944	$0
0104:Completed	$13,424	$11,060	$0
0106:Completed	$1,112,650	$909,830	$0
0108:Completed	$165,908	$153,596	$0
0120:Completed	$333,078	$209,777	$0
0119:In process	$739,788	$390,905	$116,193
0121:In process	$1,116,213	$575,409	$361,161

Contract	Billings during 2001	Collections on the Contract
0101	$201,801	$195,000
0103	$50,126	$47,500
0104	$13,424	$13,424
0106	$1,112,650	$986,150
0118	$165,908	$162,870
0120	$333,078	$333,078
0119	$680,202	$680,202
0121	$687,816	$687,816

Required:

1. Prepare a schedule of contracts, separating the completed contracts from the contracts in progress at 12/31/2001 in the following format:

Colum Number:		1	2	3	4	5	6	7	8	9	10	11	12
Colum Calculations for each job		*Info Given*	*Info Given*	*Info Given*	*Col 2+Col 3*	*Col 1-Col 4*	*Col 2/Col 4*	*Col 5xCol 4*	*From Prior Yr*	*Col 7-Col 8*	*Col 2+Col 7*	*Info Given*	*Col 10–Col 11*
		Contract	Actual	Estimated	Total	Estimated		Gross	Gross Profit	Profit (Loss)	Cost plus		Over
As of December 31, 2001		Price	Costs	Costs to	Estimated	Gross	Percent	Profit (Loss)	Prior	Current	Gross	Billings	(Under)
Completed Contracts: Job #		Amount	To Date	Complete	Job Cost	Profit	Complete	Earned	Years	Years	Profit	To date	Billings
Total Completed Contracts													
Work in Process(WIP): Job #													
Total Work in Process													
Totals: Completed & (WIP)													
Less: Amounts recognized in prior years													
Total All Contracts: Current Year													

2a. Prepare journal entries for construction costs incurred, contract billings in 2001, construction revenue and cost of goods sold recognized in 2001 under percentage of completion.

2b. Prepare the same entries for the completed contract method.

2c. Compare the two results and discuss the effect on the company's earnings.

3. Calculate the balances in the construction-in-progress (CIP), and billings to date accounts, using percentage of completion method.

4. Assume that management considers collection of the amounts remaining on the contracts 0101 and 0106 to be doubtful. Prepare a memo to advise management of the appropriate accounting procedure to follow.

5. Show the balance sheet presentation at 12/31/01 for the construction accounts using the percentage of completion method.

Business strategy consideration:

The managers of Rivendehl have purposely set the contract price on the fixed-price jobs begun in 2001 higher than they would need to be to provide Rivendehl's normal profit margin. They have done this because of the increase in the number of change orders they received in 2000 that narrowed their profit margins below their traditional (required) level. Rivendehl felt that increasing the contract price would provide a cushion and guarantee a normal profit. They realize that if the change orders do not occur, they are in effect inflating the profit margin and charging the customer an above-normal price. In spite of the increasing competition, they have decided their reputation will enable them to do this. They ask you for your opinion on this as a "smart" strategy in the current business environment. Prepare a response to their question, describing the potential effects on the company profit and including your arguments in support of (against) this strategy.

Advanced Requirements:

1. Assume for this question that Rivendehl is a publicy-held company. One concern of the SEC and the accounting profession is the extent to which companies "manage" their earnings. If earnings are "managed", the implication is that the net income figure does not reflect the actual performance or operating efficiency of the company. Is there potential for Rivendehl, or any construction company for that matter, to manage earnings if they are using the percentage of completion method to recognize revenue?

   2a. Study the actual contract price and costs at the end of contract 0041 upon its completion in 2001. Assume that the contract price for 0041 was fixed at inception. Also assume that at 12/31/00 the company knew that the actual costs listed for the completed project in 2001 were probable. What would you advise management regarding their financial reporting responsibilities in 2000? No calculations are required, only a narrative of your advice and the resulting accounting requirements.

   2b. To broaden the issues raised in (2a) consider the following. In any business environment, the unexpected happens — unions strike, manufacturing facilities malfunction, power brown-outs occur. Any of these external events could result in shortages, price hikes and/or slowdowns for a construction company, all of which could be costly. For that matter, unexpected price decreases and/or buying opportunities may occur. These would result in cost decreases. What are the financial reporting implications of these events for a construction company?

3. Calculate the gross profit percentage that Rivendehl expects on each of the contracts for which you have information. Discuss any interesting findings.

4. Assume management has consistently used the input method for determining the percentage of completion of projects at year-end. You are also aware that management's intentions are to recognize as large a gross profit as possible in 2001. Management has informed you that the percentage of completion of any contracts in progress at year-end can also be determined using the output method. What advice would you give management? Prepare your response in the form of a memo to Rivendehl's management. At a minimum include the following in your answer:

a. address the issues involved in changing from the input method to the output method for determination of the percentage of completion for revenue recognition calculation.

b. Provide appropriate citations from the accounting literature on construction accounting to support your answer.

5. A firm often exerts considerable effort to reduce volatility in their income stream. Accepting change orders from customers will affect net income and may introduce unpredictable fluctuations in the income stream. Present an argument for being willing to accept change orders from customers. In your answer consider the effect of the general economy and the competitive environment in which the firm operates.

6. Rivendehl uses the completed contract method for reporting gross profit for income tax purposes. Would there be income tax consequences to Rivendehl in 2001 because of the use of completed contract for income tax purposes versus percentage of completion for book purposes?

VŠEOBECNÁ ÚVEROVÁ BANKA

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NOTE TO READERS

This case is rather long. It includes six exhibits at the end. There are some discussion questions at the end of the text material. You may find it useful to read the questions before you begin reading the case. This will help you focus on the main issues. Some of the material is included in text boxes. As you read the case you may choose to ignore the information in the text boxes, as this material is for background purposes and in some cases is specifically related to Slovakia. While the case is set in Slovakia the situations described herein are typical in many emerging market economies.

INTRODUCTION

On April 8, 1998 the board of directors of Všeobecná Úverová Banka, a.s. (VÚB) announced that, although its 1997 income of 172 million Slovak Koruna (SK), based on application of Slovak Accounting Standards, had doubled from the income reported in 1996, the bank would pay no dividends to its shareholders. After restatement according to International Accounting Standards the net result was SK 364 million loss before tax benefit and SK 48 million loss after tax benefit. The board announced that there was a deficit in loan provisioning in the amount of SK 6 billion needed to cover worthless loans and that dividends would not likely be paid anytime in the near future. A significant amount of the worthless loans were taken over by VÚB from the split-up of the former State Bank of Czechoslovakia (SBCS). The decision not to distribute dividends was approved by both the shareholders of VÚB and the Supervising Body of the National Bank of Slovakia. [1] [2]

Members of the Slovak Parliament were faced with many political and economic challenges both after the 1989 revolution and the subsequent 1993 split of the Czech and Slovak Republics into independent states. While it was not certain the exact priorities to address first, the banking system clearly was a critical agenda item. The question was, how to structure a banking system that would facilitate the development and healthy growth of an emerging market economy after so many decades of socialist planned economy.

Všeobecná Úverová Banka was located in the Slovak Republic with its headquarters in Bratislava. At the end of 1996 VÚB had 40 branches, 39 in the Slovak Republic, one in Prague and one representative office in Moscow. The Slovak government had slightly more than 50% interest in VÚB with five other companies including Slovak banks owning approximately 30% in total and the remaining approximately 20% interest dispersed among many smaller investors including a holding company owned by VÚB. The government stake in VÚB was held in the National Property Fund (FNM).

VÚB was the largest bank in the Slovak Republic at the end of 1996 with assets of SK 171 billion. (This amount was later reduced to SK 162 billion because of a prior period adjustment to recognize an additional SK 9.324 billion in loan loss provisions.) The 1996 audit opinion issued by Deloitte Touche

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Tohmatsu (DTT) was qualified based on the going concern assumption, described in a footnote (see Selected Footnotes), that VÚB had an additional approximately SK 7.8 billion in non-performing loans the amount of which had not been reserved in the financial statements as required by International Accounting Standards (IAS), which were the accounting standards applied to the financial statements. Under Slovak reporting standards the audit opinion was unqualified. VÚB had similar qualified audit opinions under IAS for each of the years 1991-1996 although there was some improvement in the non-performing loan reserves from 1995 to 1996. Many of the non-performing loans were to businesses that were mostly controlled by government.

VÚB provided services to large-size and medium-size enterprises as well as to individuals and institutional clients in the range of standard activities performed by many universal commercial banks. VÚB performed services both in local and foreign currencies, performed trading with securities, accepted deposits, granted loans, traded securities on its own account as well as on other's account in the Slovak and foreign markets, engaged in the businesses of issue, it offered administration of assets and carried out domestic and foreign payments.

Also as of late 1999 VÚB had prepared a tender of trading activities, which were of financial and insurance nature, this having been facilitated by changes in legislation (the amended Act on Banks effective October 1, 1999). The permanent offer of banking activities were also complemented by activities of VÚB's subsidiaries in the fields of leasing, factoring, building savings and real estates. VÚB was the first bank that was licensed to perform mortgage banking.

The full range of banking services lead to VÚB having achieved the following market shares in Slovakia in 1999:

- 23.2% share of the total bank deposit market;
- 22.0% share of the individual sector deposit market;
- 30.0% share of the loan market;
- VÚB has 2.1 million accounts and 1.6 million clients

BRIEF HISTORY OF SLOVAKIA

Slovakia's existence as a nation/state dated back approximately 1,000 years. For most of that period Slovakia was occupied or dominated by one or more of its neighboring countries, with only brief periods as an autonomous state. The population was approximately 5.4 million with a significant Hungarian minority. The population was over 60% Roman Catholic and claimed one of the highest literacy rates in Europe (99 to 100% depending on the statistical source).

Some Slovaks claimed that Slovakia was the geographic center of Europe although some other countries made the same claim. Slovaks were proud of their country, their traditions, and their heritage. They were a peace-loving people who generally identified with Western Europe, except for certain political and economic alliances that were made with Eastern European countries, particularly with Russia. At the same time Slovaks and Slovakia had their own distinct identities and resisted the notion of becoming "like" any other country. Slovakia was Slovakia.

The Slovak language was codified in 1843 by Ludovit Stur who was regarded by Slovaks as a sort of national hero. Prior to that time and again at various times during the 20th century Czech, Hungarian, German, and Russian languages were imposed on Slovakia. In spite of this imposition, the Slovak language survived.

The Hungarian minority was a source of concern to a relatively small number of Slovaks. However, at least one of the approximately 30 political parties of Slovakia had as its main platform, to contain or dispose of the Hungarian population. The Central European Business Weekly Newspaper reported in April 1998 that a referendum in the town of Sturovo near the Hungarian border had as an underlying objective to annex the region to Hungary. While the Hungarian minority situation attracted some media attention, there was little evidence that it represented a significant problem in Slovakia.

Since the Velvet Divorce (from the Czech Republic in 1993) there had been several political power shifts in Slovakia. Vladimir Meciar was elected to the post of Prime Minister three times, first in 1990 (June 27 – April 23, 1991) in the first free Slovak elections, again in 1992 (July 24-March 14, 1994), and again in 1994. Mr. Meciar was a member of the Czechoslovak Communist Party from 1962-1970. Mr. Meciar was an early supporter of the democratization movement led by Alexander Dubcek. As a result of his commitment to democratization he was expelled from the party in 1970. From 1970-1990 Mr. Meciar was first a factory worker, then an administrator and finally a lawyer having graduated from Comenius University Law School in 1974. Mr. Meciar was known by his allies and foes as strong-willed, popular, and a master political tactician.

A folk story held that the population of Bratislava, the capital of Slovakia, wished to be annexed to Austria. This story probably arose because the citizens of Bratislava generally did not support Meciar. Meciar was reputed to have taken disciplinary action against Bratislava for its lack of allegiance by periodically diverting infrastructure resources out of city and into regions more politically friendly to the Prime Minister's party. This was not documented. Former Prime Minister Meciar also openly expressed his desire to move the capital and the government to Banska Bystrica, in central Slovakia. Banska Bystrica was in the heart of the Meciar's political power base. While it was unlikely that this move would actually be carried out to conclusion, both stories pointed to what was perceived to be blatant political manipulation of the progressive and to some extent Western-minded citizens of Bratislava.

The economy was weak in some ways due to a lack of natural resources and an outdated manufacturing infrastructure. The primary exception to the manufacturing problem was VSZ, the second largest steel producer in Central Europe, located in Eastern Slovakia in the city of Kosice.

In spite of its lack of some natural resources the country was beautiful and partly mountainous. It was a favorite resort area for many Germans and other Western Europeans looking for a good but relatively cheap holiday and for Eastern Europeans who seemed to regard Slovakia as a land of plenty. The city of Poprad in the High Tatra Mountain region applied to host the 2006 Winter Olympics, although there was little chance that the games would be held there since the infrastructure was in bad repair and likely would fail to meet the basic requirements of the Olympic Committee.

Slovakia was an agricultural country. Agriculture served Slovakia's people well over the years. Most families had a garden, not necessarily adjacent to their home. The garden was a great source of work, pride, and food even in the worst of times.

Slovakia had many castles but only one Slovak king. Its other rulers were mostly Austrian or Hungarian. The importance of Slovakia to its rulers, however, was underscored by the building of the Bratislava Castle. This castle served for a time as the seat of the Ottoman Empire.

Prior to 1989 Slovakia, like other CEE countries, had many Soviet monuments commemorating Russia's liberation of the region from the Nazi Germany. Some of the monuments were removed after 1989 but, particularly in Central and Eastern Slovakia, there was some favorable sentiment toward Russia. Those Slovaks who survived the Nazi occupation remembered well that life was much better under Soviet influence than under Nazi occupation.

