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Finance Training and Team Building: An Example of Finance Training Leading to Team Building

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Abstract

This research describes and evaluates how a finance training exercise led to readily identifiable team building among the participants in an executive development workshop initially targeted as a "Finance for the Non-Financial Executive "program. The finance exercise required the participants to make financial/operational tradeoffs in their own section of the firm in order to improve the return on assets for the corporation at large. The finance training workshop is used as a case study to provide observed behavioral inputs to evaluate and confirm that the finance training led to the team building. In order to confirm the emergence of team building, a collection of 12 published articles and texts on the subject of team building were reviewed and a master table was compiled containing all the authors' named team characteristics. The workshop participant groups were observed and their individual and group behavior was compared to the team characteristics listed in the table. Their behavior matched all but two of the team characteristics listed in the lengthy table. Our conclusion was that the participant groups had, indeed, formed themselves into effective teams to accomplish their task of evaluating the financial/operational tradeoffs required to improve the return on assets for their firm. Their finance training led to team building.

Future sessions of the workshop were modified to include discussions and exercises relating to the team building developed during the finance training. The participants were encouraged to note and nurture the opportunity for team building in their future intra-company interactions.

Introduction

The purpose of this case study research is to identify, analyze and verify the team building that occurred while leading participants through a finance training exercise in a "Finance for the Non-Financial Manager" type workshop in a large electric utility company. The major sections of the study are introduced below. The first section of the paper describes the basic finance training that prepared the participants for accomplishing their closing exercise of conducting financial/operational tradeoff analyses to improve the firm's overall return on assets. During the participants' analyses and presentations on their tradeoff situations, the trainers and human resource staff present concurred that the participants had formed teams; finance training had led to team building.

The next major phase of the study was to conduct a review of the team building literature and compile an extensive list of Team Characteristics developed by numerous authors in the field in order to confirm that team building did occur in our case study workshop. The team building characteristics identified were compiled in Finance Training 4.

*Table One***:** Team Characteristics, which is provided below. The process of comparing participant behavior and Table One's team characteristics and concluding that the groups did form into teams is presented in this phase of the study.

Table 1. Comparison of Team Characteristics

Author	***Team Characteristics***
Mark Alexander ***From*** ***The Pfeiffer Book of Successful Team-Building Tools* – Elaine Biech (Editor)**	***(Ten Characteristics of Successful Teams)*** ✓ ***Participative Leadership*** ✓ ***Positive Atmosphere*** ✓ ***Cooperative Relationships*** ✓ ***Balanced Participation*** ✓ ***Valued Diversity*** ✓ ***Managed Conflict*** ✓ ***Clear Goals*** ✓ ***Defined Roles*** ✓ ***Open and clear communication*** ✓ ***Effective Decision Making***
Eileen K. Aranda, Luis Aranda, Kristi Conlon ***From*** ***MBA Tutorials referred from Teams: structure, process, culture and politics***	*Characteristics of Teams:* ✓ ***Coordination*** ✓ ***Respect for individuals*** ✓ ***Sense of understanding people***
Donald Brown, Donald F. Harvey ***From*** ***Organization Development 7th Edition***	***The goals/characteristics of team development:*** ✓ ***Identify objectives and set priorities*** ✓ ***Examine the team's content or task performance*** ***Analyze the group process; that is, how the group is functioning*** ✓ ***Improve communications and relationships among group members*** ✓ ***Improve the team's ability to solve problems*** ✓ ***Decrease unhealthy competition and increase cooperation among team members*** ✓ ***Work more effectively with other teams in the organization*** ✓ ***Increase team members' respect for one another's individual differences***
Jeff Butterfield *From* *Teamwork and Team Building*	*Characteristics of Teams:* ✓ *Sense of ownership* ✓ *Shared objectives* ✓ *Culture of contribution* ✓ *Development of trust because of shared tasks* ✓ *Members are involved in decision making*

