

ISSUES IN ACCOUNTING EDUCATION  
Vol. 21, No. 3  
August 2006  
pp. 313–321

# Aerospace Lighting, Inc. (ALI): Linking Business Strategy to Audit Planning

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**ABSTRACT:** Aerospace Lighting Inc. (ALI) is a supplier of cabin lighting systems to the aerospace industry. A recent change in ALI's ownership has prompted a change in the company's business strategy, as well as a change in the company's external auditors. As a member of the audit team, your assignment is to write a memo that identifies significant business risks facing ALI and elaborates on potential audit issues.

## INTRODUCTION

**A**erospace Lighting Inc. (ALI)—previously a private company based in Chicago—has been a leading supplier of airplane cabin lighting systems for nearly ten years. Until recently, ALI had been satisfied with its profits and had sold all its products to Bombardier, a major aerospace company in Canada. This comfortable position began to change in 2003, when a large publicly traded German company (BmG) acquired 100 percent of ALI.

For ALI, the transition from a private, independent company to a subsidiary of a public conglomerate has not been an easy one. Before the takeover, ALI's management was afforded the luxury of making decisions and taking risks that affected only one owner. Being just one arm of a much larger international company, however, now requires ALI to satisfy more than its own personnel. Members of BmG's executive team dominate ALI's board of directors. These individuals have been very critical of ALI's management, particularly in the area of financial performance. Beginning with the first board meeting in 2003, the German executive team has scrutinized ALI's operating results and has never hesitated to remind ALI management that BmG views ALI as an investment that is evaluated based on its return to BmG stockholders. BmG does not tolerate any failures to meet financial targets, and is willing to replace entire management teams if required. BmG's executives take very seriously the "Financial Handbook" that they establish each year to communicate the parent company's financial principles, including equity and capital borrowing guidelines, monthly reporting requirements, and profit expectations.

Since the acquisition, ALI has been pursuing a rapid expansion strategy. The German parent company directed ALI to enter the U.S. aerospace supply industry in 2004, and quickly increase the number of U.S. contracts on which it bid, with the goal of increasing

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The authors are grateful to Doug Kalesnikoff, Jasmine Tseng, the associate editor, and two anonymous reviewers for comments on previous drafts of this manuscript. This case was awarded first prize in the 2005 Canadian Academic Accounting Association Case Writing Competition. Professor Phillips is grateful for financial support provided by the George C. Baxter Chartered Accountants of Saskatchewan Scholarship.

its revenues by 50 percent in 2005. To reach this goal, ALI adopted a strategy of submitting bid prices to U.S. manufacturers that, after adjusting for exchange rates, are approximately 20 percent lower than the prices ALI charges to Bombardier. This strategy has been successful so far, as ALI now has several large contracts with Boeing, Lockheed Martin, and Raytheon—the largest aerospace manufacturers in the U.S. ALI has already begun preparing to work on these contracts, having accumulated a significant quantity of raw materials inventory to use in producing goods for Boeing, Lockheed Martin, and Raytheon, as well as Bombardier.

ALI's management team has not discussed its new strategy with its board because management believes BmG is interested in financial results rather than the means by which they are achieved. ALI's management team also wants to keep this strategy quiet because if Bombardier's executives were to hear about it, they would likely discontinue their relationship with ALI or immediately demand a lower price, as well as insist on a refund of any excess prices charged in previous years.

Just last week, on June 29, 2005, your firm's German affiliate was appointed worldwide audit services provider for BmG's July 31, 2005 year-end. Another firm had provided audit services for BmG and all its subsidiaries in the previous year, but BmG's executive team was dissatisfied with the auditors' inability to identify significant business risks that they believed should have been brought to their attention. Your firm's office in Munich asked your Chicago office to perform the audit of ALI for its year ended July 31, 2005, and to provide your audit working papers to the Munich office by September 5, 2005. Because BmG's stock is not traded on a U.S. exchange, the company and its subsidiaries are not subject to the provisions of the Sarbanes-Oxley Act of 2002.