Slovakia also had many holidays. Some holidays were related to its Catholic heritage and others were related to Soviet heroes and Soviet sponsored events. Since 1989 some new holidays were recognized that were exclusively dedicated to Slovaks and Slovakia as an independent state.

Upon the disintegration of the Austrian-Hungarian Empire (1918) several new states were created. Among the new states was Czechoslovakia or the Czechoslovak Republic. In 1968 Czechoslovakia became the Czechoslovak Federated Republic (CSFR). The Czechs accepted their Slovak, eastern country-men only as weaker and poorer than themselves. After WWII Czechoslovakia fell under control of the USSR. The Velvet Revolution in 1989 once again freed Czechoslovakia. From 1990-1992 a great debate arose mostly instigated by the Slovaks, that Slovakia should become an independent state from Czech Republic. This finally happened on January 1, 1993 in what was sometimes referred to as the "Velvet Divorce".

One man told the author, "We are miserable in certain economic and political ways, but at least were are finally independent." In some ways the Velvet Divorce was the reverse of the unification of West and East Germany. The Czech Republic continued its western affiliations. Slovakia turned both east and west depending on the influence of the political party in power. The split resulted in Slovakia being left with mostly obsolete manufacturing infrastructure and also lead to a loss of many professional, technical, and managerial people who departed for Czech Republic and beyond in search of better economic circumstances.

Until March 1998, President Michal Kováč was the head of state. He also represented the voice of the Slovak people who preferred to turn west in the future. While Kováč and Meciar were both still in office, there was constant strife between the President and Prime Minister, who became bitter enemies during Slovakia's first years of independence. When Kováč's term ended no new president was elected. There was no candidate that could muster enough parliamentary support to win the election.

The Slovak constitution placed the election of the president in the hands of Parliament. A majority vote was required to elect the president. Once a candidate failed in a voting round, he/she was no longer eligible to run. Since no president was elected the presidential powers passed by constitution to Parliament and effectively to the Prime Minister. While Mečiar was somewhat cautious about saying so, he effectively removed Kováč from office (his term of office expired and he chose not to run for re-election) and became both Prime Minister and President in the spring of 1998. Interestingly, even the President's staunchest supporters seemed somewhat relieved to see the President's term end, hoping that the government would then turn its attention to more pressing economic needs rather than in-fighting.

Although this turn of events seemed to give Mečiar the complete power that he badly wanted, it ultimately backfired. In the fall 1998 elections Mečiar and his political party lost control of Parliament and Mečiar was forced to vacate his Prime Minister post and his pseudo-presidency.

After the 1998 elections Slovakia's new coalition government took significant actions to deal with pressing economic issues. In May 1999, President Schuster was elected to that office directly by the Slovak people. This was the first direct election of a president in Slovakia. While Slovakia faced a long road to economic stability, it was moved from the bottom of the EU membership candidate list to about the mid-point on the list. OECD and NATO membership also seemed much more assured than it previously had. These developments were regarded as improvements over the conditions that existed prior to the 1998 elections.

BRIEF HISTORY OF CZECHOSLOVAK BANKING

VÚB came into existence on January 1, 1990 as a result of the division of the State Bank of Czechoslovakia into a central bank and some commercial banks. Prior to that time the purpose of State Bank of Czechoslovakia was to control monetary policy and resources and to serve as the clearing center for import and export transactions directly under the control and supervision of the Czechoslovak government as well as to finance the state corporate sector and grant loans to this sector. Additionally there were three other banks that handled private savings deposits and loans, foreign and domestic trading company transactions, and foreign exchange transactions of individuals. As a result of the revolution in 1989 that once again established Czechoslovakia as an independent state the government recognized the need to create a commercial banking system that would help in the transition to a market economy. Upon the division/split of the State Bank of Czechoslovakia, three such commercial banks, including VÚB, that were created. In addition to the need to learn how to operate a commercial bank in a market economy, the government had to reckon with the existing loan portfolio created through the years and consisting of loans to state owned enterprises.

OLD LOAN PORTFOLIO

Under the pre-revolution system, debt service of loans to state-owned enterprises was a function of the overall economic plan. In 1990 the existing loan portfolio was divided among the new banks with the expectation that over time the loans would be repaid from operation or liquidation of the companies involved. This process was complicated by the fact that many state owned enterprises were not viable going concerns in the new market-directed economy. Some of the enterprises were privatized, some continued as state owned enterprises, and some failed.

The Bankruptcy Law in Slovakia was ineffective in a market-oriented economy. The bankruptcy process for failed or failing companies was ill-defined, rarely carried to successful conclusion, and often, because of the length of time the process took, the value of the underlying assets of the bankrupt companies deteriorated to nil.

Additionally tax rules prohibited taking a tax deduction for bad debts outside of complete bankruptcy, a process that was rarely completed. A new bankruptcy law was passed in 1997. It had not been determined the extent to which this new law would help remedy at least the recovery process for creditors. The condition of the loan portfolio of all Slovak banks at June 30, 1996, according to National Bank of Slovakia:

Total receivables 441.2 billion SK – of which amount 125.8 billion SK (28.5% of total) was classified. Collateral, usable provisions and reserve funds which could be used to cover the classified receivables was 108.2 billion SK of which 24.3 billion SK was provisions and reserves. The remaining amount of non-covered, presumed losses was 17.6 billion SK. NBS [National Bank of Slovakia – the Slovak Central Bank] reported at the beginning of 1998 that non-performing loans were one-third of the total bank loan portfolio at the end of 1997.

On March 12, 1997 the Slovak Parliament approved a measure that would defer the privatization (see Privatization section) of two banks until at least 2003 and would bar privatization of two others indefinitely. VÚB and IRB were left with apparent possibilities to be privatized. During December 1997 IRB failed and was placed under the conservatorship (forced administration) of NBS. Although investors had discussed and made commitments to acquire IRB, both before and after its failure, that had not yet been accomplished. Then prime minister, then chairman of NBS, and others had dramatically differing points of view about this situation as described in the Privatization section.

COMPETITIVE ENVIRONMENT FOR BANKS

The three major banks in Slovakia were controlled by the state. While IRB failed and was offered for sale to foreign investors, Slovenska Sporitelna remained more than 90% government owned and VÚB slightly more than 50% government owned. There had been a sharp increase in the number of foreign owned banks in Slovakia since 1991. The foreign owned banks continued to capture a minority of the deposits and loans. But the gap was narrowing.

VÚB annual financial reports for 1995 and 1996 did not speak to the the issue of competition. Both financial reports disclose the many banking services provided to the bank's customers. However, "customer service" as it was understood in, for example, the US was not mentioned in either report. The only reference to the position of VÚB in the banking sector was that it was the largest bank in Slovakia. Of course the state owned banks had a significant level of pre-revolution loans which were non-performing. The new banks with foreign ownership were not initially so burdened with bad loans. During 1998 and 1999 the foreign owned banks also began to suffer the burden of bad loans.

The government had repeatedly stated its intention to keep the banking sector under close wraps (designated as "strategic companies"). Yet with the increase in foreign ownership there was a question as to how long the government could maintain control over the banking sector.

In terms of percentages of total equity capital and total assets the Slovak banking sector consisted of the following at September 30, 1997:

	Equity	Assets	Deposits	Loans
No foreign participation	47.5%	61.2%	70.7%	76.3%
With foreign participation	33.5%	25.6%	25.4%	16.4%
Branches of foreign banks	19.0%	13.2%	3.9%	7.3%

STATUTORY ACCOUNTING

Many countries of the world had statutory accounting and reporting. Slovakia was one of them. Statutory accounting sought to standardize accounting and reporting primarily for the purpose of government control. The government wished to extract the correct tax from income and standardized accounting was a means to this end. Unfortunately, statutory accounting usually lacked the details and other informational qualities required for investment analysis and for normal business management information purposes.

Slovakia had a statutory audit profession licensed by the Slovak Chamber of Auditors. The entrance/competency examination and some of the functions of the Slovak Chamber of Auditors were supervised by the government. In 1994 a new audit act was passed. This act was in many ways similar to audit standards of the major industrial countries. A key difference was in the focus of the audit. While other accepted audit standards focused on substance over form, the Slovak Act expressly focused on form over substance since the audit opinion referred to the Slovak Act on Accounting rather than "fair presentation" or some variation of this widely accepted standard of financial reporting. An argument could me made that the "form" in this case was the valid Slovak Act on Accounting.

In interviewing some Slovak Statutory Auditors, the author determined that some pre-1994 audits indeed adhered to form over substance in the conduct of the audit engagement. The new Slovak Audit Act itself prescribed substance over form. This discrepancy may have been the result of a generation gap of sorts. A pre-1994 audit would confirm that the accounts were in order according to the law. No attempt was undertaken to confirm the existence of assets and liabilities or to assess the going concern prospects of the firm. If assets were properly documented and recorded, their existence or value was not confirmed or even deemed important under to old audit procedures. In many cases the historical cost of assets was not readily determinable. This was due to a variety of factors including: the nationalizing of businesses after 1947; the statutory revaluation of assets from time to time; and the overall inadequacy of records. This lead to the under or over statement of assets and to the over statement of income and equity caused by inappropriate depreciation expense or the non-recognition of losses from impairment of assets.

Hence, with the push toward a market economy from a command economy investors demanded a higher level of reporting and auditing. If the company sought foreign capital or had foreign ownership, it was common practice in countries with statutory accounting to have two audits, usually performed by different auditors. One was required for statutory purposes. The other was required by the foreign owner or proposed source of foreign capital to be conducted according to some externally recognized standards (often US, UK, German, or Dutch and more recently IAS). This was a slow moving process since companies normally would not apply external standards unless compelled to do so by prospective investors or from a post-investment joint venture or parent company.

The most significant differences that were found when two audits were performed was that the external audit would dramatically increase disclosures concerning the company and its operations, would invariably reduce receivables and inventory to net realizable value, and in some cases would render an adverse or exception opinion based on the going concern principle. The going concern principle, while addressed in the new Slovak Audit Act, was rarely invoked on Slovak companies at the statutory audit level. The going concern exception implied possibly impending bankruptcy or liquidation. As mentioned in this case study, bankruptcy was rarely completed due to the ambiguity of the bankruptcy law.

BANKING TRANSACTIONS IN SLOVAKIA

Slovakia had more automated teller machines (ATM) than any other Central European country. At the time most ATM were connected to the same network so that it was possible to withdraw money or make a balance inquiry from almost any ATM in Slovakia. If this factor alone were the mark of progressive banking Slovakia would have been considered the leader in CEE. To have a Slovak ATM card required an account in Slovak Koruna in a Slovak bank. It was also possible to have foreign currency accounts in Slovakia. Some banks also issued ATM cards that could be used outside of Slovakia.

BANKING TRANSACTION DESCRIPTION

A typical transaction involving payment of a supplier invoice was processed as follows (whether by a person or by a business): The invoice was sent by the supplier by mail. It included the normal invoice information as to supply description, date, price, VAT, etc. Additionally it included complete information as to supplier bank account number, name, and routing information. The recipient prepared a written payment order to his/her bank. The order had to be signed by the authority on the paying account. The paying party then had to go physically to the bank (and wait in queue for an interminable time). Each transaction was processed separately, although it was possible for companies to process group payment orders. Some businesses were permitted to use computer automated banking which eliminated the signature and the personal presentation to the bank steps. Home banking was also increasing for personal banking.

The typical intra-Slovakia payment took 2-3 business days to settle. The funds were immediately taken from the payer's current account. If the payment order was presented to the bank in the morning (before noon), it was processed and on the same day and sent to the clearing center. The supplier's bank received the information that afternoon and credited the supplier's account (probably by the end-of-day). If the order was processed after noon, the transfer took one more day. Every payment order had to include the purpose of the payment. This was an apparent attempt to identify illegal payments and to clearly identify taxable transactions but was also used by the bank clearing center for statistical reporting purposes.

In the event a payer wanted to pay a supplier invoice at the supplier's bank (this was not normally accepted practice), the transaction had to be paid in cash. This required two documents to be prepared. The first was a deposit document recording the cash from the payer to the bank's account. The second document transferred the cash from the bank's account to the payee's. It was common practice for the teller to write on the number of bank notes and coins of each denomination directly on the deposit document.

Bank service charges were applied to almost all transactions and services, including the issuance of a monthly bank statement. Additionally, each transaction into or out of one's bank account may have been confirmed by the bank by mail or the customer may have been able to elect to receive a monthly or annual statement of account activity. The service charges were relatively small individually, and according to one banker the service charges normally just covered the underlying cost of performing the transaction or service.

SLOVAK PRIVATIZATION

FNM was created in 1991 to handle the equity shares of previously state owned enterprises, specifically to administer property transformation before state property was transferred to private ownership. The main activity of FNM was selling state property under the state designated guidelines. The Large Scale Privatization Act of 1991 was amended for the 19th time in December 1997. This amendment shifted back to the government the approval authority for direct sales of FNM holdings. There were mixed reviews in the media as to whether this was a positive or negative development in privatization.

DETAILS OF PRIVATIZATION

First was the small privatization involving mostly small shops. This was followed by large privatization, which was to be in two waves. The first wave of privation from 1991-1994 involved small shops as well as some industrial companies. The buyer assumed the assets and the obligations of the firm. Some of the firms were transferred to local governments.

Slovak citizens participated in the privatization process in the first wave and were also to be permitted to participate in the same way in the second wave. The system known as voucher privatization was confusing to some individual Slovak investors. This was made worse by the fact that the government changed the privatization rules at least once. The investors may have understood that they were acquiring an equity interest in the companies of FNM or at least were acquiring an equity interest in FNM similar to mutual fund interests. In some cases this was true. Not all investors received the same number of shares in exchange for their vouchers. This practice was severely criticized in the media as preferential treatment. When the government canceled the second wave of voucher privatization investors received bonds from FNM rather than equity. FNM's principal assets were the equity shares of companies it held. The bonds were sold at a deep discount with a five year maturity value of 10,000 SK. Over 3,000,000 of these bonds were issued. Hence the eventual maturity value was over 30 billion SK.

