CPA
CHARTERED
PROFESSIONAL
ACCOUNTANTS
CANADA

CPA Common Final Examination

BOARD OF EXAMINERS' REPORT

PART A — The Day 2 and Day 3 Report

September 2016 Examination

CPA EVALUATIONS

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THE BOARD OF EXAMINERS' REPORT ON THE COMMON FINAL EXAMINATION

OBJECTIVES OF THE REPORT

The objective of this report is to explain the Common Final Examination (CFE) process and to assist the profession in improving the performance of candidates on the CFE.

The report sets out the responsibilities of the Board of Examiners, the methods used for guide setting and marking the CFE, and the results of the marking process. The report also includes recommendations to candidates from the Board of Examiners.

The September 2016 CFE Report is presented in two parts: Part A is the Day 2 and Day 3 Report and Part B is the Day 1 report.

The appendices provide more detailed information on the design, guide setting, and marking of the CFE, as well as the board's expectations of candidates on the simulations. Readers are cautioned that the marking guides were developed for the entry-level candidate and that, therefore, all the complexities of a real-life situation may not be fully reflected in the content. The CFE report is not an authoritative source of GAAP.

RESPONSIBILITIES OF THE BOARD OF EXAMINERS

The Board of Examiners (the board) comprises a chair, a vice-chair, and sixteen members appointed by the provincial bodies.

The board's responsibilities, as set out in its terms of reference, include the following:

- Setting the CFE in accordance with the *Chartered Professional Accountant Competency Map* (the *Map*) and other directions from the Professional Education Management Committee;
- Submitting the CFE and the marking guides to the provincial bodies for review;
- Marking the candidates' responses and recommending to the provincial bodies the pass or fail standing that should be given to each candidate; and
- Reporting annually on the CFE to various CPA committees and the provincial bodies, in such form and detail and at such time as is satisfactory to them.

The chair is responsible for the supervision of the evaluation process. A CFE subcommittee is actively involved in the preparation of the CFE simulations, the preparation of marking guides, and the setting of the passing profile. The full board is responsible for determining the passing standard.

THE CFE

Preparation and Structure of the CFE

The board staff works in conjunction with authors to ensure that simulations achieve the overall intent and design objectives of the board while adhering to the competencies and the proficiency levels specified in the *Map*.

The CFE subcommittee of the board provides guidance as to the content and nature of simulations to be included on the examination. It also reviews and refines these simulations to make up the three-paper evaluation set.

Nature of the Simulations

The CFE comprises a set of simulations that are both essential and effective in evaluating the candidates with regard to their readiness to be a CPA:

Day 1 – The first paper is a four-hour examination consisting of a single simulation that is linked to the Capstone 1 group case. There are two versions of the linked cases. Version 1 is presented to first time writers and version 2 is presented to repeaters and candidates who deferred.

Day 2 – The second paper is a five-hour case, with four different roles and requirements. Additional information tailored to each role is provided in four separate appendices.

Day 3 – The third paper consists of three multi-competency area simulations.

Assessment Opportunities

The board applies competency-based marking procedures that enable it to decide which candidates demonstrate readiness to enter the profession.

Assessment Opportunities are designed to answer the question, "What would a competent CPA do in these circumstances?" To attain a pass standing, candidates must address the issues in the simulations that are considered significant.

Appendix A contains a comprehensive description of the evaluation process.

Marking Guides

Marking centre leaders and assistant leaders provide valuable input during the testing and setting of the marking guides, before live marking begins. The board chair, vice-chair, selected board member(s) and senior evaluations staff hold meetings with the leaders and their assistants during both the guide-setting and the marking processes. See **Appendix B** for the Day 1 simulations that appeared on the 2016 CFE and **Appendix C and D** for the Day 2 and Day 3 simulations and marking guides. The marking results for Day 2 and Day 3, by Assessment Opportunity, appear in

the statistical reports found in **Appendix F** of this report See Part B of the CFE Report for details on Day 1, CHEI version 1 and version 2.

Day 1 – The marking guide is designed to assess the candidate on the stages of the CPA Way: 1) situational analysis; 2) analysis of the major issues; 3) conclusions and advice; and 4) communication. Based on these four summative assessments, the candidate's response is then holistically judged to be either a passing or a failing response.

Day 2 and Day 3 – Marking guides are prepared for each simulation. Besides identifying the Assessment Opportunities, each marking guide includes carefully defined levels of performance to assist markers in evaluating a candidate's competence relative to the expectations set out by the board when developing the passing profile for a competent CPA.

Five categories of performance are given for each Assessment Opportunity. The candidate's performance must be ranked in one of the five categories:

- Not Addressed
- Nominal Competence
- Reaching Competence
- Competent
- Competent with Distinction

Setting the Passing Standard

The board chair and vice-chair participate in the monitoring of live marking. Near the completion of the marking process, the CFE subcommittee satisfies itself that the markers applied the marking guides as intended by the board.

In determining which candidates pass the CFE, a passing profile is developed by the CFE subcommittee of the board. A candidate is judged in relation to these pre-established expectations of an entry-level chartered professional accountant. The passing profile decisions are ratified by the full board. In setting the passing profile, the board considers the following:

- The competency area requirements described in the *Map*
- The level of difficulty of each simulation
- The level of difficulty of each assessment opportunity
- The design and application of the marking guides
- Comments from leaders and assistant leaders regarding any marking difficulties encountered or any time constraints noted
- Possible ambiguity of wording or of translation- Input on critical decision factors from an independent board of three CPAs who review the fair pass package

The Decision Model

The purpose of the CFE is to assess whether candidates possess the competencies required of an entry-level CPA through a written evaluation that is common to all CPAs. Each day of the CFE is unique and is designed specifically to assess different skills:

- Day 1 is linked to the Capstone 1 group case work. It assesses the candidates' ability to demonstrate professional skills. It is independent from Day 2 and Day 3.

- Day 2 is the **depth** test. It assesses technical **depth** in one of four unique roles (that reflect the four CPA elective choices) and provides **depth** opportunities in the common core competency areas of Financial Reporting and/or Management Accounting. Candidates pre-select one role and respond from that role's perspective.

- Day 3 supplements the **depth** test in the common core areas of Financial Reporting and/or Management Accounting. It is also the **breadth** test for all common core competency areas.

Candidates must pass all three days in order to qualify for entry to the profession.

Day 1

Day 1 is assessed independently from Day 2 and Day 3. A pass or fail decision is made based on a holistic assessment of the candidates' performance in applying the CPA Way to demonstrate essential professional skills.

Day 2 and Day 3

The decision model used by the board is presented in Exhibit I. Four key decision points, or levels, are applied in reaching a pass or fail decision, as follows:

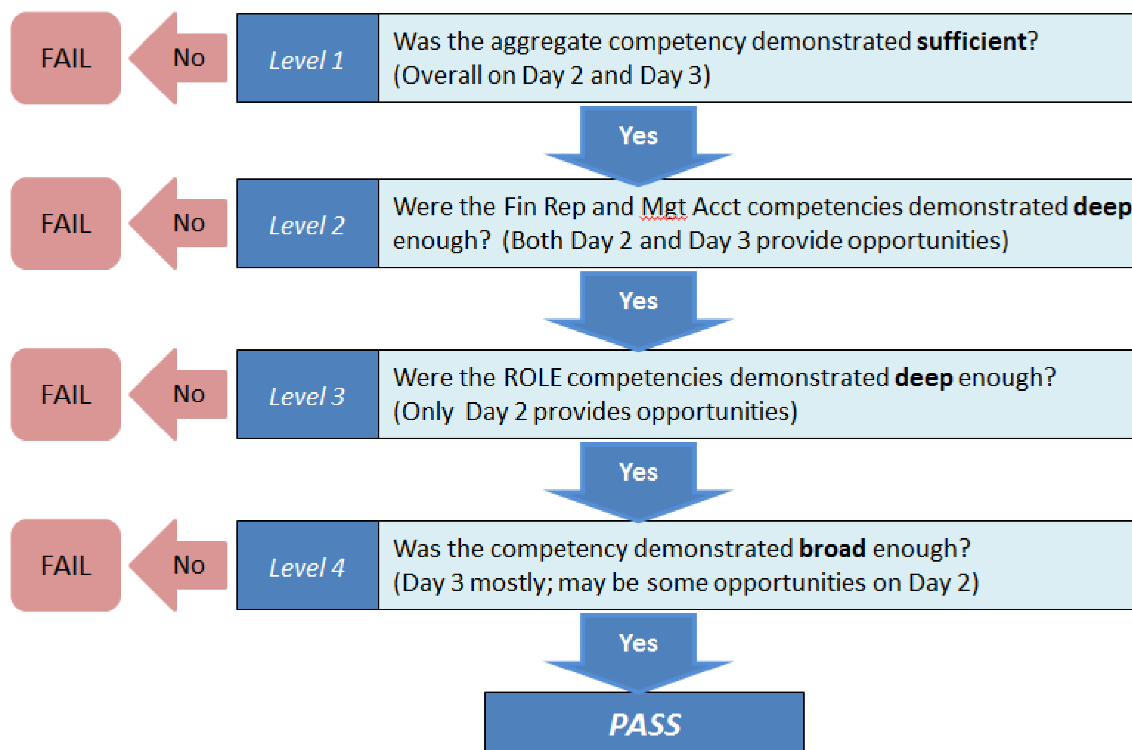
1. The response must be **sufficient**; i.e., the candidate must demonstrate competence in the Assessment Opportunities presented on Day 2 and Day 3 (Level 1).

2. The response must demonstrate **depth** in the common core area of Financial Accounting or Management Accounting (Level 2).

3. The response must demonstrate **depth** in the pre-selected elective role (Level 3).

4. The response must demonstrate **breadth** across all competency areas of the *Map*, at a core level, by not having avoided a particular technical competency area (Level 4).

EXHIBIT I
DAY 2 AND 3 PASS/FAIL ASSESSMENT MODEL



Approving the Results

The CFE subcommittee reviews and approves the marking results for each simulation. Day 1 is assessed separately from Day 2 and Day 3.

Day 1 – The CFE subcommittee discusses the profiles for both the marginally passing and marginally failing candidates to confirm that the board's pre-established passing profile has been appropriately applied by the markers.

Day 2 and Day 3 – As part of the development process, the CFE subcommittee sets preliminary requirements for the three levels (tests of depth and breadth) being assessed on the Day 2 and Day 3 simulations. After the marking is completed, the board reviews and finalizes those requirements. The board establishes the Level 1 (sufficiency) requirement for the combined Day 2 and Day 3 simulations.

During the approval process, the board continues to consider whether the results could be affected by any inconsistency in the evaluation or the board's processes.

Reporting

In reaching its decision, the board determines which candidates pass on a national basis only, without regard to provincial origin or language. Similarly, the detailed comments are based on analyses of the performance of all candidates.

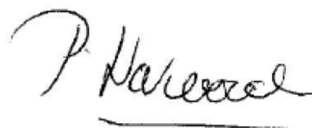
The board reports the following information by candidate number:

- Overall pass/fail standing and pass/fail standing for each of Day 1 and of Day 2 and Day 3 combined.
- A pass/fail standing for Day 1.
- A pass/fail standing for Level 1, Sufficiency.
- A pass/fail standing for Level 2, Depth in Financial Reporting and/or Management Accounting.
- A pass/fail standing for Level 3, Depth in role.
- A pass/fail standing for Level 4, Breadth in all technical competency areas.

Thank You

All board members wish to express their warm and sincere appreciation for the outstanding energy, support, and commitment of the small group of Board of Examiners staff members whose dedication and talent contributed in large measure to the achievement of our objectives and the fulfilment of our responsibilities.

We also wish to acknowledge the contributions made by the provincial reviewers, markers, authors, translators, and editors. The commitment, energy, and skill demonstrated by all the markers were outstanding, resulting in the sound application of marking procedures and producing an appropriate evaluation of the candidates. Everyone's commitment to the quality and fairness of the process is appreciated.



Peter Norwood, FCPA, FCA, FCMA
Chair
Board of Examiners

A MESSAGE TO CANDIDATES

To attain a pass standing, candidates needed to achieve a "Pass" on Day 1 and, on Day 2 and Day 3 combined, demonstrate sufficient competence in all areas plus meet the two depth standards and the breadth standards.

INTRODUCTION

The September 2016 CFE Report presents detailed information on candidates' performance for all the examination cases, except for PRI, the Day 1 linked case, Version 1. Commentary on the performance of candidates on Day 1 (PRI Version 1) is provided in a summary format only in this message to candidates, since detailed commentary on PRI will only be provided after Version 2 is written in September 2017. The simulations, marking guides, marking results, and Board of Examiners' comments on Day 2 and 3 of the examination are found in this document (Part A of the CFE Report). Similar information on Day 1 (CHEI version 1 and version 2) can be found in Part B of the CFE Report.

The intent of this message is to highlight common areas of deficiency and to offer advice from the BOE to help candidates understand how to improve their performance on the CFE.

Nature of the CFE

The design of the CFE is such that each day of the examination allows candidates to demonstrate a different skill set. Day 1 allows candidates to demonstrate their high-level professional skills, such as critical analysis, decision-making, and professional judgment, as well as communication. Day 2 allows candidates to demonstrate their technical competence in the common Financial Reporting and Management Accounting competencies and in their chosen role, which ties to one of the four elective areas. Day 2 clearly directs candidates to the work to be done and is not designed to be time constrained, allowing candidates to demonstrate depth. Day 3 allows candidates to demonstrate depth in the common core Financial Reporting and Management Accounting competencies and provides multiple opportunities to demonstrate breadth in all the technical competency areas. Day 3 is less directive and more integrative than Day 2. It is also time constrained, requiring candidates to prioritize their time per issue.

Specific Strengths and Weaknesses

Communication

A majority of candidates communicated clearly and professionally. For the most part, candidates' responses were well organized, with a logical flow. This was a notable improvement from the May 2016 CFE. However, the BOE still found that some responses were unclear, often due to the use of extreme point-form or an exceptional number of typographical errors, which made it difficult to interpret the meaning and intention of what was written.

The BOE also noted that there were candidates who merely repeated the case facts, with no further explanation as to why each fact was listed. This was typically done in point form. Other times it was the opposite issue: candidates quoted (copied and pasted) the *Handbook* or Income Tax Act and drew a conclusion without applying the criteria to the case facts at hand.

For the most part, candidates' quantitative analyses were well organized, with a logical flow. However, as was mentioned for the May 2016 and Sept 2015 examinations, some candidates still did not always explain the details of their calculations, making it hard to know what assumptions they used or how they arrived at their figures. For example, on Day 2, Performance Management role, most candidates understood the need to consider opportunity costs; however, it was not always clear what figures they included in their calculation of those costs (e.g., just steel tanks or a mix). On Day 3, the same issue was noticed with the required Management Accounting calculations on Simulation 1, where it was not always clear what costs were being treated as one-time costs versus annual costs. Candidates did not always explain their calculation, making it sometimes difficult to understand what they were attempting to do.

Candidates are reminded that they need to clearly explain their train of thought to demonstrate competence. It is not sufficient to state a correct conclusion. The Board is interested in seeing and understanding a candidate's logic and wants to see evidence of the analysis and professional judgment that has been applied.

Time Management

The Board noted time management issues on Day 3 of the September 2016 CFE. Time was better managed on the Day 1 and Day 2 simulations, which are not designed to be time constrained.

Although neither of the Day 1 simulations on the Sept 2016 CFE (CHEI Version 2 and PRI Version 1) were time constrained in their design, some time management issues were still evident. Some candidates spent an inordinate amount of time doing a full situational analysis, rather than simply addressing the changes that were relevant based on the case facts presented. Others spent too much time analyzing one of the issues presented, to the detriment of the others. On Version 2, some candidates also spent a lot of time retyping CHEI financial statements into the spreadsheet to determine year-over-year changes or to calculate ratios, rather than simply calculating the ratios.

Some candidates in the Day 2 Performance Management and Finance roles spent too much time analyzing the common financial reporting issues; however, the number of candidates who did so was far less than on previous examinations.

Some Day 2 Finance candidates spent too much time on the ratio analysis and interpretation. This may have been due to their greater comfort level with the topic. There is always a risk of spending too much time on any one required. It can hurt performance on another required. Allocating sufficient time to all of the requireds, while still ranking the importance of the issues, is essential to ensuring that overall performance on the simulation is not affected. Judgment is required in determining how much evidence to provide to demonstrate competence. Sufficient, but not excessive, depth must be demonstrated. It is likely that some of the extra time spent on these discussions by candidates would have been better spent addressing the other requireds.

The Board reminds candidates in all roles to take into account the need to cover several requireds. Day 2 in particular is designed to allow time for filtering information and planning the response. Candidates are encouraged to manage the time provided to give themselves sufficient time to plan and address all the requireds.

Day 3, which is the time-constrained day by design, saw more evidence of candidates going over the suggested times on Simulation 1 and sometimes on Simulation 2, with the result that their Simulation 3 performance suffered (a higher percentage of candidates scored Not Addressed on many assessment opportunities). Although the suggested times provided by the BOE for each simulation are guidelines, they are good estimates of how much time candidates should be spending on each simulation. Some candidates spent up to 120 minutes on the 80-minute Simulation 1, which is time that cannot be made up on later questions. The BOE saw some responses to Simulation 3 that were obviously rushed, with evidence of candidates having misread the case facts in their haste to try to make up lost time. Spending significantly more than the suggested time on any one question is a risky strategy, particularly since there are limited opportunities in the breadth tests, and more than one of the assessment opportunities could appear on the last question, depending on the examination's design. The Board encourages candidates to use the suggested times for each simulation to ensure they have the opportunity to answer all of the requireds on Day 3.

There was some evidence on Day 2 and on Day 3 of candidates skipping issues (see Not Addressed %). For example, on Day 2, there were six issues in Financial Reporting to be addressed. Some candidates appear to have randomly skipped over certain issues. The issues skipped varied from candidate to candidate, indicating to the BOE that it was not because the candidates did not see the issues (which were highly directed), but rather because they chose not to attempt the discussion. There was no evidence in these responses of time constraint. The BOE is concerned that candidates think they need to address only a specific number of issues to meet the depth test and that this was an intentional approach. Similarly, a random pattern of some issues versus others being addressed on Day 3, Q3, was evident. These candidates may simply have been time constrained (as noted above), but in some cases it appeared to be a conscious choice to address only certain requireds, perhaps in an attempt to address the breadth tests that they believed they needed to cover.

The BOE reminds candidates that not only does the CFE have depth and breadth tests, but it also has a minimum sufficiency score requirement. Skipping issues means that the sufficiency score is affected. Candidates are encouraged to attempt all the requireds, managing their time carefully in doing so.

Day 1

Points have been excerpted from the May 2016 Board of Examiners' report on Day 1, Version 1 of CHEI. Additional commentary based on candidates' performance on Version 2 has been added.

Comments Specific to Day 1 (CHEI Version 1) [excerpted from May 2016 CFE Report]

The following paragraphs elaborate on the strengths noted and draw attention to the common weaknesses identified by the Board of Examiners on May 2016 CFE, Day 1, Version 1.

Candidates generally performed an appropriate situational analysis. Most candidates identified the important factors that had changed from the Capstone case and linked them into their analysis of the issues. Most candidates appropriately analyzed the financial situation of CHEI, which was an essential component of this case's situational analysis. Weak candidates simply recapped case facts or went into too much depth in their situational analysis, redoing the entire analysis rather than focusing on the changes, which the case specifically directed them to do.

There were two major issues that candidates were expected to analyze from both a qualitative and a quantitative perspective: Hwy 507 and Homes performance. There were also two other issues candidates were expected to analyze, mainly from a qualitative perspective. Most candidates ranked the issues appropriately and spent adequate time discussing the major issues. Weak responses tended to include brief qualitative discussions (almost cryptic point-form, and often a repetition of case facts without further explanation of their importance), provided minimal quantitative analysis, or included minimal consideration and application of the situational analysis in their analysis.

Candidates are reminded that it is important on Day 1 to discuss the strategic implications, not just identify the operational issues. Often those issues are presented in the case to raise broader issues. Candidates are reminded to step back and think about the interrelationships. For example, the CDI offer could be analyzed in isolation, or it could be seen through the broader lens of Homes performance. Candidates sometimes failed to integrate the issues.

Candidates were expected to conclude on each analysis they completed, and their conclusions were expected to be consistent with the analysis they performed. Concluding that "additional information is required" was acceptable as long as it was substantiated. Weak candidates were unclear in their conclusion, or their conclusion could only be implied from their discussion.

Comments Specific to Day 1 (CHEI Version 2)

Similar to Version 1, most candidates performed an appropriate situational analysis, identifying the important factors that had changed from the Capstone case. Most candidates appropriately analyzed the financial situation of CHEI, which was an essential component of this case's

situational analysis as well, since there were financial targets introduced in the case. Where candidates often fell short is in their failure to link their assessment of the situation in their analysis of the issues. For example, many candidates highlighted the share-for-share exchange and the financial targets set out by the acquirers but failed to consider how those new facts affected each decision being made by the board.

Weak candidates simply recapped case facts, typically in extremely short bullet points with no explanation of why they were important enough to be listed, or went into too much depth in their situational analysis, redoing the entire analysis rather than focusing on the changes, which the case specifically directed them to do. Integration was also a problem in the qualitative situational analysis. For example, candidates would simply state a case fact like, "Canadian and worldwide economies are steady," but would not discuss the relevance of the point nor use it in their analysis of the issues. As another example, candidates would calculate the debt-to-equity ratio and provide a brief interpretation but would fail to use that information later, even though the ratio was very relevant to the discussion of the potential Eurobati purchase.

There were four issues that candidates were expected to analyze from both a qualitative and a quantitative perspective: the bridge design software, the district heating proposal, the Eurobati purchase, and the RC offer versus the DNC offer. Two of these issues were more operational issues that did not have a significant financial impact on CHEI, since the dollar amounts involved were not substantial in relation to CHEI's size. The other two issues were clearly significant, with one issue being a $200 million acquisition of a European company and the other relating to advice for the owners on selling their shares in CHEI.

Most candidates identified these four issues and attempted a discussion of them. However, while many candidates treated all four issues the same, stronger candidates acknowledged the prioritization of the issues. Candidates' performance on the proposed Eurobati acquisition was generally well done and tied in strategic implications for CHEI. However, candidates struggled to demonstrate a clear understanding of the share-for-share exchange in the RC and DNC offers. Many candidates did not understand the provisions of the share swap being proposed and did not understand that the financial performance of either RC or DNC would affect the shareholders of CHEI because there was an "earnout" provision in both share swap proposals. As a result, many candidates compared irrelevant numbers, like the share price of RC compared with the share price of DNC at a point in time. The other two issues had both operational and strategic aspects for the candidate to consider. As was the case for CHEI Version 1, some candidates got wrapped up in the operational analysis and failed to step back to consider the strategic aspects, which in this case were the link back to the financial targets and the earnout period. Many candidates failed to integrate and relate the issues.

Candidates are reminded to step back and consider the broader implications, rather than being too focused on an issue-by-issue, silo approach.

As was the case on prior Day 1 cases, some candidates surprisingly avoided the numbers provided in the case completely, focusing purely on the qualitative aspects of each decision. Avoiding the numbers is a fatal flaw for the Day 1 case. Candidates are strongly advised to perform a balanced quantitative and qualitative analysis.

Many candidates used very poor communication in their responses, which led to responses that were confusing, difficult to follow, and in some cases challenging to understand.

Additional Comments Specific to September 2016 Day 1 (PRI Version 1)

The following paragraphs elaborate on the strengths noted and draw attention to the common weaknesses identified by the Board of Examiners on the September 2016 CFE, Day 1, Version 1 of PRI.

The PRI Day 1, Version 1 case presented less opportunity for financial assessments and calculations than CHEI and RSI. It had more undirected issues, and candidates needed to be careful not to lose sight of the need to address not only the operational matters but also the high-level qualitative strategic analysis that was required for each major issue. Candidates struggled to identify the issue they were not directed to (governance and bonus). Candidates are reminded to step back and consider the broader problems, rather than taking an issue-by-issue, silo approach. It is important to integrate the case facts, particularly those important factors highlighted in the situational analysis, to identify the broader strategic issues.

Generally, candidates presented their responses in a well-structured format, beginning with the situational analysis and followed by an analysis of the issues they identified and a conclusion. The level of communication was generally good, with few exceptions.

All candidates started with a situational analysis. However, many simply restated case facts without putting those facts together to consider the implications to the situation presented. The BOE noted that many candidates appeared to go through a “checklist” that looked like a template approach, rather than logically addressing the matters that were relevant to the case being specifically presented. Candidates are reminded to think through the issues. There is no point presenting a situational analysis that is several pages long if that information is not going to be used as part of the analysis of the issues. Instead, the situational analysis should focus on the elements that have changed since Capstone 1 or those that will affect the decisions. These facts can then be linked to the later analysis.

Additional Day 2 and Day 3 Comments

The following paragraphs elaborate on the strengths noted and draw attention to the common detracting characteristics identified by the Board of Examiners on Day 2 and Day 3.

<u>Technical Knowledge</u>

Most candidates were able to demonstrate the technical knowledge required throughout the CFE. In general, candidates performed well across most of the depth and breadth tests. The following are some examples of the technical weaknesses noted on Day 2 and Day 3 simulations that contributed to the weaker results on those assessment opportunities.

Most candidates were able to provide a complete analysis of the basic accounting issues but struggled with the more difficult issues. On Day 2, Common, AO#6 (goodwill), candidates across all four roles struggled. Weak candidates zeroed in on the production equipment without recognizing the bigger issue associated with the goodwill of the division, often looking exclusively

at Section 3063 of the *Handbook*. Many of these candidates did not recognize that the *Handbook* required that they look at the division as a whole rather than just at the individual assets. Many of them recommended a write-down of $156,000, which was the excess of the carrying amount of the production equipment above its liquidation value, without any further analysis.

On Day 3, Simulation 2 (Dogani), AO#1 (land exchange), many candidates quoted ASPE criteria even though the case clearly stated that Dogani Inc. reported under IFRS. A surprising number of candidates did not recognize there were specific criteria that applied to this transaction under IFRS, assuming none existed because there was not a separate *Handbook* section for non-monetary transactions in IFRS. Some candidates attempted to apply the incorrect *Handbook* sections in their analysis, such as applying *IAS 18 – Revenue.* These candidates failed to recognize that the "exchange" was not a revenue transaction, but rather a PP&E transaction.

On Day 2, Assurance, AO#13 (reports), candidates struggled to provide valid reports (they needed to be audit-level assurance), as well as to explain the reports. They seemed unfamiliar with the different types of reports and did not have a good grasp of which would meet the users' needs. Some candidates just spoke to the level of assurance provided or the cost of the different reports, without really getting into the nature of each report itself and why it may or may not be good for the bank.

On Day 2, Finance, AO#9 and AO#10 (valuations), some candidates did not understand the difference between the capitalized cash flow method (based on normalized cash flows) and the transactional approach (based on normalized EBITDA) when valuing a business, and they blindly applied a four times multiple to the same base. As well, some candidates did not understand the valuations that they had calculated and were unable to suggest a reasoned, well-supported overall value for TankCo based on their analysis.

On Day 2, Taxation, AO#7 (calculate taxes payable), some candidates did not understand that capital cost allowance could indeed create a loss for a business, instead concluding that CCA was limited to income (confusing this with the rules for passive income from rental properties) and, therefore, could not be claimed by TankCo. Alternatively, some candidates appeared to have chosen (either without an explanation as to why or with a reason that demonstrated they did not understand the fundamental issues involved) to reduce their CCA claim to minimize the tax loss. While this *may* have been a useful planning tool (there is an argument, for example, that preserving UCC would help reduce tax on the impending sale of assets), simply not claiming CCA without a good reason is denying the company access to a loss carryback that would result in a substantial refund.

On Day 2, Taxation, a surprising number of candidates struggled throughout their responses to understand the difference between a credit and a deduction, which is a fundamental concept in tax. This showed up in various forms: claiming the SR&ED input tax credit as a deduction from income (AO#8), claiming the dividend tax credit as a deduction from the grossed-up value of the dividend (AO#12), and claiming donations and medical expenses as deductions from Lou's income (AO#14).

Candidates appeared to struggle with relevant costing assessment opportunities found on Day 3. On Simulation 1 (Play), AO#2 (outsourcing – quantitative), some candidates were not able to properly treat the one-time costs versus annual costs in their outsourcing analysis, mixing them up. On Simulation 2 (Dogani), AO#6 (make or buy), many candidates were not able to adequately consider the relevant costs for the decision to outsource, not understanding that unavoidable costs would not be relevant in decision-making.

On Day 2, Performance Management, some candidates struggled with the calculation of opportunity costs. While most candidates recognized the need to include opportunity costs in their pricing calculation (AO#10), some candidates were not clear on what inputs should have been included. Some considered only steel tank revenues or steel tank costs, or they used incorrect volume figures.

On Day 3, Simulation 3 (Culinary), AO#3 (number of customers), some responses used the selling price of $100 or the variable cost of $60 instead of the contribution margin of $40 when calculating the number of customers needed to replace Ivy's employment income. Some candidates also used Ivy's after-tax salary in their calculation, while all the other figures used were before tax. As a result, their calculation was not internally consistent, which skewed the number of customers needed to replace her employment income.