A recently promoted partner in your Chicago office has been assigned the responsibility for the 2005 ALI audit. She has communicated with ALI's predecessor auditor and has provided you with the notes from her review of the predecessor's working papers (see Exhibit 1). She also has obtained information from preliminary discussions with ALI's CFO

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#### EXHIBIT 1

##### Notes from Review of Predecessor Auditor's Working Papers

1. Boeing, Lockheed Martin, and Raytheon have jointly formed several policies aimed at reducing their overhead costs. One policy is that they will not respond to confirmation requests from external auditors. Another policy is that they generate a single check for each supplier every 20 to 55 days for the outstanding balance recorded at the payment date. The payment cycle period for each supplier varies, depending on its status as a preferred-A or preferred-B supplier. ALI is currently a preferred-B supplier to the U.S. companies, so it is paid every 55 days. The U.S. aerospace manufacturers also have begun expecting reductions in bid prices from suppliers as the suppliers gain experience with their production processes. Bombardier has not yet adopted policies such as these, but is expected to do so by 2007.
  2. In November 2003, ALI acquired a 47% equity interest in GlueCo for \$5 million. ALI's financial statements for the 2004 fiscal year disclosed that GlueCo was accounted for using the equity method, but ALI's management contended that they did not exert significant influence and, consequently, did not report their share of GlueCo's loss of \$1.4 million in 2004. A loss of a similar amount is expected for 2005. The audit opinion in 2004 was not qualified for this issue.
  3. On February 8, 2004, a manufacturing plant leased by ALI in Milwaukee was lost in a fire. ALI filed with its insurance company, claiming total damages of \$6.8 million. As of July 31, 2004, ALI had recorded a \$3.0 million receivable that was included in other current assets. This amount comprised the net book value of previous plant assets of \$1.7 million, plus an accrual for business interruption insurance of \$1.3 million. The predecessor auditor confirmed the details of the claim with one of ALI's external attorneys.
  4. ALI disclosed its economic dependence on Bombardier in the 2004 financial statement notes.
  5. The predecessor auditor had set materiality at \$1.1 million.
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(see Exhibit 2). The partner has asked you—as an audit senior—to prepare a memo discussing the important audit issues and any other matters she should consider regarding the upcoming year-end engagement. She reminds you that she is required to obtain second partner approval of audit plans developed for high-risk client engagements. She expects your memo will help her to (1) assess whether ALI should be considered a high-risk engagement, (2) justify that assessment to other partners in the firm, and (3) outline what will be required of you and other members of the audit team to ensure the firm meets the high expectations that BmG has for its auditors.

### REQUIREMENTS

Prepare a memo that addresses the following issues and their impact on ALI's financial statements and/or the audit plan:

- a. Client Business Risks
- b. Auditor Business Risk
- c. Audit Risks (including inherent and control risk)

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#### EXHIBIT 2

##### Notes from Discussion with ALI's CFO

1. With ALI's success in bidding on contracts with the big aerospace manufacturers in the U.S., ALI is projecting a 55% increase in sales revenue, from \$99 million in fiscal 2004 to \$152 million in 2005. The majority of this increase has come from sales to the U.S. aerospace companies, which in 2005 comprise one-third of total revenues. In 2004, sales to these companies were less than 1% of total revenues. The increased sales volume will increase gross profit from \$21.5 million in 2004 to a projected \$23.0 million in 2005. Although ALI's gross profit percentage on Bombardier sales has remained steady at 22%, the U.S. contracts are projected to cause the overall margin to fall from 22% in 2004 to a projected 15% in 2005.
  2. During the 2005 fiscal year, ALI's insurance company offered \$5.1 million for the claim regarding the fire at the Milwaukee plant. Of this amount, ALI received \$1.3 million. The CFO claims that ALI will not accept the insurance company's offer, arguing that ALI deserves full compensation. ALI plans to report the \$5.5 million difference between its total claim and the amount received at year-end as a receivable in other current assets.
  3. All of ALI's bid submissions and sales transactions with Boeing, Lockheed Martin, and Raytheon are now being processed through Exostar—an electronic independent trading exchange (ITX). This business-to-business website was started by the three largest U.S. aerospace companies to enhance their ability to transact with suppliers and customers, and also to share data about their own production costs. Exostar is now soliciting aerospace companies from other countries to participate in the ITX so that it can truly become a global hub for all aerospace transactions. It has been rumored that the U.K.'s BAE Systems and Canada's Bombardier are currently talking with Exostar about joining the ITX later this summer. Industry experts fully expect these companies will join soon because ITXs in other related industries have grown rapidly and yielded significant cost savings for many of their participants. Presently, it appears that ALI's auditors will not be allowed to directly examine Exostar's accounting system.
  4. ALI has a variety of debt agreements, many of which require the company to meet certain debt covenant ratios. The most binding of these requirements is for a minimum current ratio of 1.5:1 on the audited financial statements for fiscal years ending July 31. Had this covenant been applied to ALI's unaudited financial statements at June 30, 2005, it would have been breached.
  5. BmG has instituted a performance pay plan for its subsidiaries in 2005. The plan grants BmG stock options to executives of BmG's subsidiaries that meet or exceed the expectations established in BmG's "Financial Handbook."
  6. ALI's CFO estimates that the company's 2005 year-end financial statements will report approximately \$10 million in net income before tax, \$100 million of total assets, of which \$30 million will be current, and \$19 million in current liabilities.
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- d. Materiality
- e. Specific Accounting and Other Audit Issues