The remaining FNM properties were either to be sold to private investors at the appropriate time or were to remain in the control of the government as "strategic companies". The second wave of privatization was from 1993-1996 and involved larger companies.

Slovak privatization had several purposes:

- To restitute properties illegally seized by the previous government
- To secure state interests in strategic companies
- To encourage domestic participation in ownership structure
- To encourage employee participation in the ownership structure of their employer
- To attract foreign investment capital for new technology
- To improve the capital structure of companies

The government envisaged that the proceeds from privatization sales would be used to repay old debts of the previously state owned enterprises with the excess to be used to help develop the newly emerged market economy. This practice would have helped to resolve the bad debt problem in the banks. The banking industry was partially excluded from the first and second wave of privatization and three were later included as strategic companies in the Strategic Companies Law.

There were diverse views as to if, when, how many, and how banks should be privatized in Slovakia. By the end of 1997 there were 30 banks in Slovakia: National Bank of Slovakia and 29 commercial banks consisting of 11 Slovak-owned, 14 owned partly by foreign entities, and 4 branches of foreign banks. Banking activities were dominated by VÚB, IRB and the Slovak Savings Bank. The Slovak Savings Bank was a carryover from the pre-revolution times. It was the only bank for private Slovak citizens before 1991. In 1997 parliament amended the law to create the opportunity for privatization of VÚB and IRB. The Slovak Savings Bank remained classified as "strategic" and there were no specific plans to privatize it.

The media up to that time often cited cases of improper privatizations, for example, that a particular privatization was not at arms-length. There were reports of privatizations involving friends of the ruling political party. The typical media allegation was that either the price was inappropriately low in these cases or that the bank loans to fund the privatizations were improperly secured. There was subsequent evidence that some of these loans were never repaid by the borrowers. One interpretation of these schemes was that the borrower would pay a low price fully funded by bank loans and then the same borrower (now in control of the enterprise) would later sell the enterprise to a third party (often a foreign investor) at a much higher price. The media reported some instances where the borrower never repaid the bank loans even after the sale of the enterprise. There were also frequent complaints, primarily from foreign investors, that the "friends of the government" paid a low price for their share of the enterprise while the foreign investor paid a disproportionately high price for their share. One possible explanation of these allegations was that the scheme simply followed common practice in the US and other market-driven economies using initial public offerings.

The following quotations contrast the diverse viewpoints of bank privatization. "It is necessary to privatize banks, but so far we do not know how, as negotiations on this issue were not held…. I guess it is a bit too fast to privatize banks by the end of February (1996)" [3]

"The FNM President (see comment in the previous paragraph) was ill for a long period of time and that is why he is not informed. The privatization of banks has become a key issue for interests of political parties, not for the economy. The financial institutions (VÚB, IRB, Slovak Savings Bank, and Slovak Insurance Company) will be privatized by domestic companies, which will guarantee their credibility by internal assets." [4]

MACROECONOMIC STATISTICS

Shortly after the Velvet Revolution which culminated with the peaceful divorce of the Czech Republic and Slovakia both countries became overnight media darlings. While Czech Republic was almost always in the economic lead, perhaps because of its close proximity to Germany and its influence from Germany, Slovakia managed to maintain widely published positive macroeconomic statistics, specifically comparatively low inflation and low interest rates. The government proudly recited these statistics to the skeptics who were more concerned about the dubious political situation and the lack of transparency in the privatization process than in artificially low inflation from price regulations.

In early 1997 economists began to foretell of dramatic downward shifts in these statistics. The downward spiral continued through the first quarter of 1998, yet the old statistics were the only ones mentioned or published by the government. When IRB failed in late 1997 attention turned to the problem of foreign debt which accumulated from 1994 to 1997. The debt service payments for this foreign denominated debt was staggering. Slovakia lacked the financial resources to meet the payments and there was considerable doubt as to the ability of Slovakia to make the required payments in 1998.

The major financial rating agencies downgraded Slovakia to speculative grade thus driving up the interest rates further. In response to this problem which was exacerbated by declining tax revenue due to lower than expected corporate profits, the government decided to issue five year bonds to the general public. Vladmir Meciar announced in April 1998, "Besides the loans which we have secured, we have decided to issue government securities for the Slovak people and abroad. We estimate that people have several billion crowns hidden somewhere amongst themselves which they are not releasing into circulation. We now want to issue state securities which everyone can buy, even those who have money hidden away on the side and cannot tax it. We are now giving them a chance." He added that the state would not ask questions about the origin of the money spent on bonds. There were few takers for the bond issue.

Some of the statistics cited in Exhibit 6 are problematic for several reasons. First, the Slovak Koruna exchange rate was pegged to 60% DEM and 40% USD. Any change in either the DEM or USD would result in a change in the Slovak Koruna. (On May 14, 1998 NBS announced that the DEM would be replaced by the Euro at the end of 1998 for exchange rate calculation purposes.) NBS permited the Koruna to vary in a narrow range to allow for relatively minor over/under valuation problems. NBS resisted devaluing the Koruna in 1997 and early 1998 in spite of repeated external assertions that the Koruna was overvalued. NBS argument against devaluation was that NBS had been able to defend any external attempts to run down the Koruna. What was not mentioned was that there was very little foreign interest in the Koruna due to the difficult political situation, as evidenced by the dramatic decline in new foreign investment in 1997 and 1998. Additionally, the 1991-1993 statistics were derived retrospectively since there was no Slovak Koruna until 1993. From 1989-1992 there was the Czechoslovak Koruna. While the Czech and the Slovak Koruna ran a somewhat parallel course after 1992, the Czech Koruna generally remained at a 10% premium over the Slovak currency.

The other statistics for this period are also derived retrospectively because of the currency change. The private sector share of GDP was questionable because of the lack of transparency of the privatization process. The privatized companies continued to have government blocking stakes and in many cases the new owners were not be independent of the government.

In October 1997 the Slovak Statistical Office stopped publishing official macroeconomic statistics citing changes in the computation methods on import surcharges. Unofficial data at that time indicated a dramatic decline in exports (possibly influenced by the overvalued Koruna) and skyrocketing foreign debt. The foreign debt issue loomed large in Slovakia. There was significant evidence that long-term debt service was being financed with six month debt instruments the interest rates for which were escalating quickly due to the downgrading of Slovakia's credit standing by Standard and Poors and Moody's.

DETERIORATING SITUATION?

Premier V. Meciar blamed the NBS for problems in the banking sector and the crisis in IRB. "It is the same: a minister is responsible for what's happening in the state, and the NBS governor is responsible for the situation in banks," he said. "The NBS functions as a governmental agent on financial markets, and

the government is not satisfied with it. That is why the government either strengthens the control over the NBS, or it will create an independent state institution to serve as the agent," continued V. Mečiar. He voiced an argument for the amendment to the Act on the NBS by these words: "The change aims at nothing else but to bring new, independent faces into the musty banking environment. It is also an effort for systematic steps that would correct the direction, which was set by the NBS for 1998 not very agreeably." [5]

During the early fall of 1997 the Slovak parliament attempted to pass a law that would substantially change the structure of NBS. Not least important of the proposed changes was an increase in the number of directors from 8 to 10 with at least 5 members being appointed by the government. This step would basically give the government veto power over NBS policy decisions, a step that drew outcries from the banking industry in and out of Slovakia and from the EU Parliament and OECD. One of the conditions for membership in EU and OECD was an independent banking system. Slovakia had that but the proposed new law would substantially weaken NBS independence from the government. In December 1997 the proposed law was tabled with a promise by the government to draft a new law that would accomplish its goals.

On April 2, 1998 the Financial Times reported: "S&P is still rating Slovakia at BBB-, the lowest investment grade rating, with a stable outlook but it said yesterday it had concerns over the weakening of the country's external position, in the rapid rise in short-term external debt and the weakness of the banking system. Fitch IBCA warned late in 1997 that approval of proposed legislation, which would weaken the independence of the central bank, could be the trigger for a downgrade" .[6] Meanwhile Moody's dropped Slovakia's rating to speculative grade.

According to a 1996 comment by NBS Governor V. Masár: "The privatization of commercial banks is mainly a political decision, and the NBS supervises only the technical aspects of such decisions. A problem exists if the banks are not privatized, because the state can hardly act as a private owner and also respect commercial banking standards." [7]

In December 1997 when IRB failed and was subsequently placed under NBS caretaker status while a search was conducted for prospective investor to take over the bank, there was much finger pointing as to who was responsible for IRB's failure. This event resurrected the proposal to put NBS under governmental control. Concerns mounted that VÚB would be next to succumb as a result of Slovakia's floundering economy and lack of foreign investment.

"The task of the bank supervision is to protect the functioning of the banking sector and savers; its tasks do not include protection of banks' shareholders," replied V. Masár to the premier's criticism. "An investor that does not care about its property may lose its money in banking just as in other areas," he added. He said the NBS bank supervision acted in compliance with all laws and intervened to preserve the deposits. The IRB's losses must be born by its shareholders. "The bankruptcy of banks is something absolutely natural," concluded V. Masár. [8]

Politicians, bank officials, and the media were not the only Slovaks interested in Slovakia's economic problems. Banská Bystrica's bishop, R. Baláž, wrote in a letter addressed to "all believers" that Slovakia had been facing serious problems for a long time, and these problems were still deepening in social, security, and minority areas. "Based on many signals, we know that the privatization process has become an example of robbery," reads the letter. [9]

The Financial Times reported on April 2, 1998 that: "the country's (Slovakia) economic competitiveness had been hit by rising unit labour costs, an appreciating currency (versus the Czech koruna and D-Mark), and insider privatization. [10]]

STRATEGIC MANAGEMENT ISSUES IN VÚB

Since its inception the Bank set a very clear and stable strategy line. Beginning in 1999 and immediately after VÚB's new management was appointed to their positions & functions a new strategy of development was approved and adopted for the period 1999 – 2003. VÚB's objective was to become a modern, universal and high-quality bank, which would provide for its targeted segments of clients differentiated groups of products and services similar to renowned foreign banks to maintain its long-term priority position in the financial market of the Slovak Republic.

The Bank has never intended to markedly expand to foreign financial markets by an extended number of foreign branches. VÚB management's foreign strategy was always very conservative. The Bank showed its presence only in localities, where clients needed to be supported, promoted and facilitated in their business activities (Czech Republic, The Commonwealth of Independent States, Great Britain, China).

The Major Areas which were intended to secure the realization of the strategic objectives were as follows:

- optimization of balanced structure and growth of liquidity;
- high-quality loan portfolio;
- growth in Bank's financial performance achievable through measures of economy;
- orientating on needs of targeted segments of clients;
- improving internal bank systems.

During the first nine months of 1999 VÚB proudly stated that considerable progress had been made in many of these strategic management issues. Also, if state support was taken into consideration (recapitalization in part through the transfer of non-performing loans), it was expected that the Bank would gradually develop into a high-quality bank performing at a standard level. Additionally, privatization of the bank, which was being prepared in 1999, was considered to be a likely source to pay for accomplishment of this objective.

COMMENTS ON 1997 AUDITED FINANCIAL STATEMENTS

The 1997 IAS audited financial statements were released in mid-June 1998. The opinion was qualified with two additional paragraphs related to the problematic non-performing loan loss provisions and continuing operations. "Without further qualifying our opinion, we draw attention to Note 1.P. to the financial statements. The financial information for 1996 and prior years included in the accompanying financial statements had been restated to include adjustments to previously reported financial statements to fully record provisions for losses in the appropriate accounting periods." Said restatement had the effect of reducing total equity by 71% from SK 13.167 billion to SK 3.843 billion, a total decrease of SK 9.324 billion. Total reserves and retained earnings became a deficit.

While 1995 and 1996 financial statements were qualified due to the unrecorded loan losses the 1997 opinion was unqualified but with stronger language regarding the going concern assumption. "The Bank's ability to continue normal operations in the future as a going concern is dependent upon the realization of the objectives of the Bank's loan portfolio restructuring project, future economic and legal conditions and market developments, and continued co-operation and support of the National Bank of Slovakia and relevant government institutions."

An additional subtle difference was that VÚB referred to itself as the largest "universal bank" in Slovakia. This change was the result of its total assets now being second to the total assets of Slovenska Sporitelna.

The 9.324 billion SK prior period adjustment restates total reserves and retained earnings for all periods presented thus avoiding the need to book the loss as an operating item in 1997. The operations for 1994-1998 were restated as well since some of the loss provisions recorded in those years related to amounts included in the prior period adjustment. For the sake of comparability Exhibits 1-3 continue to show the results previously reported with the entire adjustment taken to reserves and retained earnings.

SELECTED FOOTNOTES FROM VÚB 1996 AND 1995 FINANCIAL REPORTS 1996

Accounting Policies – The financial statements were prepared on the historical cost basis of accounting, in accordance with International Accounting Standards, including practices applicable to the banking sector.

Note 2 Operating and Financial Situation (in part) – The bank has prepared a restructuring plan which was designed to improve the quality of the loan portfolio, to increase provisions for risk assets to sufficient levels and to comply with capital requirements by the end of 1999. The restructuring plan outlines the bank's approach to improving the overall quality of the portfolio through restructuring the loans of viable clients, realizing guarantees received by the bank, and actively pursuing repayment. This three year plan, if successful, will allow the bank to comply with capital requirements by the end of 1997 with the exemption for calculating the capital adequacy ration, and by the end of 1999 without the exemption.

As of 31 December 1996, the bank has recorded provisions for loan losses, including overdue interest, totaling SK 17,403 million (1995 SK 17,396 million). In accordance with the regulations issued by the National Bank of Slovakia regarding the classification of risk assets and off-balance sheet risks, the bank estimated that at 31 December 1996, the total provision requirement for loans, 100% of overdue interest, and off balance sheet risks was at least SK 7,871 million (1995 SK 9,169 million) greater than the total recorded provision for loan losses. This represents an improvement of SK 1,298 million over the prior year.