On Day 3, Simulation 1 (Play), AO#1 (pricing strategy), many candidates provided an incomplete analysis, missing crucial components of either revenue or expenses related to the alternatives, or they analyzed both options using methods that were not comparable. For example, some candidates performed a break-even analysis for one alternative and a cash flow analysis for the other alternative. Weak candidates had several errors in their calculation, and many omitted a comparison to the status quo.

On Day 3, Simulation 1 (Play), AO#4 (principal residence), most candidates were able to identify that the principal residence exemption exists and is available to taxpayers to allow them to reduce or eliminate the amount of the taxable capital gain upon the sale of a principal residence. However, candidates struggled with the application of the rules to the case. Some did not understand the technical requirements related to the principal residence exemption. They did not calculate the average annual gain or did not realize that they needed to designate either the home or the cottage as the principal residence. These candidates typically just focused on the capital gain on the home, without considering the cottage.

On Day 3, Simulation 1 (Play), AO#5 (moving costs), most candidates knew there was a rule that stated how many kilometres the taxpayer had to move. However, they were unclear on the details of the rule. Some candidates did not correctly apply or understand the 40 kilometre rule, often stating that the taxpayer simply needed to move 40 kilometres to be eligible to deduct moving expenses, without stating that the taxpayer needed to be moving closer to their work location. Some candidates also demonstrated their technical weakness in providing the client with inaccurate information on the deductibility of the individual moving costs.

On Day 3, Simulation 1 (Play), AO#6 (investments), candidates struggled to put the three investments on equal footing to compare them to each other. For example, some candidates calculated the total return for one investment option, the annual return for another, and the future value of the investment in 10 years for another. They compared each of these results in order to recommend an investment option, although these results were not comparable.

Candidates are reminded that the CFE requires a strong technical foundation of knowledge in order for candidates to clearly demonstrate their professional skills, apply their judgment, and thereby demonstrate competence.

Lack of Support/Generic Discussions

A common theme across all days was the fact that many candidates presented case facts without elaborating on why each fact was relevant to the discussion or the position being argued. Other candidates made generic comments or drew conclusions without integrating the case facts into their analysis, making for a very generic, superficial analysis of the issues. The following are examples drawn from the BOE's commentary on the Day 2/Day 3 simulations:

On Day 2, Common, AO#2 (warranty), some candidates were unable to support their analysis using appropriate *Handbook* criteria. Many of these candidates jumped straight to the conclusion (accrue $20,000) without first applying relevant case facts to the *Handbook* guidance.

On Day 2, Assurance, AO#8 (risk), some candidates listed risk factors without explaining how they would increase or decrease the engagement risk. Some candidates provided procedures that were too vague to determine what exactly they were proposing to do and what risk they were trying to cover. Some candidates also provided a list of generic procedures that could have applied to any audit. These procedures did not address either the specific accounting issues or other relevant risks.

On Day 2, Assurance, AO#9 (materiality and approach), some candidates did not do a good job of applying case facts to their approach discussion. There were a lot of details provided in the case that candidates could have used to discuss their audit approach. Appendix III contained a description of the control environment, including a description of entity-level controls as well as detailed descriptions of the sales and purchasing cycles. From that exhibit alone, there were numerous case facts that could have been used to discuss the approach. For example, candidates could have talked about the impact of Lou's absence, the reliance on the computer system, the strength of the sales cycle, or the weaknesses in the purchasing cycle on the approach that should be taken. Unfortunately, some candidates just made a generic statement (for example, that a combined approach would be used) without supporting it with relevant case facts.

On Day 2, Assurance, AO#11 (procedures), some candidates provided procedures that were too vague to determine what exactly they were proposing to do and what risk they were trying to cover. Weak candidates also tended to provide a list of generic procedures that could have applied to any audit. These procedures did not address either the specific accounting issues or other relevant risks described in the case and, as a result, they were of limited value. Candidates

are reminded that they need to explain the specific audit risk they are addressing when providing a procedure. This will help them ensure the procedure is both specific and relevant.

On Day 2, Finance, AO#7 (financial performance) and AO#8 (financial position), and Day 2, Performance Management, AO#7 (situational analysis – quantitative), candidates were generally able to calculate appropriate ratios. However, some candidates' interpretation of the ratios was generic and superficial, limited to stating that a ratio was either higher or lower than the industry average, and few used case facts to support their analysis. These candidates did not explicitly state whether TankCo was performing well compared to the industry and did not understand the downward trend TankCo was displaying.

On Day 2, Performance Management, AO#8 (situational analysis – qualitative), some candidates provided brief bullet points that were simply case facts, with little discussion of the impact on TankCo (for example, "• distributors throughout northeastern North America"). Similarly, on AO#11, candidates also lacked depth of discussion in their analysis, using brief bullet points that were simply restated case facts and did not add value (for example, "Pro: regain distributor with 5% discount").

On Day 2, Taxation, AO#13 (tax issues associated with Lou's death), many candidates identified that the TankCo shares might be eligible for the lifetime capital gains deduction, without providing any relevant analysis. Some identified the criteria and said they were met (or not met) without giving specific case facts as evidence of this. Others did not identify the criteria at all and simply concluded the shares would or would not qualify. Still others simply suggested that someone should perform the analysis to determine if they qualified, despite the fact that all the necessary information was available to them.

On Day 3, Simulation 1 (Play), AO#3 (outsourcing – qualitative), some candidates simply restated case facts. Their response lacked analysis, did not add any value to what was already stated in the case, and was, therefore, not helpful to the clients. They also did not provide a balanced discussion about whether the outsourcing option should be chosen, focusing solely on either the risks or the benefits.

On Day 3, Simulation 2 (Dogani), AO# 2 (bank info), some candidates were not able to provide a complete discussion of each item. Many either simply stated whether the item was useful to the bank, without explaining why that would or would not be the case, or provided a way to improve the information, without explaining what the problem was with the information as currently suggested by Gale.

On Day 3, Simulation 3 (Culinary), AO#6 (debts), when addressing the mortgage interest rates, the explanation of many candidates was simply that the variable interest rate would vary while the fixed interest rate would not, which provided little value to Ivy, who needed to understand the specific risk associated with each option.

Candidates must ensure that they clearly explain the reason a point is relevant when they make any point using case facts. Candidates are reminded that all competent candidate profiles on the CFE require supported arguments and defensible positions. The BOE needs to gain an

understanding of the logic used, not just see a right answer.

Irrelevant Discussions

The BOE noted that this issue was far less of a concern than on previous examinations. However, this approach only exacerbates the time management issue noted earlier and is, therefore, worth mentioning.

Some Day 2 Taxation candidates attempted a discussion of management accounting issues that did not exist, wasting valuable time. No one particular analysis stood out (there was nothing indicating that all candidates were trying to address the same issue), but instead candidates provided a variety of seemingly random (and clearly not requested) analyses that might address management accounting. It appears that candidates were searching for additional “common requireds” in the management accounting area.

On Day 3, Simulation 1, AO#1 (pricing strategy), some candidates spent time discussing qualitative factors to take into account related to the proposed pricing strategies, despite the fact that they were specifically asked to conclude on which pricing alternative maximized cash flows. These candidates used up valuable time discussing these factors, which did not provide added value to the client, since there were very few case facts to draw on to make their discussion relevant. The same issue arose on Day 3, Simulation 3, AO#2 (expansion options), where candidates attempted a qualitative analysis of the lunch tour and additional evening tour, even though the case only asked which option would be more *profitable* in AO#2. It appears that candidates were applying some sort of template as if they had been taught to “always address quantitative and qualitative.”

On Day 3, Simulation 2, AO#1 (land exchange), in addition to addressing the land exchange, some candidates treated certain issues as major issues, when in fact there was nothing in the case to suggest they were major issues. (For example, the potential impairment of accounts receivable was a minor issue. Gale stated that she had asked the professional services firm to “take a closer look at the accounts receivable processes, since collection has slowed down significantly.” This information was in the case as a hint about the audit control issues, not a valuation issue.) These discussions could only be superficial because there were few case facts for candidates to work with.

Candidates are reminded to use their judgment in deciding whether a discussion is pertinent to the issues at hand. Where there are few case facts to work with, candidates should stop and consider the appropriateness of the discussion. They should ask the question, “Is this helpful and relevant to the client or user of the report? Why?” Only if they can answer these questions should they proceed with the discussion.

APPENDIX A

EXAMINATION DESIGN, MARKING GUIDE DEVELOPMENT, AND MARKING OF THE COMMON FINAL EXAMINATION

CFE Design

Day 1 is one four-hour case that is linked to the Capstone 1 case, which candidates work on in groups for eight weeks prior to the CFE. When writing the Day 1 case, candidates are allowed access to their Capstone 1 case but not their group's answer or any sample response. The Day 1 case is designed to assess the enabling (professional) skills. Candidates are directed to *not* perform any detailed technical analysis, but rather to target a "board room and senior management" level of discussion, with high-level analytics. There are two versions of the Day 1 case. Candidates preselect the version they will write.

Day 2 is one four-hour case on which candidates are given five hours to respond. The extra hour gives candidates time to filter and find the information that they need to answer *their* role requirements from within the common information presented. Day 2 is designed to assess the technical competencies in **depth** (Level 2 and Level 3). Candidates pre-select a role (Assurance, Finance, Taxation, or Performance Management). All candidates work with the same case — it has a common section and four sets of appendices containing additional information applicable to each of the four unique roles. The required tasks, regardless of the role, are clearly directed unless there is an undirected/enabling issue in the case that the board expects candidates to identify on their own. Day 2 evaluates the competencies listed in the *CPA Competency Map* mostly in the elective area and in common Financial Reporting and/or Management Accounting areas in **depth**. The role **depth** test (Level 2) may also include coverage of other competency areas from the common core.

Day 3 is a four-hour examination containing a mix of small cases (60 to 90 minutes each) that evaluate the common core competencies only. The Day 3 cases provide additional opportunities for **depth** in Financial Reporting and Management Accounting and all the **breadth** opportunities for all the technical competency areas. Cases are time constrained, and they are designed to cover different competency areas within each case. A higher level of integration and judgment is required on Day 3 of the CFE than in the core modules, although the technical competencies are tested at the common core level of expectation.

The assessment opportunities on the Day 2 case are given mark values such that each of Day 2 and Day 3 are weighted equally.

The Development of Marking Guides and the Provincial Review Centre

Approximately three months prior to the Common Final Examination booklets being published, provincial reviewers meet to examine the simulations and the preliminary marking guides. The provincial reviewers' comments are then considered by the board when it finalizes the examination set and again when the senior markers review the marking guides in the context of actual responses.

The September 2016 CFE Marking Centre

From the marker applications received, approximately 190 individuals were chosen to participate in the September 2016 CFE marking centre. The criteria for selection included marking experience, motivation, academic achievement, work experience, personal references, and regional representation. The marking was supervised by the CPA Canada Evaluations and International Assessment full-time board staff (8 staff).

The Day 1 PRI Version 1 linked case was marked by a team of 25 markers in Montreal from October 21 to November 5, 2016. The Day 1 CHEI Version 2 linked case was marked remotely by a team of 4 markers from October 24 to October 29th. Day 2 Assurance was marked by a team of 52 markers in Montreal from October 21 to November 5, 2016. The other three Day 2 roles were marked by 14 markers in Toronto over a 5-day period in early October, immediately following the preliminary evaluation centre. Two of the three Day 3 cases were marked in Montreal from October 21 to November 5, 2016. The third case was marked remotely over the same time frame. The Day 3 simulations had a total of 98 markers.

Before the marking centre, some board members, leaders, and assistant leaders attended a five-day preliminary evaluation centre (PEC). Participants reviewed the marking guides, applied them to randomly selected candidate responses, and made necessary revisions to the marking guidelines. The written comments on the marking guides received from provincial reviewers were carefully considered.

At the beginning of the marking centre, the leaders and assistant leaders presented the marking guides to their teams. The teams undertook a two-phase test-marking procedure prior to actual marking. Phase one consisted of marking guide familiarization, during which markers applied the marking guide to copies of candidates' responses and collectively reviewed their results. Phase one thus ensured that all markers understood the issues in the marking guide and the basis on which to apply each expectation level. Phase two was an expanded test marking of several responses to establish marker congruence.

After the training and test-marking phases, and only when marker congruence was achieved, live marking commenced. All teams, for all days, had a leader, and anywhere from two to six assistant leaders, and both French-speaking and English-speaking markers. Each team had one or more markers who were capable of marking in both languages.

The board strives for the highest possible marking consistency and quality control. Leaders and assistant leaders, therefore, devoted much of their time to cross-marking and other monitoring activities. Markers' statistics were reviewed to ensure that marking remained consistent throughout the centre. Based on analysis of the statistics, leaders reviewed and, if necessary, re-marked papers to ensure that the assessment opportunities were marked fairly for all candidates. Bilingual markers marked papers in both languages, and their results were compared to ensure that the marking was consistent in both languages.

Borderline Marking (Day 1, Version 1 and Version 2)

Each candidate's paper was marked once. All candidates' responses that were assessed as clear fail, marginal fail, and marginal pass were marked a second time by the team leader or assistant team leader. Clear pass results were also audited on a random basis to ensure accuracy of marking.

Double Marking (Day 2 and Day 3)

Each candidate's paper was marked independently by two different markers. If the two initial markings differed on any assessment opportunity, an arbitrator (the leader, the assistant leader, or a senior marker) compared the two initial markings and determined the final result.

As an added measure to ensure that markers were consistently applying the marking guide, a two-day rule exists that results in the second round of marking not beginning until two days have elapsed since the first marking. Adherence to this rule ensures that any movement in the application of the guides due to marker interpretations during the first two days of live marking are stabilized before the second marking and arbitration procedures begin.

Subsequent Appeal of Results and Request for Performance Analysis

Failing candidates may apply for an appeal of their examination results for either Day 1, Day 2 and Day 3, or for all three days.

Appeal Approach

Great care is exercised in the original marking and tabulating of the papers and results. The following appeal procedures are applied to all three papers constituting the Common Final Examination.

Under the supervision of the chair of the Board of Examiners, as well as CPA Canada Evaluations and International Assessment staff, the responses are reviewed by the leaders and assistant leaders who did the original marking. The leaders and assistant leaders read the responses and compare them to the marking guides used at the marking centre. In reviewing candidates' results, two aspects are considered. First, it must be determined that the basis of marking the papers has been consistent with that accorded other candidates who wrote the examination. Second, all responses reviewed are subjected to a careful check to ensure the markers have indicated that consideration has been given to all material submitted by the candidate.

The results are then tabulated and the decision made regarding whether any candidates have been treated unfairly and should be granted a pass on the examination.

The appeal results are then forwarded to the provincial bodies for notification of the candidates.

APPENDIX B

SEPTEMBER 21, 2016 – DAY 1 SIMULATIONS

See Part B of CFE report for the marking guides for CHEI version 1 and version 2. (The marking guide for the PRI Version 1 simulation will not be disclosed until version 2 of the case is written, which will be in September 2017.)

Common Final Examination
September 21, 2016 – Day 1

Case (PRI-Version 1) **(Suggested time 240 minutes)**

You, CPA, are enthusiastically greeted by Kieran Postmaa, the vice-president of Sparky's operations. It is October 14, 2017, and you are one week into your assignment to assess Sparky's performance from PRI's perspective (Appendix I).

Kieran ushers you into his office and launches into his plans for the week. "Jennifer told me that your visit is a formality. As you know, she couldn't be here to meet with you. I understand she sent you an email instead (Appendix II)."

During the past week, you gathered information from Kieran about Sparky's operations (Appendix III), visited stores, spoke with store managers and attended a staff meeting with management at one location (Appendix VII).

Kieran continues: "I thought we could have dinner with the executive team tonight. Tomorrow, you and I can talk further about our operations and then we can improvise for the rest of your visit. Do you like to golf?"

You are a little surprised by Kieran's welcome, having thought that this visit was more than just a formality.

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APPENDIX I
EMAIL FROM MARTINA

To: CPA
Re: Sparky Ltd. visit

As you know, we purchased Sparky Ltd. for $1.2 billion on January 1, 2017. The acquisition was hotly debated, and I hope we made the right decision. We want a brand that targets the young-professional market and is trendy and appealing. At the time of purchase, the fair value of Sparky's net assets, using an earnings-based valuation, was in the range of $1.1 to $1.5 billion. If profits remain at or above 2016 levels for the next three years, there is a contingency payment of an additional $500 million. Profits will be calculated using PRI's customary accounting policies.

Employees at Sparky unionized just prior to the acquisition. The minimum wage was increased by the government by 3%. The trend in the industry seems to be to offer some benefits to part-time employees. So far, the union has not raised significant issues, but we will be heading into our first round of collective bargaining with them next year, at which time potential wage issues and working conditions will be negotiated.

I wanted to provide you with a brief update on changes that have occurred since you last helped us.

Maggie no longer plays an active role in the company and is proceeding with her shopping blog, which has become quite successful.

George and I now have a good working relationship and share the same vision for PRI. I have stayed at the helm of Phoenix. As you may know, we agreed to keep our downtown department stores and to close our suburban locations. Sales of the two owned suburban stores and the cash flow savings from the closure of all the suburban locations allowed us to reinvest in our downtown core stores. The closings have been hard on our employees but we have accommodated them as much as possible by offering positions at other locations.

The Canadian dollar has lost value relative to the US dollar. The retail industry and the economy continue to struggle, but the reinvestment we made in our infrastructure has given us an advantage over our competitors and our sales have actually improved. A renewed support in the marketplace for Canadian businesses has also helped us.

Fortunately, the class action lawsuit related to the data breach was thrown out and small settlements were reached with only those customers who were impacted. Several IT experts have tested the software for potential data breaches and we are confident that the data is secure.

APPENDIX I (continued)
EMAIL FROM MARTINA

Drawing on Sparky's expertise in online sales, we have launched online shopping for Phoenix. Our strategy of expanding to a larger market seems to be bringing in younger shoppers, which is positively impacting both our online and in-store sales.

A significant competitor launched its own e-commerce site at the same time as us. Industry experts predict that this space will become more competitive in the next few years.

Phoenix is one of the few online retailers that serves the Canadian market exclusively. We are able to maintain our mission of being a hallmark retailer in the Canadian market with strong traditions and values, while becoming more accessible to a wider market. Our mission statement now reflects the online addition: "Our mission is to serve our customers through our stores by providing a high-quality home and fashion retail experience. The experience is tailored to meet the needs of Canadians by providing quality, choice and service that can be trusted. *From in-store to online, we make it easy for Canadians to shop with us*."

Activity at Cinder has remained stable. As we decided not to make any significant decisions until Sparky was more settled, we have made no major operational changes.

Sparky will serve its own unique market. We support its offering trendy, quality products at an affordable price to its niche market. However, like Phoenix and Cinder, Sparky is expected to adopt PRI's values and the principle of treating customers, suppliers and employees with respect and integrity.

I have been hearing some grumblings from Phoenix employees. I think it might be due to the changes we had to make recently. This concerns me, and I want you to look into this when you return from Sparky. Thankfully, Cinder seems quiet at the moment.

Jennifer is now president of Sparky. As a wholly-owned subsidiary of PRI, and consistent with the setup of Cinder and Phoenix, Sparky is a separately incorporated entity. Jennifer was unhappy with the decisions being made at Phoenix, and with the fact that George and I were agreeing with each other! While I have some qualms about Jennifer being president, it seemed easiest to let her work for Sparky, as it is the closest fit with her personal vision. I have emphasized that decisions must still be made in PRI's best interest. The board instructed Jennifer to operate Sparky just as it is for the current year, as we want to get a better feel for the company before making any significant changes. Jennifer is to make all operational decisions at Sparky but still reports to me. It is important to the board that Sparky be in line with PRI's vision, and we want Jennifer to set that tone with current management.

APPENDIX I (continued)
EMAIL FROM MARTINA

I asked Jennifer to investigate one possible operational change. In line with Sparky's desire to remain contemporary, I asked Jennifer to look into self-checkout systems. The industry has been moving towards more automated alternatives for customer service, which suits the younger, tech-savvy market. If this is considered the best way to provide customer service, perhaps we should implement it in all of our stores across PRI. I know she would appreciate your input. And I am curious to see the information she has gathered so far.

I haven't heard a lot from Jennifer. Now that we have had Sparky for almost one year, she will begin making formal quarterly reports to the board, starting this quarter. It will be important to bring PRI's board and audit committee up to date as we have not had a thorough look at Sparky's results since our due diligence was completed in October of 2016.

I would like you to give me a sense of how Sparky is performing in Jennifer's hands. Taking into account what you know about our family of stores from the previous engagement, I would like you to assess Sparky's current situation and operating environment. Provide your assessment of the challenges you see Sparky facing, or having to face in the near future. Please consider both strategic and operational challenges. Where you believe you have sufficient information to do so, please suggest a course of action, or indicate what further investigation is required.

Kind regards,
Martina

APPENDIX II
EMAIL FROM JENNIFER

To: CPA
Re: Visit to Sparky Ltd.

Thank you so much for coming to visit Sparky! I apologize for not being able to welcome you but I am in Taiwan.

As you may know, we are now generating profits because of the decision to manufacture many of our in-house-brand products in China, where labour costs are lower. After Kieran discovered a factory in Taiwan with the capacity to manufacture many of our remaining Canadian-made products at a significantly lower cost, we started having all of our in-house-brand linens, such as towels and curtains, manufactured there. As the goods have just recently started to be sold, we aren't seeing a huge financial statement impact yet, but Kieran is confident that we will. I am in meetings here to see what other manufacturing we can move to Taiwan, to further lower our inventory costs. And while I'm here, I will be formalizing the acquisition of one of those suppliers. I will bring a signed binding memorandum of understanding back with me, to present to Martina and the board.

I have also looked into two self-checkout systems (Appendix VI) and am about to decide which option to pursue. While I am interested in the cost savings this will generate, I also think it is critical that we provide our target market with the technology they expect. Busy young professionals don't like to waste time waiting, and self-checkouts meet that need. It will also bring us in line with many other retailers in the industry, several of which offer a mix of self-service and conventional checkout systems. A few have moved to 100% self-service, which is my preference. Self-checkouts tend to be preferred by shoppers in the 18 to 45 age range. Older, less tech-savvy shoppers don't like the impersonal nature as much. Self-checkout systems have an expected useful life of four years.

The biggest change I have planned is to increase our appeal to the young professional by developing an in-store café. Customers can take a break from shopping to have a coffee, or can sip on one while they stroll the aisles. I did my research before moving ahead. Our market studies indicated that in-store cafés were viewed favourably by 82% of customers surveyed in the 25 to 39 age range, and by 67% of those in the 40-55 age range. Our analysis of similar competitor stores in the US indicated that cafés create profits of their own while also increasing in-store traffic by 15%. This is exciting, and we expect to open the cafés in the next year. As I knew Martina would get all worked up about this, I have kept it quiet so far, and I ask you to do the same. I am positive the board will be thrilled when I present it to them next quarter. Martina thinks she knows what's best for all of PRI, but she needs to recognize that I know what's best for Sparky.

APPENDIX II (continued)
EMAIL FROM JENNIFER

Mr. Snookers was a visionary, and I am following his example by applying my own vision to this part of the family empire. I am lucky to have the freedom to do so. I am confident that Kieran can show you how we have achieved our recent successes at Sparky, and can answer any questions you might have. He has been very enterprising and I don't have to worry, knowing he is making great decisions for Sparky.

Cheers,
Jennifer

APPENDIX III
COMMENTS FROM KIERAN POSTMAA

"As you know," Kieran begins, "2015 was a rough year, but things returned to our normal levels in 2016, and we are confident we can continue at this level. We are on target for fiscal 2017 and expect things to look even better at year end, given that the holiday season, which is always our biggest quarter, is upon us.

"When Mr. Snookers retired on January 1, 2017, Jennifer took over as president. I continued as vice-president of operations, but have taken on several new responsibilities. As Mr. Snookers' second-in-command, I learned everything I know from him. Jennifer is following his example, although taking a more hands-off approach, which is great. She understands that making a profit is important and trusts me to make the right decisions. We both believe in being aggressive when it comes to Sparky's continued success. I make most of the decisions and then report to Jennifer, simply for confirmation to proceed. We have implemented a number of key strategies that I am excited to share with you.

"We are having a stellar year (Appendix IV), which is due to some of the new initiatives I have implemented. As a retailer, one of our largest controllable costs is labour, which is often as much as 20% of our margin. I have worked with our scheduling department to find ways to minimize labour costs while still providing the support we need for our customers.

"I realized that the daytime staff were not spending enough time restocking shelves. With customers in the store, it was hard to know whether items were sold out or were sitting in carts waiting to be put back on the shelves. Daytime staff also spent a lot of time tidying up after customers instead of restocking. I therefore moved the restocking to the night shift. We always had some restocking done then, with four staff on overnight. I put four more staff on the overnight shift and eliminated ten staff during the day. The result is great savings and a more efficient way of working! There have been no issues filling the night shifts — lots of employees are asking to work them.

"We are also working hard to find more ways to economize, such as manufacturing more goods overseas for cost-saving measures on many of our in-house brands. Jennifer should be signing a binding memorandum of understanding with one of our suppliers, for Sparky to buy them, which should allow us to expand and start being a supplier to others. There is money to be made.

"With respect to the in-store cafés, we have worked closely with design teams to develop both the brand and the interior atmosphere that the cafés will bring to our store. We used the results of our market studies to create a design that will appeal to our target market. This has been a massive undertaking, and it has cost quite a bit to finalize the designs. Our next step is to start construction. We capitalized everything as a branding intangible, so fortunately, nothing will show up on the income statement in the current year.

APPENDIX III (continued)
COMMENTS FROM KIERAN POSTMAA

These costs include:

Legal fees	$	50,000
Preliminary market study		200,000
Design consulting fee and logo		275,000
Marketing staff salaries		75,000
Office overhead		50,000
Interior design fees		400,000
	$	1,050,000

"Mr. Snookers, who was always focused on cutting costs, must have recognized that increased compensation would improve morale, since he implemented a new bonus plan just before he left (Appendix V). Mr. Snookers mentioned that this should motivate managers to achieve higher profits in the next three years, in line with what PRI would want, based on the purchase and sale agreement. I know that top management is happy with the new plan, and is working hard to earn it. Happier managers should translate into happier employees overall!

"Come to think of it, Jennifer has never asked me about the plan and how it is working, which is a bit odd. I'm assuming that Martina knew about the bonus plan at the time of the acquisition."

APPENDIX IV
SPARKY LTD. INCOME STATEMENT

Sparky Ltd.
(in thousands of dollars)

	9 months ended Sep. 30, 2017	12 months ended Dec. 31, 2016
Retail sales	$ 792,081	$ 1,025,347
Online sales	396,428	511,789
Cost of merchandise	(855,726)	(1,117,498)
Margin	332,783	419,638
Fulfillment costs	31,714	40,943
Technology	32,099	41,352
Employee wages and benefits	59,872	85,371
Amortization	15,789	19,747
General, administrative and other	152,897	204,589
Earnings before income tax	40,412	27,636
Income tax expense	11,315	7,738
Net earnings	$ 29,097	$ 19,898

APPENDIX V
MANAGEMENT BONUS STRUCTURE

In November of 2016, Mr. Snookers announced that, effective January 1, 2017, Sparky would be implementing a revised bonus structure for its senior management team. Whereas senior managers previously received a small annual bonus, Mr. Snookers introduced a structured bonus system, to provide incentive for improved profits and to motivate all Sparky employees to work as a team.

The revised management bonus structure is as follows:

- Bonuses are calculated as a percentage of each manager's base salary.
- The percentage of the base bonus is equal to the percentage change in profits in any given year; for example, a 5% increase in profits equals a 5% base bonus.
- Base bonuses will increase by one percentage point for every 10% decrease in expenses from the prior year.
- Base bonuses will increase by one percentage point for every 10% increase in total assets from the prior year.
- Bonuses will be paid out in February of the following fiscal year.

The senior management team consists of the four vice-presidents and the ten regional managers responsible for sales and finances.

APPENDIX VI
SELF-CHECKOUT SYSTEMS

Check-It-Out

Check-It-Out is the original self-checkout system, and is used by retailers worldwide.

The Check-It-Out process is as follows:

- The customer presses “Start” on the touchscreen.
- For every item scanned, the weight of that item is registered in the system, and the checkout expects the same weight to be added to the bagging area.
  - If the same weight is added, the customer may continue to scan and bag items.
  - If the same weight is not added, an error message such as, “Please rescan the item and place the item in the bag,” will be displayed and the customer cannot proceed until this is corrected.
- If an item is bagged without being scanned, an error message such as, “Unexpected item in the bagging area – please scan item before placing in bag,” will be displayed and the customer cannot proceed until this is corrected.
- Once all items are bagged, the customer selects their method of payment, pays and leaves.
- Acceptable methods of payment are by debit, credit and cash.

As it is familiar to most customers, the Check-It-Out system is popular. The scale is quite sensitive and can be problematic if a customer leans on it or if an item’s weight does not exactly match the weight registered in the system. This often leads to cashiers clearing errors without knowing the actual reason for the error.

Read-It-All

Read-It-All is a new, high-tech system that eliminates some of the frustrations of the weight checks performed by previous versions of self-checkouts. It is brand new to the market and initial feedback has been positive.

The Read-It-All process is as follows:

- The customer places an item inside a large rectangular space. The machine finds and automatically reads the UPC code without the customer having to scan the product.
- At the same time, the machine weighs the product, so when moved to the bagging area, the weights are matched up. The scale is less sensitive, so inconsequential weight differences rarely cause an error message.