Richard L. Daft *From* *Management*	*Effective team characteristics:* ✓ *Trust* ✓ *Healthy conflict* ✓ *Commitment* ✓ *Accountability* ✓ *Results orientation*
William G. Dyer ***From*** ***Team Building: Current Issues and New Alternatives – William G. Dyer***	***Ingredients critical to successful launch of team:*** ✓ ***Goals and objectives*** ***Time tables*** ✓ ***Metrics*** ✓ ***Training on how to work together*** ***Morale of a team is often affected by:*** ✓ ***Support*** ✓ ***Resources*** ✓ ***Communication*** ✓ ***Personalities***
D. Hellreigel, J. Slocum ***From*** ***Organizational Behavior 12th edition***	***An effective team has the following core characteristics:*** ✓ ***Know why it exists and have shared goals*** ✓ ***Support agreed-on guidelines or procedures for making decisions*** ✓ ***Communicate freely among themselves*** ✓ ***Receive help from one another and give help to one another*** ✓ ***Deal with conflict openly and constructively*** ✓ ***Diagnose its own processes and improve their own functioning***
Gregory Moorhead and Ricky W. Griffin ***From*** ***Organizational Behavior: Managing People and Organizations – Griffin, Moorhead***	***Characteristics that must remain positive to remain a cohesive and effective team:*** ✓ ***Leadership*** ✓ ***Motivational Forces*** ✓ ***Communication*** ✓ ***Interaction-Influence*** ✓ ***Decision making*** ✓ ***Goal Setting*** ***Control Processes*** ✓ ***Performance***

J.R. Recardo, D. Wade, C.A. Mention, J.A. Jolly ***From*** ***<u>Teams: Who Needs Them and Why?</u> - Recardo, Wade, Mention and Jolly***	***<u>A successful team will have the following characteristics:</u>*** ✓ ***Definable Membership*** ***Membership Stability*** ✓ ***Common Goals*** ✓ ***Sense of Belonging*** ✓ ***Interdependence*** ✓ ***Interaction*** ✓ ***Common Rewards***
Greg L. Stewart, Charles C. Manz, Henry P. Sims ***From*** ***<u>Teams and Teamwork</u> (References for Businesses, Encyclopedia for Business, 2nd Edition)***	***<u>Characteristics of Effective Teams</u>:*** ✓ ***Clear Direction*** ✓ ***Clear Responsibilities*** ✓ ***Knowledgeable members*** ✓ ***Reasonable Operating Procedures*** ✓ ***Interpersonal relationships***
Leigh L. Thompson *From* *<u>Making the Team: A guide for Managers</u>*	*<u>Key Characteristics of Teams:</u>* ✓ *Teams exist to achieve a shared goal.* ✓ *Team members are interdependent regarding some common goal.* *Teams are bounded and stable over time* ✓ *Team members have the authority to manage their own work and internal processes.* ✓ *Teams operate in a social system context*
David A. Whetten, Kim S. Cameron *From* *<u>Developing Management Skills</u>*	*<u>Attributes of Effective Teams:</u>* ✓ *Have interdependent members* ✓ *Help members be more effective working together than alone.* ✓ *Function so well that they create their own magnetism.* ✓ *Do not always have the same leader* ✓ *Members care for and nurture one another.* ✓ *Have members who cheer for and bolster the leader and vice versa.* ✓ *Effective teams have a high level of trust among members.*

The final phase of this study was to plan for achieving the team building results in future versions of the finance training. Suggestions are made on how to ensure that team building does spontaneously occur (or is stimulated to occur) and how to integrate team building into the body of knowledge that the participants take away from the workshop.

Methodology

This study is structured on a two-step research process. The first step is the development of a detailed case study describing the basic finance training conducted to prepare the participants for their closing exercise; a finance tradeoff analysis in which actions to improve the firm's profit margin are traded off against actions to improve the firm's asset turnover. This step was facilitated by drawing upon the authors' experiences in conducting numerous financial management workshops in the electric utility industry. The interpersonal dynamics described in the tradeoff analysis Finance Training 5discussions were drawn from real discussions based upon actual tradeoff decisions that had to be made.

The second step was to verify that actual team building did occur. This was accomplished by (1), conducting the previously mentioned literature review to identify and compile numerous authors' team characteristics into *Table One:* Team Characteristics and (2), comparing the team behavior of the participants to the team characteristics arrayed in Table One. A near perfect match was observed between the participants' behavior and the team building authors' lists of team characteristics. The results are analyzed later sections of the study.