Bear in mind that the partner on this engagement is also responsible for many other client engagements. Consequently, while you should endeavor to be direct and succinct in your memo (limiting it to no more than four single-spaced pages), you should avoid assuming that the partner will fully recall all relevant facts or that she will immediately recognize all important implications of those facts. In short, be sure to describe the specific facts that you consider relevant and explain the implications for the ALI engagement. Because the contents of your memo will form the basis of discussions that the partner is likely to have with other partners in the firm, make sure that you clearly identify any specific information that your partner should consider sensitive.

## CASE LEARNING OBJECTIVES AND IMPLEMENTATION GUIDANCE

### Overview and Objectives

Aerospace Lighting, Inc. (ALI)—a U.S. subsidiary of a large publicly traded German company—supplies airplane cabin lighting systems to the North American aerospace industry. The instructional setting requires the student to prepare a memo to the local engagement partner to discuss important audit issues regarding the upcoming year-end engagement. The case alludes to a few risk factors that are crucially important to the audit, but that are not immediately obvious based on a superficial analysis. These and other relevant risk factors seeded in the case are detailed in the Teaching Notes.<sup>1</sup>

The case has two primary objectives. The first is for students to gain practice with recognizing audit issues that can arise on an engagement. The wide range of issues in the case—both obvious and subtle—challenges students to consider how client circumstances affect financial statements and the audit. The second objective is to give students practice in organizing and linking issues together when planning an audit. In particular, we believe the case is an effective vehicle for demonstrating how a client's business strategy can exert a significant impact on audit planning. Students discover this relationship by considering how a change in the client's business strategy affects its relationship with its largest customer, and can have cascading implications for other business relationships, which can then have implications for financial reporting. By learning to link the ramifications of one issue to another, students discover the significance of a client's business strategy to financial statement audit planning.

To successfully address the case requirements, students must demonstrate the following abilities:

- Identify engagement factors affecting client business risk, auditor business risk, inherent risk, control risk, and detection risk.
- Formulate an audit strategy that reflects the risk factors suggested in the case.
- Identify specific accounting and audit issues that need to be addressed on the engagement.
- Organize observations in an informative and comprehensive manner to respond to the engagement partner's request.

### Implementation Guidance

The case is best used to illustrate topics relating to audit planning and risk. In particular, its business environment perspective makes the case an ideal complement to the topic of the "strategic systems" audit approach. Alternatively, the numerous risk factors embedded in the case also make it appropriate for demonstrating the judgment involved in applying the audit risk model. The case also includes opportunities for addressing other audit topics, such as materiality and audit testing, but they are not central to the case and could be omitted if an instructor wished to do so. The case includes several financial reporting issues, which most students should have been exposed to in an intermediate financial accounting course, so little "outside" preparation is required to complete the case analysis.

This case has been used by the authors in two ways. First, we used the case as an exam question in a graduate-level auditing course. For students at this level, the topic coverage and difficulty level was well suited for using the case as a mid-term exam. To test these graduate students' ability to properly structure a memo, we substituted the detailed

<sup>1</sup> The case is based on field research involving an actual company, but we have disguised the company name and industry to preserve anonymity.

case requirements with a simple statement to “prepare the memo.” We allowed 72 minutes for students to read the case and complete their written responses. Although we have not used the case as an exam with undergraduate students, we believe it would be suitable for use in a final exam, particularly if the detailed case requirements were presented. Instructors who use the case as an exam with undergraduate students should consider removing the page limit and providing more time for reading and analyzing the case. Our graduate-level students found the 72 minutes minimally adequate; 90 minutes would have been comfortable for them and likely would be the minimally adequate time for undergraduates. To guide assessment of student responses, we developed a point-based grading key, which is attached to the teaching notes for instructor use.<sup>2</sup> A model solution, which elaborates on the grading key, is attached as a second appendix to the Teaching Notes.