APPENDIX VI (continued)
SELF-CHECKOUT SYSTEMS

- When all items have been scanned, the customer pushes a button and proceeds to payment, similar to the Check-It-Out system.
- No cash is accepted — all payments must be with debit or credit cards.

Each self-checkout system requires a master terminal and annual maintenance. The estimated initial investment costs and annual operating expenses have been compiled below.

	Traditional	Check-It-Out	Read-It-All	Note
Number of registers	12	12	8	1
Cost per register	$ 0	$ 30,000	$ 80,000	2
	0	360,000	640,000	
Master terminal	0	150,000	200,000	
Installation cost	0	25,000	50,000	
Upfront investment	$ 0	$ 535,000	$ 890,000	
Annual maintenance	$ 500	$ 25,000	$ 40,000	
Staffing cost	546,000	162,500	65,000	3
Annual costs	$ 546,500	$ 187,500	$ 105,000	

Notes:

1. Due to its efficiency, Read-It-All can accommodate a quicker flow-through rate, so only eight registers are required.

2. There is no upfront cost for traditional equipment as it has already been purchased. If disposed of, the traditional equipment has no salvage value.

3. The cost of staffing one checkout person for all open hours is $65,000 per year.

   Traditional: Requires one staff per register for the average time each checkout register is open (70%) = (12 × $65,000 × 70%)

   Check-It-Out: Requires one staff per four registers during peak times (75%) and one staff for all twelve registers during slow times (25%) = (3 × $65,000 × 75%) + (1 × $65,000 × 25%)

   Read-It-All: Requires one staff per eight registers = (1 × $65,000)

APPENDIX VII
NOTES FROM A STAFF MEETING WITH MANAGEMENT AT A SPARKY LOCATION

- The results from the customer comment box that is maintained in the front of the store were presented. Some of the customer comments are as follows:

  - *Whenever I am in the store, I feel like it is in chaos. I check back every few days for curtains I see advertised online. I can never find them and the window treatment aisle always looks like a closing-out sale — bare and a mess!*

  - *I am excited about the rumours I am hearing of a café being added! As a young mom, I am always looking for an easy caffeine fix while I shop.*

  - *You can never find a staff person when you need one. I look for help and there is nobody around! I like a personal touch when I shop.*

  - *I like how bright and cheerful the store is, but it is frustrating that it is so behind on technology. It is more efficient to check prices and ring things up for myself. At least the addition of high-quality coffee in your rumoured café will help make my shopping more enjoyable while I am stuck waiting in lineups.*

  - *The staff is always flustered and the place is a mess. I cannot find anything and no one is around to find it for me. What a nightmare!*

  - *They need more staff on checkouts. The lineups are out of control. I am tired of waiting for the old lady in front of me to finish chitchatting with the one clerk that is on cash!*

  - *I just bought a set of sheets from you. They have always been of reasonable quality, but faded as soon as I washed them. When I tried to return them, the store clerk told me I couldn't because they had been washed. Well, I wouldn't know they were going to fade without washing them, would I?*

  - *Your store treats customers like an inconvenience. There is no respect! Your goods might be trendy, but your service sucks. Everything is impersonal. I was excited about visiting the new stores, but with what I've experienced, I will not be coming back.*

- The staff seemed unfazed by the comments. "Well, that's just how things are now," one stated. "It's not like we control any of that — there's not much we can do about it." "Customers think it is bad for them — they should try being us," groaned another. "The holiday season is only going to make it worse."

APPENDIX VII (continued)
NOTES FROM A STAFF MEETING WITH MANAGEMENT AT A SPARKY LOCATION

- The next week's schedule was presented, which prompted a staff person to complain. "I cannot believe I only have three shifts! That will make paying rent a challenge. When we unionized, we expected to see better control over our shifts, but management still isn't listening."

- The general consensus among staff is that they are frustrated with the hours of work. There are less regular day shifts and more staff are being asked to pick up night shifts. With less hours being given out in total, they take them because they need the money, but it is not ideal. Some also commented that, with their hours being reduced, many of them are at risk of losing full-time status and might therefore lose their rights to full benefits.

- The store manager attempted to keep the focus positive but eventually agreed with staff that the hours weren't working, adding that there is little to be done as their regional manager seems set on keeping costs down.

- Concerns related to restocking were discussed. A decision was made by the regional manager to place more out overnight so that enough products would be on the shelves for customers. Staff noted that this would cause shelf space shortages, and some products might need to be moved around. In terms of getting product onto the shelves during the day, the store manager's instruction was, "Just do your best."

As staff were leaving the meeting, you heard them discussing a union local being formed at Phoenix's flagship store in Vancouver. Phoenix employees are worried that the acquisition will result in employment changes similar to Sparky's experience. The feeling was that unionizing that store would show PRI how serious the employees are.

Common Final Examination
September 21, 2016 – Day 1

Case (CHEI-Version 2) (Suggested time 240 minutes)

It is now April 23, 2018. There have been no changes in the Board of Directors or shareholdings of CHEI since 2016. CHEI's most recent financial information is provided in Appendix I. Head office costs have been constant since 2015. The company's results, by geography, have been consistent with 2015. The Awani Dam project is progressing on time and on budget. Of the other major opportunities from a year ago, the following occurred: the company did not bid on the Klang Bridge project; it bid low and did not get Highway 507; and it did not buy any major pieces of land in the greater Toronto area. The Heavy Engineering (HE) division has just been awarded its first significant tunnel contract in Alberta.

Canadian and worldwide economies are steady even though the oil and gas sector has been hurt by lower oil prices. Most economic forecasts point to all economies possibly looking stronger in the next one to three years. At the end of the first quarter, the company is on track to meet its consolidated 2018 budget of $615 million in revenues, and pre-tax income of $43 million.

In the heavy engineering industry, companies are under pressure to use staff more efficiently in order to reduce costs, and to use more technology, including engineering tools and software. Two smaller engineering consulting competitors have entered the engineering software market. One of them actually sold off their consulting business in order to focus on software that they had developed. Another industry development is that the fifth- and sixth-largest Canadian heavy engineering companies have recently made purchases of similar European and Asian companies. Acquisitions seem to be a new trend in the industry.

Board meeting – April 23, 2018

Penelope Navire: Since we will be discussing several new initiatives in this meeting, I have invited CPA, from our team of external consultants, to join us.

As you know, all the shareholders want to realize the value of their shares, and most believe that now might be the right time to sell. Others think we should wait a bit longer. I want us to consider the possibility of selling. Sisi Nagy and I have had preliminary discussions with two potential acquirers (Appendix II). We have not had any serious pricing discussions, although both want to pay only with their company shares. That means the shareholders of CHEI will exchange their shares for X number of shares of the acquiring company. As part of the agreement, CHEI shareholders would not be permitted to sell their shares in the acquiring company until one year after the acquisition. Both of the acquiring companies have indicated that they would provide an additional incentive through a cash earnout clause, which means the selling shareholders would get extra proceeds, based on the future financial results of CHEI. The clause might work something like this: the sellers receive 5% of CHEI's net income for at least one year after the acquisition. Both potential acquiring companies have acquisition criteria that require CHEI to have reached $650 million in revenues, and $50 million in pre-tax profits, in order for the acquisition to happen. We may be required to present our first-quarter 2018 financials to them soon.

We are not yet at the point of needing a detailed valuation of CHEI for sale purposes. CPA, can you help us determine which of the acquiring companies is presenting the best offer? Because of the way the deal may be structured, we want a deal that allows our shares to maintain or increase in value in the year post-acquisition. Are there any other decision factors we should be considering?

Okay, on to other business, all of which will have an important bearing on finalizing the sale of the company.

Sisi Nagy: What is the status of HE's bridge design software that was mentioned at the last board meeting?

James Johnson: We have gathered further information (Appendix III). CPA, your opinion on the strategic fit of the options presented would be helpful. We will have to decide which of these options is most financially beneficial. CPA, can you help us assess the options using the preliminary analysis we received?

Frank Cessnick: We are a construction company, not a software company. I don't think we should touch this project.

John Higman: On the contrary, if we can make money and help build consistency into our income levels, we should pursue it. I think the entire board would agree that achieving a steady income is critical.

Penelope Navire: Agreed. Let's see what CPA says and then revisit the matter. I wouldn't want to give up a competitive advantage by sharing something we can use ourselves!

Kathy Fernandez: We need to deal with the performance of the Homes division (Homes), particularly if we want to sell.

James Johnson: I think we all agree that Homes has not been performing well. Maybe the Homes district heating proposal will help (Appendix IV). CPA, can you help us assess the risks and opportunities related to the proposal to help us make a decision?

Another key decision facing the board is whether to expand our position in Europe through the purchase of the heavy engineering business, EuroBati (EB) (Appendix V).

Zoe Murphy: I'm not sure if that is a good idea. The European economies are generally stagnant and our French subsidiary has had issues.

Frederick Dale: The question is whether EB is a good prospect and fit with CHEI.

James Johnson: We will be doing a business valuation as part of the next steps, but based on our preliminary review, our offer would likely be around $200 million cash. If this year's dividend is not paid by CHEI, half of our current cash could be used for the purchase. We would have to finance the rest.

Frederick Dale: Ideally, we want to see synergies in the options that we choose to go forward with. CPA, can you look at the financial statements of EB and discuss what might be the specific business risks related to the purchase? Can you advise us as to which areas should be looked at more closely within EB before we proceed further? Please focus on the risks specific to our business.

Frank Cessnik: CPA, please also comment on our financing plans for the acquisition.

Penelope Navire: Thank you all for your valuable comments. CPA will review the information we have gathered and provide a high-level assessment of all the issues. We need to know if there are any significant factors we have failed to consider, and identify any additional information that is critical for us to obtain before making our decisions. I expect CPA to consider the strategic and operational elements related to each decision, and where there is sufficient information, to suggest a course of action.

CPA, please highlight the changes since our last situational analysis. Regardless of whether we sell, the decisions facing us are interrelated, and we want our financial results to be strong. For now, use the financial projections and other financial information that our staff have prepared. A more detailed analysis will be completed later.

Let's meet again in 10 days' time to review CPA's analyses and recommendations, and make some decisions.

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APPENDIX I
FINANCIAL INFORMATION

Canada Heavy Engineering Inc.
Consolidated Income Statement
(in thousands of dollars)

	Q1 2018 (unaudited)	2017 (audited)	2016 (audited)
Revenues	$ 150,901	$ 596,871	$ 574,611
Direct cost of activities	128,101	503,782	493,354
	22,800	93,089	81,257
Expenses			
Sales, general and administration	12,503	49,270	48,773
Interest	589	1,824	1,812
Amortization	351	1,447	1,471
	13,443	52,541	52,056
Income before taxes	9,357	40,548	29,201
Income taxes	(2,526)	(11,102)	(7,902)
Net income	$ 6,831	$ 29,446	$ 21,299

APPENDIX I (continued)
FINANCIAL INFORMATION

Canada Heavy Engineering Inc.
Consolidated Balance Sheet
(in thousands of dollars)

	Mar. 31, 2018	Dec. 31, 2017	Dec. 31, 2016
	(unaudited)	(audited)	(audited)
Assets			
Current assets:			
Cash	$ 39,639	$ 30,473	$ 21,546
Accounts receivable	58,039	57,949	56,892
Inventory	46,789	49,758	51,425
Work in progress	29,786	32,458	33,172
Prepaid expenses	397	407	302
	174,650	171,045	163,337
Property, plant, equipment and land (net)	43,234	42,538	41,431
	$ 217,884	$ 213,583	$ 204,768
Liabilities			
Current liabilities:			
Accounts payable and accrued liabilities	$ 50,142	$ 56,458	$ 54,849
Deferred revenue	7,978	8,002	8,759
Land loans	15,746	16,789	17,898
Current portion of mortgages	1,946	902	844
	75,812	82,151	82,350
Land loans	8,705	9,805	8,002
Mortgages payable	11,458	6,549	6,784
	95,975	98,505	97,136
Shareholders' equity			
Common shares	10,105	10,105	10,105
Retained earnings	111,804	104,973	97,527
	121,909	115,078	107,632
	$ 217,884	$ 213,583	$ 204,768

APPENDIX I (continued)
FINANCIAL INFORMATION

Canada Heavy Engineering Inc.
Financial Analysis

	Mar. 31, 2018	Dec. 31, 2017	Dec. 31, 2016
Current ratio	2.30	2.08	1.98
Quick ratio	1.29	1.08	0.95
Long-term debt-to-equity	0.17	0.17	0.14
Total debt-to-equity	0.79	0.86	0.90
Annualized:			
Days receivable (days)	35.10	35.44	36.14
Inventory turnover (days)	28.29	30.43	32.67
Days payable (days)	35.72	40.90	40.58
Net margin	4.53%	4.93%	3.71%
Gross profit margin	15.11%	15.60%	14.14%
Pre-tax margin	6.20%	6.79%	5.08%

APPENDIX I (continued)
FINANCIAL INFORMATION

Canada Heavy Engineering Inc.
Heavy Engineering (HE)
Divisional Income Statement
(in thousands of dollars)

	Q1 2018	2017	2016
Revenues	$ 116,425	$ 462,413	$ 442,489
Direct cost of activities	97,797	385,190	376,558
	18,628	77,223	65,931
Expenses			
Sales, general and administration	8,902	34,999	34,601
Interest	88	147	101
Amortization	161	622	646
	9,151	35,768	35,348
Income before taxes	$ 9,477	$ 41,455	$ 30,583

APPENDIX I (continued)
FINANCIAL INFORMATION

Canada Heavy Engineering Inc.
Homes
Divisional Income Statement
(in thousands of dollars)

	Q1 2018	2017	2016
Revenues	$ 34,476	$ 134,458	$ 132,122
Cost of homes sold	30,305	118,592	116,796
	4,171	15,866	15,326
Expenses			
Sales, general and administration	1,854	7,602	7,402
Interest	477	1,578	1,604
Amortization	89	399	401
	2,420	9,579	9,407
Income before taxes	$ 1,751	$ 6,287	$ 5,919

APPENDIX II
INFORMATION ABOUT POTENTIAL ACQUIRERS

RC Corporation

RC Corporation (RC) is a Canadian company comprised of a conglomerate of industrial companies. These include businesses in chemical, farm, oil-refining, natural-gas cogeneration plant, IT services, and road-building equipment. RC's mission statement is:

> *Drawing on our vast experience, our mission is to acquire and increase the profitability of strong industrial businesses that respond well to the changing needs of their clients and markets, and to sustain those businesses with supportive administrative capabilities.*

Each separate business has its own mission and vision statements.

In the last ten years, RC has completed six major acquisitions. With an objective of creating additional profits, RC is known to aggressively cut costs after acquiring a company. The company prefers short earnout periods, and to have a lower percentage of the total price paid in the earnout.

On April 16, 2018, the Toronto Stock Exchange announced an investigation into "certain accounting irregularities" allegedly committed by RC. The company's press release stated that it is cooperating with the investigation. Trading of the shares was not suspended. Share prices dropped from $45.40 to $40.30 after the announcement. Two of the three market analysts covering the stock are still bullish on it and expect the price to rise in the medium- to long-term, despite the investigation.

DNC Maverick Inc.

DNC Maverick Inc. (DNC) is a direct competitor to CHEI. Over 70% of its revenues are derived in international markets. DNC's mission statement is:

> *DNC Maverick Inc. is Canada's largest and best heavy engineering firm, serving satisfied clients in Canada and abroad, in order to maximize returns to its shareholders.*

The main analyst who covers DNC's stock, although not bullish on its future prospects, was impressed that all the company's growth is internal. The analyst had concerns that over 35% of the company's projects would be bad for the environment. However, DNC is known for its ethical conduct with respect to business practices, has a very strong code of conduct, and has never been accused of offering bribes in any jurisdiction. DNC's CEO, Arthur Smith, clashed in the media with James Johnson on certain business issues when DNC won a contract for which CHEI was also competing.

APPENDIX II (continued)
INFORMATION ABOUT POTENTIAL ACQUIRERS

Information collected

	RC	DNC
Year end	Dec. 31, 2017	Jan. 31, 2018
Share price at year end	$31.50	$31.20
Tax rate	24%	27%
Last fiscal year revenues	$1,402 million	$745 million
Last fiscal year net income	$242 million	$84 million
Last fiscal year earnings per share	$0.62	$0.57
Analyst consensus forecast, earnings per share	$0.64	$0.56
Market capitalization	$12,295 million	$4,598 million
Average daily trading volume	175,424	71,482

APPENDIX III
INFORMATION ABOUT BRIDGE DESIGN SOFTWARE DEVELOPMENT

The HE division has developed sophisticated software to help with certain aspects of bridge design for its own use. However, if it can be perfected, it will have wide applicability in the industry. The very latest programming technology is used for the software coding. A patent application is currently in process. According to the patent lawyer, obtaining a patent is by no means certain.

The software is not operational yet. It is missing some essential features and capabilities for the user interface. Adding those features should make it a viable commercial product. The user interface needs to be completed, at an estimated cost of $696,000.

A recently conducted market survey suggests there are about 4,000 bridge design firms, or departments within engineering companies, that would be interested in using the software. The firm conducting the survey estimated that a 30-35% market penetration is possible over three years. HE's management believe that the lower end of the range is more realistic. Sales would be promoted by the expenditure, late in the first year, of $6.5 million in marketing. Each bridge design firm or engineering department would be charged a one-time licence fee of $16,000, and an annual maintenance fee. The HE division expects to have $2.99 million of annual costs (software maintenance and administration).

Internal staff prepared the following pre-tax net present value analysis, based on the company's 15% project hurdle rate.

Option 1: Operate a new business

In this option, CHEI will fully develop the software and operate the licensing of the software as a separate business.

	Cash flow	PV factor (rounded)	PV	
Remaining development	$ (696,000)	1.00	$ (696,000)	
Marketing costs	(6,500,000)	0.87	(5,652,174)	
Licence sales	6,400,000	2.28	14,592,000	(equal per year)
Annual maintenance	2,304,000	6.67	15,360,000	
Annual costs	(2,990,000)	6.67	(19,933,333)	
NPV			$ 3,670,493	

The staff assumed that the maintenance revenue will be received into perpetuity.

APPENDIX III (continued)
INFORMATION ABOUT BRIDGE DESIGN SOFTWARE DEVELOPMENT

Option 2: Jones Engineering Software Solutions USA Inc.

The product manager has also considered using a third-party: after the remaining development is complete, Jones Engineering Software Solutions USA Inc. would be granted the right to license the intellectual property, and CHEI (HE division) would earn, in return, either:

a) $3.2 million lump sum,
b) $2.0 million up front and an 8% royalty on licence sales, nothing on maintenance, or
c) An 18% royalty on licence sales, nothing on maintenance

Option 2a)	Cash flow	PV factor (rounded)	PV
Remaining development	$ (696,000)	1.00	$ (696,000)
Sell after remaining development	3,200,000	0.87	2,782,609
NPV			$ 2,086,609

Option 2b)	Cash flow	PV factor (rounded)	PV
Remaining development	$ (696,000)	1.00	$ (696,000)
Upfront payment	2,000,000	1.00	2,000,000
Royalty on licence sales — 8%	512,000	2.28	1,167,360
NPV			$ 2,471,360

Option 2c)	Cash flow	PV factor (rounded)	PV
Remaining development	$ (696,000)	1.00	$ (696,000)
Royalty on licence sales — 18%	1,152,000	2.28	2,626,560
NPV			$ 1,930,560

Option 3: Sell the software as is

In this option, there will be no further development and the software will be sold, as is, to an interested party for a present value of $1.5 million.

APPENDIX IV
INFORMATION ABOUT DISTRICT HEAT PROPOSAL

The Valois, a 320 single-home construction project, is being planned in the Homes division. It will be about one-third complete at year end. Francois Valve, a technician, has come up with the idea of building a "district heat" plant to go with this and every future development project.

The HE division would actually do the construction of the heating plant.

Residential district heating is found in Europe, but rarely in North America. District heating works as follows: a small, natural-gas-powered central heating plant, owned and operated by CHEI, would deliver hot water and heat (via hot water) through underground pipes to every home in the project. This process is more energy-efficient than each home having its own heat source.

In order to be successful in Canada, we will need to increase the efficiency of the central heating plant and find ways to further reduce heat loss during delivery of the hot water heating to the homes.

The VP Sales believes that having this heating system in place will make the company's homes unique and more attractive to buyers. Currently, all homes built by Homes use natural gas for heat and hot water, and their average annual natural gas bills are in the range of $1,600.

The preliminary plan would be to charge each homeowner a fixed amount of $1,100 per year plus the average cost of the water purchased from the city, which is $125. Another pricing option would be to charge based on consumption, which would vary month to month, and charge our actual cost of supply plus a markup of 20% to 25%.

The costs of the project have been estimated. They include $45,000 for land and $398,000 for other property, plant and equipment, as well as $186,000 for annual operating costs. Revenues are estimated to be $1,225 per home. Internal accounting staff prepared the following projections:

Total revenue	$392,000	(320 homes x $1,225)
Operating costs	186,000	
Cash flow	206,000	
Less amortization (over 25 years, excludes land)	15,920	
Net income	190,080	
Average cost per home, including amortization	$631	

APPENDIX V
INFORMATION ABOUT EUROBATI ACQUISITION

EuroBati (EB) is a division of a French diversified industrial conglomerate, Thaneuf SA (TS). TS has total sales of over $2 billion, and follows international financial reporting standards (IFRS). EB builds roads, bridges and some complex tunnels, primarily in the European Union countries.

TS will soon be publishing an asking price. It does not appear to have any other interested purchasers at this time. TS has offered to finance 30% of the purchase price with a three-year, interest-free vendor take-back loan, and an introduction to a French government-owned bank for the remaining cash.

CHEI's own bank is also willing to finance the acquisition, with a 3% loan, on the condition that a total debt-to-equity ratio of 2:1 is not exceeded.

The key findings noted on a visit to EB by Issa Chewani and three colleagues include the following:

- EB is winning contracts in Africa and is seeking to obtain more there. The division has world-class expertise in tunnelling.

- All non-management EB employees are unionized, and are represented by 17 different unions. EB has not had any strikes in the last 15 years. As is common in France, employees average six weeks of vacation per year. Morale appears to be good.

- EB has a very strong business development group, which sometimes generates more work than the division can handle. However, projects are generally on schedule and on budget.

- According to the unaudited internal financial statements, prepared under IFRS, the profits of EB have been flat for the last four years. Financial statements are presented below. The Canadian dollar-to-euro exchange rates for calendar 2017 and for the year end were close to 1.42 dollars Canadian for one euro.

APPENDIX V (continued)
INFORMATION ABOUT EUROBATI ACQUISITION

EuroBati Division
Statement of Profit or Loss
For the years ended December 31
(in thousands of CDN dollars)

	2017		2016	
Revenues	$ 133,455	100.0%	$ 134,222	100.0%
Cost of sales	105,696	79.2%	106,049	79.0%
	27,759	20.8%	28,173	21.0%
Expenses				
Administrative and selling	7,456	5.6%	7,551	5.6%
Amortization	1,455	1.1%	1,447	1.1%
	8,911	6.7%	8,998	6.7%
Profit (or loss) before taxes	$ 18,848	14.1%	$ 19,175	14.3%

APPENDIX V (continued)
INFORMATION ABOUT EUROBATI ACQUISITION

EuroBati Division
Statement of Financial Position
As at December 31
(in thousands of CDN dollars)

	2017		2016	
Assets				
Current assets:				
Trade receivables	$ 18,796	12.9%	$ 19,175	17.0%
Unbilled revenue	24,518	16.8%	17,458	15.5%
Work in progress	19,789	13.5%	19,425	17.2%
Investment in equity	397	0.3%	347	0.3%
	63,500	43.5%	56,405	50.0%
Due from affiliate	75,668	51.8%	48,434	43.0%
Property, plant and equipment (net)	6,916	4.7%	7,889	7.0%
	$ 146,084	100.0%	$ 112,728	100.0%
Liabilities				
Current liabilities:				
Accounts payable	$ 16,953	11.6%	$ 15,485	13.7%
Provisions	16,478	11.3%	8,009	7.1%
Advance billings	21,458	14.7%	16,789	14.9%
Pension indemnities	804	0.5%	902	0.8%
	55,693	38.1%	41,185	36.5%
Net assets of the division	90,391	61.9%	71,543	63.5%
	$ 146,084	100.0%	$ 112,728	100.0%

APPENDIX V (continued)
INFORMATION ABOUT EUROBATI ACQUISITION

	Dec. 31, 2017	Dec. 31, 2016
Current ratio	1.1	1.4
Quick ratio	0.3	0.5
Total debt-to-equity	0.6	0.6
Total debt-to-assets	0.4	0.4
Asset turnover	7.1	7.0
Days receivable (in days)	51.4	52.1
Days payable (in days)	58.6	53.3

APPENDIX C

SEPTEMBER 22, 2016 – DAY 2
SIMULATION AND MARKING GUIDES

Common Final Examination
September 22, 2016 – Day 2

Case

Assume the pre-selected role in which you will be formulating your response. Answer all requireds as specifically directed in your role. Within the requireds for each role, candidates are directed to look at specific additional appendices, which are unique to each role. Use only the information you have been directed to refer to.

Information that is common to all roles is presented in the "Common Information" section. Additional information, customized to each role, is presented in the "Specific Information" section.

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BACKGROUND
COMMON INFORMATION FOR ALL ROLES

TankCo Limited (TankCo) is a privately-owned corporation that manufactures and sells steel tanks. TankCo was founded in 1984 by Lou Marshall, who built the company into its current successful position. TankCo has two divisions:

1. Residential – Heating oil tanks are sold to distributors throughout northeastern North America, who then sell them to residential customers. TankCo is one of eight fabricators in the residential market, who are all dealing with the declining market. The key success factors for retaining distributor relationships are quality and service.
2. Commercial – This division was created in 2012 when TankCo acquired a commercial tank manufacturer. Larger tanks, ranging from underground tanks for gas stations to large tanks situated at northern mining sites, are sold to commercial companies. There are dozens of metal fabrication shops that have the capacity to fabricate commercial tanks. The key success factor is delivering these large tanks to the customer on time.

Both residential and commercial tanks are manufactured in the same location. A small administrative office is leased in an office nearby.

The mission of TankCo has always been to produce reliable and safe steel tanks of the highest quality. The vision of TankCo is to become the leading manufacturer of steel tanks in the industry.

Lou was the driving force behind the company's growth and, until last year, had not missed a day of work in over thirty years. However, Lou's health began failing last year and he was forced to reduce his daily involvement. On January 24, 2016, Lou passed away at the age of 72.

Lou's two children, Rob and Sarah, each inherited 50% of his shares in TankCo. Rob is a doctor and Sarah has a business degree. Both are now in their late 40s and have never taken an interest in the business.

Lou established a Board of Directors years ago, which met semi-annually to advise Lou on business operations. Lou valued the board's advice on strategic, financial, and legal issues, as it compensated for his lack of a formal business education. With Lou's recent passing, the board is taking a more active role in representing the interest of the company and its new shareholders.

The current board chair is Rita McGuire, who until her retirement last year, was the engagement partner at CPA LLP, the company's public accountants. The other directors are comprised of a local city councillor, TankCo's outside legal counsellor, a local businessman and a retired executive with an international steel company.

BACKGROUND (continued)
COMMON INFORMATION FOR ALL ROLES

Today is January 28, 2016, and the board called an emergency meeting to review results and discuss the main issues. Rita commented:

"Last month, we hired Josh Hoppy for three months, to take Lou's place on an interim basis, knowing there was a possibility that Lou might not be able to return to work. It's unfortunate that Josh was unable to spend more time with Lou before he passed. While the board deliberates on TankCo's future, Josh is managing the business. Josh has an operations background and was most recently a plant manager at a metal fabrication company.

"We have all just received the unaudited financial statements for 2015 (Appendix I), and the results indicate that, for the first time in its history, TankCo is losing money. This is probably a reflection of the limited amount of attention Lou paid to the business while his health was failing. Josh has performed an assessment of the current operations and developed the 2016 forecast (Appendix II), in preparation for the upcoming renewal of TankCo's line of credit with the bank."

REQUIREMENTS FOR YOUR ROLE
(READ ONLY THE ONE SPECIFIED FOR YOUR PRE-SELECTED ROLE)

ASSURANCE REQUIREMENTS

Today is January 28, 2016. You, CPA, are employed by CPA LLP and have just left the office of Madeline Murphy, the engagement partner who took over the TankCo file when Rita retired last year.

Given its private ownership, TankCo has never had an audit performed. CPA LLP has always performed a review engagement. However, given Lou's reduced involvement in operations over the past year, TankCo's board has requested an audit of its financial statements. As always, you attended the year-end inventory count. In anticipation of the audit, this year, you also met with management to gather information about the system of internal controls.

Based on a cursory review of TankCo's draft financial statements, Madeline thinks there are some accounting issues that will need to be addressed, including the financial reporting impact of the recent losses in the commercial division and whether these result in an impairment. She asks you to review TankCo's draft financial statements, discuss any accounting issues and propose any necessary adjusting entries. She would also like you to evaluate the impact of the adjusting entries on TankCo's compliance with the debt-to-equity covenant and its borrowing base.

Since this will be CPA LLP's first time auditing TankCo, Madeline would like you to prepare a memo discussing any engagement issues that you believe need to be considered, including a discussion of any potential issues with the firm's audit independence.