The Finance Training

To start the session, the participants were taught fundamental financial analysis tools and then applied those tools to evaluate their own company's financial performance. This part of the training was essential in order to prepare the participants for later analyses that would lead to theteam building benefits. In the event participants were from multiple companies, a large, publicly traded firm's financial statements would be used. A brief list of the finance topics follows.

1. The structure and content of their company's *balance sheet*,
2. The structure of the company's *income and cash flow statements*,
3. Essential *financial performance measures*, including,
   - Profitability margins and investment returns: especially the net profit margin
   - Asset turnover and return on assets (Brigham and Houston, 2009, p. 104)
   - Market value measures: including price-to-earnings ratio (P/E) and market-to book ratio
   - Measures of financial leverage and debt capacity
4. Customary *benchmark financial performance measures* for the industry in which their company is competing, for use in,
   - Analyzing and evaluating their company's growth trends
   - Comparing their company's performance to the overall industry and to key competitors (Brigham and Houston, p. 103)
   - Assessing their company's appeal to potential investors in the company's stocks and bonds

As the participants explored their company's financial statements, they became more comfortable with finance terms and measures found on financial statements and published financial performance statistics. They developed a sense of financial identity with their own company. More importantly, they gained a better understanding of how they personally affected their company's return on assets and how they were financially linked with other people in the company.

Financial Analysis Using the Expanded Return on Asset Chart

Participants use an Expanded ROA Chart that was developed for use in finance training sessions. The chart is an expansion of the well-known DuPont Return on Investment
Chart that was used by the DuPont Corporation as early as 1919. (Posey, p. 3). The chart is built upon three simple equations that appear in all basic financial management texts. (Brigham and Houston, p. 101, Fraser, p.186, Center for Business planning, p.1, Berk, et.al., p.39).

They are:

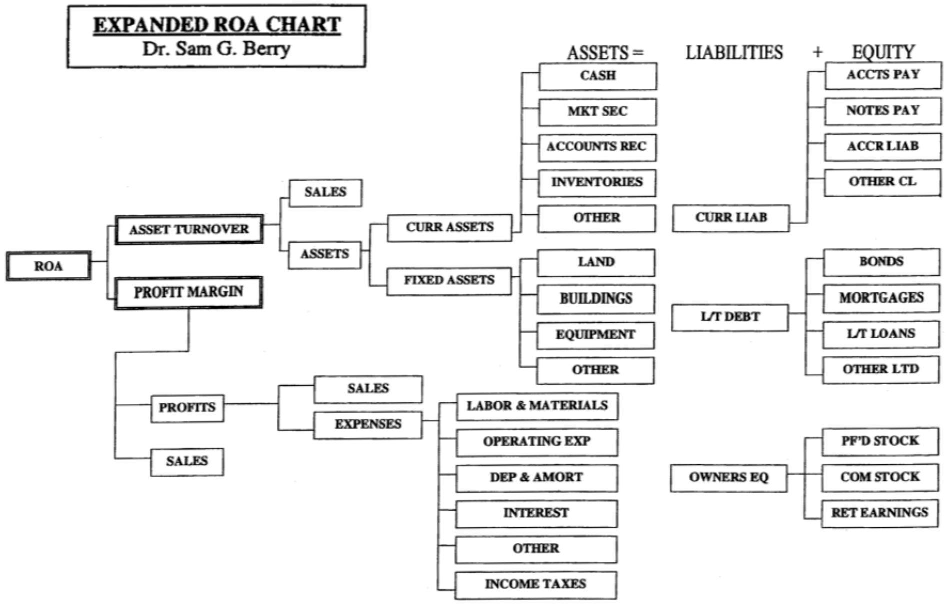
1. Return on Assets (ROA) = net income (NI)/total assets (TA), giving a percent answer. ROA = NI /TA
2. Net Profit Margin (NPM) = net income (NI)/sales (S), also giving a per cent answer. NPM = NI / Sales
3. Asset Turnover = sales (S)/total assets (TA), providing an index number = Sales/TA, giving an index number answer

An important relationship to note is that Return on Assets is the product of the profit margin and the assets turn.