The second way the case has been used by the authors is as an assigned in-class discussion case. We have used it in this manner on three separate occasions in a graduate-level auditing class when discussing the significance of a client’s business strategy to financial statement audit planning. Once again, the instructions for students at this level were nondirective: “Be prepared to discuss the case.” When discussing the case with undergraduate students, instructors might prefer to assign the detailed requirements included with the case. Alternatively, instructors might assign some of the specific discussion questions listed below, which we prefer to use (in a graduate-level class) as in-class discussion prompts.

### *In-Class Discussion*

For in-class use, students should be advised to prepare for class by studying the case background and creating notes to prompt their class comments. For a 75-minute class session, time should be allocated approximately as follows across the various components:

- 5 minutes to review the broad case setting and “case facts”
- 15 minutes to discuss ALI’s relationship with BmG and the effects on ALI’s business strategy
- 10 minutes to discuss general engagement issues
- 15 minutes to discuss inherent, control, and detection risks
- 5 minutes to discuss specific audit strategy issues
- 15 minutes to discuss specific audit and performance measurement issues
- 10 minutes to summarize and wrap-up

The above time allocation is certainly flexible, and will vary depending on how well students identify and analyze particular issues.

To initiate and sustain discussion, we recommend using the following questions as in-class discussion prompts. Answers to each of the prompts are provided in the Teaching Notes.

- 5 minutes to review the broad case setting and “facts”
  - What is ALI’s history?
  - What does it produce?
  - For whom were these products made in the past? For whom are they made now?

<sup>2</sup> Given the exam time constraints, we did not expect students to include every single point listed in the grading key in order to earn a “perfect” score. Rather, the maximum score was determined as that earned by the student who achieved the greatest number of points (30 in the year we used the case as an exam). All other students were evaluated relative to this benchmark.

- Do you get the feeling that ALI was a comfortable or uncomfortable work environment in the past? Does it seem like a comfortable work environment now?
- 15 minutes to discuss ALI's relationship with BmG and the effects on ALI's business strategy
  - How has ALI's corporate climate changed with BmG as its new owner?
    - How should the new "tone at the top" affect your audit-planning judgments and decisions?
    - How has the new corporate climate affected ALI's business strategy?
    - What has ALI done tactically to implement its new business strategy?
      - Has it been effective in increasing sales and profits?
      - Is the new pricing policy sustainable?
      - Why do you, as ALI's financial statement auditor, care whether the pricing policy is sustainable?
      - Which customer is responsible for the majority of ALI's gross profit dollars? Is there anything in the future that might jeopardize ALI's relationship with this customer?
    - What ethical issues have arisen for ALI since being acquired by BmG?
- 10 minutes to discuss general engagement issues
  - Who is your firm's audit client? Who has oversight responsibility for the financial reporting process? Does knowing this change your firm's reporting responsibilities?
  - Of what significance is the statement that ALI has not reported its new pricing policy to BmG? If BmG executives discovered that your firm possessed this information but did not share it with BmG, would they be pleased with the manner in which you handled the audit results?
  - This is a first-time audit for our firm. What is the significance of how we came to be appointed auditors?
- 15 minutes to discuss inherent, control, and detection risks
  - Would the ALI audit be considered a high- or low-risk engagement? What specific factors influence your judgment?
  - What should be your response to these risks? Are there any factors that might constrain your ability to respond to these risks?
- 5 minutes to discuss specific audit strategy issues
  - For sales transactions, would you recommend using an audit approach that is primarily substantive or one that combines substantive with tests of controls?
  - Through what system are ALI's sales transactions being processed? How can we obtain adequate audit evidence if our firm is not granted access to that system?
  - What quantitative and qualitative factors should the auditors take into account when estimating materiality?
  - Although ALI is not subject to the provisions of SOX, speculate about how the requirement to report under Section 404 of SOX might influence your firm's audit strategy and procedures.
- 15 minutes to discuss specific audit and performance measurement issues
  - In our experience, these issues are easily identified and require little prompting. The issues are elaborated in the appendixes to the teaching notes.
- 10 minutes to summarize and wrap-up
  - What was the most significant risk factor for the audit? Was this driven by changes in financial reporting policies or by changes in the client's business environment?