She then asks you to prepare the audit plan. Madeline suggests you look over the information you gathered and prepare a draft of the overall audit plan for 2015. She reminds you that the audit plan should include an assessment of the overall financial statement risk as well as a discussion of materiality and the audit approach. In addition, as part of your risk assessment, Madeline would like you to perform an analytical review of the income statement items to identify any changes that could raise additional risks. Finally, she would like you to document the procedures that you recommend be undertaken on the high-risk financial statement items. Canadian Bank has historically been the key user of TankCo's financial statements. Madeline instructs you to carefully consider the relevant extracts of the lending agreement and ensure that the bank's needs are considered in your audit plan.

Madeline also asks you to draft a memo, discussing any internal control deficiencies in the sales and purchasing cycles, so that she can include them in a management letter.

Finally, Madeline has recently been informed that the bank has invoked their right to a special report from the public accountants; therefore, she asks you to prepare a separate memo to her, explaining the reporting options available.

REQUIREMENTS FOR YOUR ROLE
(READ ONLY THE ONE SPECIFIED FOR YOUR PRE-SELECTED ROLE)

ASSURANCE REQUIREMENTS (continued)

In addition to the common appendices (I and II), the information provided in Appendix III (Assurance) is relevant for the year-end work that you have been asked to perform.

REQUIREMENTS FOR YOUR ROLE
(READ ONLY THE ONE SPECIFIED FOR YOUR PRE-SELECTED ROLE)

FINANCE REQUIREMENTS

You, CPA, work as a financial consultant for Family Business Consultants (FBC). Rich Mann, a principal at FBC, was called by Rita McGuire, asking that FBC help TankCo's board explore various issues.

TankCo experienced weak results in 2015 and lost money for the first time in its history. Rich has indicated that the results have not been reviewed or audited. Based on a cursory review of TankCo's draft financial statements, he thinks there are some accounting issues that will need to be addressed, including the financial reporting impact of the recent losses in the commercial division and whether these result in an impairment. Rich asks you to review TankCo's draft financial statements, discuss any accounting issues and propose any necessary adjusting entries. He would also like you to evaluate the impact of the adjusting entries on TankCo's compliance with the debt-to-equity covenant and its borrowing base.

Rich also asks you to compare TankCo's results to its historical performance and to industry statistics. To that end, he would like you to separately assess its financial performance for the year ended December 31, 2015, as well as its financial condition at December 31, 2015.

The board is currently evaluating the strategic options of the business, one of which might be to sell TankCo. To that end, the company has already prepared a valuation based on the fair market value of the net assets of TankCo, and has included this valuation for your information. To assist the board in its deliberations, Rich would like you to prepare valuations using two additional methods: 1) the capitalized cash flow approach; and 2) the transactional approach, assuming a multiple similar to recent transactions in the industry. Rich would then like you to conclude on an estimated value based on the entirety of your analyses.

The company is in the midst of developing a new line of fibreglass tanks. To help Rich assess the project, he asks you to use the gathered information to provide him with a capital budgeting analysis. You should provide your analysis from both a qualitative and quantitative perspective.

In terms of the lending arrangements and covenants, Rich asks you to use industry benchmarks and your quantitative analysis to identify possible savings and efficiencies, and to suggest ways to improve the company's liquidity and financial condition. He also asks you to provide an assessment of the financing options that have been presented.

In addition to the common appendices (I and II), the information provided in Appendix III (Finance) is relevant for the analyses that Rich would like you to perform.

REQUIREMENTS FOR YOUR ROLE
(READ ONLY THE ONE SPECIFIED FOR YOUR PRE-SELECTED ROLE)

PERFORMANCE MANAGEMENT REQUIREMENTS

You, CPA, work as a management consultant for Family Business Consultants (FBC). Rich Mann, a principal at FBC, was called by Rita McGuire, asking that FBC help TankCo's board address various issues and assess its strategic options.

TankCo experienced weak results in 2015 and lost money for the first time in its history. Rich has indicated that the results have not been reviewed or audited. Based on a cursory review of TankCo's draft financial statements, he thinks there are some accounting issues that will need to be addressed, including the financial reporting impact of the recent losses in the commercial division and whether these result in an impairment. Rich asks you to review TankCo's draft financial statements, discuss any accounting issues and propose any necessary adjusting entries. He would also like you to evaluate the impact of the adjusting entries on TankCo's compliance with the debt-to-equity covenant and its borrowing base.

Next, Rich would like you to qualitatively assess TankCo's current situation. He also asks you to compare the company's current performance and financial condition to its historical performance, and to industry statistics.

In its discussions with the board, management has been unable to explain why the commercial tank division appears to be unprofitable, and the accounting department is thinking about making an impairment adjustment. Rich believes the current costs are not appropriately allocated. He asks you to determine the best cost allocation method and use it to recalculate the costs and the resulting profits for each division, and then determine whether an impairment charge should be recorded.

TankCo is in the midst of developing a new line of fibreglass tanks. Information has been gathered on sales volumes, and TankCo would like FBC to analyze and recommend a pricing strategy for the new line.

As the new owners of TankCo, Rob and Sarah had Josh and his team provide a list of strategic priorities. Rob and Sarah would like you to critically assess whether each strategic priority is relevant based on your analysis of the company and industry.

Looking forward, Rob and Sarah are unsure what to do with the company: "Since we have never been involved with TankCo and, given the loss in 2015, we are open to different options for TankCo's future. We would be open to liquidating the company, selling the business or part of the business or continuing to operate TankCo. Could you evaluate these options and recommend our best course of action?"

REQUIREMENTS FOR YOUR ROLE
(READ ONLY THE ONE SPECIFIED FOR YOUR PRE-SELECTED ROLE)

PERFORMANCE MANAGEMENT REQUIREMENTS (continued)

In addition to the common appendices (I and II), the information provided in Appendix III (Performance Management) is relevant for the analyses that Rich would like you to perform.

REQUIREMENTS FOR YOUR ROLE
(READ ONLY THE ONE SPECIFIED FOR YOUR PRE-SELECTED ROLE)

TAXATION REQUIREMENTS

You, CPA, work for CPA LLP in the tax group. Madeline Murphy is the engagement partner who took over the TankCo file when Rita McGuire retired last year.

In addition to the normal tax compliance and planning work, Madeline asks you to perform some financial statement analysis. As TankCo is requesting an audit this year, Madeline would like you to address the accounting issues before the audit begins. Based on a cursory review of TankCo's draft financial statements, she thinks there are some accounting issues that will need to be addressed, including the financial reporting impact of the recent losses in the commercial division and whether these result in an impairment. She asks you to review TankCo's draft financial statements, discuss any accounting issues and propose any necessary adjusting entries. She would also like you to evaluate the impact of the adjusting entries on TankCo's compliance with the debt-to-equity covenant and its borrowing base.

TankCo has always relied on CPA LLP to calculate the income taxes payable. Madeline asks you to adjust for any accounting issues you identify and, based on the revised net income, to prepare an estimate of the taxable income and the taxes payable or refundable for 2015.

Next, TankCo is in the midst of developing a new fibreglass tank, which has involved a lot of research and development activities during the year. Management would like to know if there is special tax treatment for research and development costs, and has requested a report discussing how these costs should be treated for tax purposes.

In addition, assuming the fibreglass tank project goes ahead, management is unsure of whether to legally structure its operations as a division of TankCo Limited or in a corporation or a limited partnership. Madeline asks you to prepare a memo analyzing the options, being sure to consider tax planning and the company's objectives.

Lou's children had considered selling the company's shares but found no buyer. They have asked the board to consider selling the company's assets and distributing the after-tax proceeds between the two of them. Rob and Sarah have asked CPA LLP to estimate TankCo's net income for tax purposes resulting from the disposition of the corporation's assets, as well as the after-tax proceeds that would be available in the company after a sale of TankCo's assets (assume for this purpose that the fibreglass tank project remains inside TankCo, and is not moved into a separate entity before the sale). They would also like to know the amount of money each shareholder would be left with after the corporation's after-tax proceeds have been distributed and their personal taxes have been paid.

REQUIREMENTS FOR YOUR ROLE
(READ ONLY THE ONE SPECIFIED FOR YOUR PRE-SELECTED ROLE)

TAXATION REQUIREMENTS (continued)

Rita McGuire is the executor of Lou's estate. She has requested that CPA LLP explain the tax issues associated with Lou's death and estimate Lou's 2016 federal tax liability. She would also like to know what returns will need to be filed for Lou, and what opportunities may be available to minimize his taxes payable.

In addition to the common appendices (I and II), the information provided in Appendix III (Taxation) is relevant for the tax analyses that the partner would like you to perform.

APPENDIX I
EXCERPTS FROM DRAFT FINANCIAL STATEMENTS

Tankco Limited
Draft Balance Sheet
As at December 31
(in thousands of dollars)

	Note	2015 (unaudited)	2014 (unaudited)
Assets			
Current assets:			
Cash		$ 89	$ 51
Receivables, less allowance		1,930	1,891
Inventory	1	3,137	2,761
Prepaid expenses		248	250
		5,404	4,953
Property, plant and equipment, net	2	3,706	3,746
Development costs	3	564	0
Goodwill	4	2,000	2,000
		$ 11,674	$ 10,699
Liabilities			
Current liabilities:			
Bank indebtedness	5	$ 2,883	$ 1,091
Accounts payable and accruals	6	1,045	920
Current portion – long-term debt	5	500	500
		4,428	2,511
Long-term debt	5	3,000	3,500
		7,428	6,011
Shareholders' equity			
Share capital		100	100
Retained earnings		4,146	4,588
		4,246	4,688
		$ 11,674	$ 10,699

APPENDIX I (continued)
EXCERPTS FROM DRAFT FINANCIAL STATEMENTS

Tankco Limited
Draft Income Statement
For the Year ended December 31
(in thousands of dollars)

	Note	2015 (unaudited)	2014 (unaudited)
Sales, net of rebates	7	$ 12,546	$ 15,126
Operating expenses:			
Cost of sales, excluding depreciation	8	9,410	11,042
Selling, general and administrative		2,156	1,924
Depreciation		692	678
		12,258	13,644
Operating income		288	1,482
Interest expense		344	305
Earnings (loss) before taxes		(56)	1,177
Income taxes expense (recovery)	9	(14)	294
Net income (loss)		$ (42)	$ 883
Retained earnings, beginning of year		$ 4,588	$ 4,055
Net income (loss)		(42)	883
Dividends		(400)	(350)
Retained earnings, end of year		$ 4,146	$ 4,588

APPENDIX I (continued)
EXCERPTS FROM DRAFT FINANCIAL STATEMENTS

Additional Information and Notes

The financial statements for TankCo have been prepared using ASPE.

Note 1 – Inventory

	2015	2014
Raw materials	$ 430,000	$ 256,000
Work in progress	216,000	0
Finished goods	2,491,000	2,505,000
Total inventory	$ 3,137,000	$ 2,761,000

Note 2 – Property, plant and equipment

	Land	Building	Equipment	Total
Cost, January 1, 2015	$ 500,000	$ 5,175,000	$ 9,968,000	$ 15,643,000
Additions	0	10,000	642,000	652,000
Cost, December 31, 2015	500,000	5,185,000	10,610,000	16,295,000
Accumulated depreciation, January 1, 2015	0	4,227,500	7,669,600	11,897,100
Depreciation	0	103,700	588,080	691,780
Accumulated depreciation, December 31, 2015	0	4,331,200	8,257,680	12,588,880
Net book value, December 31, 2015	$ 500,000	$ 853,800	$ 2,352,320	$ 3,706,120

Note 3 – Development costs

All research and development costs are expensed as incurred in Selling, General, and Administrative expense, with the exception of the costs noted below.

Fibreglass tank project

The past year has been spent developing a next-generation, fibreglass oil tank. Discussions have been held with distributors, who are eager to start selling the tanks to their residential customers. A working prototype has been built, but we have three remaining steps to complete before proceeding with production:

1. We need certification from the government, which we expect to receive within the next few months.
2. We need the board's consent to proceed, in Lou's absence.
3. We need to finance the start-up costs of the new business.

APPENDIX I (continued)
EXCERPTS FROM DRAFT FINANCIAL STATEMENTS

Additional Information and Notes (continued)

We anticipate being in commercial production, and shipping product, within one month of overcoming the three hurdles.

All $564,000 of development costs related to the fibreglass tank project have been accumulated in a special balance sheet account, entitled Development Costs. The costs incurred to date include a $120,000 non-refundable deposit on equipment and $444,000 of design and other development costs.

Note 4 – Goodwill

Goodwill of $2 million arose from the acquisition of a commercial tank manufacturer on January 1, 2012. The assets acquired became the commercial division at TankCo. The purchase price was based on four times earnings before interest, taxes, depreciation and amortization (EBITDA), which is the standard in the industry. The book value of the commercial division assets at December 31, 2015, was:

Working capital [1]	$ 810,000
Production equipment [2]	390,000
Goodwill	2,000,000

[1] *The fair value of working capital approximates book value.*
[2] *Production equipment can be liquidated for approximately 60% of its carrying value.*

APPENDIX I (continued)

EXCERPTS FROM DRAFT FINANCIAL STATEMENTS

Additional Information and Notes (continued)

Note 5 – Bank borrowing

The company has a credit facility with Canadian Bank, as follows:

1. Bank indebtedness – line of credit

The line of credit available is equal to, 80% of its accounts receivable 45 days and under plus 60% of its finished goods inventory, to a maximum of $4 million. As at December 31, 2015, management calculated the borrowing base as follows:

	2015	2014
Receivables at 80%	$ 1,544,000	$ 1,512,800
Inventory at 60%	1,882,200	1,656,600
Borrowing base (maximum $4 million)	3,426,200	3,169,400
Bank indebtedness	2,883,031	1,090,637
Available	$ 543,169	$ 2,078,763

2. Long-term debt – term loan

The term loan of $3.5 million (2014 – $4 million) is secured by equipment. It was arranged in 2011 in order to help pay for the commercial tank operation acquisition. The loan is being repaid over 11 years with equal annual principal payments.

Covenant

The credit facility requires maintenance of a debt-to-equity ratio of no more than 2:1 at each balance sheet date. Debt and equity are calculated as total liabilities and total equity, as measured using ASPE.

APPENDIX I (continued)
EXCERPTS FROM DRAFT FINANCIAL STATEMENTS

Additional Information and Notes (continued)

Note 6 – Lawsuits

It is common for the company to get named as a defendant in lawsuits pertaining to oil spills. TankCo is currently named in 21 such lawsuits, which is a significantly higher number than normal. To protect against exposure to payouts on successful claims, which typically range from $255,000 to $410,000 each, the company maintains annual insurance coverage of $5 million with a $20,000 deductible per claim, which has historically been sufficient. When named in a lawsuit, the cost of the deductible is accrued. If the lawsuit is subsequently dropped, the amount is reversed.

The continuity schedule of pending lawsuits, which is included in accounts payable and accruals, is as follows:

	Number of lawsuits	Accrued amount
Balance, December 31, 2013	8	$ 160,000
New lawsuits in 2014	4	80,000
Deductibles paid out during the year	(2)	(40,000)
Lawsuits dropped	(1)	(20,000)
Balance, December 31, 2014	9	180,000
New lawsuits in 2015	19	380,000
Deductibles paid out during the year	(7)	(140,000)
Balance, December 31, 2015	21	$ 420,000

Note 7 – Revenue

During the year, TankCo received a contract to manufacture four large commercial tanks for Goldie Corp, a mining customer, for delivery in 2015. As of December 31, 2015, three of the tanks have been completely manufactured and the remaining tank is 90% complete. Only one of the tanks has been delivered to the customer as the customer asked TankCo to keep the tanks at its plant until construction of the mine site is complete, which is anticipated to be by mid-2016. Each tank has a contract price of $240,000 and is expected to generate a gross profit margin of 10%. Only one tank is manufactured at a time, and each tank takes three weeks to finish. The completed tanks are insured by the customer. As it has only collected payment for the tank that has been delivered, TankCo has only recognized the sale of one of the four tanks in the 2015 financials. The other three are included in inventory.

APPENDIX I (continued)
EXCERPTS FROM DRAFT FINANCIAL STATEMENTS

Additional Information and Notes (continued)

Note 8 – Cost of sales

TankCo has unionized plant workers. In February 2015, the workers went on strike for three weeks, and temporary contract workers were hired to replace the union workers during that time. It was subsequently determined that lower-quality units were produced by the temporary workers, and some tanks have since been confirmed to be defective. Thankfully, none of these defective tanks resulted in oil spills but some have been returned. Approximately 800 residential tanks were manufactured and shipped during that period, 32 of which have already been replaced at a cost of $400 per tank. Management thinks that another 50 tanks might be defective and has committed to its distributors to replace any tanks with manufacturing defects for a period of one year after purchase.

Beyond an amount for those that have already been replaced, no amount has been included in the financial statements. In the past, it was rare for the company to experience returns from its distributors.

Note 9 – Income taxes

The taxes-payable method is used to account for income taxes. The combined effective tax rate has historically averaged 25%, and the company accrues income taxes throughout the year on this basis.

APPENDIX II
2015 OPERATIONS REPORT AND 2016 FORECAST

To: Board of Directors
From: Josh Hoppy
Re: 2015 – 2016 Operations review

The 2015 results were poor. I reviewed the results with the management team in order to develop the following forecast for 2016.

	Note	2016 (forecast)	2015 (unaudited)
		(in thousands of dollars)	
Sales	1	$ 15,250	$ 12,546
Operating expenses:			
Cost of sales, excluding depreciation	2	11,285	9,410
Selling, general and administrative	3	1,900	2,156
Depreciation	2	704	692
		13,889	12,258
Operating income		$ 1,361	$ 288

Note 1 – Sales by division

	2016 (forecast)	2015 (unaudited)	2014 (unaudited)
	(in thousands of dollars)		
Residential tanks	$ 10,500	$ 8,946	$ 11,426
Commercial tanks	4,750	3,600	3,700
Total tank sales	$ 15,250	$ 12,546	$ 15,126

APPENDIX II (continued)
2015 OPERATIONS REPORT AND 2016 FORECAST

2015 Sales review

The residential tank market is experiencing a slow decline, estimated at 2% per year. However, the decrease in sales for 2015 was also caused by the loss of a key distributor that switched suppliers due to TankCo's quality issues. In 2015, as a result of the defective tanks, TankCo offered existing distributors additional sales rebates of $700,000.

Commercial tank sales were lower in 2015 than in 2014 as one less tank was sold. The tanks sold to Goldie Corp have been included in the 2016 forecast.

2016 Plan

Residential unit sales and selling prices are both forecasted to increase in 2016. I expect that we will get back the key distributor that we lost last year, and have included half of that lost volume in the forecast. The sales rebates expire in a few weeks and we expect to raise prices in line with the rest of the industry, resulting in an average selling price that is 7% higher than in 2015.

I also propose that we increase our average selling price of commercial tanks by $10,000 per tank in 2016. We will complete the last tank and deliver it and the other two remaining tanks in the Goldie Corp contract. Otherwise, we anticipate selling volumes similar to 2014.

Note 2 – Cost of sales

	(in thousands of dollars)		
	2016 (forecast)	2015 (unaudited)	2014 (unaudited)
Cost of sales – residential tanks	$ 7,124	$ 6,355	$ 7,445
Cost of sales – commercial tanks	4,865	3,747	4,275
Cost of sales (includes depreciation)	$ 11,989	$ 10,102	$ 11,720
Gross profit – residential tanks	$ 3,376	$ 2,591	$ 3,980
Gross profit – commercial tanks	(115)	(147)	(575)
Gross profit	$ 3,261	$ 2,444	$ 3,405

APPENDIX II (continued)
2015 OPERATIONS REPORT AND 2016 FORECAST

2015 Performance

The residential division experienced lower costs in 2015, largely due to 8% fewer unit sales in 2015 than in 2014. Lower volumes led to higher unit costs as fixed overhead was spread over fewer units.

Commercial tank costs were lower in 2015 than in 2014, due to efficiency savings achieved in each of direct materials, direct labour and variable overhead.

2016 Plan

Both divisions expect cost increases of 2%. We expect fixed overhead to increase slightly over 2015 due to inflation.

Note 3 – Selling, general, and administrative expenses

2015 Performance

Costs were higher in 2015 because there were additional costs associated with the delivery of replacement tanks for the defective ones, and a greater-than-normal number of lawsuits. All other expenses were comparable.

2016 Plan

Administrative overhead has been budgeted with no increase, and no incremental costs associated with shipping replacement tanks for defective products, or for increased lawsuits.

ASSURANCE ROLE ADDITIONAL INFORMATION

APPENDIX III
ASSURANCE – ADDITIONAL INFORMATION

Information on the Control Environment
As Discussed with Josh Hoppy and Various Staff Members

Entity level controls

Prior to his illness, Lou was very involved in the business and approved all major decisions, including approval of all expenditures. However, as his involvement during 2015 was sporadic, Marvin Bell, TankCo's controller, was given authority to act on Lou's behalf. Marvin does not have a formal accounting designation but he is a conscientious, long-time employee. Marvin has one accounting clerk who supports him in his role.

Three years ago, TankCo converted to a cloud-based accounting system, which has resulted in the elimination of its IT department staff and its servers. The accounting system is well developed and widely used by organizations in a variety of manufacturing sectors. The system allows user roles to be configured, to enhance segregation of duties.

Sales cycle

TankCo sells its residential tanks through a distributor network of several hundred customers. These customers order tanks in batches of at least 10, which is the minimum number of tanks that TankCo will ship. Due to their size and customized nature, commercial tanks are sold in single quantities. The administrative process for invoicing and collection is the same for both divisions.

Orders are submitted through a secure website that is fully integrated with a module of the financial system. Each customer has a unique login and profile that specifies a credit limit and the terms of sale. These terms are populated by the controller, who is the only person with access.

Orders are received by the operations team and shipments are filled from inventory, or are scheduled on back order if the inventory has yet to be manufactured. Backlogged orders are typically shipped within a few weeks.

When orders are shipped, the operations people key in the quantity of tanks, and the system instantly and automatically generates an invoice that is sent to the customer electronically. Standard credit terms are net 45 days, although some customers have negotiated early payment discounts, which are tracked in the system.

Remittances from customers are made through electronic funds transfer. The accounting clerk reviews the deposits by viewing an online bank statement on a daily basis. A listing of customer receipts is prepared, and entries are made in the financial system to apply remittances against customers' accounts.

APPENDIX III (continued)
ASSURANCE – ADDITIONAL INFORMATION

Information on the Control Environment (continued)
As Discussed with Josh Hoppy and Various Staff Members

Purchasing cycle

TankCo purchases a variety of raw materials to manufacture its tanks, from steel to welding supplies. TankCo's five shop foremen and one production manager are all authorized to issue purchase orders for materials, as required, without approval. To solicit the best price, the company uses a number of suppliers and does not limit who their employees can purchase from as there is no list of pre-approved vendors.

Materials are delivered to the receiving area, where a warehouse employee receives the bill of lading and files it away. When the supplier invoice is received, which may be that day or a few days later, the accounting clerk enters the payable amount into the accounting system and selects a payment date.

Cheques are printed each week. The system selects all invoices scheduled for payment in that week and automatically prints the cheques.

The cheques typically require one signature, Lou's, but Marvin Bell has been the signer since June of last year. The accounting clerk mails the signed cheques to the suppliers.

The accounting clerk prepares a monthly bank reconciliation that is filed and available for review upon request.

APPENDIX III (continued)
ASSURANCE – ADDITIONAL INFORMATION

Extracts from the Lending Agreement with Canadian Bank

Covenants:

- The borrower will furnish the lender with financial statements that have had a review engagement performed by an independent public accountant within 45 days of the year-end reporting date.
- Upon request by the lender, the borrower will furnish a special report, audited by an independent public accountant, calculating the provisions of this agreement.
- The borrower shall not exceed a debt-to-equity ratio of more than 2:1.
- The borrower shall not draw on the line of credit facility in excess of its borrowing base, which shall be determined as the lesser of:
  - $4 million
  - 80% of third-party receivables aged 45 days and under, plus 60% of finished goods inventory

Violation or default of any term under the lending agreement triggers a 30-day remedy period for the borrower. If the situation is remedied to the bank's satisfaction, the terms and conditions of the lending agreement shall remain in place. However, if the violation or default is not corrected within 30 days from when the financial statements are issued, all loans under both the term and line of credit facilities will become payable on demand.

APPENDIX III (continued)
ASSURANCE – ADDITIONAL INFORMATION

Extracts from Last Year's Review Engagement File

Key areas of discussion and inquiry

Receivables:

- Standard credit terms are net 45 days for all distributors. Other than for very rare exceptions, customers pay within this time frame. As it deals with a stable group of long-term distributors who are well capitalized, the company has experienced very few bad debts historically. The balance of receivables and the provision for bad debt appear plausible.

Inventory:

- At the request of the client, we attended the inventory count at year end, in case the bank exercises its option to request a special report. In 2014, the bank did not request a special assurance report on its security position.
- Inventory includes raw materials and any work in progress. At December 31, 2014, there was no work in progress. Raw materials largely consist of coiled sheets of rolled steel. We discussed the costing of the raw materials and are satisfied that management has recorded these at the appropriate value.

Property, plant and equipment:

- The company owns a large manufacturing plant in an industrial park. A separate office is leased for administration.
- The company uses specialized robotic equipment to streamline the assembly line and to perform tasks such as bending and forming the steel sheets for the residential tank operations.
- In 2014, the company spent $776,000 in capital expenditures on the plant. These were discussed with management and all appear to be appropriately capitalized. There were no other costs that warranted capitalization.

APPENDIX III (continued)
ASSURANCE – ADDITIONAL INFORMATION

Extracts from Last Year's Review Engagement File (continued)

Accounts payable:

- We reviewed the listing of accounts payable and the various accrual balances. The company has been diligent in paying according to its terms of credit and nothing unusual was noted.
- The company's provision for lawsuits has followed the previous year's practice and appears suitable.

Cash, line of credit and term loan:

- These balances were all confirmed with Canadian Bank.
- Interest expense was recalculated to determine plausibility.
- The lending covenants were recalculated and no issues were noted. The result is as follows:

	Lending covenant	2014 Result
Debt-to-equity ratio (Total liabilities/total equity)	< 2:1	1.3:1

FINANCE ROLE ADDITIONAL INFORMATION

APPENDIX III
FINANCE – ADDITIONAL INFORMATION

Industry Statistics for the Metal Fabrication Sector

The metal fabrication industry is comprised of a variety of manufacturers involved in the cutting, milling, pressing and forming of metal. Industry statistics for the metal fabrication industry are as follows:

Sales growth – residential (2015)	- 2.0%
Sales growth – commercial (2015)	3.1%
Gross profit margin	24%
Operating margin	10%
Return on equity	9.2%
Current ratio	1.45
Receivable turnover	9 times
Inventory turnover	6 times
Debt-to-equity ratio	1.02

The cost-of-equity statistics for this sector are as follows:

Beta	1.5
Risk-free return	4%
Risk premium	9%

A review of comparable transactions in the industry over the past 12 months indicate an enterprise value / EBITDA multiple of four times.

APPENDIX III (continued)
FINANCE – ADDITIONAL INFORMATION

Fair Market Value of Net Assets

All tanks are manufactured in one location. As at December 31, 2015, the carrying value and the appraised value of the company's property, plant and equipment for that single location are as follows:

(in thousands of dollars)	Carrying value	Appraised value
Land	$ 500	$ 2,000
Building	854	4,000
Equipment	2,352	1,500
Total	$ 3,706	$ 7,500

As at December 31, 2015, the estimated fair market value of the net assets (also known as the adjusted book value approach) is as follows:

(in thousands of dollars)	
Net book value of equity (unaudited)	$ 4,246
Fair market value bump of PP&E (above)	3,794
Adjusted book value of net assets	$ 8,040

APPENDIX III (continued)
FINANCE – ADDITIONAL INFORMATION

Fibreglass Tank Project

To: Board of Directors
From: Josh Hoppy
Re: Fibreglass tank project

Fibreglass tanks are more durable and last longer than traditional steel tanks. This project has been ongoing since the beginning of last year and considerable resources have been spent on developing a prototype that is ready for certification by the provincial Health and Safety Department.

The strategic rationale for developing a fibreglass tank is to protect our share in the residential tank market. Lou and the other managers believed it was necessary for us to continue to be a single-source supplier of all types of tanks for our existing distributors, and possibly others. In addition to the potential for an increased market share, these tanks should generate higher margins over our traditional steel tanks.

There is currently one competitor offering fibreglass tanks but we believe our product is superior to theirs. This competitor has been making significant penetration into the traditional steel tank market, even though fibreglass tanks cost the consumer almost twice as much as steel tanks.

The operations are not complex and the manufacturing process has already been designed. A suitable production site has been identified and we have equipment suppliers on standby, ready to install the production equipment.

APPENDIX III (continued)
FINANCE – ADDITIONAL INFORMATION

Fibreglass Tank Project (continued)

The business plan assumptions are as follows:

- Sales and gross profit margin:

		Year 1	Year 2	Year 3	Year 4	Year 5
Production capacity	units	6,000	6,000	6,000	6,000	6,000
Sales	units	2,000	4,000	6,000	6,000	6,000
Selling price		$1,000	$1,000	$1,000	$1,000	$1,000
Gross profit margin (excluding depreciation)		40%	40%	40%	40%	40%
Gross profit		$800,000	$1,600,000	$2,400,000	$2,400,000	$2,400,000

- Volume of sales: A conservative assumption would be that sales of fibreglass tanks replace steel tanks that would otherwise be sold by us. However, we realistically think that having the fibreglass tank in our product portfolio will increase the volume of our overall sales by 20%. Steel tanks are expected to sell for $525 per unit, at a 28% gross profit margin (excluding depreciation), for the next five years.