These financial statements do not include any adjustments to recorded asset and liability amounts that my be necessary if the bank was unable to achieve its restructuring plan. The continuing normal operations of the bank in the future as a going concern is dependent upon the realization of the objectives of the bank's restructuring plan.

Note 27 Related Parties – Consistent with usual practices in the Slovak Republic, certain members of management of the bank were members of the supervisory boards of companies which were the Bank's most important clients. Their participation in these bodies is regulated by the bank's internal regulations. In addition, some employees and members of the management are clients of the bank. All banking services provided to these clients are provided on terms and conditions generally available to other clients of the Bank.

Subsidiaries and other companies in which VÚB a. s., has a capital interest take part in normal banking activities. All VÚB a. s. banking operations are performed in line with applicable regulations.

Structure of Shareholders

National Property Fund Slovak Republic	50.79%
Investment Funds and Join-Stock Companies	42.60%
Other Shareholders	6.59%

1995

The accounting policy concerning IAS application was identical to 1996
Note 2 concerning operating and financial situation was basically the same as 1996
Note 23 (1996 Note 27) was basically identical to 1996

Structure of shareholders is as follows:

National Property Fund Slovak Republic	47.80%
Investment Funds and Joint-Stock Companies	40.72%
Other Shareholders	7.80%
Restitution Investment Fund SR, a.s.	3.68%

BANKSCOPE GROUPING DESCRIPTIONS

Exhibits 4 and 5 were extracted from BankScope 1998 software. The 1997 and 1998 financial data was not available under comparable IAS reporting, therefore the analysis was limited to 1995 and 1996 data. The VÚB group was simply VÚB alone. CEE-OECD includes all listed CEE banks where the country was an OECD member. All CEE includes all listed CEE banks regardless of OECD membership. All Slovak includes all 13 commercial banks which are listed in BankScope (VÚB being the largest). 4 Largest CEE includes the largest bank in Poland, Hungary, Czech Republic, and Slovakia (which was VÚB). In this sense CEE was only Central Europe. Standard & Poors LTD Rating BB includes all BankScope listed banks which had the same long-term debt rating as VÚB as of March 1998. Thomson STD Rating LC-1 includes all BankScope listed banks which had the same short-term debt rating as VÚB. 4 Western Peer Size includes one bank from France, Belgium, Germany, and the United States, all 4 being approximately the same asset size as VÚB, that was 5,000,000,000 USD. As for the other groupings other than 4 Western Peer Size, there was great variation in the asset size. For example in the 4 Largest CEE group VÚB was the smallest size in assets, the average being 10,500,000,000 USD and the largest being 16,000,000,000 USD.

RATIO DEFINITIONS AND COMMENTS

Bankscope reports 11 significant ratios for banks in its aggregation analysis. The Total Capital Ratio was self-reported based on requirements of the local environment and bank regulations. This ratio was excluded from the definitions due to non-reporting and variations in its use. The ratios are derived from the financial statement data of over 10,000 reporting banks world-wide. The lines that are used in these 11 ratios are:

2000 Loans	2075 Liquid assets (memo)
2010 Total earning assets	2080 Net interest revenue
2025 Total assets	2085 Other operating income
2030 Total customer & short-term funding	2090 Overheads
2055 Equity	2160 Hybrid capital (memo)
2060 Total liabilities & equity	2165 Subordinated debt (memo)
2070 Loan loss reserve (memo)	

The 10 reported ratios used in Exhibits 4 and 5 are:

Asset Quality

Loan loss reserve(2070)/Gross loans(2000+2070) x 100

Capital

Equity(2055)/Total assets(2060) x 100

Capital funds(2055+2160+2165)/Liabilities(2060-2055-2160-2165) x 100

Operations

Net interest margin(2080/2010avg) x 100

Return on average assets(2115/2025avg) x 100

Return on average equity(2115/2055avg) x 100

Cost to income ratio((2090/(2080+2085)) x 100

Liquidity

Net loans(2000)/Total assets(2025) x 100

Net loans(2000)/Customer & short-term funding(2030) x 100

Liquid assets(2075)/Customer & short-term funding(2030) x 100

SUGGESTED DISCUSSION QUESTIONS

1. What are the goals of privatization in newly emerging market economies?
2. Is it necessary or appropriate for the state to retain any equity interest in industries that are privatized? Why might certain industries be treated differently during the privatization process?
3. BankScope, a bank reporting database, publishes statistics, financial statements, and analysis of about 10,000 major banks of the world. For 1994-96 BankScope indicates that the VÚB financial statements were issued on an unqualified basis. The DTT auditor's report for VÚB financial statements for the same period have a going concern exception precipitated by unrecorded loan loss provisions. How could the two reporting sources differ as to whether the financial statements are issued on a qualified versus unqualified basis?
4. Mr. Meciar was the leader of Parliament. Slovakia was supposed to have a President, but the Parliament had failed twice to elect a replacement for Michal Kovac whose term had expired on March 2, 1998. The constitution provided that if a president is not elected after two attempts that parliament assumes the duties of the presidency, which effectively made Mr. Meciar both PM and President. Mr. Masár was appointed for a six year term on July 29, 1993 to his Chairman position at NBS by then President Kovač. While the Bishop is not an officially designated leader of Slovakia his words carry significant weight as a spokesman for the Slovak people who are reported as being approximately 60% Catholics. Assume for the sake of discussion that the Prime Minister, the NBS Chairman, and the Catholic Church Bishop had the best interest of Slovakia in mind. The parliament had been reluctant to privatize certain Slovak banks but had opened a window of opportunity for VÚB and IRB to be privatized. OECD, the EU parliament, and many economic and financial analysts had expressed grave concerns about the Slovak privatization process. That is that it lacked transparency and that the banks had not been privatized. The Bishop basically stated that the privatization process in Slovakia was corrupt. Why might the parliament regard privatization of banks as being different from privatization of any other industry? Regardless of whether the Slovak privatization process is corrupt or not, how might such a process be corrupted? Assuming that the privatization of banks is ultimately carried out, would it matter if the process leading to the privatization of Slovak banks was corrupt?
5. What are some of the reasons that these men would have such diverse points of view regarding privatization?
6. Exhibits 4 and 5 includes 10 key ratios of VÚB and 7 groupings of banks for benchmarking purposes. The ratios and groupings are described in the Ratio Definitions and Comments section. Exhibits 1, 2, and 3 are the income statement, balance sheet and statement of cash flows respectively for VÚB. Is VÚB profitable? Does it appear to be in good financial condition?
7. Referring to Exhibits 4 and 5 are there any significant differences among the groups? How does VÚB compare to each group?
8. Refer to Exhibit 5. The group marked Western includes a German, Belgian, French and US bank all with approximately USD 5 billion in total assets which also approximately the total assets of VÚB. Do there appear to be any differences between the Western banks and VÚB? What might explain these differences, if they exist?
9. In November 1996 OECD stated in its publication on the Slovak Republic: "Privatization in Slovakia suffers from both a lack of information and transparency, which results in an insufficient inflow of foreign capital. Prior to the privatization process, state banks should be restructured." What does it mean, "state banks should be restructured."? What is transparency?
10. In the same report cited in question 9 OECD goes on to say: "The banks should not be privatized by industrial companies, with the companies using capital for their own development rather than for bank purchases. Slovak banks also need more capital, and that is why the question of foreign capital is so important in this area." Industrial companies need debt capital. What is the problem with industrial companies buying a controlling interest in privatized banks and then using the banks to finance the needs of the industrial companies?

11. The Act on Privatization was amended 19 times between 1991 and 1997. What might explain the need for all these changes?
12. Comment on the ratios included in the ratio definition section. How does the construction of these ratios relate to the ratios of an industrial company? What do you suppose to be the rational for a ratio that measures capital adequacy by including subordinated debt in the capital component of this ratio?
13. What is a prior period adjustment in financial reporting? How is it to be reported on the financial statements? Is VÚB justified in regarding the SK 9.324 billion adjustment to non-performing loan loss reserves as a prior period adjustment?

Exhibit 1
VÚB Financial Statements 1994-98*
(Denominated in million SK)

Profit and Loss	1998	1997	1996*	1995	1994
Interest Income	17,133	15,914	13,807	17,986	19,665
Interest Expense	(15,404)	(12,560)	(9,804)	(10,629)	(11,914)
Net Interest Income before Provision for Loan Losses	1,729	3,354	4,003	7,357	7,751
Provision for Loan Losses	(7,434)	(325)	(176)	(4,006)	(5,305)
Net Income (Loss) after Provision for Loan Losses	(5,705)	3,029	3,827	3,351	2,446
Provisions for Losses on Equity and Financial Investments	(1,434)	(22)	—	—	—
Fees and Commissions Net	1,731	1,512	1,016	931	1,220
Foreign Exchange Transactions Net	979	369	1,367	1,495	750
Other Income and (Expenses) Net	(93)	353	(917)	515	1,178
Profit (Loss) before Operating Expenses and Taxation	(4,522)	5,241	5,293	6,292	5,594
Operating Expenses	(5,276)	(5,605)	(4,516)	(3,378)	(3,274)
Profit (Loss) before Taxation	(9,798)	(364)	777	2,914	2,320
Income Tax (Benefit)	4	(316)	110	2,240	1,719
Net Profit (Loss)	(9,802)	(48)	667	674	601

* In the 1997 IAS audited financial statements 1996 and prior period data was restated to account for the anticipated losses provisions for non-performing loans. The effect of the prior period adjustment was to reduce total equity by 9,324 million SKK a 71% reduction. As a result of the prior period adjustment loan loss provisions for 1996 and prior period income statements were reduced as those provisions related to the prior period adjustment.

Exhibit 2
VÚB Financial Statements 1994-98
(Denominated in million SK)

Balance Sheets	1998	1997	1996*	1995	1994
Assets					
Cash and Cash Equivalents	5,113	4,843	4,283	8,608	8,286
Deposits with NBS	8,941	13,531	4,567	10,427	9,530
Deposits with other Financial Institutions	9,249	18,491	22,400	26,960	23,284
Loans, Advances to Clients and Unpaid Interest	86,913	92,998	94,833	87,726	86,138
Investments	13,736	14,750	24,772	19,258	13,926
Securities Purchased Under Agreements to Resell	1,340	1,209	569	—	—
Premises and Equipment	7,339	7,751	2,542	670	214
Other Assets	1,115	1,490	7,797	6,916	4,975
Total Assets	133,746	155,063	161,763	160,565	146,353
Liabilities and Shareholders' Equity					
Current Accounts	50,491	59,988	55,637	54,998	53,599
Deposit Accounts	78,879	79,634	89,612	88,000	77,800
Other Liabilities	2,191	2,419	4,109	3,098	1,988
Bonds	4,501	5,749	5,372	1,338	509
Total Liabilities	136,062	147,790	154,730	147,434	133,896
Subordinated Loan	3,691	3,478	3,190	—	—
Registered Capital4,078	4,078	4,078	4,078	4,078	
Reserves, Other Capital	(10,085)	(283)	(235)	9,053	8,379
Funds and Retained Earnings (Accumulated Deficit)					
Total Shareholders' Equity	(6,007)	3,795	3,843	13,131	12,457
Total Liabilities and Shareholders' Equity	133,746	155,063	161,763	160,565	146,353

* See note at the end of exhibit 1 concerning prior period adjustment in the 1997 financial statements.

Exhibit 3
VÚB Financial Statements 1994-98
(Denominated in million SK)

Cash Flow Statements	1998	1997	1996*	1995	1994
Operating Activities					
Profit (Loss)	(9,802)	(48)	667	674	601
Depreciation	1,180	1,430	1,175	672	460
Amortization of Bond Discount	77	36	34	10	—
(Profit) Loss on Disposal of Fixed Assets	(71)	(269)	(65)	112	—
Capitalization 1993 expenses	—	—	—	—	(286)
Unrealized FX Loss213	288	—	—	—	
Net Provisions for Loan Losses	7,434	325	176	4,006	5,305
Provision for Losses on Equity and Financial Instruments	1,434	—	—	—	—
Inc. (Dec.) in Deferred Tax	—	—	—	—	(623)
(Inc.) Dec. in Required NBS Balances	4,590	(8,964)	5,860	(897)	(3,607)
(Inc.) Dec. in Amounts Due from Other Banks	9,102	3,909	4,560	(3,676)	(6,927)
(Inc.) Dec. in Loans, Advances to Customers and Unpaid Interest	(2,794)	2,079	(17,807)	(5,594)	933
Dec. in Dealing Securities	1,145	9,085	—	—	—
Inc. in Other Assets	475	1,052	(1,872)	(456)	(88)
Inc. in Current Deposit Accounts	(10,252)	(5,627)	2,251	11,599	8,504
Inc. in Taxes Payable—	—	—	435	225	
Inc. in Other Liabilities	(228)	(1,690)	1,011	675	339

Net Cash Provided by Operating Activities	2,503	1,606	(4,010)	7,560	4,836
Investing Activities					
Net (Inc.) Dec. in Investment Securities	(211)	(272)	(5,514)	(5,332)	916
Purchase of Fixed Assets Net	(697)	(1,115)	(1,991)	(2,725)	(1,835)
Net Cash Used in Investing Activities	(908)	(1,387)	(7,505)	(8,057)	(919)
Financing Activities					
Dividends	—	—	—	—	(408)
Proceeds from Issuance of Bonds	175	341	4,000	819	—
Redemption of Bonds	(1,500)	—	—	—	—
Receipt of Subordinated Loan		—	3,190	—	—
Inc. in Capital	—	—	—	—	2,447
Net Cash Provided by Financing Activities	(1,325)	341	7,190	819	2,039
Net Inc. in Cash and Cash Equivalents	270	560	(4,325)	322	5,956
Cash and Cash Equivalents at Beginning of Year	4,843	4,283	8,608	8,286	2,330
Cash and Cash Equivalents at End of Year	5,113	4,843	4,283	8,608	8,286