ROA = NPM times TA Turn = NI/Sales times Sales/TA

In the above equation, the Sales items algebraically cancel out, and the equation is back to, ROA = NI/TA. (Brealy and Myers, p.835)

Splitting the Return on Assets into its Profit Margin and Asset Turnover components is valuable for financial tradeoff analyses and problem solving purposes. It allows Finance Training 9 managers to concentrate their attention on specific areas in the business. (Alvarez and Fridson, p. 359, Welch, p.529)



The Expanded Return on Asset Chart

Working the chart from left to right provides a problem solving framework. The Return on Asset block, ROA, is the starting point. As shown above, ROA can be split into Asset Turnover times Profit Margin. Analyzing Asset Turnover works with the balance sheet; analyzing Profit Margin works with the Income Statement. Each will be analyzed for its impact on ROA, in a trouble shooting approach.

Note: Analyses of trouble shooting examples are presented the Appendix," Trouble Shooting the Balance Sheet and Income Statement". A reader experienced in finance may choose to bypass the Appendix and continue reading here.

Evaluating Financial Management Tradeoffs Using the Expanded ROA Chart

Participants soon begin to notice that strategies to improve either Asset Turnover or Profit Margin will frequently conflict; improving one damages the other. A classic example is the strategy of automating production. Large capital expenditures are required to purchase automated production and assembly facilities. Consider the damage this strategy does to Asset Turnover (sales divided by assets). There could be large increases in assets with no immediate increase in sales. The turnover would plummet. On the other hand, the profit margin (profits over sales) would significantly increase. The automation program would provide major reductions in labor expenses, leading to large profit increases. A tradeoff decision will be needed - - will the gains in profitability exceed the damages in asset turnover? The margin-vs.-turnover tradeoff is a frequent occurrence in all companies. For example, in the automation tradeoff, the firm's original situation might have been: a 3% profit margin being multiplied by an asset turn of 3, yielding a 9% ROA. After the automation expenditures the asset turn might fall to 2, but if the profit margin has increased to 5%, the ROA has moved up to 10%. The tradeoff was positive. The expanded ROA Chart provides a visual, logical display of the tradeoff process to guide numerical calculations.

Participants learn to anticipate the conflicts and consider the tradeoffs in a logical manner. Tradeoff analyses would become an important part of the session's closing exercise described below.

Financial Tradeoffs During Economic Recessions

The usual uses of the Expanded ROA Chart are to optimize the tradeoffs between the Profit Margin and the Asset Turnover and to maximize the Return on Assets. During the severe recession of the 2008-2010 period, most industries suffered major declines in sales revenue. A glance at the ROA Chart reveals that all asset turnovers will decline with lower sales, and profits margins will also decrease with decreased sales. The focus in managing return on assets will thus shift from a profit maximization approach to a loss minimization approach. Managers are now charged with finding the best mix of assets and expenses to reduce.

Deciding Which Assets to Reduce: The Tradeoffs

Most of the current assets move "spontaneously" with sales. (Brigham, p. 530) If sales decline, fewer accounts receivable will be placed on the balance sheet and cash balances will be quickly drawn down. Inventory purchases orders will be cut as quickly as possible, reflecting the lower sales and the lower need for inventory replenishment. Credit customers can be pressed to pay more quickly, and suppliers can be pressed for price reductions. The general pattern to current assets is that they are a quick and less painful area to reduce the cash invested.

The fixed, long life assets present more serious and painful cut-back decisions. If plants are being staffed in shifts, the number of shifts utilized may have to be reduced and that means painful layoffs of people will occur. Laid off employees may not return if they find work elsewhere. Replacement of aging equipment can be postponed, resulting in a decline of production efficiency. Entire plants may be shut down.

Tradeoff Analyses

Tradeoff analyses will be facilitated by using the Expanded ROA chart as a framework for decision making. For example, if a firm had two plants making the same product, one automated and the other labor intensive, managers could choose between two layoff options. Closing the labor intensive plant would leave the more efficient plant operating, but cause larger layoffs. If the potential loss of experienced laborers was more of a concern than more efficient production, management's choice would be to close the automated plant. More than likely, the economic choice would be to close the labor intensive plant, experience larger layoffs but survive the serious economic downturn. The Expanded ROA Chart would facilitate conceptualizing and formulating tradeoff scenarios which could then be subjected to rigorous quantitative financial analyses leading to final decisions.