- Direct selling, general and administrative costs: Management estimates incremental fixed costs of $450,000 to support the new product line. Variable direct labour and materials and other fixed and variable manufacturing costs have been included in calculating gross profit.

- Capital costs: The new production equipment will cost $1.6 million. The equipment qualifies for a 30% capital cost allowance. The equipment has an economic life of five years and supports annual production capacity of 6,000 tanks. The equipment will have no residual value after five years.

- Working capital: The new product line will require an additional working capital investment equivalent to 45 days of sales.

- Costs incurred: To date, the company has incurred $564,000 on this project.

APPENDIX III (continued)
FINANCE – ADDITIONAL INFORMATION

Financing Options

In addition to the credit facility with Canadian Bank, the board has identified the following sources of financing.

Real estate mortgage

TankCo currently owns its real estate (land and building) without debt. The land and building have an appraised value of $6 million. After soliciting interest from a number of lenders, the best proposal for using the real estate as collateral yielded a five-year term mortgage, with a 20-year amortization schedule of equal annual repayments, at a fixed rate of 4.75% and a loan-to-value ratio of 60% of the appraised value of the real estate. The company must maintain a debt service coverage ratio of greater than 1.2 each year.

Sale lease-back

TankCo could also sell its real estate (land and building) outright and lease it back. The term of the lease would be 10 years, which is approximately half of the remaining life of the building. Lease payments of $500,000 would be due annually at the beginning of the year. The implicit lease rate is 5.45%. The lessee would still be responsible for all operating and maintenance costs of the property.

PERFORMANCE MANAGEMENT ROLE ADDITIONAL INFORMATION

APPENDIX III
PERFORMANCE MANAGEMENT – ADDITIONAL INFORMATION

Product Costing Information

The controller, Marvin Bell, has provided the following costing information for 2015:

Residential tanks	Per unit	Total
Selling price	$492	$8,946,000
Direct materials	$103	$1,873,000
Direct labour	$101	$1,836,000
Variable OH	$48	$873,000
Fixed OH applied*	$98	$1,773,000
Cost of sales	$350	$6,355,000
Gross profit	$142	$2,591,000
Contribution margin	$240	$4,364,000

Commercial tanks	Per unit	Total
Selling price	$240,000	$3,600,000
Direct materials	$97,467	$1,462,000
Direct labour	$72,867	$1,093,000
Variable OH	$9,133	$137,000
Fixed OH applied*	$70,333	$1,055,000
Cost of sales	$249,800	$3,747,000
Gross profit	($9,800)	($147,000)
Contribution margin	$60,600	$909,000

* Fixed overhead is applied on direct labour hours and includes depreciation.

APPENDIX III (continued)
PERFORMANCE MANAGEMENT – ADDITIONAL INFORMATION

Product Costing Information (continued)

Cost allocation methodology

Tank fabrication has historically been a labour-intensive process; as a result, fixed plant overhead has always been allocated on the basis of direct labour hours.

Most raw material and direct labour costs can be easily attributed to either the residential-tank or the commercial-tank line.

The residential tanks are manufactured in an assembly-line format that uses 80% of the floor space of the plant and 90% of the equipment. The commercial tank uses a large, open space at the back of the plant, accounting for the other 20% of the floor space and 10% of the equipment.

Shipping and receiving expenses are driven by the number of orders; 75% of orders are for residential customers.

The manufacturing process of the residential tanks was modified three years ago to utilize a higher degree of robotic welders and mechanized equipment. The cost of this equipment was paid for by the direct-labour savings.

By comparison, the commercial tank production is still largely a manual process, where pre-formed steel slabs are assembled, welded and coated without ever moving the tank, which, due to its size, is impossible.

Costs that make up fixed plant overhead are as follows:

Fixed overhead	Cost driver	2015 (actual)
Plant depreciation	Equipment use	$ 692
Production management – residential	Production volume	602
Production management – commercial	Production volume	158
Property taxes and insurance	Floor space	645
Shipping and receiving	Number of orders	437
Plant repairs and maintenance	Floor space	294
		$ 2,828

Over/under applied fixed overhead have been allocated to cost of goods sold and finished goods inventory, using a pre-determined ratio.

APPENDIX III (continued)
PERFORMANCE MANAGEMENT – ADDITIONAL INFORMATION

Memo from Rob and Sarah Marshall

To: CPA
From: Rob and Sarah Marshall
Re: Strategic planning

Since we know little about the industry, Josh has provided us with the following brief overview, along with TankCo's priorities for the year.

Industry analysis

The tank fabrication sector is a subset of the metal fabrication industry. The tank fabrication sector is highly fragmented, with many small operators competing to produce oil tanks, propane tanks and water tanks, using various metal composites and fibreglass.

Residential heating oil tank sector

Residential heating oil tanks are predominately used in the northeastern market, where electricity has historically been expensive and natural gas penetration is low. It is estimated that there are two million residential tanks currently installed at homes across this region.

However, as heating with oil is no longer the favoured home heating source, this line is experiencing an estimated decline of 2% per year, as newer homes are built with alternative heating systems and existing homes are converting from oil systems. Also contributing to declining sales is the increasing life of an oil tank. Steel oil tanks need to be replaced every 10 years but fibreglass tanks made by the competition can currently last 15 years, and TankCo's new fibreglass tanks, that should be on the market soon, should last 20 years. These product enhancements have made the replacement cycle for new tanks longer. Any decline in sales due to volume has historically been offset by increases in pricing across the industry.

Commercial tank sector

Commercial tank volumes are sensitive to economic cycles. The industry is in a growth phase, which is expected to continue for years to come. Commercial tanks require a large, open space to construct, and specialized welding and forming expertise. The end uses of commercial tanks are wide, and vary from subterranean tanks for gas stations and commercial buildings to tanks used in northern mine sites.

APPENDIX III (continued)
PERFORMANCE MANAGEMENT – ADDITIONAL INFORMATION

Memo from Rob and Sarah Marshall (continued)

Industry statistics for the metal fabrication industry are as follows:

Sales growth – residential (2015)	- 2.0%
Sales growth – commercial (2015)	3.1%
Gross profit margin %	24%
Operating margin %	10%
Current ratio	1.45
Inventory turnover	6 times
Debt-to-equity ratio	1.02

Josh and his team have provided their strategic priorities for the coming year. We would like your thoughts on each of them, and whether their successful implementation would be enough to warrant continuing to own and operate TankCo.

- Regain the major residential tank distributor that was lost in 2015. We believe we can regain this particular distributor's business if we offer an additional 5% discount through 2016. Forecasted sales for 2016 are 19,950 units.
- Complete testing and obtain certification for the fibreglass tanks. These tanks sell at a premium in the market and offer the possibility of higher margins and a larger market share. We are still finalizing the pricing. The 2016 forecast excludes the fibreglass tank opportunity.
- Although we forecasted sales of 19 commercial tanks, we believe the commercial tank division should be phased out, as these tanks are contributing a negative gross profit in the 2016 forecast. This change would result in an upside change to the forecast circulated to the board, which assumes TankCo is continuing this line of business in 2016.

APPENDIX III (continued)
PERFORMANCE MANAGEMENT – ADDITIONAL INFORMATION

Fibreglass Tank Opportunity

To: FBC
From: Josh Hoppy
Re: Fibreglass tank opportunity

The strategic rationale for developing a fibreglass tank is to protect our share in the residential tank market. Lou believed it was necessary for us to continue to be a single-source supplier of all types of tanks for our existing distributors, and to encourage other distributors to switch to TankCo because of its product line diversification. Fibreglass tanks can be more profitable than steel tanks but generally sell for twice as much, which will limit their market penetration.

	Steel tanks	**Fibreglass tanks**
Useful life	10 years	20 years
Relevant manufacturing cost	$375	$600
Manufacturer's selling price	$525 (2016 budget)	See below

There is currently one competitor offering fibreglass tanks but we believe our product will be superior, as our tank should last five years longer. This competitor has been making significant penetration into the residential tank market and is currently selling its fibreglass tanks for $900 each.

Based on market research, estimates for market size and market share for fibreglass tanks at different price levels are as follows:

Manufacturer's price	**Market demand (# of tanks)**	**TankCo's estimated market share**	**Replacement of TankCo steel tank volume ***
$700	50,000	80%	35%
$800	20,000	75%	45%
$900	15,000	65%	50%
$1,000	12,000	60%	55%
$1,100	6,000	35%	80%

* This is the amount of TankCo steel tank sales that would be replaced by fibreglass tank sales. For example, at $700, TankCo would sell 14,000 fewer steel tanks (50,000 x 80% x 35%).

TAXATION ROLE
ADDITIONAL INFORMATION

APPENDIX III
TAXATION – ADDITIONAL INFORMATION

TankCo Limited Tax Information

Undepreciated capital cost

	December 31, 2014	Additions in 2015
Class 1	$944,115	$10,000
Class 8	$80,211	$1,013
Class 29	$3,029,120	$640,987
Cumulative eligible capital	$1,206,536	$0

There were no disposals during the year. The assets making up the December 31, 2014, balance in Class 29 were all acquired in 2014.

Tax attributes of the issued and outstanding shares

There are 1,000 common shares issued and outstanding, with a paid-up capital of $100,000.

The company shares had always been owned by Lou Marshall and were inherited equally by his two children upon his death on January 24, 2016.

Other expenditures that were incurred in 2015

Meals and entertainment	$2,421
Term life insurance on Lou Marshall	$3,244
Country club dues for Lou Marshall	$4,783

These items were all included in Selling, General and Administrative expenses. Due to its poor operating performance, TankCo made no tax instalments during the year.

APPENDIX III (continued)
TAXATION – ADDITIONAL INFORMATION

TankCo Limited Tax Information (continued)

Fibreglass tank project

The company saw an opportunity to enter the fibreglass tank market to further differentiate its value proposition to its customers. While other fibreglass tanks have previously been developed, the company looked to improve the durability and stability of the tank with a mix of resins that had not been used previously. TankCo contracted a chemical engineer to develop the resin formulation and to perform tests on the next-generation tank. TankCo used its own internal resources to design and build the tank prototype. The resulting tank should last five years longer than comparable fibreglass tanks currently on the market.

TankCo has not yet decided whether the line of business will remain within TankCo or whether it will be a separate entity. The manufacturing facility for the fibreglass tank is planned to be separate from the manufacturing facility for the steel tanks. The following project costs have been incurred, and recorded in a separate asset account on the financial statements.

	Costs expended to date
Tank design costs (contractor)	$130,000
Direct labour hours attributed to the project	120,000
Direct material attributed to the project	70,000
Pre-marketing costs to obtain purchase orders	35,000
Overhead costs allocated to the project	89,000
Non-refundable deposits on equipment	120,000
Total	$564,000

Combined federal and provincial tax rates and prior-year taxable income

	Active business income (eligible for small business deduction)	Active business income (ineligible for small business deduction)	Property income
Corporate tax rate	15%	28%	47%

TankCo's 2014 taxable income was $1.18 million. The company has not previously claimed any investment tax credits and had no losses available to carry forward as at December 31, 2014. The opening balance in the GRIP account is $600,000.

APPENDIX III (continued)
TAXATION – ADDITIONAL INFORMATION

Fair Market Value of Assets

The board provided the following fair value of all of TankCo's assets at January 24, 2016.

	Estimated value
Land	$2,000,000
Building	$4,000,000
Equipment	$1,500,000
Development costs	$0
Life insurance proceeds receivable	$500,000

Costs to liquidate the inventory, real estate and equipment are expected to be 8% of the proceeds. In addition, CPA LLP and the company's lawyers have indicated that their total fees for winding up the company and preparing the associated tax filings would be $50,000.

Other working capital accounts, such as receivables, prepaid expenses, and payables and accruals, would be settled at the amount recorded on the books. All the liabilities can be repaid without penalty. Rita has asked you to assume for now that TankCo's year-to-date income is nil.

TankCo has a term life insurance policy on Lou's life. In the event of death, the policy provides the company with a payout of $500,000. The insurance was purchased with the intention of providing the company with funds to help during a period of transition.

Both Rob and Sarah earn income in excess of the top bracket. Accordingly, their combined federal and provincial marginal tax rate is 45%.

APPENDIX III (continued)
TAXATION – ADDITIONAL INFORMATION

Summary of Lou Marshall's Personal Tax Information

Lou is survived by his wife, Thelma, aged 64, his children Rob and Sarah, and three grandchildren. His will specifies the following distribution of his assets.

Thelma (wife):

Asset	Adjusted cost base	FMV at January 24, 2016
Personal residence	$400,000	$900,000
RRIF	$600,000	$1,300,000

Rob (son):

Asset	Adjusted cost base	FMV at January 24, 2016
500 shares of TankCo Limited	$50,000	$2,000,000
Boat	$100,000	$40,000
Personal stamp collection	$60,000	$10,000

Sarah (daughter):

Asset	Adjusted cost base	FMV at January 24, 2016
500 shares of TankCo Limited	$50,000	$2,000,000
Rare painting	$25,000	$50,000

Charitable bequests:

Lou made a special bequest of $600,000 to Great Canadian University, a registered charity, to be paid out of the following assets of his estate:

Asset	Adjusted cost base	FMV at January 24, 2016
Cash on hand	$482,000	$482,000
TFSA	$39,000	$85,000
Utility company bond (unregistered) due 2024	$30,000	$33,000

APPENDIX III (continued)
TAXATION – ADDITIONAL INFORMATION

Summary of Lou Marshall's Personal Tax Information (continued)

Lou had the following sources of income:

	24 days in 2016
Old Age Security	$574
Canada Pension Plan	$876
Dividends (from TankCo)	$0
Accrued interest income	$138

Thelma had no sources of income in 2016. Before he died, Lou incurred medical expenses of $5,420 and donations of $120 in 2016.

Lou had never used his lifetime capital gains exemption. At his date of death, Lou did not have a cumulative net investment loss balance.

DAY 2 – MARKING GUIDE –ASSURANCE (INCLUDES COMMON)
TANKCO LIMITED

In the Assurance role, the candidate is expected to draft the overall audit plan for the 2015 audit of TankCo's financial figures, including procedures for the high-risk areas. As part of the audit, the candidate is expected to address the significant financial reporting errors in the draft financial statements and consider the impact of the errors on compliance with the bank's lending agreement terms. Any control deficiencies should be discussed in a management letter. Candidates are also expected to provide professional advice regarding the bank's request for a special report.

Memo to: Madeline Murphy
From: Assurance CPA
Subject: TankCo's 2015 Year-End Audit

The first six assessment opportunities are common to all roles.

Assessment Opportunity #1 (Common) The candidate discusses the revenue recognition for the undelivered commercial tanks. *The candidate demonstrates DEPTH in Core Financial Reporting.*

The company has an accounting policy of recognizing revenue when tanks are delivered to customers. TankCo had a contract with Goldie Corp. to manufacture four large commercial tanks in 2015. However, at December 31, three of these tanks are still on site. Two of the three tanks are complete and being held by the company at the request of the customer and at the customer's risk. The third tank is 90% complete.

Each tank has a contract price of $240,000 and is expected to generate a gross profit margin of 10%. TankCo has recognized the sale of one of the four tanks in the 2015 draft financials because it is the only tank that has been delivered and where payment has been received. The other three are included in inventory.
The accounting issues are

1. whether the completed tanks can be included as sales in 2015; and
2. whether the partially completed tank should be recognized in sales based on the percentage of completion.

On the first issue, under HB 3400.04 – *Revenue*, sales and service transactions shall be recognized when the requirements as to performance are satisfied, provided that at the time of performance ultimate collection is reasonably assured.

Collection has not been an issue in the past (although accounts receivable turnover has slowed in 2015). Because Goldie Corp. has already paid for the first tank, I will assume that collection for the other three tanks will not be an issue. The remainder of this discussion will focus on performance. Because the goods have been manufactured under contract and are available to the customer, we must determine whether this sufficiently constitutes performance.

HB 3400.05 defines performance as being achieved when

i. the significant risks and rewards of ownership have been transferred to the customer, which has been achieved because the customer has taken title and insured the finished tanks; and
ii. the amount of consideration has been determined, which has been achieved because the tanks' value ($240,000) is specified in the contract.

HB 3400.07 generally specifies that delivery is required for performance to have been met; however, HB 3400.09 gives consideration to explicit bill-and-hold arrangements – which appears to be what the Goldie Corp. order is because the company is holding the tanks at the customer's request (Goldie Corp. requested the delay until its mine site is complete in mid-2016) and the customer has insured the two completed tanks. Thus, on the first issue, it would appear appropriate for the company to recognize in revenue the sale of the two completed but undelivered tanks.

On the second issue, regarding the yet-to-be-completed tank, HB 3400.15 suggests that, when determining whether the significant risks and rewards of ownership have been transferred to the buyer, the company should consider whether

i. any significant acts of performance remain to be completed, which is the case because the tank's construction has not yet been completed; and
ii. there is any continuing managerial involvement, which is the case because the tank is not finished.

Therefore, we cannot use the same bill-and-hold arguments to recognize the $240,000 revenue for the fourth tank. The other possibility is to consider this a long-term contract and recognize revenue as work is performed to construct the tank. We are told that it takes three weeks to construct each tank, so the question is whether that is a long enough period of time to be considered a long-term contract. We believe it is unlikely to be a duration long enough to warrant use of the percentage-of-completion or completed-contract method. Therefore, the fourth tank rightly belongs in work-in-progress inventory at December 31, 2015.

Because the risk and rewards of ownership of the two completed commercial tanks have transferred to the customer and the revenue has been recognized, for tax purposes the sale of these two commercial tanks will be included in 2015 taxable income.

Issue #1: To record the bill-and-hold sales

Accounts receivable (240,000 × 2)	$480,000	
Sales		$480,000
Cost of sales	$432,000	
Inventory (FG)		$432,000
Income tax expense (25% × GP)	$12,000	

Income taxes payable		$12,000

The cost of inventory sitting in work in progress is also incorrect. If the inventory is 90% complete, then the amount in work-in-progress inventory should be: $240,000 × 90% = $216,000 (total cost of them item, considering the 10% gross margin) × 90% complete = $194,400.

Cost of sales	$21,600	
Inventory (WIP)		$21,600
Income taxes payable	$5,400	
Income tax expense		$5,400

The overall impact of these adjustments on the lending covenants will be positive:

- The incremental recognition of revenue on the bill-and-hold tanks will add to equity.
- Recording the sale/receivable and relieving inventory will help create additional borrowing availability since receivables are at a higher rate than inventory.

For Assessment Opportunity #1, the candidate must be ranked in one of the following five categories:

Not addressed – The candidate does not address this assessment opportunity.

Nominal competence – The candidate does not attain the standard of reaching competence.

Reaching competence – The candidate attempts to discuss the revenue recognition issue related to the undelivered commercial tanks.

Competent – The candidate provides a reasonable discussion of the revenue recognition issue related to the undelivered commercial tanks.

Competent with distinction – The candidate provides an in-depth discussion of the revenue recognition issue related to the undelivered commercial tanks.

Assessment Opportunity #2 (Common)

The candidate discusses the warranty provision related to the defective tanks.

The candidate demonstrates DEPTH in Core Financial Reporting.

The company shipped 800 residential tanks that were manufactured during the strike. In the 10 months since then, 32 of the tanks have been found to be defective. The company has replaced the tanks at no charge and has committed to its distributors to replace any tanks with manufacturing defects for a period of one year after purchase. Management believes that another 50 tanks might be returned from these shipments. Because returns have not been an issue in the past, this would be a new accounting issue for the company to address in 2015. The issue is

whether a provision for a warranty on those tanks should be set up in the 2015 fiscal year, given that management's commitment suggests a constructive obligation.

ASPE is silent on provisions; however, this matter could be dealt with in the context of HB 3290 – *Contingencies.* The commitment to replace any defective tanks is an existing condition (the potentially defective tanks have already been constructed), with an uncertainty about the extent of the liability associated with it, making this a contingent liability. The issue will be resolved in the coming months as the one-year anniversary expires.

Measurement requires management to assess the likelihood and amount of the potential loss. The maximum amount of exposure would involve all 800 tanks being returned, less the 32 that have already been returned and replaced. Management has assessed the likelihood of the contingency and believes it is likely that another 50 tanks will be returned. Since the amount both can be estimated and is likely, a loss provision should be accrued in the 2015 financial statements.

At $400 per tank, the contingent loss to be reported would be $20,000. The maximum amount of potential liability should be disclosed in the notes to the financial statements ((800 − 32) × 400 = $307,200). Because the company has yet to fulfill this provision by replacing any of the 50 tanks, the provision is not tax deductible. Thus, no adjustment is required to taxes payable or income tax expense.

Issue #2: To establish a warranty provision

	Dr	Cr
Cost of sales	$20,000	
Accounts payable and accruals		$20,000

The incremental provision will weaken the debt-to-equity covenant calculation.

For Assessment Opportunity #2, the candidate must be ranked in one of the following five categories:

Not addressed – The candidate does not address this assessment opportunity.

Nominal competence – The candidate does not attain the standard of reaching competence.

Reaching competence – The candidate attempts to discuss the warranty provision issue related to the defective tanks.

Competent – The candidate provides a reasonable discussion of the warranty provision issue related to the defective tanks.

Competent with distinction – The candidate provides an in-depth discussion of the warranty provision issue related to the defective tanks.

Assessment Opportunity #3 (Common)

The candidate discusses the accounting treatment for the lawsuits.

The candidate demonstrates DEPTH in Core Financial Reporting.

TankCo is currently experiencing a significant jump in the number of lawsuits against it, from 4 in 2014 to 19 in 2015.

According to HB 3290, paragraph 5, "a *contingency is an existing condition or situation involving uncertainty as to possible gain or loss to an enterprise that will ultimately be resolved when one or more future events occur or fail to occur. Resolution of the uncertainty may confirm the acquisition of an asset or the reduction of a liability or the loss or impairment of an asset or the incurrence of a liability."*

These lawsuits are a possible loss (payout of a minimum of $20,000 deductible, plus any amount that exceeds the insurance coverage) that will be resolved at a future date (either the settlement of the lawsuit or when the lawsuit is dropped).

Further HB guidance tells us that

.12 *The amount of a contingent loss shall be accrued in the financial statements by a charge to income when both of the following conditions are met:*

(a) it is likely that a future event will confirm that an asset had been impaired or a liability incurred at the date of the financial statements; and

(b) the amount of the loss can be reasonably estimated.

It would appear that the lawsuits will result in a likely payout, since very few have been dropped in the past and none on the continuity schedule seem to have been ruled in TankCo's favour. TankCo also has insurance specifically for this purpose. The actual likelihood of the lawsuits and potential payouts will need to be determined with the assistance of TankCo's lawyers, but for now I will assume they are all likely. They are also estimable, as we know that, at a minimum, the deductible of $20,000 will have to be paid and that the settlements typically range from $255,000 to $410,000 (so any exposure beyond the $5 million of insurance could be determined).

According to HB 3290.13, *"when no amount within the range is indicated as a better estimate than any other, the minimum amount in the range would be accrued."*

Therefore, 21 pending claims at $255,000 per claim equals $5,355,000. The company has $5 million of insurance coverage, so the question is whether these two amounts can be offset. According to HB 3290.11, *"A likely loss to an enterprise may be reduced or avoided by a counterclaim or a claim against a third party. In such a case, the amount of the likely recovery is an element of the likely loss and, therefore, would be taken into account in determining the amount to be recognized in the income statement. However, if the probability of success in the related action is less than likely, a potential recovery would not be taken into account."* TankCo has a history of lawsuits, and it appears the insurance company has always covered successful claims; therefore, it is probably safe to assume that the related action is likely, and these two amounts should be treated together.

Assuming the $255,000 is above and beyond the $20,000 deductible, $5,355,000 − $5,000,000 of coverage = $355,000 of additional possible exposure if these claims are all resolved in the coming year. Therefore, this amount needs to be accrued.

The company must also disclose any additional exposure as a contingent liability in the notes to the financial statements. Because these losses are not deductible for tax purposes until the claims are resolved, there is no adjustment to income taxes payable or income tax expense.

Issue #3: To establish a contingent loss on lawsuits.

Contingent loss from lawsuits	$355,000	
Accounts payable and accruals		$355,000

This issue will have a negative impact on the debt-to-equity ratio, which further weakens the lending covenant.

For Assessment Opportunity #3, the candidate must be ranked in one of the following five categories:

Not addressed – The candidate does not address this assessment opportunity.

Nominal competence – The candidate does not attain the standard of reaching competence.

Reaching competence – The candidate attempts to discuss the lawsuits issue.

Competent – The candidate provides a reasonable discussion of the lawsuits issue.

Competent with distinction – The candidate provides an in-depth discussion of the lawsuits issue.

Assessment Opportunity #4 (Common)

The candidate discusses the accounting treatment for the deferred development costs.

The candidate demonstrates DEPTH in Core Financial Reporting.

The company has deferred $564,000 of costs associated with the development of the new fibreglass tank.

Costs from development of the new fibreglass tank can be capitalized as an intangible asset provided they meet criteria set out in HB 3064 – *Goodwill and Intangible Assets*.

To be recognized as an intangible asset, an asset must be identifiable. Identifiable criteria are met when the asset is separable and arises from contractual or other legal rights. In the case of the fibreglass tank design, it is indeed separable, in that the design and manufacturing process could be carved off as a separate business. In addition, because there are certification requirements from the government to allow for operations, this also creates a legal right and control of the intangible asset. However, the company has yet to receive that government certification.

The recognition criteria that must be met for the cost to be capitalized include the following:

1. There are probable expected future economic benefits, which is supported by the business case prepared for board approval.
2. The costs can be reliably measured, which is supported by the fact that the company has been tracking the costs associated with the development of the fibreglass tank.

The next issue that needs to be considered is ensuring all the costs listed relate to the development phase of the project. Costs incurred for research or operations should be excluded from the intangible asset cost pool. Research costs should be expensed, and costs pertaining to operations should be dealt with according to their nature and either capitalized or expensed.

Development costs are recognized when the following criteria are met:

1. Technical feasibility – This was achieved when a working prototype was built, although government certification is still pending. On balance, this criterion can be supported.
2. Intention to pursue the project – Management has every intention of pursuing the project; however, the project has not yet received final board approval in Lou's absence. Until Lou's passing, his intention was to pursue this project; however, that decision now rests with the board, so there can be no assurance that the intention to pursue is still valid.
3. Ability to use the intangible asset – TankCo has the full rights to do so, but only upon receipt of the government certification. TankCo expects to receive the government certification within the next few months, but until that time, satisfaction of this criterion is questionable.
4. Availability of adequate technical and financial resources to complete development – TankCo appears to have the technical resources, but it's unclear whether it has the financial resources to complete the project. The precarious financial situation makes this criterion difficult to support.
5. Ability to measure the development expenditures – The company appears to have tracked the expenses ($444,000); therefore, this criterion does not seem to be an issue.
6. Existence of a market for the fibreglass tank – This is also met given that we are told that discussions that have been held with distributors indicate they are eager to start selling the tanks.

Not all of these criteria have been met, so the costs should be expensed in 2015. In addition, TankCo may already have an accounting policy in place to expense development costs, even if they were to meet these criteria. This policy is supposed to be applied consistently to all internal projects. If this was a policy the company had already put in place when dealing with a prior internal project, it would have to expense these costs anyway.

The deposit on the equipment, however, meets the definition of an asset and should be set up as a prepaid.

Issue #4: To expense the development costs of the fibreglass tank project

Selling, general and administrative	$444,000	
Non-refundable deposits (prepaid)	$120,000	
Development costs		$564,000

Expensing these costs will reduce the amount of equity in the company and have a negative impact on the debt-to-equity covenant calculation supporting the lending agreement.

For Assessment Opportunity #4, the candidate must be ranked in one of the following five categories:

Not addressed – The candidate does not address this assessment opportunity.

Nominal competence – The candidate does not attain the standard of reaching competence.

Reaching competence – The candidate attempts to discuss the deferred development costs issue.

Competent – The candidate provides a reasonable discussion of the deferred development costs issue.

Competent with distinction – The candidate provides an in-depth discussion of the deferred development costs issue.

Assessment Opportunity #5 (Common)

The candidate assesses the impact of the accounting issues on the debt-to-equity covenant and the borrowing base.

The candidate demonstrates DEPTH in Core Financial Reporting.

(Note: Candidates would address this AO after AO#6; however, due to the ordering of the actual marking, it is presented first.)

Having dealt with the financial reporting issues, we can now consider whether the company is in compliance with the bank's lending covenants. The bank covenants have two areas that need to be considered:

1. Compliance with the debt-to-equity financial covenant as at December 31, 2015.
2. Compliance with the availability covenant, based on a calculation of the borrowing base.

Debt-to-Equity Covenant

As a result of the adjusting journal entries for the accounting issues discussed in the previous section, the debt-to-equity ratio covenant has changed materially from compliance (at 1.7:1, based on the unaudited drafts) to non-compliance (at 2.3:1, based on my pro-forma calculations).

Therefore, the company is out of compliance. However, based on what the company is projecting for 2016, it should be able to get back on side.