Exhibit 4
Comparative Ratios 1996 and 1995
VÚB and 7 Bank Groups (See Description of Banks and Ratio Components)

Ratio	VÚB		CEE-OECD		All CEE		All Slovak		4 Largest CEE	
	1996	1995	1996	1995	1996	1995	1996	1995	1996	1995
Asset Quality										
Loan loss Gross loans reserve/	14.32	16.55	6.88	6.87	20.27	13.06	13.58	12.65	8.13	9.81
Capital										
Equity /Total assets	7.70	8.18	9.41	7.84	20.48	13.21	5.76	6.02	6.14	5.89
Capital funds/Liabilities	NA	8.91	10.81	8.94	26.16	15.37	7.55	6.40	7.02	6.35
Operations										
Net interest margin	2.62	5.11	4.13	5.46	4.14	8.32	2.44	4.41	5.01	5.80
Return on s average asset	0.02	0.44	1.20	1.93	1.10	2.60	0.00	0.99	1.54	1.17
Return on average equity	0.27	5.27	14.17	25.70	7.20	18.52	-0.06	16.57	25.65	19.55
Cost to income	82.58	32.80	57.41	53.95	63.05	34.16	69.07	44.75	58.73	61.16
Liquidity										
Net loans /Total asset	60.88	54.64	42.47	39.20	47.17	59.43	48.86	35.60	44.34	45.93
Net loans /Cust & ST fund	71.71	61.35	54.98	55.31	71.99	115.10	54.84	47.93	54.35	54.66
Liquid assets /Cust & ST funds	28.49	37.46	38.20	55.92	48.50	50.84	41.21	38.99	37.75	39.63

Exhibit 5
Comparative Ratios 1996 and 1995
VÚB and 7 Bank Groups (See Description of Banks and Ratio Components)

Ratio	VÚB		Standand & Poors LTD Rating BB		Thomson STD Rating LC-1		4 Western Peer Size	
	1996	1995	1996	1995	1996	1995	1996	1995
Asset Quality								
Loan loss Gross loans reserve/	14.32	16.55	4.50	3.97	0.76	2.05	0.23	0.23
Capital								
Equity /Total assets	7.70	8.18	11.62	10.07	5.91	5.08	2.81	2.99
Capital funds/Liabilities	NA	8.91	14.13	11.86	7.51	6.96	3.55	3.93
Operations								
Net interest margin	2.62	5.11	3.62	3.99	0.01	2.04	1.15	1.35
Return on s average asset	0.02	0.44	1.09	1.25	0.00	0.47	0.10	0.10
Return on average equity	0.27	5.27	10.11	11.47	0.03	9.30	3.40	3.51
Cost to income	82.58	32.80	54.63	58.01	62.02	67.76	58.89	56.11
Liquidity								
Net loanss /Total asset	60.88	54.64	62.92	56.50	82.55	52.79	54.65	62.36
Net loans /Cust & ST fund	71.71	61.35	101.38	91.66	91.36	74.51	81.39	102.49
Liquid assets /Cust & ST funds	28.49	37.46	31.01	41.49	17.20	31.51	29.83	14.15

Exhibit 6
Slovakia Macroeconomic Statistics

Year	1991	1992	1993	1994	1995	1996	1997	1998
GDP at (1993) prices (bil USD)	6.38	13.57	11.98	12.10	13.96	14.49	17.46	17.39
GDP at current prices (bil USD)	9.41	11.74	11.98	13.77	17.34	19.00	19.09	20.36
Unemployment rate	11.80	10.40	11.34	13.25	17.27	19.38	12.50	15.60
Inflation rate	61.20	10.01	23.19	13.41	9.89	5.81	6.10	6.70
Share of the private sector on GDP	5.10	23.40	39.00	58.20	64.90	76.80	82.60	82.40
Additional foreign direct investment (mil USD)	39.0	180.7	138.9	236.3	193.9	199.0	161.1	259.7
Foreign debt (bil USD)	NA	NA	NA	NA	5.80	7.60	10.70	11.90
Imports (bil USD)	3.61	3.58	6.38	6.63	8.81	11.11	11.72	10.78
Exports (bil USD)	3.45	3.64	5.45	6.69	8.58	8.83	9.64	9.64
Year-end USD exchange rate	27.84	28.90	32.97	31.46	29.70	31.58	34.53	36.21

NA statistic was not reliably measurable or was not available. In October 1997 the Slovak Statistical Office announced that it would suspend publishing official statistics due to a change in the method of computation which renders the statistics incomparable with prior periods. These statistics were taken from the Annual Report of the National Bank of Slovakia.

[1] References in this case to various political and bank officials should be read within the context of the timeframe of the case, that is 1989-mid-1999. In October 1998 the Slovak people elected a new government resulting in changes in Parliament, the Prime Minister, and many bank officials.

[2] Background information that is not integral to banking, the primary focus of this case, is set off in text boxes. The reader may find the text box material to be interesting but not essential to the case.

[3] FNM President and ZRS member S. Gavronik, Pravda 15 Feb 96

[4] Premier V. Meciar, Praca 17 Feb 96

[5] SITA 19 Dec 97 V. Meciar response to NBS chairman V. Masar

[6] Financial Times 2 Apr 98 SLOVAKIA: Benchmark Eurobond, Kevin Done, East Europe Correspondent

[7] Symsite 13 Sep 96 Source : NO/2] Elaborate

[8] Pravda/1 19 Dec 97

[9] SITA 27 Dec 97

[10] FT 2 Apr 98

[11] Exhibits 1-3 prepared from VUB published Annual Reports 1994-1998

[12] BankScope Database Software, Bureau van Dijk 1998 For Exhibit 4 and 5 note that the 1996 prior period adjustment was made after BankScope published this data.

BTC MAKES AN ACQUISITION AND NEEDS A CASH FLOW STATEMENT

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David G. Cheesebro, Principal
Dupuis and Ryden, PC, Flint, Michigan

INTRODUCTION

BTC Corporation operates two distinct business units. One unit manufactures slip clutches that are used in a variety of applications such as labeling machines, robotics, computer peripheral equipment, and medical devices.

BTC's other business unit develops, manufactures and sells seismic energy sources (marine air guns). These air guns create elastic waves at frequencies that travel to great depths and send a reflected signal that provides data to form the basis for decisions to drill exploratory and development oil and gas wells. In April 1999, BTC acquired a primary competitor in the marine air gun industry, American Geomarine, Inc. ("American"), and approximately doubled the size of its seismic energy source business.

In the acquisition, BTC acquired all of the outstanding common stock of American for $13,783,000. $13.6 million of the purchase price went to the shareholders of American: $6.1 million in cash, a $7.0 million 8.25% installment note payable to the former principal shareholder of American, and 63,492 shares of BTC Corp. common stock valued at $500,000 ($7 7/8 per share). The purchase price also included $183,000 of legal and appraisal fees.

For this price, BTC acquired a company in American that generated net earnings of $496,000 for the year ended September 30, 1997, $1,454,000 for the year ended September 30, 1998, and $1,253,000 for the six months ended March 31, 1999. Profit margins ranged from 7.8% to 27.9% during these periods.

Recorded net assets of American at March 31, 1999 were $4,994,000. The balance sheets and statements of income and retained earnings of American for the six months ended March 31, 1999 and years ended September 30, 1998 and 1997 are included in Exhibits 1 and 2. The book values of American at the time of the acquisition are based on the March 31,1999 balance sheet amounts.

BTC analyzed the American assets and liabilities acquired and allocated the purchase price as follows:

Book value of acquired net assets as of March 31,1999	$4,994,000
Fair value increases/(decreases) to net assets:	
Inventories	500,000
Plant and Equipment	69,000
Goodwill	8,600,000
Accrued Liabilities	(100,000)
Income Tax Payable	(95,000)
Deferred Income Taxes	(185,000)
Total Purchase Price	$13,783,000

After several unprofitable years, BTC also has begun to achieve financial success. BTC generated net earnings for the years ended June 30, 1997 and 1998 of $2,121,000 and $5,134,000, respectively. Earnings for the nine months (prior to the acquisition of American) ended March 31, 1999 were $4,024,000. Profit margins ranged from 20% to 28% during these periods. The balance sheets and statements of income and retained earnings of BTC for the years ended June 30, 1999, 1998 and 1997 are included in Exhibits 3 and 4. The statement of income for the year ended June 30, 1999 includes the results of American since the time of the acquisition in April 1999.

BTC's financial results for the year of the acquisition of American were essentially flat. American contributed $1,468,000 of the $1,538,000 increase in sales and virtually the entire $233,000 increase in pre-tax profit for the year ended June 30,1999.

In addition to acquiring American, BTC purchased $77,000 of other fixed assets during the year ended June 30, 1999.

The installment note related to the acquisition was issued to the former principal owner of American on April 17, 1999. The note requires quarterly installments of $425,000 of principal plus interest. The first installment was paid on July 17, 1999.

BTC has an incentive stock option plan that is accounted for under the intrinsic value method set forth in Accounting Principles Board Opinion 25. During the year ended June 30, 1999, 41,000 options were exercised whereby 41,000 shares of BTC stock were issued at $1.00 per share. These exercised options had been issued in earlier years. During the year ended June 30, 1999, the BTC issued 35,000 stock options to employees. Each option permitted the employee to convert it into one share of common stock at $6.46 per share. The fair value of the options issued in 1999 was determined to be $3.27.

Questions

Questions 1 –5 involve preparation of the consolidated statement of cash flows in the year that BTC Corporation acquired American. Questions 1 and 2 focus on making calculations and performing analyses that facilitate preparation of the operating, investing, and financing activities in the statement of cash flows required in Question 3. Questions 4 and 5 relate to the supplemental disclosures of noncash investing and financing activities and cash paid for interest and income taxes. Questions 6 – 9 address other issues and scenarios.

1. Using the template in Exhibit 5, compute the change in each balance sheet account of BTC Corporation for the year ended June 30, 1999.
2. Analyze the change in each balance sheet account, identifying the amounts resulting from investing, financing, and operating activities. (Note that, because of the acquisition of American, some changes in working capital accounts are due to investing, rather than operating, activities.)
3. Prepare the operating (indirect-method), investing, and financing activities sections of the consolidated statement of cash flows for BTC Corporation and Subsidiaries for the year ended June 30, 1999.
4. Prepare the supplemental disclosures about noncash investing and financing activities required for BTC's consolidated statement of cash flows for the year ended June 30, 1999.
5. Prepare the supplemental disclosures about cash paid for interest and cash paid for income taxes required for BTC's consolidated statement of cash flows for the year ended June 30, 1999.
6. The business combination of BTC and American was accounted for as a purchase. What component(s) of the transaction caused pooling of interests accounting to be proscribed?
7. Had the business combination been accounted for as a pooling of interests, how would the statement of cash flows differed from the statement of cash flows in the year of a purchase business combination?
8. The $7 million note that BTC signed in connection with the acquisition was issued to the principal American stockholder in exchange for his shares. How would the cash flow statement have changed had BTC obtained a $7 million bank loan and used the proceeds to purchase the shares from the principal stockholder?
9. The 41,000 shares of BTC issued in 1999 that were not related to the acquisition of American were issued under BTC incentive stock option plan that is accounted for using the intrinsic value method. Had BTC adopted the fair value method of accounting for the costs of stock options, how would this have affected the statement of cash flows? (You need not quantify your answer, but should identify the items that would have been presented differently.)

Bibliography

Accounting Principles Board. Accounting Principles Board Opinion No. 16, Business Combinations. 1970.

Bahnson, P., P. Miller, and B. Budge. 1996. "Nonarticulation in Cash Flow Statements and Imlications for Education, Research and Practice," Accounting Horizons (December), 1-15.

Drtina, R., and J. Largay III. 1985. "Pitfalls in Calculating Cash Flow from Operations," The Accounting Review (April), 314 – 326.

Financial Accounting Standards Board. Statement of Financial Accounting Standards No. 95, Statement of Cash Flows. 1987. Norwalk, Ct.

Heath, L. 1988. "Cash Flow Statements in Intermediate Accounting Textbooks," Accounting Horizons (December), 107 – 116.

Nurnberg, H. 1993. "Inconsistencies and Ambiguities in Cash Flow Statements under FASB Statement No. 95," Accounting Horizons (June), 60 – 75.

Nurnberg, H. and J. Largay III. 1996. "More Concerns over Cash Flow Reporting under FASB Statement No. 95," Accounting Horizons (December), 123 – 136.

BTC Makes an Acquisition and Needs a Cash Flow Statement
Exhibit 1

American Geomarine, Inc. Balance Sheets
As of March 31, 1999 and September 30, 1998 and 1997

	March 31, 1999	September 30, 1998	September 30, 1997
ASSETS			
Current Assets			
Cash	$1,685	$565	$460
Accounts Receivable – net	1,289	1,722	985
Inventories	2,043	1,586	318
Other Current Assets	54	55	132
Total Current Assets	5,071	3,928	1,895
Property and Equiptment – Net	1,195	1,257	1,124
Total Assets	$6,266	$5,185	$3,019
LIABILITIES AND STOCKHOLDERS' EQUITY			
Current Liabilities:			
Accounts Payable	$173	$320	$180
Income Taxes Payable	724		
Other Accrued Liabilities	375	1,124	552
Total Current Liabilities	1,272	1,444	732
Stockholders' Equity			
Common Stock	4	4	4
Retained Earnings	4,990	3,737	2,283
Total Stockholders' Equity	4,994	3,741	2,287
Total Liabilities and Stockholders' Equity	$6,266	$5,185	$3,019

Amounts are in 000s.
Information as of March 31, 1999 is unaudited.