The lower part of the Expanded Return on Asset Chart facilitates expense reduction decision making. Materials usage can be placed under increased scrutiny to reduce waste and overruns. Operating expenses (overhead) frequently provide a ripe area to find cutbacks. Information technology, travel, security, auditing, telecommunications and auditing are some of the many areas that can be trimmed. Many firms outsource some of the named functions and achieve significant savings.

Reducing Financing Costs

A valuable feature of the Expanded ROA Chart is the inclusion of the liability and equity side of the balance sheet in the diagram. A recession can present opportunities to refinance some of the firm's debt. Just as homeowners refinance their mortgages when interest rates decline, businesses refinance their mortgage loans and other long term debt with lower interest rates. High-yielding preferred stock can be repurchased and refinance with lower cost debt. Fixed assets can be sold and then leased back, thus freeing up large amount of cash. Lastly, common stock dividends can be reduced to save cash. Numerous firms would likely be reducing dividends at the same time, so the negative signaling associated with dividend cuts would be mitigated by the generally distressed economic conditions.

The concluding observation about economic downturns is that recessions do present opportunities to reduce the size of the business and the cost of doing business; however painful those actions may be. Just as the Expanded ROA Chart guides expansion and profit maximization strategies, it can also guide business contraction and profit preservation strategies.

Concluding Observations on Trouble-Shooting the ROA Chart

Again, the Expanded ROA Chart provides an "organization chart" of the Balance sheet and Income Statement. The ROA Chart splits into Asset Turnover and Profit Margin, just as the equations did. By working through the chart from left-to-right, the reasons for a declining ROA will eventually be found, and corrective actions can be focused on the problem areas. And we have seen the value of being able to find the most expeditious asset reductions and expense cuts during economic downturns. The finance training would be nearing a close at this point. A final, "put-it-all-together" exercise is needed to provide participants with an integrated perspective on their finance training.

The Closing Exercise Using the ROA Chart

As a final closing exercise, each participant is assigned the task making a presentation on the following items.

1. First, find yourself on the chart. Identify the assets you manage and the revenues and expenses you influence.
2. Using the ROA Chart, identify your personal impact on the company's ROA.
3. Describe a Profit Margin vs. Asset Turnover conflict that you have experienced.

Performance on Items 1 and 2 of the Assignment: Identifying Personal Impact on ROA

Most participants were comfortable in working through items 1 and 2. They found themselves on the chart with relative ease. They could identify the assets they managed and the expenses they controlled. Some early presenters needed guidance in tracingthemselves from right-to-left, all the way back to their personal contribution to ROA. Those who presented later learned from the early presenters and smoothed out their examples. One rule given to them which was good-naturedly but vigorously enforced by the group was that there was to be no “this is what we do in the ____ department” talk. This was a finance exercise, not show-and-tell.

Performance on Item 3 of their Assignment: Financial Tradeoff Analyses

It was understandably more difficult for some participants to extemporize in the area of financial management tradeoffs. Some of them were being asked to “speak finance”, a new language to them. Some of their presentations morphed into discussions of operational conflicts among different groups in the company, rather than financial tradeoff analyses. The discussions were polite and not personal, so they were allowed to run. And this is where team building began.

The Shift from Finance to Team Building

The training presenters and session observers concur that some of the participants’ efforts at describing profit margin-vs.-asset turnover tradeoffs were modest successes. The unplanned, unexpected team building that took place in the group was a much greater successes. The participants made sincere efforts at describing their profit margin vs. asset turn tradeoffs. Their team trust level had risen to the point that they were willing to discuss their tradeoffs without fear of conflict. The following are examples of their reports.