(in thousands of dollars)

	2015 (unaudited)	Bill & Hold AJE #1	Warranty AJE #2	Lawsuit AJE #3	Intangible AJE #4	2015A
Current						
Cash	$ 89					$ 89
Receivables, less allowance	1,930	480				2,410
Inventories	3,137	(454)				2,683
Prepaid expenses	248				120	368
	5,404	26	-	-	120	5,550
Property, plant, and equipment, net	3,706					3,706
Development costs	564				(564)	-
Goodwill	2,000					2,000
Total assets	$ 11,674	$ 26	$ -	$ -	$ (444)	$ 11,256
Current						
Bank indebtedness	$ 2,883					$ 2,883
Accounts payable and accruals	1,046	12	20	355		1,433
Long-term debt due with one year	500					500
	4,429	12	20	355	-	4,816
Long-term debt	3,000					3,000
	7,429	12	20	355	-	7,816
Share capital	100					100
Retained earnings	4,145	14	(20)	(355)	(444)	3,341
	4,245	14	(20)	(355)	(444)	3,441
Total liabilities and shareholders' equity	$ 11,674	$ 26	$ -	$ -	$ (444)	$ 11,256
Debt-to-equity ratio	1.7	0.8	(1.0)	(1.0)	-	**2.3**

Borrowing Base Covenant

There are a number of deficiencies in the calculation of borrowing base prepared by the client:

1. Raw materials and work in progress must be excluded from the borrowing base.
2. Old receivables over 45 days must be excluded. Forty-five days implies an 8-times turnover of accounts receivable. Because receivables are only turning over 6.5 times (the unadjusted balance), there are likely a number of older uncollected receivables that should be excluded from the borrowing base, regardless of whether they are collectible. To approximate the amount of receivables older than 45 days, we can take sales and divide it by 8 (12,546 ÷ 8 = 1,568), which means $1,568 estimates the value of 45 days' worth of receivables. The difference between that and the actual accounts receivable balance would need to be backed out ($1,930 − $1,568 = 362).

3. The borrowing base needs to be adjusted for the bill-and-hold accounting issue (see above), which helps improve the borrowing base by replacing a lower-margin inventory account with a higher-margin receivable account.

(in thousands of dollars)

Borrowing base (recalculated)	2015	Bill & Hold AJE #1	Warranty AJE #2	Lawsuit AJE #3	Intangible AJE #4	2015A
Receivables	1,930					1,930
Plus: 2 commercial tanks (bill and hold)		480				480
Less: Old receivables	(362)					(362)
Receivables - adjusted	1,568	480	-	-	-	2,048
Borrowing base @ 80%	1,255	384	-	-	-	1,639
						-
Inventory	3,137	(454)				2,683
Less: Bill-and-hold sales						
Less: Raw materials	(430)					(430)
Less: Work in process	(216)					(216)
Inventory - adjusted	2,491	(454)	-	-	-	2,037
Borrowing base @ 60%	1,494	(272)	-	-	-	1,222
Total borrowing base (maximum $4,000	2,749	112	-	-	-	2,861
Drawn	2,883					2,883
Available (overdrawn)	(134)	112	-	-	-	(22)

As a result of posting the adjusted journal entries and correcting some of the other inputs into the calculation, it appears that the company is overdrawn on its line of credit as at December 31, 2015, by approximately $22,000.

Conclusion

As a result of the covenant violation and overdraw on the line of credit, the company will have a 30-day remedy period from the date the financial statements are issued to try to get back onside. If this is not remedied, the bank likely has the option to call all of its loans – both the line of credit and the term loan. This will require the company to immediately begin negotiations with the bank to facilitate alternative terms and possibly seek additional sources of financing. If unsuccessful, the company may be unable to continue supporting the going-concern assumption.

For Assessment Opportunity #5, the candidate must be ranked in one of the following five categories:

Not addressed – The candidate does not address this assessment opportunity.

Nominal competence – The candidate does not attain the standard of reaching competence.

Reaching competence – The candidate attempts to discuss the impact of the financial statement adjustments on the debt-to-equity covenant and the borrowing base.

Competent – The candidate provides a reasonable discussion of the impact of the financial statement adjustments on the debt-to-equity covenant and the borrowing base.

Competent with distinction – The candidate provides an in-depth discussion of the impact of the financial statement adjustments on the debt-to-equity covenant and the borrowing base.

Assessment Opportunity #6 (Common)

The candidate discusses the potential impairment of the commercial tank division.

The candidate demonstrates DEPTH in Core Financial Reporting.

(Note: This discussion would come before AO#5 in the candidate's response.)

TankCo recorded goodwill of $2 million when it acquired a commercial tank manufacturer on January 1, 2012. According to HB 3064.72, *"Goodwill shall be tested for impairment whenever events or changes in circumstances indicate that the carrying amount of the reporting unit to which the goodwill is assigned may exceed the fair value of the reporting unit."* The standard provides examples of such events or circumstances, including a significant adverse change in the business climate and the loss of key personnel. The commercial tank division generated a negative gross profit of $575,000 in 2014 and $147,000 in 2015, and the company is projecting a negative gross profit of $115,000 for 2016. In addition, Lou, the previous owner and founder of the company, was ill in 2015 and has since passed away. Given that he was a driving force in the company's growth, his absence may have already greatly affected the results of the business and may continue to. These are both indicators that the carrying amount of the reporting unit may exceed its fair value, and, therefore, goodwill should be tested for impairment.

According to HB 3064.78:

For the purpose of testing goodwill for impairment, acquired assets and assumed liabilities shall be assigned to a reporting unit, as of the date of acquisition, when:

(a) the asset is employed in, or the liability relates to, the operations of a reporting unit; and

(b) the asset or liability is considered in determining the fair value of the reporting unit.

Therefore, we need to test the whole reporting unit for impairment, not just goodwill. When this is done, the *Handbook* prescribes a specific order. According to HB 3064.76, *"When goodwill and*

another asset (or asset group) of a reporting unit are tested for impairment at the same time, the other asset (or asset group) is tested for impairment before goodwill." Therefore, we need to look at the other assets in the commercial division first.

According to HB 3064.74, *"When the carrying amount of a reporting unit, including goodwill, exceeds its fair value, a goodwill impairment loss shall be recognized in an amount equal to the excess."*

The other two assets are the working capital of $810,000 and the equipment of $390,000. We are told that the fair value of the working capital approximates the book value; therefore, no write-down is needed with regards to the working capital. In terms of the equipment, we are told that it can be liquidated for 60% of its carrying value ($390,000 × 60% = $234,000). Therefore, the equipment may need to be written down by $156,000 ($390,000 – $234,000), but further analysis should be performed to confirm this after a more thorough assessment of goodwill has been performed, as discussed next.

In terms of assessing the potential impairment of goodwill, section 3064 defines fair value as *"the amount of the consideration that would be agreed upon in an arm's-length transaction between knowledgeable, willing parties who are under no compulsion to act."* In this case, we can use an EBITDA multiple to estimate fair value, because that is what the original purchase price was based on and we are told that it is a standard in the industry. Given that we had a loss in the current year, EBITDA would be negative, which would suggest that the fair value of the goodwill is zero. Before we come to such a conclusion, though, we will need to talk to TankCo about its plan for the commercial tank division in the future and obtain more information to support the fair values we have estimated. If we conclude that the equipment needs to be written down and the goodwill needs to be written off, that would result in an adjustment of $2,156,000. Such an adjustment would significantly reduce the equity in the company, which would have a negative impact on the debt-to-equity covenant calculation supporting the lending agreement.

For Assessment Opportunity #6, the candidate must be ranked in one of the following five categories:

Not addressed – The candidate does not address this assessment opportunity.

Nominal competence – The candidate does not attain the standard of reaching competence.

Reaching competence – The candidate attempts to discuss the potential impairment of the commercial tank division issue.

Competent – The candidate provides a reasonable discussion of the potential impairment of the commercial tank division issue.

Competent with distinction – The candidate provides an in-depth discussion of the potential impairment of the commercial tank division issue.

Assessment Opportunity #7
The candidate discusses the engagement issues related to the 2015 TankCo financial statement audit.

The candidate demonstrates DEPTH in the Assurance role.

Audit Opinion

We need to ensure that we can render an audit opinion, which could be challenging given that the company has never been audited and evidence supporting the comparative numbers may not be available. However, we did gather audit evidence to support the existence of inventory at December 31, 2014, which should address the most significant risk to rendering an opinion.

If we are auditing the current year numbers only, then we will need to note in the financial statements that the prior year numbers are unaudited. We will also need to add an Other Matters paragraph to the audit report to state that the comparative financial statements are unaudited. If TankCo does not want an audit report with an Other Matters paragraph, then we will need to perform audit procedures on the prior year numbers. Note that our engagement letter, as well as written management representations, must clearly include the responsibilities of the auditor and management in this regard, and it must clearly reflect the approach taken related to comparative information.

Opening Balances

Given that TankCo has never had an audit before, we will have to perform audit procedures to obtain sufficient, appropriate audit evidence that the opening balances do not contain material misstatements.

The existence of opening inventory may be covered by the evidence we gathered at last year's inventory count, which we attended despite having only done a review engagement. For other current assets and liabilities, we can gather evidence as part of our audit of this year's balances. For example, the collection and payment of opening accounts receivable and accounts payable, respectively, will provide us with evidence of their existence, rights and obligations, completeness, and valuation at the beginning of the period.

For non-current assets, such as property, plant, and equipment, we can use the schedules gathered as part of our review engagement, but we will need to perform additional work to test the balances and to vouch any material additions or dispositions.

Balances outstanding with the bank (cash, indebtedness, and long-term debt) were confirmed with the bank last year during the review engagement.

If the work we did around inventory when we attended last year's count was not sufficient for audit purposes, we will likely have to qualify the audit report due to a scope limitation. However, if the work done last year was sufficient, it may provide us with sufficient evidence to provide an unqualified report.

Deadline

The lending agreement calls for financial statements reviewed by the company's public accountants to be furnished to the bank within 45 days of the year end, which is approximately two weeks away. Changing the engagement from a review to an audit may slow down the completion of the engagement and make it difficult to deliver the financial statements with the report of the public accountant by this date. The fact that an audit is being provided instead of a review should not concern the bank.

Given the precarious financial situation TankCo appears to be in, it is in the bank's best interest to get access to this information as soon as possible for the purpose of evaluating its credit exposure.

Independence

We should also consider our independence, given the fact that the board chairperson was also the engagement partner for this client until recently. A retired partner is considered a member of the firm if they are closely associated with the firm. We are not given sufficient information to determine whether Rita would be considered closely associated with the firm, but we should also consider what a reasonable observer would think. Even if we determine that Rita is not closely associated with the firm and she is independent in fact, there may still be an appearance of lack of independence. We should discuss this issue further with management and implement safeguards, such as informing the audit team during planning, performing unpredictable procedures (since she knows how we perform our audits), having a quality reviewer, and applying our professional judgment when receiving information directly from Rita.

For Assessment Opportunity #7 (Assurance), the candidate must be ranked in one of the following five categories:

Not addressed – The candidate does not address this assessment opportunity.

Nominal competence – The candidate does not attain the standard of reaching competence.

Reaching competence – The candidate attempts to discuss a few of the engagement issues related to the audit.

Competent – The candidate provides a reasonable discussion of a few of the engagement issues related to the audit.

Competent with distinction – The candidate provides an in-depth discussion of a few of the engagement issues related to the audit.

Assessment Opportunity #8

The candidate assesses the overall financial statement risk for the TankCo audit.

The candidate demonstrates DEPTH in the Assurance role.

This is the first year we are performing an audit of the company. Although we are familiar with the company because we have performed reviews in the past, we do not have audit-level comfort over the opening balances. This increases the risk of the engagement.

The bank requires the financial statements within 45 days of the year-end reporting date. It is already January 28; therefore, there is very little time left to perform the audit. The tight deadline increases the risk of us missing an error in the financial statements.

The company's weak financial position may play a role in the selection of its accounting policies in order to maintain as positive a perspective as possible to retain the bank's interest in financing and refinancing the company, as exemplified by its choice to capitalize the development costs related to the fibreglass tank.

The control environment was significantly weakened during the year due to the owner-manager's illness. While Josh has experience in the industry, he did not have as much time as desired to work with and learn from Lou. This fact, too, will require us to spend more time gathering sufficient audit evidence to compensate for the increased control risk. Also, the company operates with a lean accounting staff, which makes segregation of duties more difficult and increases control risk.

The controller stepped in for Lou, but he does not have an accounting designation and, as demonstrated by the accounting errors found, does not seem to have a strong knowledge of financial reporting. This increases the risk of the financial statement containing errors.

There are several large, significant uncertainties confronting the business that raise specific risks. Those risks pertain to the shipment of the defective tanks for which the full ramifications have yet to be fully understood, as well as a significant increase in the number of pending lawsuits.

The material decline in the financial strength of the organization and the potential violation of the debt-to-equity covenant and borrowing base limit (see next section) could result in the company having a going concern issue. The loss of the owner and the loss of a major customer are two other indicators. The significant underperformance of the commercial tank division is also concerning. It will increase audit risk and may result in other potential reporting and accounting disclosures for us to consider, or it may have given management incentive to manipulate the financial statements to improve the outlook and try to stay onside of its lending agreement terms. We should discuss with management its future plans to determine if the going concern assumption can be supported.

Our long-time experience and knowledge with the client is a positive factor that helps to mitigate the risk. The board is also a mitigating factor since its composition suggests strong areas of competence (although they meet only twice per year regularly and only started to play a more

active role in the business upon Lou's recent death). Nevertheless, the overall risk of this engagement is high.

For Assessment Opportunity #8 (Assurance), the candidate must be ranked in one of the following five categories:

Not addressed – The candidate does not address this assessment opportunity.

Nominal competence – The candidate does not attain the standard of reaching competence.

Reaching competence – The candidate attempts to perform an overall financial statement risk assessment.

Competent – The candidate performs a reasonable overall financial statement risk assessment and concludes on the risk level.

Competent with distinction – The candidate performs an in-depth overall financial statement risk assessment and concludes on the risk level.

Assessment Opportunity #9

The candidate discusses the materiality and approach for the TankCo financial statement audit.

The candidate demonstrates DEPTH in the Assurance role.

Materiality

Earnings before tax is generally a good basis to use to set materiality for a profit-oriented manufacturing business like TankCo. Historically, the company has generated consistent profitability and stable returns; however, 2015 was not a good year for the company since there were several unusual events. As a result, we have normalized income to eliminate these one-time events.

As for the threshold to use, TankCo is a privately owned corporation. With Lou's passing, Rob and Sarah each inherited 50% of the shares of the company. They would use the financial statements to assess profitability and the value of their new investment. The only other user of the financial statements is the bank. TankCo has both a line of credit and a term loan with the bank. The bank will use the financial statements to assess the company's financial state and its ability to repay the loan, as well as to determine whether the debt-to-equity covenant has been met and the borrowing base not exceeded. As a result, the bank would be concerned about profitability, as well as the accounts receivable, inventory, debt, and equity balances. Although there are a limited number of users, with the bank being the only external user, the bank is likely relying heavily on the financial statements to determine if debt-to-equity covenant and the borrowing base limit are offside; therefore, it is appropriate to use 5% of normalized profit before tax.

Normalized income before tax (in thousands of dollars)	
Adjusted earnings before taxes	$(849)
Add back abnormal discounts	700
Add back abnormal lawsuits	355
Add back accrued warranty	20
Add back replacement tanks (32 × $400)	13
Normalized earnings before taxes	$ 239
Threshold	5%
Materiality	$ 12

I have also considered other thresholds, given the significance of the normalization adjustments. A materiality threshold using revenue or assets commonly uses a range for materiality of 0.5% to 2.0% of revenue or assets. Again, due to the expected level of scrutiny by the bank and the board, I think we should use a lower threshold level for the 2015 audit. At 0.5% of adjusted revenue or assets, materiality would be between $46,000 and $65,000, calculated as follows (in thousands of dollars):

Revenue	13,026
Benchmark	0.5%
Materiality	65
Assets	9,122
Benchmark	0.5%
Materiality	46

We will use $46,000 as our planning materiality (the midway point between all three).

Specific Materiality

We will also need to consider classes of transactions, account balances, and disclosures for which a lower materiality level would be warranted. Given the reliance by the bank on the accounts receivable and inventory balances to evaluate its security position, these are two areas in which a lower materiality is likely needed.

Performance Materiality

TankCo is a long-time client of the firm; therefore, we are very familiar with its operations. We have only performed review engagements in the past, and we are not aware of any errors in the prior periods, but we have already identified some accounting transactions that have not been recorded correctly in the current year. As a result, we set performance materiality at 75% of materiality, which is $34,500.

Approach

Based on the information gathered on the company's internal controls, some processes are stronger than others. The sales cycle has largely been automated, with key controls over authorization, initiation, and execution well segregated. Testing of the automated controls may be

an effective way of auditing the revenue accounts, but it will not alleviate the need for substantive evidence. The automated controls can be tested using computer-assisted auditing techniques to confirm the system operates the way we documented it and is effective. We can probably use a combined approach for the sales cycle.

Unlike the sales cycle, which has a strong set of internal controls, the purchasing cycle has weaker internal controls relating to

- poor controls over purchase orders;
- no formal receiving procedures;
- no matching of evidence of receipt with the invoice;
- no supporting evidence upon approval of the cash disbursement;
- only a single signature or approval required for disbursements; and
- inadequate segregation of duties, with the clerk both recording the transaction and handling the disbursement.

As a result of these ineffective controls, control risk for this cycle will be high, and we will need to rely on a substantive approach.

For Assessment Opportunity #9 (Assurance), the candidate must be ranked in one of the following five categories:

Not addressed – The candidate does not address this assessment opportunity.

Nominal competence – The candidate does not attain the standard of reaching competence.

Reaching competence – The candidate attempts a discussion of the appropriate audit approach and materiality level as part of the audit plan.

Competent – The candidate provides a reasonable discussion of the appropriate audit approach and materiality level as part of the audit plan.

Competent with distinction – The candidate provides an in-depth discussion of the appropriate audit approach and materiality level as part of the audit plan.

Assessment Opportunity #10

The candidate performs analytical procedures for the purpose of further assessing audit risk.

The candidate demonstrates DEPTH in the Assurance role.

Performing analytical procedures helps in assessing audit risk. The variances between the adjusted financial statements and last year, at a high level, are as follows (in thousands of dollars):

	2014 (unaudited)	2015A (adjusted)	Variance to 2014
Sales	$ 15,126	$ 13,026	$(2,100)
Operating expenses			
Cost of sales, excluding depreciation	11,042	9,862	(1,180)
Selling, general and administrative	1,924	2,600	676
Depreciation and amortization	678	692	14
	13,644	13,154	(490)
Operating income	1,482	(128)	(1,610)
Lawsuits		355	355
Interest expense	305	344	39
Earnings (loss) before taxes	1,177	(827)	(2,004)
Income taxes expense (recovery)	294	(12)	(306)
Net income (loss)	$ 883	$ (839)	$(1,698)

A more detailed analytical review will be performed during the audit, but for planning purposes, the key issues raised by the analytical review, using the adjusted balances, include the following:

- Sales are declining, which may be attributed to both a declining market and the loss of a key distributor. In addition, Lou was the driving force of sales; his absence may explain part of the decline. There were also additional sales rebates offered this year due to the defective tanks. This could be one potential indicator of impairment that we should note.
- Overall gross profit margin is declining (22.5% in 2014; 19.0% in 2015 after adjustments). This may be partially related to lower volumes (lower volumes led to higher unit costs because fixed overhead was spread over fewer units), but it may also pertain to higher costs. Further investigation of the declining gross profit margin is required.
- The negative gross profit margin on the commercial tanks suggests we should evaluate the commercial tanks in inventory to ensure that the cost is lower than the net realizable value. However, the gross profit on the commercial tanks has improved since last year, which is consistent with Josh's comment that commercial tank costs were lower in 2015

than in 2014 due to efficient savings achieved in direct materials, direct labour, and variable overhead.

- General, selling, and administrative expenses were higher ($676,000 negative variance), which is attributable to the adjustments made to expense the R&D costs of the fibreglass tank and the incremental accruals for insurance deductibles. There were also additional costs related to the delivery of replacement tanks for the defective ones and the greater-than-normal number of lawsuits.
- Interest expense is higher by $39,000, which means that the savings from the repayment of the long-term loan must be more than offset by incremental draws on the line of credit. Using an average balance outstanding on the debt indicates that the interest expense balance appears reasonable.
- Depreciation has increased by $14,000. This might be explained by the $652,000 in additions during the year.
- The lawsuit accruals and potential impairment charges were items we raised in our discussion of potential accounting issues. These will need to be discussed and vetted by management separately.

For Assessment Opportunity #10 (Assurance), the candidate must be ranked in one of the following five categories:

Not addressed – The candidate does not address this assessment opportunity.

Nominal competence – The candidate does not attain the standard of reaching competence.

Reaching competence – The candidate attempts an analytical review of the income statement.

Competent – The candidate performs a reasonable analytical review of the income statement.

Competent with distinction – The candidate performs a detailed analytical review of the income statement.

Assessment Opportunity #11

The candidate recommends procedures for the high-risk areas.

The candidate demonstrates DEPTH in the Assurance role.

Planning performance materiality has been set at $34,500 (planning materiality is $46,000).

Issue #1 – Accounts Receivable and Revenue

The adjusted accounts receivable balance at December 31, 2015, is $2.4 million, which is somewhat comparable to the prior year ($1.9 million at December 31, 2014) because the increase over the prior year relates to a one-time sale. However, the accounts receivable balance is high

given the lower sales base of $13.0 million this year versus $15.1 million last year. This lower turnover of accounts receivable suggests that we should focus on the existence and valuation assertions for this account. Because receivables have been posted as security for the line of credit, it is important that we consider the procedures of the special reporting engagement concurrently with the financial statement audit procedures.

To address the existence assertion of accounts receivable, we can send confirmations to the distributors. We can also look at subsequent receipts since year end.

The valuation assertion can be tested by looking at the aged listing of receivables and following up on any past due accounts. For the borrowing base calculation, the correct age of the accounts receivable is important. We should sample a few of the receivables listed as under 45 days old in the aged listing and compare each to the date on the invoice to ensure they are dated correctly. We will need to determine whether the decline in accounts receivable turnover relates to weaker financial credit of the distributors or perhaps was caused by the lack of management attention during Lou's illness.

We will need additional evidence to support the revenue recognition of the bill-and-hold arrangement that allows the company to record revenue for the two commercial tanks held on behalf of the customer. We should inspect evidence supporting the transfer of the risks and rewards of ownership to the customer, especially the fact that the completed tanks have been insured by the customer and evidence that the customer requested the delayed delivery.

Issue #2 – Inventory and Purchases

TankCo carries a material amount of inventory that has also increased year over year from $2.7 million to $3.1 million. Much of this increase pertains to an increase in raw materials on hand (year-over-year increase of $0.2 million), as well as work in progress ($0.2 million in 2015 and none in 2014). Since turnover has declined, there is a risk of overstatement. Inventory has been posted as security for the line of credit, so it is important that we consider the procedures of the special reporting engagement concurrently with the financial statement audit procedures.

The key assertions for inventory will be existence, valuation, and presentation.

To address inventory existence, we will use the evidence gathered during the year-end inventory count observation.

Given the negative gross profit margin experienced in the commercial tank segment, valuation is a particular concern. To address valuation, we will need to ensure that any inventory on hand pertaining to this segment has a net realizable value greater than cost, including the tank that is 90% complete at December 31, 2015. To test the NRV of inventory, we should look at subsequent sales. We should also determine whether fixed overhead has been properly attributed to inventory. As volumes shrink, there may be unused capacity, but that should not factor into the overhead allocation.

To address presentation, we will need to review the inventory listing to ensure that only finished tanks are included in finished goods inventory, since this is the only marginable inventory for the bank's line of credit.

Issue #3 – Intangibles: Development Costs of Fibreglass Tanks

Given the company's precarious financial position, we have determined that it would be unable to meet the criteria for capitalization of these costs. However, we should perform procedures to confirm whether each criterion has been met. For example, we should see whether the government certification and the test results have been received since year end. If they have not, does management have any support for the technical feasibility of the project? We should also receive confirmation from the board that they plan to pursue the project. In terms of the necessary financial resources, we should confirm with the bank that it intends to renew the line of credit and not call the term loan.

Issue #4 – Trade Payables, Accruals, and Provisions

The payables and accruals account has increased from $0.9 million to $1.5 million, largely due to the provisions associated with the defective tanks and the associated increase in lawsuits. The completeness and valuation assertions pose the largest material risks of misstatement for these accounts.

To address these risks, we should

- discuss the reasons for the increasing volume of lawsuits with the company's legal counsel and request completion of a formal legal letter;
- given the significant rise in lawsuits, review the insurance policy and evaluate the sufficiency of coverage;
- discuss with management how the estimate of 50 additional defective tanks was assessed, and review the communication sent out to the distributors regarding management's commitment to replacing defective tanks;
- review production reports on tanks made during the period of the strike by the temporary workers, and check that the tanks that have been replaced to date were indeed ones made during that period of time;
- review inventory costing schedules to ensure that $400 is indeed the cost of one residential tank unit; and
- examine the number of tanks replaced or changes in the number of lawsuits since year end. There is only a short period of uncertainty left on the warranty provision since the one-year anniversary expires soon.

Issue #5 – Impairment of the Commercial Tank Division

Given the negative gross profit margin realized in the commercial tank segment and management's concerns about this line of business going forward, there appears to have been an impairment of these assets. We need to perform procedures to assess the fair value of the commercial tank reporting unit. We have been told that the carrying value of the working capital approximates its fair value, but we will have to see what makes up the working capital in order to test this. For the equipment, we have been told that the fair value is equal to 60% of the carrying value. We will have to inquire with management how this value was determined and corroborate it by looking at recent sales of similar equipment. In terms of the goodwill, we will need

management to provide us with a discounted cash flow statement. We will test the assumptions underlying the cash flow projections in order to determine whether goodwill needs to be written down or off completely.

Issue #6 – Going Concern

Due to the losses experienced in the current year, the breach in the bank debt-to-equity covenant, the overdraw on the line of credit, the impairment of the commercial tank division, and the need for more financing, there may be a going concern issue. We should talk to management and obtain any forecasts they have to support the going concern assumption. We will then need to evaluate the reasonableness of management's projections and assumptions.

For Assessment Opportunity #11 (Assurance), the candidate must be ranked in one of the following five categories:

Not addressed – The candidate does not address this assessment opportunity.

Nominal competence – The candidate does not attain the standard of reaching competence.

Reaching competence – The candidate discusses specific audit procedures for some of the significant accounts.

Competent – The candidate discusses specific audit procedures for several of the significant accounts.

Competent with distinction – The candidate discusses specific audit procedures for most of the significant accounts.

Assessment Opportunity #12

The candidate drafts a memo discussing any internal control deficiencies found in the sales and purchasing cycles.

The candidate demonstrates DEPTH in the Assurance role.

I have reviewed the sales cycle and did not identify any internal control deficiencies in that process. The sales cycle appears to have fairly strong controls. The purchasing cycle, on the other hand, has the following weaknesses:

Control Deficiency	Impact	Recommendation
Ability to authorize purchase orders should be limited, and purchase orders should be approved prior to submission to a vendor.	Currently, six people have the authority to issue purchase orders, which creates the risk of duplicate orders and the risk of not being able to negotiate the best terms with suppliers because orders are not aggregated. This can result in a build-up of excess materials or paying more than necessary.	The foremen should be able to identify the need for materials and may complete a draft purchase order or a requisition, but the completion and approval of all purchase orders should be centralized with one individual.
There is no pre-approved vendor listing.	Without a pre-approved list of vendors, there can be no assurance that all vendors are legitimate. There is a possibility of paying fictitious suppliers or receiving materials of inferior quality. You may also be missing out on any volume discounts from not aggregating your orders with key suppliers.	All vendors should be pre-approved. Volume discounts and credit terms should be established with key vendors in advance of purchasing.
There are no formal receiving procedures.	There is a risk that the person receiving the materials either does not check what has been received or does not know what was ordered. If the goods received do not agree with the bill of lading, then the three-way match (discussed next) will be useless. Also, defective products will go unnoticed.	A standard receiving report, with documented procedures on counting items received against the bill of lading, and a process of checking their condition should be established.
There is no three-way match of the receiving report, purchase order, and supplier invoice.	There is a risk that the company is paying for materials that either were not received or were charged at the wrong price.	Copies of the receiving report and the purchase order should be supplied to the accounting clerk to be matched against the supplier invoice once received.

Control Deficiency	Impact	Recommendation
No supporting documentation is attached to the request for disbursement.	There is a risk that a cheque gets completed incorrectly or made out to a fictitious payee.	All payments should be accompanied by supporting documents. The supporting documents should be cancelled to prevent duplicate processing. It may be desirable to have more than one signature on each cheque or have the disbursements approved by an operations manager (or a similar position) in addition to having the controller approve payments.
The accounting clerk lists the customer receipts from the bank statement, reviews the deposit, records the invoices, prepares the cheques for signature, mails the cheques, and prepares the bank reconciliation.	Inadequate segregation of duties could allow the accounting clerk to commit fraud (e.g., could lap accounts receivable).	Additional employees may need to be hired to appropriately segregate these duties. At a minimum, the accounting clerk should not mail the cheques once they have been signed, and the bank reconciliation should be reviewed (see below). Having another employee mail the cheques segregates recording from custody.
Bank reconciliations should be reviewed.	The accounting clerk is preparing bank reconciliations, but they are not being reviewed. The risk is that errors and fraud will not get detected on a timely basis.	The controller should review all bank reconciliations. This is a particularly important compensating control given the inadequate segregation of duties in the accounting department.
Cheques require only one signature, which used to be Lou but is now Marvin.	Marvin may not have the same experience that Lou had and is signing cheques without supporting documentation (discussed above). In addition, given his position as controller, he could likely create a cheque and sign it himself fraudulently or collude with the accounting clerk to do so.	It is a common best practice to have at least two signatures on a cheque. This, in conjunction with the review of the supporting documentation upon cheque signing, will provide a strong control over payments.