BTC Makes an Acquisition and Needs a Cash Flow Statement
Exhibit 2

American Geomarine, Inc. Statements of Income and Retained Earnings For the Six Months Ended March 31, 1999 and Years Ended September 30, 1998 and 1997

	March 31, 1999	September 30, 1998	September 30, 1997
Sales Revenue	$4,498	$9,746	$6,389
Costs and Expenses:			
Cost of Good Sold	1,376	2,805	2,822
Selling, General and Administrative	1,131	4,665	2,715
Depreciation and Amortization	84	156	115
Total Costs and Expenses	2,591	7,626	5,652
Operating Income	1,907	2,120	737
Other Income	22	83	11
Income Before Income Taxes	1,929	2,203	748
Income Tax Expense	676	749	252
Net Income	1,253	1,454	496
Retained Earnings, Beginning of Period	3,737	2,283	1,787
Retained Earnings, End of Period	$4,990	$3,737	$2,283

Amounts are in 000s.
Information as of March 31, 1999 is unaudited.

BTC Makes an Acquisition and Needs a Cash Flow Statement
Exhibit 3

BTC Corporation and Subsidiaries Consolidated Balance Sheets
As of June 30, 1999, 1998 and 1997

	1999	1998	1997
ASSETS			
Current Assets			
Cash	$3,500	$1,317	$2,628
Accounts Receivable – net	2,208	5,002	2,266
Inventories	5,413	2,451	1,886
Other Current Assets	239	147	124
Total Current Assets	11,360	8,917	6,904
Property and Equipment	7,037	5706	5,562
Accumulated Depreciation	(5,614)	(5505)	(5,435)
Property and Equiptment – Net	1,423	201	127
Goodwill	12,610	4,339	
Deferred Income Taxes	2,494	3,100	1,290
Total Assets	$27,887	$16,557	$8,321
LIABILITIES AND STOCKHOLDERS' EQUITY			
Current Liabilities			
Current Maturities of Long-term Debt	$1,700		
Accounts Payable	549	$1,717	$449
Income Taxes Payable	725	201	861
Interest Payable	115		
Other Accrued Liabilities	1,633	1,596	
Total Current Liabilities	4,722	3,514	1,310
Long-Term Debt	5,300		
Stockholders' Equity			
Common Stock	26,117	25,576	24,678
Retained Earnings/(Deficit)	(8,252)	(12,533)	(17,667)
Total Stockholders' Equity	17,865	13,043	7,011
Total Liabilities and Stockholders' Equity	$27,887	$16,557	$8,321

Amounts are in 000s.

BTC Makes an Acquisition and Needs a Cash Flow Statement
Exhibit 4

BTC Corporation and Subsidiaries. Consolidated Statements of Income and Retained Earnings
For the Years Ended June 30, 1999, 1998 and 1997

	1999	1998	1997
SALES REVENUE	$19,591	$18,053	$10,531
Costs and Expenses:			
Cost of Good Sold	10,091	9,745	5,788
Selling, General and Administrative	3,804	3,300	2,485
Research and Development	386	216	204
Amortization of Intangibles	335	114	
Total Costs and Expenses	14,616	13,375	8,477
Operating Income	4,975	4,678	2,054
Other Income	149	98	67
Interest Expense	(115)		
Income Before Income Taxes	5,009	4,776	2,121
Income Tax Expense /(Benefit)	728	(358)	--
Net Income	4,281	5,134	2,121
Retained Earnings,/(Deficit), Beginning of Year	(12,533)	(17,667)	(19,788)
Retained Earnings,/(Deficit), End of Year	$(8,252)	$(12,533)	$(17,667)

Amounts are in 000s.

BTC Makes an Acquisition and Needs a Cash Flow Statement
Exhibit 5

Consolidated Balance Sheet of BTC Corp. and Subsidiaries

	BTC Corp. and Sub			-------- Increase Due To: ----------		
	6/30/99	6/30/98	Increase/ (Decrease)	Investing Activities	Financing Activities	Operating Activities
ASSETS						
Current Assets						
Cash	3,500	1,317				
Accounts Receivable, net	2,208	5,002				
Inventories	5,413	2,451				
Other Current Assets	239	147				
Total Current Assets	11,360	8,917				
Plant and Equipment	7,037	5,706				
Accumulated Depreciation	(5,614)	(5,505)				
Goodwill-net	12,610	4,339				
Deferred Income Taxes	2,494	3,100				
Total Assets	27,887	16,557				
Liabilities and Stockholders' Equity						
Current Liabilitities						
Current Maturities of Long-term Debt	1,700					
Accounts Payable	549	1,717				
Interest Payable	115					
Income Taxes Payable	725	201				
Other Accrued Liabilities	1,633	1,596				
Total Current Liabilities	4,722	3,514				
Long-term Debt	5,300					
Total Liabilities	10,022	3,514				
Stockholders' Equity						
Common Stock, no par value	26,117	25,576				
Retained Earnings/ (Accumulated Deficit)	(8,252)	(12,533)				
Total Stockholders' Equity	17,865	13,043				
Total Liabilities and Stock. Equity	27,887	16,557				

(Amounts in $000s)

SILVERADO AUDIO, LTD.
ANALYSIS OF INVESTMENT OPPORTUNITY IN A START-UP COMPANY

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NOTE: THE NAMES OF THE COMPANY AND THE PRINCIPALS HAVE BEEN CHANGED.

Silverado Audio, Ltd.
Analysis of Investment Opportunity in a Start-up Company

"Let's review where we are in this process." Dave Bradley said to his wife Dawn as they met in their home office. "It's getting close to decision time." Dave had been investigating an opportunity to buy a stake in a small start–up company in the high-end loudspeaker industry.

"Let's go over all the areas we've looked at and then make our decision." Dave and Dawn were contemplating an investment of $100,000 to buy 50,000 shares or a one-sixth interest in a start-up company that designed and manufactured high-end loudspeakers. The investment would also mean leaving his career as an Accounting professor to work at the company.

BACKGROUND

Silverado Audio, LTD. was a twenty-two-month old company that had been formed by an outside investor, Will Short, and Fred Smith, a British loudspeaker designer who had emmigrated to America. Fred's wife, Judy, worked as the Sales Manager. Mr. Short and Mr. Smith each owned 50% of the Company. The Company had originally worked out of Mr. Smith's house, but had since moved to a 5,000 square foot industrial condo. The Company was organized as a C corporation.

The equity investment made by Will Short was $200,000. Will had loaned the company an additional $220,000 over the initial twenty-two month period. Will received 100,000 shares. Fred Smith's investment was sweat equity to develop the products. Fred received 100,000 shares but made no capital investment.

Dave Bradley became involved when he was asked by his boss, the dean of the business school where Dave was an Accounting professor, if Dave was interested in helping a start-up Company develop a business plan. The Dean had received a call from Will Short asking for such help. The Dean told Dave that Will was concerned about Fred's lack of business experience and the resulting confusion and conflict that took place at work.

Dave worked over a two-month period helping to build a business plan. Although he was not an audiophile, he believed the products to be excellent. A host of early reviews of the Company's first product, the Solo, were highly positive. The New York Times reviewer claimed it was "the most musical loudspeaker" he had ever heard.

As the Business Plan was nearing completion, Will asked Dave if he were interested in becoming part owner and running the financial and operational parts of the Company. Will said that " Fred needs some structure, he's really a creative guy. He just needs some managing. I think you'll agree that the Company has a good upside." Dave said it was "apparent that the Company needed some additional capital and some planning". Dave also thought that the Company had potential. He also couldn't deny that he was feeling the entrepreneurial bug. He had taught for fifteen years and done some consulting, but this was different. He really wanted to try to help Silverado grow and to create something valuable. Dave told Will that he'd think about the offer. He asked Fred if he could have permission to talk to the Company's new sales manager about his opinion of the business and perhaps his interest in joining Dave as an investor.

Dave was able to put about $100,000 at risk. He didn't think that was enough. He called Pete Collins, the new sales person who had joined the Company recently. Pete was a business person and had been a VP in the Human Resource area. His company had been bought out and Pete was looking for an opportunity. He was dabbling as sales manager at Silverado. Dave talked with Pete about the possibility of investment in Silverado. Pete was a lot more knowledgeable than Dave about music and loudspeakers. He had in the past worked as a sales manager for a regional music and electronics chain. Pete thought the products were "great and could get better. The Company needs marketing programs and needs to build a network of sales reps to get into more high-end shops. Home theater is going to be big also. That will require different products and different customers. I'm interested." Dave and Pete discussed Pete investing $100,000 for a one sixth interest in the company. Dave would invest a similar amount for the same share.

ORGANIZATIONAL STRUCTURE

The proposed organizational structure if the new investment took place would be as follows:

Board of Directors [Will Short, Chairman; Fred Smith; Dave Bradley: and Pete Collins]

- President & Designer [Fred Smith]
  - CFO and COO [Dave Bradley]
    - North American Sales [Pete Collins]
    - International Sales [Judy Smith]
    - Accounting Manager [Kathy Judas]
    - Manufacturing Manager [Bill Pout]

Silverado had five factory workers who did the receiving, assembly, and order fulfillment.

INDUSTRY ISSUES

High-end audio was very much a cottage industry with just a couple of really big players. It was estimated that there were about one hundred and fifty companies in existence at the end of 1996. Ninety-five percent of the companies had revenues below one million dollars. Distribution in the U.S. was to high-end shops and some smaller chains. The usual distribution method was to enlist independent reps who covered a territory and who worked on commission. Silverado had five reps at the end of 1996. Full coverage would require approximately ten reps.

The U.S. and to some extent England were regarded as the key players in the high-end industry. Japan, even with its powerful consumer electronics industry, viewed the U.S. as the prime supplier for high-end speakers. Exports were handled by a distributor in each country. Japan was Silverado's largest single customer. Well over fifty percent of Silverado's sales were exports.

There had been no radical breakthroughs in the technology of reproducing sound. Work was being done on digital reproduction of music. However, the technology seemed to be quite a bit off in the future. Each loudspeaker designer would choose among materials such as aluminum, polypropylene, paper, kevlar or other materials to construct the cone. Resistors and capacitors in various configurations and qualities were the essential elements of the crossover. The voice coil could be of several materials and varying rigidity. Wood was still the most common enclosure material, but some designers were working with a

variety of ceramics. Silverado's Reference 2 achieved a very rigid and "dead" box through using material similar to Corian. The designer, with the help of some software, would create a certain effect. Silverado's signature sound was that of a very tight and deep bass achieved with one or more small woofers. Even to the untrained ear, there were highly discernable differences among speakers. However, there was no protection in terms of intellectual property patents for the various designs.

WORLD VIEW

Though a small company, Silverado faced a world market. Key suppliers and key customers were on the other side of the world. In order to grow its business, Silverado may have to be able to offer some sort of trade financing for larger orders. Currently the company was paid by wire transfer before shipping. Likewise, its overseas suppliers insisted on payment by wire before releasing goods.

SUPPLIERS

Silverado worked with about thirty different suppliers but several were key. Like most speaker companies, Silverado bought the woofers and tweeters for its products from Taiwan. The Company had two key suppliers who built the components according to Silverado's design. The company had spent about $5,000 on tools to make a proprietary cone. The other parts were manufactured to Silverado's specifications. Only Fred and Judy Smith dealt with the Asian suppliers. Judy was a native of China and therefore fluent in dealing with the Taiwanese suppliers. Fred was quite insistent on this rule. He and Judy took all trips to visit with suppliers. There were two key cabinet suppliers in the U.S. One supplier did the wood veneer higher-end boxes. The other did the vinyl wrapped boxes. The remaining suppliers were relatively easy to replace and supplied non-critical components and supplies.

CUSTOMERS

Silverado's had about forty customers in the U.S. and sold to seven overseas distributors. Japan was the single biggest customer. Other overseas sales had been made to Korea, Taiwan, France, Spain, Greece, Mexico, and Chile. Only Japan seemed to be reliable for reorders. In the U.S., with the exception of a large outlet in New York that was Silverado's second largest customer, most of the customers were very small high-end shops with a relatively narrow demographic of audiophiles for customers. It seemed likely that to thrive in the future, Silverado would have to sell at lower prices or introduce lower price products. Also, to reach a wider audience, the company may have to design its speakers to be appropriate for the Home Theater market.

PRODUCTS & PRICING

The Company's product lineup with foreign and domestic pricing appears in Table 1 below. The product line consisted of several series:

The Listening Room Series consisted of the Solo, Duo, and Trio products. The Solo was the Company's first product. The Solo was a bookshelf speaker with a single aluminum 5.25" woofer. The Duo was similar to the Solo except that it had two woofers. The Trio was similar to the Duo except that its cabinet was floor standing. The cabinet finish on the Listening Room line was a veneer in several different woods. The Center Channel Duo was added for home theater.

The Reference 2 was a specialty product similar in design to the Duo but with a Corian and Avolar cabinet and ultra high-grade components.

The Studio Series consisted of the Studio 1, Studio 2, and Studio 3 products. The configuration of the drivers was similar to that of the Listening Room. However, the woofers were polypropylene and the cabinets were vinyl-wrapped. The Center Channel Studio 2 was added for home theater.

The PS 20 was Silverado's stand. The stand was metal and would accommodate all the bookshelf speakers.

The two center channels, one for the Listening Room, and one for the Studio Series, allowed for a five-channel home theater configuration.

The pricing reflected shows the expensive nature of high-end speakers. The foreign prices reflect the accommodations for lack of credit risk and the freedom from paying commissions on the sales. The foreign distributors negotiated their own terms with the retail outlets and they bore the credit risk.

In addition to the products shown, the Company was planning to introduce a lower cost series called the PT (Performance Theater). In addition, there were discussions about developing a subwoofer to make the speakers more attractive to the home theater market.