> **Issue 1:** Arose in a session with senior executives of a large electric utility company. The treasurer’s office had recently sent out a notice that no new lease could be entered into without the

approval of the treasurer's office. One participant was the manager of a large coal-fired power generating station. (Electric power station managers are not known to be timid people.) He chuckled and said, "Let me tell you something. I can sign for a trainload of coal, yet you're telling me I can't lease a copy machine? Look, man, I can order a mile of coal; don't tell me I can't order a copy machine!" There was always a "Finance Officer in Residence" at these sessions; this time it was an Assistant Treasurer. He quickly explained that the lease restriction was meant to prevent a capitalized lease from being entered into because a capitalized lease would be show up as long term debt on the balance sheet. He went on to explain that the company was already debt heavy and in danger of a bond down-grading. A bond down-grading is a dire financial event; costing multi-millions in future interest expenses and causing a significant decline in stock price. The power station manager's response was, "Well,why didn't you say so? I'll play team ball, just tell me the rules!" The group gave him some, "Yeah! Right-On's!"

Issue 2: Came from a corporate lobbyist, a jocular fellow who had taken his share of ribbing about his"soft" job, took his turn at presenting. He reported, "I led my team in lobbying hard for House Bill No. XXX, which passed. Our company is now allowed to
get a cash return on plant under construction. This generates $48M this year in additional revenues, with 10 more years coming. Any questions?" He drew a round of applause. The ribbing stopped.

Issue 3: A timid person stood and said that she was not sure how she fit in on the ROA chart; all she did was, "manage a desk and a computer." With some gentle prodding, she reported that the purchasing group she led bought several millions of dollars of hand tools and supplies per year. She led a study that decided to spend funds on software to evaluate large quantity purchase discounts offered by suppliers. She and her team found that many suppliers were not offering satisfactory quantity discounts, so changes were made in purchasing negotiations to obtain better terms for the company. It was a perfect example of a tradeoff; she spent a small amount of capital dollars for software assets and then used the software to cut the tools and supplies expense. The slowdown in asset turnover was well exceeded by the increase in profitability. She took a little bow when she received her cheers from the group.

Other Trade-Off Issues

From other presentations, the following conclusions appeared:

- Regarding Adequate Funding for Human Resources: “People turnover hurts profits [profit margin] and slows down productivity [asset turnover]. Let us help you hire, train and retain good people.”
- For Safety: “Pay us now, or pay THEM later. We are your preventive maintenance for human capital.”
- For Internal Auditing: “We make external audits smoother. We prevent fines and keep you out of court.”
- For Environmental Auditing:” We can review planned projects, spot problems and prevent costly delays.”

The common theme to the above four reports was: spend small dollars now (small hits to profit margin) to prevent big delays later (big hits to asset turnover). The participants were demonstrating that they had internalized the tradeoff logic and now had a better understanding of their financial linkages to other parts of the company.

Financial Tradeoff Analyses Led to Team Building

Each participant was guided toward successfully completing his/her assignment. Each understood how they affected the company’s Return on Assets. They learned that evaluating asset turnover vs. profit margin tradeoffs could resolve many conflicts in the company. *A team was built.*According to Don Hellreigel and John Slocum, the group became a team united toward the goal of accomplishing a better ROA. (Hellreigel and Slocum, p.321). In their text, they describe characteristics of effective teams as:

1. Knowing why the team exists and having shared goals.

2. Communicating freely among members.
3. Openly and constructively dealing with conflict.

Our participants exhibited all of the above characteristics. They formed a team to accomplish their training session assignments and, more importantly, gained a better understanding of their team memberships back at work. (Cummings, p.232, Schein,p.109) They had a chance to practice candid communication with team members as they dealt with operational conflicts and they had a mechanism to evaluate the tradeoffs. (Dyer, p.114) There were no prescribed "team building exercises" for them to complete. They had to evaluate urgent, real financial/operational tradeoffs and walk away still speaking to each other. Our participants went through a process described by Stewart, Manz and Sims of "forming, storming, norming and performing." They "formed" into a loosely-organized team, "stormed" through some disagreements, "normed" into a cohesive group, then "performed" very well at dealing with conflicts and tradeoffs. (Stewart, Manz and Sims, p. 82-86.)