Control Deficiency	Impact	Recommendation
The accounting clerk enters the payable amount into the accounting system and manually selects a payment date.	The payment date the accounting clerk selects may not take advantage of potential discounts available if paid early or may be beyond the invoice due date, in which case interest could be incurred.	The payment date and discount terms should be entered into the accounting system, and the system should automatically determine the payment date based on these fields to maximize possible discounts and minimize interest on late payments.

For Assessment Opportunity #12 (Assurance), the candidate must be ranked in one of the following five categories:

Not addressed – The candidate does not address this assessment opportunity.

Nominal competence – The candidate does not attain the standard of reaching competence.

Reaching competence – The candidate discusses some of the internal control weaknesses in the sales and purchasing cycles.

Competent – The candidate discusses several of the internal control weaknesses in the sales and purchasing cycles.

Competent with distinction – The candidate discusses several of the internal control weaknesses in the sales and purchasing cycles in depth.

Assessment Opportunity #13

The candidate discusses the reporting options for the special report required by the bank.

The candidate demonstrates DEPTH in the Assurance role.

The Canadian Bank has extended a line of credit with TankCo, with a maximum available amount of $4 million, subject to sufficient security margins:

- 80% of accounts receivables 45 days and under; plus
- 60% of finished goods inventory.

The credit facility has a financial covenant for which the borrower must comply on an annual basis:

- Maximum debt-to-equity ratio of 2:1

It is likely, based on my preliminary accounting analysis, that TankCo is in breach of the covenant as of December 31, 2015. This triggers a 30-day remediation period for TankCo to get the covenant back on side, failure of which gives the bank the right to call all its loans, including both the line of credit and the term loan.

The bank has requested that TankCo provide “a report audited by an independent public accountant calculating the provisions of this agreement.” This statement needs to be clarified with both the client and the bank because it is unclear what this report should look like.

There are two “calculating provisions” over which the bank will want assurance:

1. Whether the company has provided adequate security to support the amount of funds drawn under the line of credit.

2. Whether the company is in compliance with the debt-to-equity covenant.

Special Report Parameters

First, we need to determine the nature of our engagement. The options are as follows:

1. Audited financial statements of TankCo Limited

The bank should be able to calculate for itself compliance with the lending agreement using the audited financial statements. This clause appears to be an add-on to compensate for the fact that the agreement only specifies review-level assurance for the company’s financial statements. However, since the client is having the financial statements audited this year, it might sufficiently address the bank’s needs without the need for and cost of a special engagement.

2. CAS 805, *Special Considerations – Audits of Single Financial Statements and Specific Elements, Accounts or Items of a Financial Statement*

Using this as guidance, we could provide assurance on the values of the accounts used in the debt-to-equity covenant and the amount of marginable security in the company. There are certain elements, such as receivables older than 45 days, that might not be readily available in standard financial statement disclosure but that would be specifically addressed in this engagement, making the report more useful to the bank.

3. Section 5815 *Special Reports – Audit Reports on Compliance with Agreements, Statutes and Regulations*

This report would express an opinion on whether TankCo was in compliance with its credit facility.

Analysis of Major Issues

The first option is probably the most cost-effective solution. Any missing information in the financial statements can probably be obtained directly from the client. If we go with just the financial statement audit, the materiality used would be that for the financial statements as a whole; therefore, $46,000. That amount might not be low enough to provide the bank with comfort over the inventory and receivable balances used to calculate compliance with the borrowing base. In addition, an appropriate materiality level for the special report may vary depending on how close debt-to-equity covenant is to being breached at December 31, 2015. When the covenant calculation is close to the threshold, then materiality will be lower than if the company is clearly in compliance or default of its covenant. This will vary depending on the extent of the proposed

accounting adjustments. Our preliminary analysis suggests that the debt-to-equity covenant will be out of compliance.

If the bank insists on a special report as specified under the agreement, the second option (CAS 805 report) probably provides the bank with the most insight because it will specify the degree to which the debt-to-equity covenant has been violated and the line of credit overdrawn. In this case, materiality for the engagement should be discussed specifically with the bank to determine what threshold it is comfortable with. The third option may indicate whether the company is complying with the lending agreement but will not assist the bank in determining the full extent of its credit exposure to the company.

Conclude and Advise

Only if the audited financial statements are insufficient to meet the bank's needs would I recommend that we issue a CAS 805 report. This should be discussed with the bank to confirm that it is suitable for its needs.

For Assessment Opportunity #13 (Assurance), the candidate must be ranked in one of the following five categories:

Not addressed – The candidate does not address this assessment opportunity.

Nominal competence – The candidate does not attain the standard of reaching competence.

Reaching competence – The candidate attempts a discussion of the reporting options for the special report required by the bank.

Competent – The candidate provides a reasonable discussion of the reporting options for the special report required by the bank and concludes on a valid reporting option.

Competent with distinction – The candidate provides a thorough discussion of the reporting options for the special report required by the bank and concludes on a valid reporting option.

DAY 2 – MARKING GUIDE – FINANCE
TANKCO LIMITED

In the finance role, candidates are expected to first draft a report that evaluates both the 2015 financial performance and the 2015 financial state of TankCo. Candidates are also asked to perform two business valuations of TankCo in order to help the board assess the options of selling or liquidating the company. Next, candidates are expected to perform a capital budgeting analysis to evaluate the fibreglass tank manufacturing opportunity from both a qualitative and a quantitative perspective. Candidates are then asked to use their analysis to discuss potential suggestions and recommendations on ways to improve TankCo's financial strength and its liquidity. Finally, candidates are asked to evaluate two different financing alternatives for the company that have been proposed and to recommend one of the options.

See Assurance Guide for the Common Assessment Opportunities #1 to #6.

Assessment Opportunity #7

The candidate provides an assessment of the financial performance of TankCo for 2015.

The candidate demonstrates DEPTH in the Finance role.

TankCo has a long history of operating profitability; however, 2015's financial performance was poor and, worse, significantly eroded the financial strength of the company.

We will begin by performing a quantitative analysis of the company's recent performance against the previous year's and against the industry benchmarks, and then we will discuss opportunities for improving the financial strength of the organization.

Ratio Analysis

A ratio analysis can help to identify areas of strength and weakness based on the company's performance relative to industry statistics.

	2014 (Actual)	2015 (Unadjusted)	2015 (Adjusted)	2016 (Budget)	Industry Statistics
Sales growth - residential	N/A	-21.7%	-21.7%	17.4%	-2.0%
Sales growth – commercial *	N/A	-2.7%	10.3%	4.7%	3.1%
Gross profit margin %	22.5%	19.5%	18.8%	21.4%	24.0%
Operating margin %	9.8%	2.3%	-1.1%	8.9%	10.0%
Return on equity **	18.8%	-1.0%	-24.6%	17.1%	9.2%

*Adjusted for the two bill-and-hold commercial tanks recognized in revenue in 2015 instead of 2016.
**Using the end-of-year balances.

Analysis

The company significantly underperformed the industry in 2015 in many profitability statistics, including the following:

- Lower sales growth in both the commercial and residential segments
- Lower gross and operating profit margins
- A significant underperformance of return as a result of lower sales growth and margins

Interestingly, financial results and performance indicators for 2014 were as good as or better than industry. This indicates the potential for a turnaround.

Analytical Review of the 2015 Results versus 2014

It is also helpful to prepare an analytical review of the 2015 results versus the prior year to identify the root causes of the financial underperformance.

	2014	2015	Variance to 2014
	(unaudited)	(adjusted)	
Sales	$ 15,126	$ 13,026	$(2,100)
Operating expenses			
Cost of sales, excluding depreciation	11,042	9,862	1,180
Selling, general and administrative	1,924	2,600	(676)
Depreciation and amortization	678	692	(14)
	13,644	13,154	(490)
Operating income	1,482	(128)	(1,610)
Lawsuits	0	355	(355)
Interest expense	305	344	(39)
Earnings before taxes	1,177	(827)	(2,004)
Income taxes expense	294	(2)	296
Net earnings	$ 883	$ (825)	$(1,708)

The key issues raised by the ratio analysis and the analytical review, using the adjusted financial statement balances, include the following:

- Declining sales, which may be attributed to both a declining market and the loss of a key distributor. As well, $700,000 in one-time sales rebates were given in 2015.
- Declining overall gross profit margin (22.5% in 2014, 19.0% in 2015). This may be partially related to lower volumes but may also pertain to higher costs. The $700,000 in rebates noted above would also affect the gross margin to some degree. Further investigation into the declining gross profit margin is required to determine how this trend could be turned around.
- Higher general, selling, and administrative expenses ($676,000 negative variance), which are attributable to the expensing of the R&D costs of the fibreglass tank project and the incremental insurance deductible provisions. These are one-time expenses that should be excluded in determining a normalized level of profitability.

- Interest expense is higher by $39,000, which means that the savings from the repayment of the long-term loan must be more than offset by incremental draws on the line of credit. Using an average balance outstanding on the debt indicates that the interest expense balance appears reasonable. The line of credit is a very affordable, low-cost source of financing; however, the company will be challenged to renew this facility in 2016 based on the 2015 results.
- The lawsuit accrual was raised in our discussion of potential accounting issues. This, too, is a normalization adjustment.

Note: Candidates were not expected to do both a ratio analysis and an analytical review for a comparison with the prior-year numbers. There were many other ways to analyze the numbers that were equally valid. The important part is that candidates calculate or analyze relevant numbers and are able to understand and interpret the results appropriately.

Overall Assessment

The financial performance of TankCo was very weak in 2015. It is considerably weaker than both its 2014 historical performance and the industry statistics. The operations and financial performance must be improved moving forward or TankCo will not be able to survive.

For Assessment Opportunity #7 (Finance), the candidate must be ranked in one of the following five categories:

Not addressed – The candidate does not address this assessment opportunity.

Nominal competence – The candidate does not attain the standard of reaching competence.

Reaching competence – The candidate performs a reasonable quantitative analysis of the financial performance of TankCo, but the overall interpretation is superficial.

Competent – The candidate performs a reasonable quantitative analysis of the financial performance of TankCo, including demonstrating an understanding of its financial performance compared to both the industry and historical results.

Competent with distinction – The candidate performs a thorough quantitative analysis of the financial performance of TankCo, including demonstrating an understanding of its financial performance compared to both the industry and historical results. The candidate clearly articulates that the financial performance of TankCo is not sustainable moving forward.

Assessment Opportunity #8

The candidate provides an assessment of the financial state of TankCo at December 31, 2015.

The candidate demonstrates DEPTH in the Finance role.

The weak financial performance of TankCo for 2015 has led to a weakened financial state for the company at December 31, 2015. Our analysis of its financial state follows.

Ratio Analysis

A ratio analysis can help to identify areas of financial strength and weakness relative to a company's historical condition, as well as compared with industry statistics (rounded).

	2014 (Actual)	2015 (Unadjusted)	2015 (Adjusted)	Industry Statistics
Current ratio	2.0	1.2	1.2	1.5
Receivable turnover **	8.0	6.5	5.4	9.0
Inventory turnover **	4.0	3.0	3.7	6.0
Debt to equity	1.3	1.7	2.3	1.0

*Using the end-of-year balances.

Analysis

The company exhibited much weaker ratios than the industry and deteriorating ratios over the prior year, including

- a lower current ratio, implying lower liquidity; and
- a higher financial leverage ratio, implying higher financial risk.

The company also indicates lower-than-industry-standard management efficiency of working capital, as indicated by

- lower receivable turnover, which implies that the company is not collecting its accounts as quickly as its competitors are;
- lower inventory turnover, which implies that the company is not managing its supply chain as well as its competitors are; and
- the inefficient management of working capital, which ties up company cash and necessitates a higher draw on the line of credit.

This buildup of working capital is partially offset by increased availability under the margining requirements of the line of credit.

Analytical Review of the 2015 Results versus 2014

On the balance sheet, working capital efficiency appears to have weakened during the year.

- Accounts receivable turnover declined from 8.0 times to 5.4 times in 2015, partially because of the bill-and-hold accrual at December 31, but there is additional weakness that is unexplained.
- Inventory turnover declined from 4.0 times to 3.6 times in 2015.
- Payables turnover declined from 12.0 times to 7.0 times in 2015. The various provisions associated with defective tanks accounts for some of this, but not all of it.

Note: Candidates were not expected to do both a ratio analysis and an analytical review for a comparison with the prior-year numbers. There were many other ways to analyze the numbers that were equally valid. The important part is that candidates calculate or analyze relevant numbers and are able to understand and interpret the results appropriately.

Overall Assessment

The financial state of TankCo is weak right now. There is a potential violation of the covenants under the lending agreement. In the absence of the bank's credit facility, it will be difficult to sustain operations, let alone reinvest incremental capital into the business to pursue new ventures such as the fibreglass tank product line.

For Assessment Opportunity #8 (Finance), the candidate must be ranked in one of the following five categories:

Not addressed – The candidate does not address this assessment opportunity.

Nominal competence – The candidate does not attain the standard of reaching competence.

Reaching competence – The candidate performs a reasonable quantitative analysis of the financial state of TankCo, but the overall interpretation is superficial.

Competent – The candidate performs a reasonable quantitative analysis of the financial state of TankCo, including an understanding of its financial state compared to both the industry and historical results.

Competent with distinction – The candidate performs a thorough quantitative analysis of the financial state of TankCo, including an understanding of its financial state compared to both the industry and historical results. The candidate understands the connection between its financial performance and its financial state and understands that renewing the bank's credit facility may be problematic next year.

Assessment Opportunity #9

The candidate prepares a valuation of TankCo using the capitalized cash flow approach.

The candidate demonstrates DEPTH in the Finance role.

In order to value a company using the capitalized cash flow approach, the normalized annualized cash flows must first be determined, then the capitalization rate must be determined. We have used the company's estimated weighted average cost of capital as the capitalization rate.

		2014A	2015A (adj)	2016B
Earnings before taxes (adjusted)		1,176	- 849	976
Adjust 2016 budet for the 2 commercial tanks recorded in 2015				- 26
Add back:				
Depreciation and amortization		678	692	704
Interest expense		305	344	385
Normalization adjustments:				
One-time sales discounts			700	
Lease-costs of manufacturing facility		- 500	- 500	- 500
One-time fiberglass tank project costs			444	
One-time warranty expense provision			20	
One-time lawsuit accrual			355	
Normalized EBITDA		1,660	1,206	1,539
Ongoing working capital adjustments		-	-	-
Ongoing sustaining capital expenditures		- 776	- 652	- 660
Cash taxes (EBITDA - Depreciation*) x tax rate (Note 1)	25%	- 245	- 129	- 209
Unlevered cash flow		639	426	670
Capitalization rate (below)		11.0%	11.0%	11.0%
Capitalized cash flow		5,805	3,870	6,091
Add in the value of real estate as a redundant asset (Note 2)		6,000	6,000	6,000
Enterprise value		11,805	9,870	12,091
Value of outstanding debt		- 5,091	- 6,383	- 6,440
Equity value		$ 6,714	$ 3,487	$ 5,651
Rounded		6,700	3,500	5,700

Cost of capital determination		Pretax		After tax
	Weight	Cost component	Tax rate	Cost component
Cost of debt (Note 3)	50%	6%	25%	2.25%
Cost of equity	50%	17.5%		8.75%
Discount factor				11.00%
			Perpetual growth rate	0%
			Capitalization rate	11.00%

Note 1 – Depreciation is used as a proxy for CCA. We also have included all the depreciation/CCA in this calculation but in reality the CCA related to the building would not be included as this schedule assumes it is sold.

Note 2 – Note that if the redundant assets are actually sold (as in the sale/leaseback transaction discussed later) there would be significant taxes associated with this transaction. These have not bee included in the above.

Note 3 – The cost of debt could arguably be anywhere between about 4% and 6% given the financing terms that have been proposed and discussed later in this report.

This approach is most suitable when cash flows are stable and the company is a going concern.

For Assessment Opportunity #9 (Finance), the candidate must be ranked in one of the following five categories:

Not addressed – The candidate does not address this assessment opportunity.

Nominal competence – The candidate does not attain the standard of reaching competence.

Reaching competence – The candidate attempts a valuation of TankCo using the capitalized cash flow approach.

Competent – The candidate performs a reasonable valuation of TankCo using the capitalized cash flow approach and understands the concepts underlying the valuation.

Competent with distinction – The candidate performs a reasonable valuation of TankCo using the capitalized cash flow approach and appropriately normalizes the cash flows. The candidate also explains when the valuation technique is most appropriate and justifies the capitalization rate used or properly integrates the redundant assets.

Assessment Opportunity #10

The candidate prepares a valuation of TankCo using the transactional (multiples) approach and uses all of the valuation information to recommend a value for TankCo.

The candidate demonstrates DEPTH in the Finance role.

The second approach that we will compute uses recent transactions to value a company based on a multiple. We have been told that a multiple of 4 times EBITDA is commonly used in the market to value companies.

Normalized EBITDA	1,660	1,206	1,539
Observed EBITDA Multiples in the Market	4.0	4.0	4.0
Capitalized cash flow	6,640	4,826	6,154
Add in the value of real estate as a redundant asset	6,000	6,000	6,000
Enterprise value	12,640	10,826	12,154
Value of outstanding debt	- 5,091	- 6,383	- 6,440
Equity value	$ 7,549	$ 4,443	$ 5,714
Rounded	7,500	4,400	5,700

The value of a business interest is typically the highest amount that can be obtained through the sale of the business with an arm's-length third party. We have provided an estimate of this value using a variety of approaches.

However, a key decision will be to determine whether or not the business is to be valued as a going concern. The valuation of the business as a going concern will include the value of goodwill, which would otherwise not have standalone value. On a liquidation basis, only the assets that have standalone value are included.

As discussed later in our report, we believe that stabilizing the business is possible and restoring profitability has a strong likelihood of success. The two key risk factors that might jeopardize this assumption are

1. higher-than-expected costs associated with the defective tank settlements (warranty, insurance, and lawsuit settlements); and
2. loss of any further distributors.

Another possibility that might be explored for maximizing value is to separately sell off the different segments of the business:

- The commercial tank division does not appear to generate a profit. Further analysis should be performed to determine how and why profits in this segment have deteriorated during the past four years since acquisition. For a growing market, this does not seem right. However, if it is true, it may be more profitable to the company overall to shut the division down rather than continue incurring losses.

- The residential tank division might be sold as a standalone going concern. Alternatively, TankCo may separately carve off the distributor relationships (and tank volumes) and sell these to another strategic buyer (a competitor in the industry). As the sector volumes are in slow decline, other competitors will be looking to maximize capacity at their existing plants and could take the TankCo volume and fill it using their own idle production capacity. Strategic buyers will pay more for businesses that have natural synergies. This would allow TankCo to separately sell off the real estate and liquidate the equipment to realize possible incremental proceeds. This idea is further supported by the sale-leaseback opportunity for the real estate. Selling the real estate and leasing it back increases the equity value, meaning pursuing this transaction is accretive to shareholder value.

- The fibreglass tank opportunity is a new project that shows a favourable return potential. However, until government certification of the tank is received, this asset comes with considerable risk to a purchaser, so waiting a few more months could make this another asset available for sale. A purchaser should be willing to pay up to the net present value for the opportunity, as we have determined in a separate section of our report.

For the purposes of our valuation to the board, we are going to assume that TankCo is a going concern and includes both the residential and commercial tank businesses. We will also assume that the company sells the real estate and leases it back under a long-term leasing arrangement. *(Note: A candidate can make any reasonable assumptions here.)*

I have calculated value using two different approaches, and TankCo has calculated the value using the adjusted net asset approach. The results of this analysis are as follows:

Valuation Approach	Valuation Opinion
Adjusted book value approach	$5.1 million*
Capitalized cash flows approach (based	$5.7 million
Transactional approach (based on 2016	$5.7 million

*Represents the $8,040,000 calculated by TankCo less the adjustments noted, totalling $2,939,000, for a total adjusted book value of $5,101,000.

The capitalized cash flow and transactional approaches are both income approaches. The value of the business interest is the greater of the value determined using either an asset approach or an income approach. Therefore, I estimate that the equity value of TankCo at December 31, 2015, is approximately $5.7 million.

For Assessment Opportunity #10 (Finance), the candidate must be ranked in one of the following five categories:

Not addressed – The candidate does not address this assessment opportunity.

Nominal competence – The candidate does not attain the standard of reaching competence.

Reaching competence – The candidate performs a reasonable valuation of TankCo using the transactional approach OR provides an overall supported value for TankCo.

Competent – The candidate performs a reasonable valuation of TankCo using the transactional approach AND provides an overall supported value for TankCo.

Competent with distinction – The candidate performs a reasonable valuation of TankCo using the transactional approach and provides an overall supported value for TankCo. The candidate also fine-tunes the adjusted book value calculated by the client or suggests other options for the company, such as selling off various divisions rather than the entire company.

Assessment Opportunity # 11

The candidate evaluates the fibreglass tank opportunity from a qualitative perspective.

The candidate demonstrates DEPTH in the Finance role.

The board of directors has asked us to evaluate the fibreglass tank manufacturing opportunity from a capital budgeting perspective. While the materials used to manufacture the tank differ from the steel currently used, the rest of the downstream business is virtually identical, including

- the same competitors;
- the same distributors;
- the same end-use customers; and

- the same end uses.

Thus, the cost of capital for this line of business should be very similar to that of the existing steel tank business.

The qualitative factors supporting this opportunity, which should be considered by the board, include the following:

- It strengthens the product line by offering distributors a supplier that can fulfill all their tank needs. This could help distributors with achieving volume discounts, saving on shipping costs, and reducing administrative processing from dealing with multiple suppliers.
- The tanks offer an opportunity to achieve a higher selling price and a higher margin (40% project margin with a $1,000 selling price versus ~30% margin on a ~$500 selling price, which equates to $400 of gross profit margin per unit sold versus $150 of gross profit margin).
- The tank design, if certified by the government, is a superior design that offers customers a higher-value proposition than either steel or other fibreglass tanks. This could provide TankCo with a sustainable competitive advantage, which could generate higher returns over time.

The qualitative factors that go against pursuing this opportunity, which should be considered by the board, include the following:

- The company does not have manufacturing experience with fibreglass. It may take some time to build this competency. It is very important that the company minimize the risk of selling defective tanks, since we have seen how costly that can be in terms of lost reputation and remediation costs and efforts.
- There is a risk that the new tanks will cannibalize the sales of existing steel tanks, which will only serve to accelerate the decline of this market.
- Because the new fibreglass tanks last twice as long as steel tanks, this too will accelerate the decline of the market volumes since the replacement market will become weaker as more fibreglass tanks get installed over time.
- With Lou gone, it will be important for someone to be accountable for this new line of business. Because the operations are going to be physically separate from the steel fabrication plant, Josh may be stretched to oversee both operations.
- The company is in a weak financial position right now. This opportunity requires an upfront investment in equipment and working capital. The first year is expected to generate negative cash flows, which will add to the financing burden of the opportunity.

For Assessment Opportunity #11 (Finance), the candidate must be ranked in one of the following five categories:

Not addressed – The candidate does not address this assessment opportunity.

Nominal competence – The candidate does not attain the standard of reaching competence.

Reaching competence – The candidate performs a qualitative assessment of the fibreglass tank opportunity, but the analysis is superficial.

Competent – The candidate performs a reasonable qualitative assessment of the fibreglass tank opportunity, discussing both its pros and cons.

Competent with distinction – The candidate performs a thorough qualitative assessment of the fibreglass tank opportunity, discussing both its pros and cons.

Assessment Opportunity #12

The candidate evaluates the fibreglass tank opportunity from a quantitative perspective).

The candidate demonstrates DEPTH in the Finance role.

I have also prepared a quantitative analysis for this fibreglass tank opportunity. I have used a discounted cash flow methodology to calculate the net present value of the opportunity. Below, I have calculated a net present value of approximately $538,000, which implies that the opportunity generates a return that exceeds our cost of capital. Note that this excludes the costs incurred thus far to design and develop the project, since these are sunk costs and are thus irrelevant to the analysis.

Sensitivity Analysis

With a new start-up operation like this, additional financial analysis should be prepared and considered by the board. The key items for which sensitivity analysis should be performed include the following:

- We will also want to calculate a breakeven point, based on sales volumes, to help assess the risk of the new operation.
- Selling prices are established in the market, so these prices are less likely to experience a wide variation; however, we should understand the impact of different responses we might expect, particularly if we get into a pricing war with the other fibreglass tank competitor.
- The lost volume of steel tanks to fibreglass tanks through the existing dealer network is a key uncertainty. At the same time, an increase in market share by attracting new distributors is another potential upside.

The direct overhead should be budgeted out in detail to ensure all incremental overheads from the new product line have been considered, including those pertaining to the new fabrication facility as well as any sales and marketing programs.

We should also note that we have used a five-year time frame for our analysis because this is the estimated useful life of the equipment. There may be value in this project beyond the five-year time frame (a residual or continuing value), which would add to the net present value. However, it is difficult to estimate costs and revenues beyond this time frame, and, as such, this has not been completed. Real option theories could be used to support this potential continuing value as well.

FIBREGLASS TANK CAPITAL BUDGET

			Year 0	Year 1	Year 2	Year 3	Year 4	Year 5
			0	1	2	3	4	5
Production capacity	units			6,000	6,000	6,000	6,000	6,000
Sales	units			2,000	4,000	6,000	6,000	6,000
Selling price				$ 1,000.00	$ 1,000.00	$ 1,000.00	$ 1,000.00	$ 1,000.00
Gross profit margin (excluding depreciation)				40%	40%	40%	40%	40%
Incremental gross profit				$ 800,000	$ 1,600,000	$ 2,400,000	$ 2,400,000	$ 2,400,000
Steel tanks NOT sold	units			2,000	4,000	6,000	6,000	6,000
Selling price	Selling price			$ 525.00	$ 525.00	$ 525.00	$ 525.00	$ 525.00
Market share penetration				0%	0%	0%	0%	0%
Gross profit margin (excluding depreciation)				28%	28%	28%	28%	28%
Opportunity cost				-$ 294,000	-$ 588,000	-$ 882,000	-$ 882,000	-$ 882,000
Incremental overhead costs	Note 1			-$ 450,000	-$ 450,000	-$ 450,000	-$ 450,000	-$ 450,000
Incremental before tax profit				$ 56,000	$ 562,000	$ 1,068,000	$ 1,068,000	$ 1,068,000
Cash taxes		25%		-$ 14,000	-$ 140,500	-$ 267,000	-$ 267,000	-$ 267,000
After-tax incremental profits				$ 42,000	$ 421,500	$ 801,000	$ 801,000	$ 801,000
Equipment purchase			- 1,600,000					
Tax shield on equipment	Note 2		278,181					
Investment in working capital	Note 3		- 117,123	- 117,123	- 117,123	-	-	351,370
After-tax cash flows for discount			- 1,438,943	- 75,123	304,377	801,000	801,000	1,152,370
Discount rate	Note 4	11.00%	1.000	0.901	0.812	0.731	0.659	0.593
Present value of after-tax cash flows			- 1,438,943	- 67,679	247,039	585,684	527,644	683,875
Net present value			537,621					
Rounded			*538,000*					

FIBREGLASS TANK CAPITAL BUDGET

Assumptions and supporting calculations:

1. The costs incurred to date on developing the prototype and obtaining the certification are sunk costs and are excluded from the analysis.

2. Tax shield calculation

Tax Shield Formula = [Investment Cost x Tax Rate x CCA Rate x (1+Discount Rate/2)]/[(Discount Rate + CCA Rate) x (1+Discount Rate)]

Present value of the tax shield at inception:

Equipment =	[$3,000,000 x 25% x 30% x (1+d%/2)]/[(d%+30%)x(1+d%)]	$	278,181

3. Investment in working capital

		Year 0	Year 1	Year 2	Year 3	Year 4	Year 5
Fibreglass tank sales			2,000,000	4,000,000	6,000,000	6,000,000	6,000,000
Opportunity cost of sales (i.e. steel tanks)			1,050,000	2,100,000	3,150,000	3,150,000	3,150,000
Incremental sales			950,000	1,900,000	2,850,000	2,850,000	2,850,000
Investment required for working capital	[Days]		45.0	45.0	45.0	45.0	45.0
Estimated incremental balance of receivables			117,123	234,247	351,370	351,370	351,370
Investment in receivables		- 117,123	- 117,123	- 117,123	-	-	351,370

4. Cost of capital determination

	Weight	Pretax Cost component	Tax rate	After-tax Cost component
Cost of debt	50%	6%	6%	2.25%
Cost of equity	50%	18%		8.75%
Discount factor				11.00%

For Assessment Opportunity #12 (Finance), the candidate must be ranked in one of the following five categories:

Not addressed – The candidate does not address this assessment opportunity.

Nominal competence – The candidate does not attain the standard of reaching competence.