Table 1 Silverado Products and Wholesale Prices at March 1997

	A	B	C
87	**Unit Prices**		**March**
88			
89		Price/unit	$
90	Solo	Foreign	795
91		Domestic	933
92			
93	Duo	Foreign	1,095
94		Domestic	1,208
95			
96	Trio	Foreign	1,395
97		Domestic	1,648
98			
99	Reference-2	Foreign	2,495
100		Domestic	3,575
101			
102	Studio-1	Foreign	439
103		Domestic	548
104			
105	Studio-2	Foreign	649
106		Domestic	749
107			
108	Studio-3	Foreign	849
109		Domestic	932
110			
111	PS-20	Foreign	139
112		Domestic	149
113			
114	Center Ch. Studio	Foreign	350
115		Domestic	400
116			
117	Center Ch. Duo	Foreign	525
118		Domestic	600

Note: Excerpt from Business Plan spreadsheet. See appendix

INTELLECTUAL PROPERTY

The company had no intellectual property rights to any of its designs. It was not feasible to expect to get any such protection due to the well-known and extensive use of the same basic materials and technology by many acoustic designers.

FINANCIAL ANALYSIS OF THE COMPANY'S FIRST TWO YEARS

Please see the appendix for an analysis of Silverado's first two fiscal years. The Company had lost $270,500 over the first two years. Will Short had advanced the Company $220,080 in loans in addition to the original $200,000 capital investment. Most of the first year had been devoted to new product development. Sales for the first ten months ending 2/28/95 were $63,848. However the Company had developed its first several products and received several very favorable reviews.

During the second fiscal year, sales jumped to $704,460. The number of products sold was now eight with an additional two products finished development. Operating cash was negative by $75,397 in the second year. More favorable reviews appeared in the Audio press. Although salaries were not at market, top line growth and new product development were very strong.

If Silverado could reach $1.5 million, then the Company should be almost at breakeven and be able to pay modest salaries to the stockholder/employees. At about $2.5 million in revenue, the company would be on solid footing. The improvement from the first year to the second had been tremendous. Could Silverado get to $1.5 and then to $2.5 million?

THE FIVE YEAR PLAN

Unit Sales Projection

The detailed monthly projections for Silverado appear in the appendix. The spreadsheet was an integral part of the business plan that Dave worked on over the two-month period. The five-year plan began with a detailed month by month forecast for the fiscal year ending 2/28/97. For each month, each model's sales were projected for both foreign and domestic sales. Fred, Judy and Pete had the major input into creating the forecast. The forecast contemplated a doubling of unit sales. [See A:45 on the spreadsheet.]

Sales Price Projection

The business plan forecast a wholesale price reduction of thirty percent starting at the beginning of the fiscal year in March, 1996. The retail price in the U.S. shops averaged approximately 1.8 times the wholesale price. These were very expensive speakers even with the price reduction. A pair of Solos would generally sell for $1,695 at retail. The original price of the Solos had been $2,400 a pair at retail. The sales price reduction should open the market to additional buyers. Better pricing and sourcing had also reduced the price of components. Still, even at the reduced prices, high-end speakers were not a mass-market item. Silverado had to sell around the world just to get the volume. [See A:85 on the spreadsheet]

Revenue Projection

The revenue forecast showed that Silverado would just exceed one million in revenues if the projection held. Units sold would almost double but revenue would increase by forty-five percent due to the price reductions. The new products, the Studio 2 and Studio 3, would begin to produce revenue in October. Silverado would remain an export-oriented product. Fifty-eight percent of unit sales and fifty-three percent of dollar sales would be generated by exports. The Asian market was by far the largest of the export markets. [See A:120 on the spreadsheet for the numbers. See BA:1 for charts A and B]

Variable Cost Forecast

Silverado's accounting system was kept on a local area network and utilized Peachtree Accounting. The chart of accounts supported a functional income statement. Dave recast the numbers for the historical periods in the contribution margin format. All the projections also utilized that format. He felt that the CM format was far better suited to management needs.

The costs classified as variable for the forecasts were direct materials, freight out, freight-in, variable overhead such as indirect materials, and certain selling costs. Dave made percentage estimates based on examination of account balances and sample transactions. The result was the variable cost estimate. Direct labor was not included as a variable cost but rather as a fixed cost. [See Q:159, A:157 and A:195 on the spreadsheet]

Contribution Margin Forecast

The monthly total contribution margin forecast was the difference between the total revenue and total variable cost forecasts. The forecast showed that Silverado would generate a total of $473,712 in CM. The CM percentage was 46%. [See A:230 on the spreadsheet]

Fixed Cost Projections

Dave separated the fixed costs into manufacturing, selling, and administrative categories. Each category of spending was examined with Bill Pout (manufacturing), Pete Collins and Judy Smith (Sales), and Fred Smith (R&D). Certain costs were traced to each of the areas. For example, Rent was allocated on the basis of square footage. Fred's salary was broken down into a portion as president and a portion as head of R&D. Most of the costs were aggregated for the year and then evenly spread over the months. Trade shows were budgeted in the months where the spending occurred. The big show for the year was the Consumer Electronics Show in Las Vegas in January. New products were showcased there, and hopefully new dealers signed up. Other major shows occurred in Japan, Hong Kong, and Germany. Everyone felt that the advertising budget was inadequate. However, it represented a major increase from the year before. The fixed costs totaled $642,965. [See A:266 on the spreadsheet.]

Financing and Net Income Projections

At the projected sales level and projected cost structure, Silverado would lose $169,253 for the fiscal year. Will Short had agreed to loan the company $100,000. The plan shows that infusion in July. Will had also agreed that all loans would be interest free for the five year period. Silverado would pay no income taxes and projected to have a net operating loss carry forward of $446,727 at the end of the fiscal year. [See A:322 on the spreadsheet]

Monthly Cash Budget Supporting Schedules

The supporting schedules for the cash budget include Schedule 1: Collections on sales; Schedule 2: Purchases and Payments for Purchases; and Schedule 3: Payments for Operating Expenses.

For collections, Silverado expected to collect all its funds ahead of shipment for foreign sales. For domestic sales, the company expected to collect fifty percent in the month of sale and fifty percent the next month. Bad debts had been negligible. The company had been using a consultant to help with establishing a pricing policy. The consultant had recommended a 7% cash discount for payment within seven days. The company had not yet decided on the program. The discount was not included. The company's terms were net 30. The company expected to collect $1,003,114 during the fiscal year. [See A:350 and R:360 on the spreadsheet]

For purchases, the company established a target RM inventory of $50,000. All payments were estimated to be made in the month following purchase. This was not likely to be the most realistic since foreign purchases required payment at the time of shipment. Time to the factory for those components could be five weeks. The most costly component was the cabinet. Cabinets were available at net thirty terms. The company had accumulated $130,000 in unpaid bills. The majority of the new investment would go towards clearing up these bills and the remaining $70,000 would be used for working capital. Silverado expected to pay $428, 282 for materials purchases during the fiscal year. [See A:365 on the spreadsheet]

Payments for operating expenses were assumed to be in the month incurred. Both variable and fixed expenses, less depreciation and amortization, would total $746,225 for the year. [See A:379 on the spreadsheet]

Monthly Cash Budget

The monthly cash budget showed that Silverado would burn $266,893 in operations for the year. That deficit would be made up from the $200,000 equity investment from Dave and Pete and the

$100,000 loan from Will Short. Even with that, the ending cash balance would be $38,107. It was the cash budget, the money in and out that was most important for Dave and Dawn as they looked at the investment. This was close. Silverado couldn't afford any major slips in the plan. [See A:389 on the spreadsheet]

Monthly Pro Forma Balance Sheets

The Pro Forma Balance Sheets began with the historical statement from 2/29/96. Each item on the balance sheet was calculated from work done in other areas of the spreadsheet. The balance sheet showed a negative stockholder's equity. The losses would have exceeded the investment. However, the loans from Will Short behaved pretty much like equity as they required no payment or interest accrual over the five-year period. Also, the lease liability became negative in September. Dave did not adjust for that as the Company may well need to lease some additional equipment during the year. There was discussion about potentially acquiring a flexible packing system from Sealed Air that would eliminate the need to buy expensive and space consuming foam sheets. [See A:440 on the spreadsheet]

Five Year Forecast of Revenue, VC, & CM

With the first fiscal year done in detail, the next step was to project over a future period. Dave picked a five-year period for two main reasons. First, five years was the time horizon that he had set to create a valuable company and to "cash out". Second, estimating beyond five years was extremely difficult due to changes in technology, changes in consumer behavior, and changes in world conditions.

What would growth most likely be? It seemed that with the excellent reviews of the products and the speed of bringing product to market that growth should be strong. Growth was projected to be 30% in the export arena and 50% in the domestic market. The stronger growth in the domestic market reflected the expected expansion of the sales rep network and the expansion into home theater. The new PT Series consisting of two bookshelf speakers, a floor standing speaker and a center channel would be introduced sometime in fiscal 1997. The Company had high hopes for its success.

The next major question had to do with price levels. Dave assumed that prices would increase on both the revenue and variable cost side by 3%. The general economic climate with respect to prices was quite stable

Revenue over the five-year period projected to $4.7 million. Contribution margins totaled $2.3 million. At these levels, Dave felt sure that his exit strategy would work. At this level of sales, Silverado would have a very well known brand name and good distribution. There were many foreign companies who would love to build on a well-respected U.S. brand. . [See A:1 on the spreadsheet]

Five Year Pro Forma Income Statements and Share Valuation

The next step was to construct the income statements for the five-year period and to calculate some performance measurements. The income statements through contribution margin were already done. The fixed expenses for fiscal 1996 came from the detailed forecast for the year. Fixed costs were adjusted over the next two years to allow for salary increases, additional staffing, and increased advertising. The results showed that Silverado would turn profitable in the third year of the five-year plan. By the end of fiscal 2000, the Company would have used up its net operating losses. The Company would net over $500,000, 10.7% on sales of $4.7 million.

Salaries for the stockholder/employees would be at reasonable levels by the third year. By the fifth year, with bonus distributions, salaries would be at healthy levels. At that time, according to plan, the company would seek out a buyer. [See AP:1 on the spreadsheet]

EVA Valuation

For internal tracking purposes and to test the purchase price of the shares, Dave also constructed an evaluation using Economic Value Added (EVA). EVA is a residual income measure developed by the consulting firm of Stern, Stewart and Co. EVA counts all the money spent by managers as capital to be charged with a rental cost – the cost of capital. Companies that earn in excess of the cost of capital create value. Those that earn less than their cost of capital destroy value. There are many benefits to the EVA approach to calculating value. Several of the most benefits important are: 1) the approach requires an explicit recognition of the cost of capital; 2) true economic profit is not recognized until the cost of capital is covered; and 3) management is charged with the cost of virtually all major expenditures including such things as R&D and major marketing expenditures that are expensed under GAAP. There are many other adjustments that may be made to finely tune the calculation of capital. Adjustments to convert deferred taxes to a cash basis, and conversion of LIFO inventories to FIFO are two examples. Because the EVA

model required a consideration of cost of capital, assumptions about future values, and discounting to present value, Dave used the method as a way to check on the $2/share purchase price he was contemplating.

Dave started with a calculation of beginning capital. He calculated the present value of leases including property leases. He allowed for the rental of additional space as the company grew. R&D was recognized as capital. He approximated that $200,000 of product development had taken place and he assumed that about $40,000 would take place each year between salaries and materials. Allowing for amortization of the R&D over a five-year period, the amount of capitalized R&D stayed at $200,000. He then subtracted the non-interest bearing current liabilities (NIBCL). Capital for the first year came to $623,280. Capital for the remainder of the forecast term was estimated in relation to the growing size of operations. Receivables, Inventory, and Fixed Assets were increased. The capital estimates rose to $1,366,384 by year five of the forecast. [See AP:46 on the spreadsheet]

Net Operating Profit After Tax (NOPAT) is the proxy for cash return under EVA. Depreciation is judged to be a surrogate for cash investments in fixed assets. EVA assumes that the leads and lags in receivables and payables stays steady and does not skew the measurement. Silverado's NOPAT was taken from the five-year forecast income statement. [See AP:48 on the spreadsheet]

Silverado's return each year is calculated by dividing NOPAT by Capital. Under EVA, managers are forced to focus both on operations (NOPAT) and investment (Capital). Silverado's returns were negative for the first two years but turned positive in the third year. [See AP:50 on the spreadsheet]

Under EVA, managers are forced to estimate the weighted average cost of capital (WACC) and to treat the cost of capital as the threshold for creating wealth. In a true EVA system, bonuses are paid only if returns exceed the cost of capital. Since Silverado was a newly formed closely-held company, WACC could not be calculated using market-related betas, or even betas calculated from Silverado's own history. Rather, the 20% cost of capital, represented a judgment based on the level of risk and Dave's experience with other small businesses. The 20% cost of capital is an after-tax return.