Comparing Our Training Group Teams Characteristics to Numerous Authors' Lists of Team Characteristics

Other authors listed similar team characteristics.(Alexander, p. 377, Aranda, et. al., p.119, Brown and Harvey, p. 282, Luthans, p. 457, McKendall, p. 277). These and numerous other authors' characteristics of teams are arrayed in *Table 1: Team Characteristics*. The authors are named in the left column, and their proposed characteristics of a team are displayed in the large right column. The purpose of compiling the table was to note how the teams did display nearly all the team characteristics proposed by a large number of authors on the subject. It was not the purpose of this research to evaluate the relative merits of one author's list versus another author's list of team characteristics. Our research benefitted from all their works.

Comparative Checking of Team Characteristics

Check marks appear by those team characteristics that our program participants displayed while pursuing their group assignments. Our groups really did form and function as effective teams, as evidenced by the appearance of checks by nearly all the authors' named team characteristics. All but two of the table's team characteristics are checked. The perspective taken by the authors in placing check marks by the team characteristics was: noting team characteristics that were present in this short term training situation. There are some team characteristics noted in the table that build slowly over time; they could not occur in this two day executive development program. Examples are: time tables and membership stability. The teams formed in this program disbanded after two days. Their time table was denoted in a matter of hours, and the control process was to stand back and watch the surprising short amount of time they took to form into teams and work together in teams. We are confident that ourparticipants did, indeed, form teams as defined by a large group of published works on the subject that list effective team characteristics.

How the Financial Tradeoff Exercise Led to Team Building

Looking back on the group's planned and unplanned accomplishments gained from using the Expanded Return on Asset Chart, the exercise helped them form and function as teams. They faced a new assignment requiring the use of newly developed skills teamed up to help each other through their assignment. The participants' actions met nearly all of our cited authors' criteria for the building of a team. The team building experiences that occurred in this session were a welcome addition to the benefits of this training session. The trainers and company observers agreed that steps should be taken to keep and enhance the team building potential for future training sessions.

Future Plans for Combining Finance and Team Building

Future finance training sessions using the Expanded ROA Chart as a closing exercise will plan ample program time to allow team building to sprout and grow. The authors feel that the future table of contents handed out for this program should not formally list a team building session. We want the team building to emerge from its own energy. After the spontaneous emergence of the team atmosphere, a trainer skilled in team building techniques would then step in to enhance and solidify the team building benefits that had just occurred. He/she would ask the team to describe "what just went on here?" He/she would then lead the participants through a summary of how they had actually built a team as they used tradeoff analyses to work through conflicts. He would use classic team building techniques to teach them how to recognize and encourage team formation in work situations. In final parting comments he would urge them to remember how team building bloomed in their training session experience, and encourage them to keep the team spirit going in their work relationships.

Summary and Conclusion

This case study first presented the structure and content of a successful "Finance for the Non-Finance Executive" type workshop delivered numerous times in large electric utility firms. An essential tool used was the Expanded Return on Investment Chart. In the closing, integrative exercise of the workshop, participants were each required to use the chart to analyze a tradeoff analysis (profit margin versus asset turnover) they had encountered in their work. During the tradeoff analyses, active exchanges among the participants occurred as they began to learn how their section of the company was financially linked to other areas of the company. They learned that their return on asset optimization strategies had to consider tradeoffs with other sections of the company. Improvements to profit margin in one area might require damage to asset turnover in another. Their active exchanges, conducted in the framework of their tradeoff analysis training, led the participants to begin to function as a team focused on company-wide return. In the opinion of the trainers and observers, they became a functioning team focused on the common goal of improving return on investment.

The authors recognized the need to confirm their premise that teams had actually been formed. Comparisons between the participants' group behavior and the team characteristics appearing in *Table One* revealed that the participants had matched all but two of the team criteria listed in the lengthy table. The authors' premise was confirmed; finance training did lead to team building. They further recommend that future versions of the finance training workshops should include formal team building training immediately following the tradeoff analyses to capitalize upon the spontaneous emergence of the team atmosphere.

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Appendix

Trouble Shooting the Balance Sheet and the Income Statement

The trouble shooting/problem solving capabilities of the ROA Chart are particularly important to the participants. They must understand these techniques in order to deal with the operational and financial tradeoffs they will face in the session's closing exercise. A small set of examples will be explored here to demonstrate the techniques.