## Experiential Feedback

When used either as an exam question or as an in-class discussion case, we have found students to be enthusiastic about the case and the rich audit issues it presents. Students typically identify the specific audit and financial reporting issues, but often need coaching to recognize the implications of the affiliation with BmG, the threat posed by ALI's new bidding strategy, and the impact of the possible move to the electronic ITX. Once students "see" this big picture, they are usually then able to appreciate the rich and complex setting for this seemingly simple engagement. Students' anecdotal feedback on the case has been extremely positive. Comments consistently focus on the importance of understanding the client's business environment in order to consider all the risks present in an engagement. It seemed clear from our experience that students came away from the case with an awareness that truly understanding a client's business strategy and operating environment was as important as understanding their clients' financial reporting policies.

More systematic feedback was obtained from a colleague who assigned the case for class discussion approximately 35 percent of the way through his graduate-level auditing class. The colleague asked his 63 students to use five-point, Likert-type scales to indicate their extent of agreement with three statements about the significance of a client's business strategy to financial statement audit planning. Students evaluated the statements the day before the case was discussed in class and again immediately after the case was discussed. A fourth statement was included in the post-case questionnaire to allow students to indicate their specific impressions of the ALI case.

Table 1 displays mean responses from the 50 students who responded to both the before- and after-case questionnaires.<sup>3</sup> The data for the first statement suggest that, on

**TABLE 1**  
Mean Pre- and Post-Case Ratings

Statements	Pre-Case Rating	Post-Case Rating
Understanding an audit client's business strategy is essential for performing an effective audit.	4.38	4.62
External auditors should focus more on the risk of errors in judgment and application of GAAP than on the risk of poor strategic business decisions made by a client.	3.62	2.80
Risks arising from a change in a client's business strategy are important in the long run, but they are unlikely to create audit risks of the current period.	1.96	1.84
The ALI case enhanced my understanding of how strategic business risks affect the risk of material misstatement.	NA	4.04

In response to questionnaires given both before and after the case was discussed in class, students indicated their extent of agreement with the above statements, using the following scale: 1 = strongly disagree, 2 = disagree, 3 = neutral, 4 = agree, 5 = strongly agree.

<sup>3</sup> To preserve anonymity but still allow matching the pre- and post-case questionnaires, students were asked to include a personally relevant but otherwise meaningless identification number on both questionnaires. Unfortunately, only 50 students provided identification numbers that could be matched. The results reported above use responses from these 50 students; independent samples t-tests conducted using all responses yielded similar results.



average, our graduate-level students had a fairly strong appreciation for the need to understand a client's business strategy before the ALI case was discussed (mean rating of 4.38 out of 5). Despite this high baseline, students' appreciation for a client's business strategy increased after the ALI case was discussed (mean rating of 4.62) (paired samples  $t = 2.87$ , two-tailed  $p = 0.006$ ). Responses to the second statement, which used negative wording, similarly indicated that students saw a greater need for auditors to consider a client's strategic business decisions. Specifically, after the case was discussed, students were not as inclined to agree with the statement that auditors should focus on the risks of error in judgment and application of GAAP rather than risks relating to a client's poor strategic business decisions (3.62 versus 2.80,  $t = -6.31$ ,  $p < 0.001$ ). Responses to the third statement again showed slightly greater appreciation for business strategy after discussing the case; students were somewhat more inclined to disagree with the view that business strategy creates long-run rather than short-run audit risks (1.96 versus 1.84), although this shift was not statistically significant ( $t = -1.10$ , two-tailed  $p = 0.278$ ).

The average rating for the fourth statement, included only in the post-case questionnaire, suggested that students recognized that the ALI case influenced their beliefs about business strategy; the average rating (4.04) did not differ statistically from the point of the scale indicating "agreement" with the statement, "The ALI case enhanced my understanding of how strategic business risks affect the risk of material misstatement" ( $t = 0.362$ ,  $p = 0.719$ ). These data suggest that the case can be used successfully by instructors who have not been immersed in its development and writing.

### TEACHING NOTES

Teaching notes are available only to full-member subscribers to the *Issues in Accounting Education* through the American Accounting Association's electronic publications system at <http://aaahq.org/ic/browse.htm>. Full-member subscribers should use their personalized usernames and passwords for entry into the system where the Teaching Notes can be reviewed and printed.

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