The "spread" is equal to the difference between the return and the cost of capital. The first three years showed negative spreads. In terms of EVA, the first two years were very bad indeed. Even year three, where the EPS multiple model showed significant value, the EVA model still showed value destruction because the return earned of 7.43% was far less than the opportunity cost of capital – 20%. EVA didn't turn positive until year four. The present value of the five year stream of EVA was a negative $408,897. [See AW:57 on the spreadsheet]

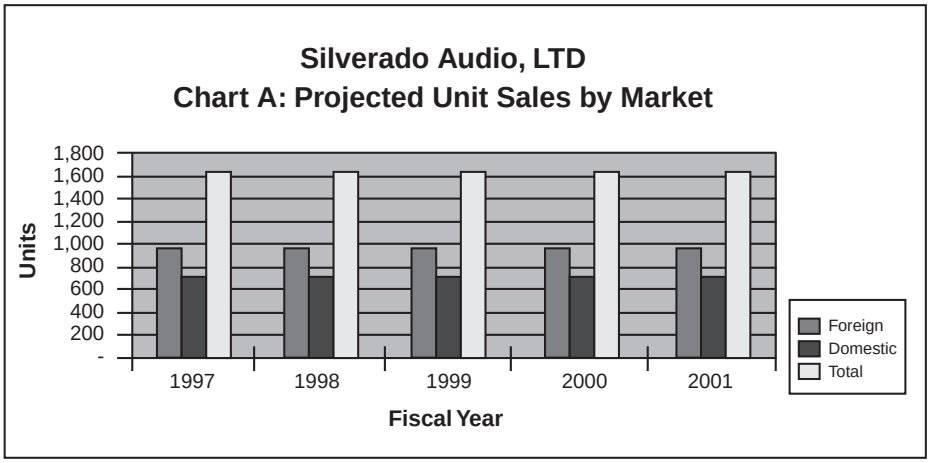
Since the forecast period was only five years, an assumption had to be made about the terminal value. Dave assumed that the operating results for the sixth year and on would be the same as the fifth year – in other words that growth would stop. He capitalized the NOPAT and took the present value. The present value of the terminal value was $1,021,008. Add to that the capital in place of $623,280 and the Company value was $1,235,301. Subtracting the stockholder's loan of $320,080 and the value of the equity was $915,221. The value of a share of stock at March 96, the present value, based on 300,000 shares outstanding, was $3.05. [See AW:57 through AW:70 on the spreadsheet]

Key Graphs

The following graphs summarize some of the more important relationships. [See BA:1 on the spreadsheet

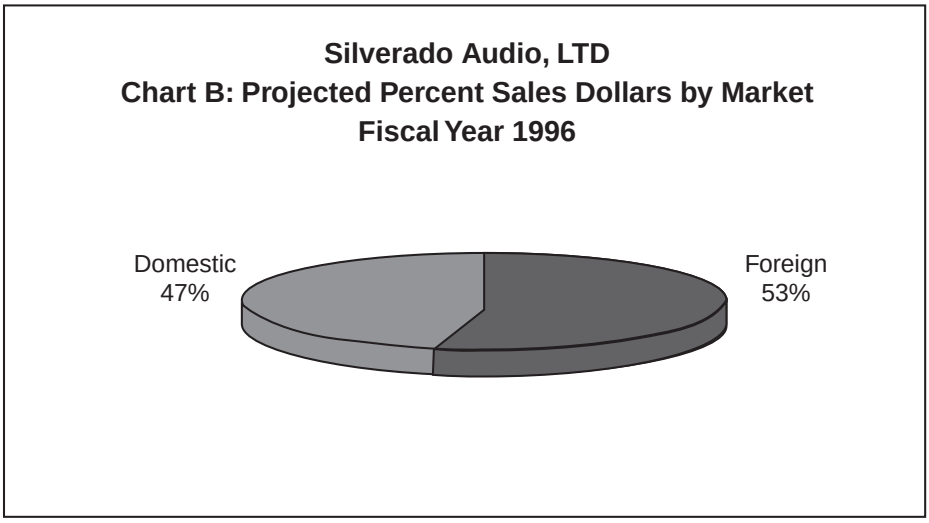
Unit Sales by Market

	1997	1998	1999	2000	2001	Total
Foreign	957	957	957	957	957	4,785
Domestic	693	693	693	693	693	693
Total	1,650	1,650	1,650	1,650	1,650	8,250



Dollar Sales for Fiscal 96

	1997
Foreign	$542,235
Domestic	$481,919
Total	$1,024,154



	BP	BQ	BR	BS	BT	BU
6		1997	1998	1999	2000	2001
7	Sales	$1,024,154	$1,817,644	$2,484,389	$3,421,502	$4,752,119
8	Var. Costs	$ 550,442	$ 930,798	$1,273,736	$1,754,566	$2,436,506
9	Cont. Margin	$ 473,712	$ 886,846	$1,210,654	$1,666,936	$2,315,614
10						
11						
12						
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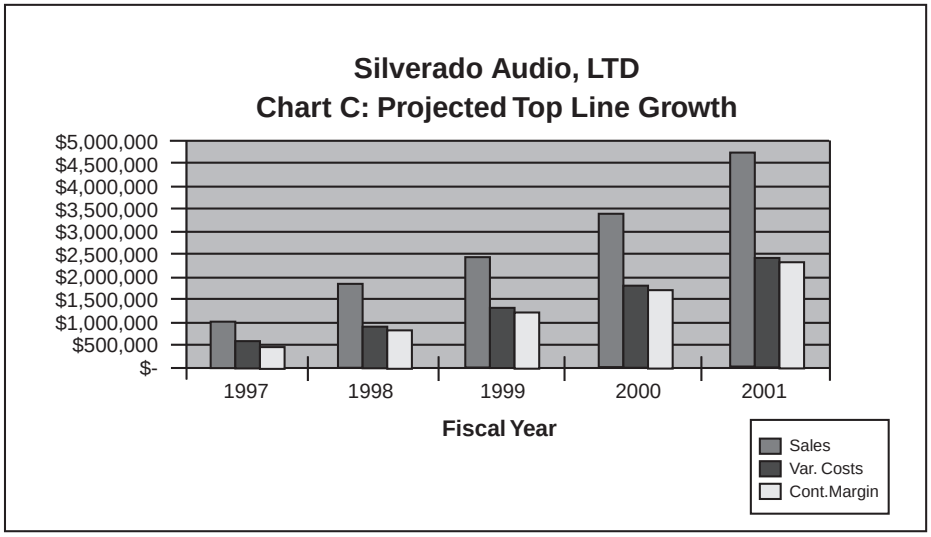

	BW	BX	BY	BZ	CA	CB	CC
6			1997	1998	1999	2000	2001
7	Pre Tax Operating Profit		(169,253)	(56,119)	63,498	360,081	781,722
8	Net Income		(169,253)	(56,119)	63,498	360,081	508,119
9							
10							
11							
12							
13							
14							
15							
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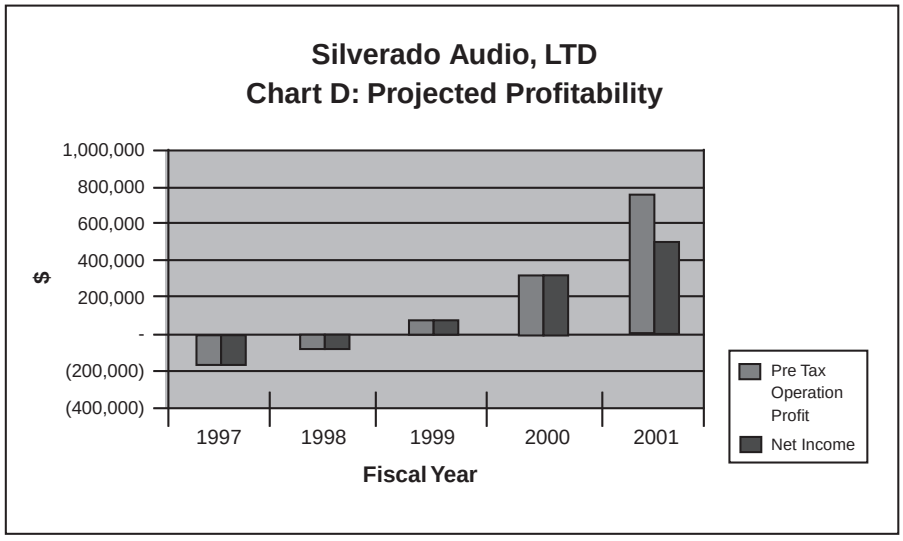
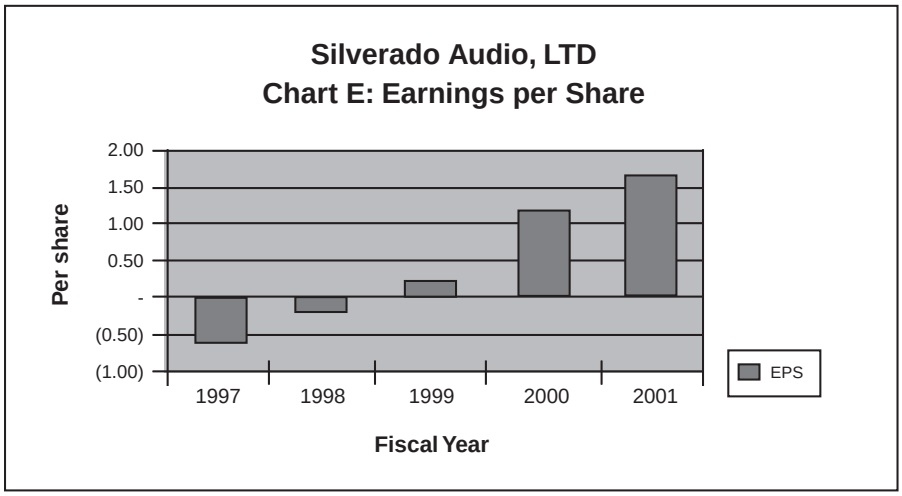
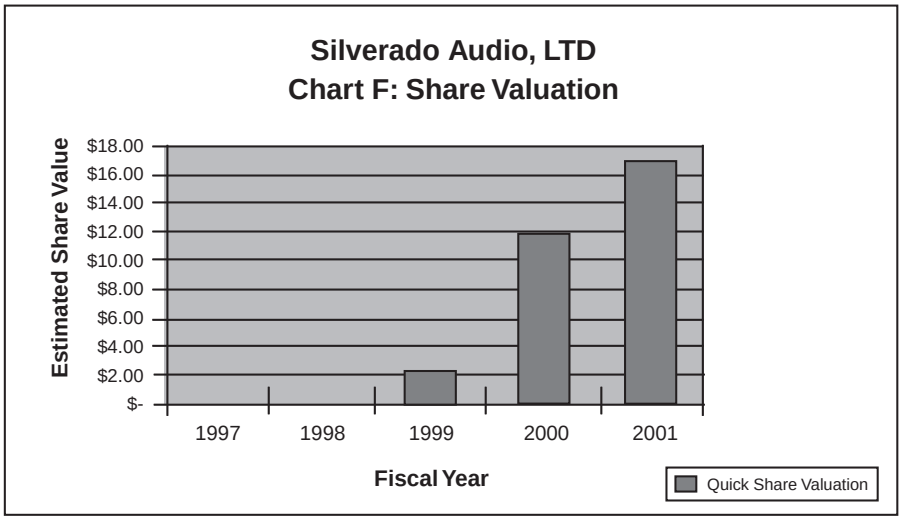


	BA	BB	BC	BD	BE	BF	BG
31			1997	1998	1999	2000	2001
32		**EPS**	**(.056)**	**(0.19)**	**0.21**	**1.20**	**1.69**



	BI	BJ	BK	BL	BM	BN	BO
31			1997	1998	1999	2000	2001
32	**Quick Share Valuation**		NMF	NMF	$2.12	$12.00	$16.94



BUILDING VALUE AND THE EXIT STRATEGY

What price might a buyer pay? Dave calculated a company value at ten times earnings, or just over $5 million. That price was only slightly above one year's gross revenue for year five. Dave felt that if he could identify the right buyer, perhaps a manufacturer of electronics and electronic components, who did not have a brand name or distribution in the U.S. then the price could be much higher. Such a buyer could use Silverado's brand to penetrate the U.S. market. He was hoping for two times revenue.

PRICE OF THE SHARES AND CASH OUT

Dave felt that the price of the shares was fair. The price was the same as Will had paid. With 300,000 shares issued (including 50,000 each to Dave and Pete), a two dollar price valued the company at $600,000. The valuation was less than the just concluding year's revenue and less than the value calculated using the EVA model. The financial pay out would hopefully be between $16 and $32 per share in five years.

DECISION TIME

"Well, that's about it." said Dave. "I never thought that when I started this project that I'd be thinking about becoming part of the Company."

"It's an interesting opportunity, and music is fun. The products are beautiful and sound great, but how many people can afford those prices?" asked Dawn. "I'm concerned about a few other things too."

"How do we get out if we want to? In my own business, the shares are traded freely on the NYSE and I can sell them in a couple of minutes. In a small business, where we're not even the majority shareholders, what happens if we want to sell? Even if you are able to get a good deal for selling the whole company in five years, what if the other shareholders don't want to sell?"

Dawn looked over the plans and set them down. "Yes, the numbers look good. But who's to say if the projections will come true. What I see is risk – a lot of risk. I don't feel comfortable about the people involved either. You've only known them a short time. How much do you really know about them and whether or not you will all work effectively when things get tough? We spent three hours discussing the pros and cons when they came to visit us here. I think they underestimated the difficulties and were mostly trying to get you and Pete involved."

The other thing I really worry about is that over half your business, both customers and suppliers, is overseas, mostly in Asia. Who are the people? We haven't met any of them. Remember, I'm conservative - it's my nature to always look at the downside. But, it may be worth taking the risk. It looks like something you really want to do."

QUESTIONS FOR DISCUSSION

1. Do you find the investment possibility attractive? Which factors are attractive and which are not?
2. What are the major types of risks that Silverado faces?
3. Do you agree with Dawn, that Dave may not know enough about his potential partners? If so, what steps would you recommend he take to learn more?
4. Should Dave and Dawn hire an outside consultant such as a CPA to look over the deal?
5. What do you think of Silverado's performance in its first two years?
6. If the estimates in the detailed forecast in Sections 1 through 3 are reasonable, what is Silverado's breakeven point? What would the breakeven point be if the advertising budget was increased by $150,000 and the rent increased by $40,000 due to a move to larger quarters.
7. Do you think that the five-year growth rates used in Section 7 are reasonable?
8. Section 8 uses a multiple of ten to estimate a value per share. Is that a reasonable multiple? Why or why not?
9. What is EVA? What does the EVA valuation show for Silverado?

10. Is the price of the stock fair? Why or why not?

11. Would you be as concerned as Dawn about taking a minority position in a closely held company?

12. Would you make the investment?

APPENDIX

The Appendix contains the hard copy of the Excel workbook that accompanies the case.

Tab 1 in the workbook is a map to the forecast model in Tab 2.

Tab 2 in the workbook is the forecast model itself.

Tab 3 in the workbook is the historical analysis of Silverado Audio.