Finding the Problem

Suppose that a firm's ROA has been declining below acceptable standards and corrective action is required? *(Please refer to the chart.)* A good place to start is to analyze *Asset Turnover*. On the ROA chart, the Asset Turnover block opens up to show Sales divided by Assets. If Sales are known to be acceptable, then the search begins to determine which assets could be causing the slow turnover problem. (Brigham and Houston, p. 103)

Is the problem in Current Assets?

On the chart, the Assets block splits into Current Assets and Fixed Assets. In the Current Assets, the current assets most likely to cause problems are inventory and accounts receivable. The amount of inventory and the firm's ability to move the inventory are evaluated using calculations and benchmarks previously described. (Brigham and Houston, p. 103) If inventory levels are satisfactory, the next current asset to check is accounts receivable. If analysis indicates that receivables are taking too long to collect, a problem area has been identified. Excess receivables are non-earning assets that will are slow down asset turnover and reduce ROA. Managers would thus concentrate corrective efforts on accounts receivable. It logically and graphically follows that ROA will decline if funds become tied up in inventories, receivables or other current assets. The participants will work with other Current Assets appearing on the chart; we move on to an analysis of Fixed Assets.

Is the Problem in Fixed Assets?

The pattern for evaluating asset management has been established. If an asset turnover is low, the problem is either low sales or an abnormally high balance in the asset being reviewed. The pattern is applied to each of the fixed asset items (land, plant and equipment). If fixed asset turnover is low, there are excess balances in the fixed assets of plant and equipment (again, assuming sales levels are satisfactory). Firms are sometimes forced to sell off unused plant in order to improve their fixed asset turn. Recall that an improved turnover in any one asset improves turnover in total assets and thus leads to an improvement in ROA.

The Liabilities and Equity Side of the Expanded ROA Chart

The far right side of the chart depicts the Liabilities and Equity portion of the balance sheet, to complete the balance sheet diagram. The participants become familiar with forms of short and long term debt financing and types of equity financing. In the working sessions, the participants are shown the negative impacts on liabilities and equities caused by excess current and fixed assets. These non-earning assets must still be financed; they place stress on the firm's debt and equity financing capacity. The Asset Turnover portion of the chart is an "organization chart" of the balance sheet. Participants are more comfortable with this graphical display than with columns of numbers. The next big area on the Expanded ROA Chart is the *Profit Margin* area, which deals with the Income Statement. The Profit Margin and Income Statement appear on the lower portion of the chart.

Trouble-Shooting the Income Statement

Our analysis started with the problem of a declining ROA and determining which corrective actions were required. After trouble-shooting Asset Turnover, we now move down to the profit margin. Recall that the profit margin was found by dividing profits by sales and getting the per cent return on sales. The pattern here is; if the profit margin is low, either sales are down or expenses are up. An analysis of key expense items follows.

Is the problem in Cost of Goods Sold?

The expenses block on the chart opens up to show the typical expense items seen on the on the Income Statement. Labor and materials costs are the main ingredients in cost of goods sold. If production expenses are high, the company will have a lower profit margin and compare poorly with competitors in this category. Statistics are available that show benchmark labor and material costs for numerous industry categories.(http://moneycentral,msn.com. January 12, 2009).

What about overhead expenses?

To check overhead expenses, we look at the operating expenses and depreciation/amortization expenses on the chart. If operating expenses are increasing and getting out of line with industry benchmarks, significant problems exist. ROA is being damaged. High operating expenses (overhead) is a problem frequently encountered in firms experiencing a declining ROA. Small, high-tech firms often overlook controlling operating expenses in their pursuit of rapidly changing product technology.

Interest and Tax Expenses?

If the company is burdened with high interest rate debt, the damage to profit margin will appear on the chart. If the company is debt-heavy, the debt will appear on the liabilities side of the ROA Chart. Determining the level of debt financing and negotiating debt terms is the responsibility of the company’s finance team. Operating managers are not involved with the financing mix. Neither are they charged with the management of taxes, which is a highly specialized and continually changing area of accounting.