Reaching competence – The candidate performs a quantitative assessment of the fibreglass tank opportunity, but the analysis lacks significant elements or contains conceptual errors.

Competent – The candidate performs a reasonable quantitative assessment of the fibreglass tank opportunity.

Competent with distinction – The candidate performs a reasonable quantitative assessment of the fibreglass tank opportunity. The candidate also suggests areas in which a sensitivity analysis would be useful or understands that the project may have a continuing value beyond the five-year time frame.

Assessment Opportunity #13

The candidate advises the client on ways to improve its financial situation and liquidity situation.

The candidate demonstrates DEPTH in the Finance role.

In this section of the report, we will discuss an approach for dealing with the current weak financial situation and liquidity crisis at TankCo. There are a number of opportunities to restore the financial health of the company in the short term.

1. Work with the bank on establishing a turnaround plan that allows the company to continue drawing under its existing credit facility
    - The company should ask for a temporary extension on the credit facility.
        - Management should work proactively with the bank to solicit its support during the turnaround.
        - An open line of communication and sharing of information is critical to soliciting the bank's support.
        - Management will need to draft a turnaround plan immediately that should incorporate some of the ideas discussed in this section to solicit patience with the bank.
        - The company could also offer up its real estate as additional collateral, to give the bank some comfort on its security position; however, this should only be provided on a temporary basis because the real estate may be part of the long-term solution.

2. Tightening up working capital practices
    - By collecting receivables more quickly and reducing the balance, cash will be freed up to reduce the operating line of credit.

        - The company is achieving a turnover ratio of 5.4 times. Adjusting the company's credit terms or improving collection efforts to enforce its 45-day terms should allow the company to achieve an 8.0 times turnover, which is consistent with the industry benchmark.
        - Adjusted budgeted 2016 sales ÷ 8.0x = ($15,250,000 − $480,000) ÷ 8.0x = $1,846,000 target receivable balance.
        - The actual adjusted balance of receivables at the beginning of the month was $2,410,000.
        - This means that $564,000 of cash could be realized by focusing on better managing accounts receivable.
    - By reducing inventory and raw materials on hand, cash will also be freed up to reduce the operating line of credit.
        - The company is achieving a turnover ratio of 3.6 times versus an industry benchmark of 6.0 times.
        - If the company were able to achieve a comparable inventory turnover, this would cut the balance of inventory almost in half and allow this amount of cash to be applied against the credit line.
        -

2016B cost of sales	$11,285,000
2015 bill and hold adjustment	(432,000)
Adjusted 2016 budgeted cost of sales	10,853,000
Industry turnover	6 times
Target inventory balances	1,809,000
Balance at December 31, 2015 (adjusted)	2,705,000
Potential cash release from inventory	$ 896,000

Focusing on these two accounts alone (accounts receivable and inventory) could reduce the line of credit from the current $2.9 million to $1.3 million in a few months.

3. Cost containment

The 2016 budget is projecting positive EBITDA of $2.1 million with no cost cuts and modest price increases. The company should look at all departments with an expectation of deferring any unnecessary costs. All hiring should be frozen. Management may want to consider implementing a pay cut and then approaching the union for a similar sort of concession until the liquidity crisis has been averted.

Discretionary costs may be deferred until the financial situation is stabilized. Capital spending programs should only be expended as absolutely necessary. For example, preventative maintenance planned for 2016 might be deferred until later in the year once liquidity improves and the strategic direction has been determined. Research and development activities, such as the fibreglass tank project, may require postponement to curtail short-term spending.

4. Refinancing the real estate

The real estate has an appraised value of $6 million and is currently unencumbered. The book value of the real estate is $1.354 million, implying that there is a significant unrealized gain.

There are two options presented (discussed in more detail below) for using this asset as a way of raising additional capital:

a. By selling the asset and leasing it back
b. By mortgaging the asset

5. Discontinuing dividends

Currently TankCo pays out a significant amount of dividends (2015 – $400,000; 2014 – $350,000). Now that Rob and Sarah own TankCo, they may not require these dividends in order to sustain a comfortable lifestyle. Therefore, in order to conserve cash and improve TankCo's liquidity, we suggest that any dividends be discontinued until such time that TankCo returns to profitable operations.

Note: Because the requirement was quite open, there were other suggestions that could be rewarded for this assessment opportunity.

Overall Conclusions

The company has enough possible courses of action to avert a liquidity crisis. The above-noted items should be implemented immediately. In the long term, TankCo must return to profitable operations and build its equity to improve its financial situation.

For Assessment Opportunity #13 (Finance), the candidate must be ranked in one of the following five categories:

Not addressed – The candidate does not address this assessment opportunity.

Nominal competence – The candidate does not attain the standard of reaching competence.

Reaching competence – The candidate identifies some alternative courses of action for improving the financial situation or the liquidity situation.

Competent – The candidate discusses and evaluates the financial situation and liquidity situation and advises the client on managing the situation.

Competent with distinction – The candidate discusses and evaluates the financial situation and liquidity situation and advises the client on managing the situation. The candidate explicitly discusses the debt capacity that is available to TankCo and develops both short-term and long-term solutions.

Assessment Opportunity #14

The candidate discusses and evaluates the financing options.

The candidate demonstrates DEPTH in the Finance role.

Two financing options have been identified for TankCo in order to use its unencumbered real estate assets to secure additional financing. Each of these options is further discussed below.

Sale-Leaseback Transaction

With an inherent gain of $4.646 million on the land and building, it would be good to realize the gain to increase retained earnings. If this were possible, this would put our debt-to-equity covenant back onside. However, *Handbook* section 3065 — Leases must be taken into consideration.

Handbook 3065.63 states that a lease shall be accounted for as a capital, direct finance, or operating lease by the seller-lessee. To determine whether the lease is a capital or operating lease, three criteria are considered:

- There is reasonable assurance that the lessee will obtain ownership at the end of the lease term. In this case, there is no such assurance or provisions in the information provided.
- The lease term is of such a duration that the lessee will receive substantially all of the economic benefits of the property. In this case, because the lease covers only half of the economic life (which is below the 75% guideline), the criterion is not met.
- The lessor is assured of recovering the investment in the leased property and earning a rate of return on the investment. This is typically met when the present value of the minimum lease payments is more than 90% of the value of the property.

  PVMLP = $500,000 + $500,000 PVIFA (9years,5.45%) = $3,983,760

  $3,983,760 ÷ $6,000,000 = 66%
  Therefore, this criterion is not met.

As a result, the lease is an operating lease.

Handbook 3065.66 states that when the leaseback is classified as an operating lease, any profit or loss arising on the sale shall be deferred and amortized in proportion to rental payments over the lease term. *(Following Example 4 in 3065 Illustrative Examples.)*

Sale proceeds	$6,000,000
Carrying value of land	(500,000)
Carrying value of building	(854,000)
Gain on sale of building	4,646,000
Minimum lease payments (deferred gain)	3,983,760
Gain recognized immediately	$ 662,240

Thus, we would recognize a $662,240 gain immediately upon the sale, and the deferred gain of $3,983,760 would be recognized over the lease term. The effect would be a substantial improvement in the debt-to-equity ratio of TankCo.

Note: Although this analysis is strongly linked with financial reporting, accounting for this transaction has a significant impact on the debt-to-equity ratio of TankCo, which in this situation is relevant due to the financing alternatives being considered and the current financial situation of TankCo.

Mortgage Transaction

By mortgaging the building, the company can raise cash. The cash can be used to pay down the amounts owing to the bank, as well as potentially fund the start-up of the fibreglass tank line of business.

The amount of mortgage financing available is based on a loan-to-value ratio of 60%. The company will be responsible for the costs of getting a formal appraisal done; however, this should yield proceeds of nearly $3.6 million. This amount is more than enough to pay off the line-of-credit balance with the bank, which would give the bank some comfort.

Comparison of the Mortgage Transaction versus the Sale-Leaseback Transaction

The considerations of entering into the sale-leaseback transaction compared with the mortgage transaction are as follows:

- The implicit interest rate of the sale-leaseback is higher than what can be obtained using a traditional mortgage, making it slightly more expensive (5.45% for the sale-leaseback versus 4.75% for the mortgage financing).
  - However, TankCo should bear in mind that it would be responsible for covering the costs of setting up the mortgage arrangement, including legal fees, appraisals, and any lender commitment fees. Mortgages may also need to be insured (although, given the low loan-to-value ratio of 60%, this insurance may be optional). This will narrow the effective interest rate between the two options.
  - There may be substantial tax differences between the two options as well:
- The land and building would be considered “sold” under the sale-leaseback transaction. This would lead to a significant gain of $4.646 million. While the details of this gain would need to be analyzed further (a portion would be recapture), if we assume that this total gain was a capital gain, it would lead to taxes of approximately $1.162 million ($4.646 million × 50% inclusion rate × 50% tax rate for investment income). This reduces the attractiveness of this option significantly.
- Offsetting this significant drawback is the fact that the full amount of the operating lease payments under the sale-leaseback would be deductible for tax purposes moving forward, but only the interest portion of the mortgage would qualify as a tax deduction.
- The big advantage of the sale-leaseback transaction is that the full value of the real estate is realized in cash (net of taxes). The cash can be used to pay off almost all of the amount borrowed from the bank. At December 31, 2015, the company owed Canadian Bank $6.4

million in total between the line of credit and the long-term debt. This would eliminate the liquidity crisis, provided the company is able to restore positive operating cash flows.

- The other issue becomes what happens at the end of 10 years. Renewing the lease may cost more, or the company may have to find a new fabrication facility. This is somewhat mitigated by the declining nature of the business, and perhaps either closing the business, selling it, or moving to a smaller location may make sense at that time.
- The terms of the two financing options vary as well. The mortgage only has a five-year term, whereas the lease has a 10-year term. In a declining industry, it will become more difficult to sustain and raise debt financing as the business profits shrink. The lease provides fixed financing for twice as long without any associated covenants. Covenants can also become more challenging to sustain in a declining and volatile business. However, in the real world, mortgage financing generally does not contain onerous covenants.

Conclusions on Financing Options

Due to the significant tax liability that would be created under the sale-leaseback transaction, I recommend that TankCo proceed with a mortgage. However, for simplicity, I suggest that TankCo approach its current bank and ask it to provide a comprehensive financing package that would include the line of credit and mortgage financing. This could be tailored to meet TankCo's needs now and into the future and, given that its current bank would be familiar with its operations, may be the simplest to complete. The additional proceeds will help relieve the liquidity crisis and can also be used to fund the new growth capital expenditures (fibreglass tank project).

Management should prepare a long-term forecast of income, financial position, and cash flow to ensure that the cash flow is sufficient to service any incremental debt that is added to the capital structure and that all lending covenants are maintained.

For Assessment Opportunity #14 (Finance), the candidate must be ranked in one of the following five categories:

Not addressed – The candidate does not address this assessment opportunity.

Nominal competence – The candidate does not attain the standard of reaching competence.

Reaching competence – The candidate identifies some of the pros and cons of the financing options.

Competent – The candidate discusses and evaluates the significant pros and cons of the financing options and provides a supported recommendation.

Competent with distinction – The candidate discusses and evaluates the significant pros and cons of the financing options and provides a supported recommendation. The candidate explains how the chosen option is preferred from a current financial situation perspective and how the chosen option will assist the company with its plans moving forward.

DAY 2 – MARKING GUIDE – PERFORMANCE MANAGEMENT TANKCO LIMITED

In the performance management role, the candidate is expected to thoroughly analyze the current situation, analyze the costing of the commercial tanks, recommend a price and pricing strategy for the fibreglass tanks, critique the strategic plan for TankCo prepared by Josh and his team, and provide the new owners with recommendations for the future of the company. As part of the engagement, the candidate is expected to address the significant financial reporting errors in the draft financial statements and to consider the impact of the errors on compliance with the bank's lending covenants.

See Assurance Guide for the Common Assessment Opportunities #1 to #6.

To: Board of Directors, TankCo Limited
From: Management consultant, CPA
Subject: TankCo's Strategic Plan

Assessment Opportunity #7

The candidate performs an analysis (quantitative side) of the current situation at TankCo.

The candidate demonstrates DEPTH in the Performance Management role.

Analysis of TankCo's strategic plan would begin with a quantitative and qualitative analysis of the internal and external environment. The situational analysis in the draft plan provided by management does not do a good job of fully exploring the current situation from an internal and external perspective. Understanding the current situation is a requirement for strategic planning.

We will begin by performing a quantitative analysis of the company's recent performance against the previous year and against the industry benchmarks.

Ratio Analysis

A ratio analysis can help to identify areas of strength and weakness based on the company's performance relative to industry statistics.

	2014 (Actual)	2015 (Unadjusted)	2016 (Budget)	Industry Statistics
Sales growth – residential	N/A	(21.7)%	17.4%	(2.0)%
Sales growth – commercial	N/A	(2.7)%	31.9%	3.1%
Gross profit margin % – overall	22.5%	19.5%	21.4%	24.0%
GP% – commercial	(15.5)%	(4.1)%	(2.4)%	24.0%
GP% – residential	34.8%	29.0%	32.2%	24.0%
Operating margin %	9.8%	2.3%	8.9%	10.0%
Current ratio	2.0	1.2	N/A	1.45
Inventory turnover*	4.0	3.0	N/A	6.0
Debt to equity	1.3	1.7	N/A	1.02

*COGS ÷ ending inventory

If the adjustment for two bill-and-hold commercial tanks is considered, then the 2015 sales growth is actually 10.3% (((3,600 + 480) − 3,700) ÷ 3,700), which is significantly better than -2.7%. However, this adjustment would change the 2016 budgeted growth figure from 31.9% to 4.7%.

Interpretation of Quantitative Analysis

Before adjustments, in 2015, the company significantly underperformed against the industry in many profitability statistics, including the following:

- Lower sales growth in both the commercial and residential segments
- Lower company gross and operating profit margins (although residential gross profit percentage was above the industry benchmark)

The company also exhibited much weaker financial strength ratios than the industry, including the following:

- A lower current ratio, implying lower liquidity
- A higher debt-to-equity ratio, implying higher financial risk

The company also shows a lower-than-industry-standard management efficiency of working capital, as indicated by the following:

- Lower inventory turnover, which implies that the company is not managing its supply chain as well as its competitors are
- Inefficient management of working capital, which ties up company cash and necessitates a higher draw on the line of credit (from $1.1 million in 2014 to $2.9 million in 2015)

Interestingly, financial results and performance indicators for 2014 were close to industry, which indicates potential for a turnaround.

Analytical Review of the 2015 Results versus 2014

It is also helpful to prepare an analytical review of the 2015 results versus the prior year to identify the root causes of the financial underperformance.

	2014	2015 (Adj.)	Variance to 2014
	(unaudited)	(unaudited)	
Sales	$ 15,126	$ 13,026	$(2,100)
Operating expenses			
Cost of sales, excluding depreciation	11,042	9,862	(1,180)
Selling, general and administrative	1,924	2,600	676
Depreciation and amortization	678	692	14
	13,644	13,154	(490)
Operating income	1,482	(128)	(1,610)
Loss from contingent lawsuits		355	355
Interest expense	305	344	39
Earnings before taxes	1,177	(827)	(2,004)
Income taxes expense	294	(2)	(296)
Net earnings	$ 883	$ (825)	$(1,708)

For reference: Analytical review with unadjusted 2015 figures

	2014	2015	Variance to 2014
	(unaudited)		
Sales	$15,126	$12,546	$(2,580)
Operating expenses			
Cost of sales, excluding depreciation	11,042	9,410	(1,632)
Selling, general and administrative	1,924	2,156	232
Depreciation and amortization	678	692	14
	13,644	12,258	(1,386)
Operating income	1,482	288	(1,194)
Interest expense	305	344	39
Earnings before taxes	1,177	(56)	(1,233
Income taxes expense	294	(14)	(308)
Net earnings	$ 883	$ (42)	$ (925)

The key issues raised by the analytical review, using the adjusted balances, include the following:

- Declining sales, which may be attributed to both a declining market and the loss of a key distributor.
- Declining overall gross profit margin (22.5% in 2014, 19.5% in 2015). This may be partially related to lower volumes and fixed costs being spread out over fewer units, but it may also pertain to higher costs. Further investigation into the declining gross profit margins is required to determine how this trend could be turned around.
- Higher general, selling and administrative expenses ($676,000 variance), which are mostly attributable to the expensing of the R&D costs of the fibreglass tank and the incremental insurance deductible provisions. These are one-time expenses ($444,000) that should be excluded in determining a normalized level of profitability.
- Interest expense, which is higher by $39,000 as a result of increased borrowing from the line of credit. While TankCo can afford the increased interest expense at this point, the greater concern is the decreased credit available, from $2 million in 2014 to $543,000 in 2015.
- The lawsuit accruals, which were items that we raised in our discussion of potential accounting issues. These, too, are normalization adjustments.
- Working capital efficiency, which on the balance sheet appears to have weakened during the year:
  - Inventory turnover declined from 4.0 times to 3.0 times in 2015.
  - Current ratio declined from 2.0 to 1.2.

Overall Assessment

The 2015 financial state of TankCo is currently very weak and is putting the company at risk because of the potential violation of the covenants under the lending agreement. In the absence of the bank's credit facility, it will be difficult to sustain operations, let alone reinvest incremental capital into the business to pursue new ventures such as the fibreglass tank product line.

These findings will feed into the current situational analysis findings documented later in our report.

For Assessment Opportunity #7 (Performance Management), the candidate must be ranked in one of the following five categories:

Not addressed – The candidate does not address this assessment opportunity.

Nominal competence – The candidate does not attain the standard of reaching competence.

Reaching competence – The candidate calculates and attempts to discuss most ratios in comparison to industry benchmarks.

Competent – The candidate calculates and discusses most ratios in comparison to industry benchmarks.

Competent with distinction – The candidate calculates and discusses most ratios in comparison to industry benchmarks and includes some trend analysis.

Assessment Opportunity #8

The candidate provides an analysis (qualitative) of TankCo's situation.

The candidate demonstrates DEPTH in the Performance Management role.

We have prepared a SWOT analysis to help the board better understand the strengths, weaknesses, opportunities, and threats of the business.

Internal Strengths:

- That the company has been in business as long as it has, suggests it has a very viable strategy that has served it well until the past year. The company has a long and profitable track record. The 2014 financial performance was in line with industry benchmarks.
- The company has an established network of distributors.
- The established market share of residential tanks is approximately 10%. (2 million installs in total market with a 10-year replacement cycle = 200,000 tanks sold per year in the market. TankCo has approximately 20,000 budgeted for 2016, which is 10%.)
- The company has a highly automated manufacturing process for residential tanks.
- The company has an established workforce and strong metal fabrication and welding experience.
- The company is able to achieve efficiency savings in the commercial tank division, showing continuous improvement.
- The company could commence manufacturing and selling fibreglass tanks through an established distributor network.

Internal Weaknesses:

- In 2015, the failing health of the company's president, Lou Marshall, may have had a negative impact on the execution and focus of operations.
- The strike last February resulted in temporary workers being used, and these workers were responsible for producing substandard tanks that have resulted in significant negative financial and operational consequences. This may also lead to a longer-term negative impact on the perceived brand quality.
- The shipment of defective tanks last February brought to light weaknesses in the company's manufacturing and quality assurance programs.
- The company's financial position is poor. It is approaching possible default on existing credit facilities and may require new financing.
- The management of accounts receivable is poor, which indicates that collection experience is weakening with the established group of distributors.
- The management of inventory is poor, which is evidenced by the build-up of raw materials and the lower-than-industry inventory turnover.
- Succession planning is poor, since Josh Hoppy was brought in only recently and operations were permitted to languish throughout 2015.
- A major distributor was lost due to poor quality issues. There could be other unhappy distributors to worry about.
- Management accounting systems are poor, since it appears that costs have not been appropriately allocated between the commercial and residential segment, giving management a false indication of relative profitability.
- There is uncertainty around the job satisfaction of the workforce with the recent strike.
- The board only meets semi-annually. With new owners, it would be beneficial for the board to meet more frequently.
- There is a possible concern or conflict that the past (now retired) auditor is now a board member.
- New ownership is creating uncertainty about the future direction of the company.
- The increasing number of lawsuits increases the risk of TankCo becoming insolvent.
- The dividend policy is questionable, since TankCo lost $42,000 in 2015, yet the dividends paid out in 2015 increased to $400,000 from $350,000.

External Opportunities:

- Commercial tank sales are growing in volume.
- Stringent government regulations (e.g., the fibreglass tank approval) could create a barrier for new entrants to the industry.
- Increasing prices in the residential tank market could offset declining sales. TankCo could take advantage of this trend if it can produce tanks in a cost-effective way.
- High electricity prices are discouraging people from shifting to electricity from oil for heating.

External Threats:

- The residential tank market is shrinking.
- The threat of substitute products (e.g., fibreglass tanks, other types of heating systems that don't require a tank) is high.
- Competitive rivalry is high, since commercial tanks are competitively priced, with narrow margins.
- With residential tanks, the same number of manufacturers is chasing an ever-shrinking volume in the market, which will intensify competition over time.
- The increasing life of residential tanks lengthens the life cycle, thereby decreasing sales.

Conclusions on the Situational Analysis

- There is uncertainty around the direction that the new owners will provide. The children may which to divest of their shares, hold onto the shares but not invest their own money in the company, or carry on the business and possibly invest additional funds to build on their father's legacy. Getting a clear understanding of their objectives will help set the new mission and vision, which will help the board deliberate over the strategic alternatives.
- The company has a history of competing effectively, but it lost focus in 2015 and made a significant misstep by shipping defective tanks.
- The poor financial position will limit strategic options.

For Assessment Opportunity #8 (Performance Management), the candidate must be ranked in one of the following five categories:

Not addressed – The candidate does not address this assessment opportunity.

Nominal competence – The candidate does not attain the standard of reaching competence.

Reaching competence – The candidate identifies a few points in each category.

Competent – The candidate discusses a balance of points in each category.

Competent with distinction – The candidate thoroughly discusses a balance of points in each category.

Assessment Opportunity #9

The candidate performs an in-depth analysis of the profitability of the two product segment lines (residential and commercial).

The candidate demonstrates DEPTH in the Performance Management role.

Cost Allocation

There are a number of indications that the cost allocation methodology may be resulting in inaccurate management information:

- There is a large pool of indirect costs that can be allocated on the basis of several cost drivers.
- There is the continuation of a long-standing practice to allocate indirect overheads on the basis of direct labour hours, knowing that the residential line was reconfigured three years ago to reduce labour and increase automation costs.
- Direct costs are being allocated based on a cost driver instead of being included as a direct cost (production management).
- The floor space of the commercial division is disproportionately small compared to that of the residential assembly line.
- The shipping costs are disproportionately related to the residential segment.

Each of these indicators suggests that a disproportionately high amount of costs are being allocated to the commercial segment, which has the effect of cross-subsidizing the residential segment.

To get a truer reflection of the actual product line profitability, the company should be using an activity-based costing system. The following table reallocates the fixed plant overhead for 2015 on this basis:

	Allocation	**Commercial**	**Residential**
Depreciation	10%-90%	$ 69	$ 623
Property taxes	20%-80%	129	516
Shipping	25%-75%	109	328
Plant repairs	20%-80%	59	235
Production management	Specific	158	602
		$524	$2,304

Carrying the revised FOH allocation through to the two divisions results in the following:

2015 Actuals

Case Facts	**Previous Profitability** Commercial	Residential	**Revised Profitability** Comm.	Res.
Sales	$3,600	$8,946	$3,600	$8,946
Cost of sales				
DM	1,461	1,873	1,461	1,873
DL	1,093	1,836	1,093	1,836
VOH	137	873	137	873
FOH	1,055	1,773	524	2,304
Total COS	$3,746	$6,355	$3,215	$6,886
Gross profit	$(146)	$2,591	$ 385	$2,060
GP%	(4.1)%	29.0%	10.7%	23.0%

As a result of reallocating the costs, the profitability of the segments for 2015 is very different. The commercial tank segment still performed poorly in 2015 but did not lose the $146,000 originally reported in the management report. In fact, it earned $385,000.

Further, a reallocation of FOH and subsequent revisions to Josh's forecast will likely result in a much improved profitability picture for the commercial division in 2016.

Conclusion

Management is making decisions based on incorrect management information. This could affect how commercial tanks are being priced, as well as Josh's recommendation to phase out the commercial tank division. Since the commercial tank division is in fact profitable, no impairment adjustment should be recorded as suggested by the accounting department.

For Assessment Opportunity #9 (Performance Management), the candidate must be ranked in one of the following five categories:

Not addressed – The candidate does not address this assessment opportunity.

Nominal competence – The candidate does not attain the standard of reaching competence.

Reaching competence – The candidate attempts to recalculate overhead allocation or gross profit for each division.

Competent – The candidate recalculates overhead allocation and gross profit for each division for one year.

Competent with distinction – The candidate recalculates overhead allocation and gross profit for each division for both years and concludes that the commercial tank division is profitable.

Assessment Opportunity #10

The candidate evaluates the pricing strategy for the fibreglass tank opportunity.

The candidate demonstrates DEPTH in the Performance Management role.

In this section of our report, we will discuss the pricing strategy for the new fibreglass tank product. We have been provided with market information about supply and demand at various pricing levels. There may be other advantages to consider in the value proposition; for example, how insurance companies might view risk for households that use a fibreglass tank versus a steel tank. Such implications are outside of the scope of this part of our report.

The value proposition of the fibreglass tank is the longer useful life it provides to customers. However, this benefit is offset by higher costs and consequently higher retail prices. A steel tank currently sells for $525 in the wholesale market. If the new fibreglass tank lasts twice as long, a customer should be indifferent to paying as much as $1,050. The competitive market price is currently $900, which likely pertains to the inferior quality of that design compared to TankCo's product design.

There is an important long-term implication from the initiation of the sale of fibreglass tanks in that it will slow down the replacement cycle of oil tanks in the decades to come. This will have the effect of doubling the acceleration of the current 2% decline in the market. However, for the coming decade, the replacement market should continue to decline at the current rate. This observation should factor into the long-term planning horizon for the company. For example, it might be less desirable for the company to make a significant long-term capital investment that would extend beyond the next 10-year planning horizon. The company should also make a conscious effort to manage its cost structure, with the anticipation of declining volumes in years to come.

Pricing Strategies

Strategic pricing strategy considers long-term sustainability, where the price covers all costs. Tactical pricing may take a short-term pricing approach to deal with specific market conditions. Some relevant alternatives to consider in making the pricing decision include the following:

- Once the TankCo product is certified, there will be only two players in the market, which implies limited competition. This will allow the players to price their products at a premium to skim market demand until other players enter the market. The certification and development timeline will only protect the market for the short term, depending on whether other manufacturers have initiated fibreglass tank design projects yet or not. This alternative would suggest that TankCo and the competitor would be well served by keeping the prices high until significant competition emerges.
- TankCo may want to consider using penetration pricing, which involves lowering prices below those of the competition to gain a larger distributor base. However, given the current industry life-cycle phase of the residential oil tanks, penetration pricing may set off a price war because both steel and fibreglass manufacturers will defend their positions in the market vigorously. Given TankCo's weak financial position, the company would be unable to sustain itself for long if a price war emerged in the industry.
- A market-based pricing strategy would focus on the product value to the customer and the related price in the market. As indicated by the market research, TankCo should be able to attain more than its fair share of the market at a price of $900, presumably because of the longer tank life. Matching or pricing it above the competitor's price would also be less likely to instigate a price war.
- TankCo may want to offer bundle pricing to tempt new distributors to switch suppliers for all their tank purchases. Using this tactic, the company might be able to leverage different product lines to gain access to more distributors without explicitly advertising lower prices. It is important for the entire residential tank industry that pricing remain stable in a declining market.

Quantitative analysis can be performed using the market and costing data to determine the optimal pricing point, but these findings need to be considered within the context of the strategic approaches just described. We have calculated the optimal price point of $1,000 per tank by calculating the price point with the highest incremental contribution margin. This analysis considers the following:

- TankCo's products will still have a slight market share advantage at the $1,000 price point, presumably because of the longer tank life.
- The opportunity costs associated with the lost sales of steel tanks must be considered in the analysis. While the $700 price point would create the highest level of sales and contribution margin, once opportunity costs associated with the loss of steel tank volumes are factored into the analysis, the net contribution margin is less than other pricing alternatives.

Recommendation

We believe that TankCo should go to market with a price of $1,000 per tank. The ability to adjust pricing over the long term (possibly lower) remains a viable option in the future. Future pricing will depend on the market acceptance of the new fibreglass tank product and the reaction of competitors to the pricing structure and potential new entrants. We believe that this approach balances the short-term opportunity with the long-term threats to the industry from the acceleration of the declining market created by these new types of products.

A	B	C	D	E = B x C	F =E x A	G	H = E x G	I = F - H	J = B x C x D	K	L = J x K	M = I - L
Manufacturer's Price	Market demand (# of tanks)	Tankco's estimated market share	Replacement of Tankco Steel Tank Volume	Fibreglass tank volume forecast (units)	Fibreglass tank sales ($000's)	Fibreglass cost per tank	Fibreglass tank costs ($000's)	Incremental contribution margin from fibreglass ($000's)	Steel tank volumes lost (units)	Opportunity cost per tank	Opportunity cost ($000's)	Net positive contribution margin ($000's)
700.00	50,000	80%	35%	40,000	28,000	600.00	24,000	4,000	14,000	150.00	2,100	1,900
800.00	20,000	75%	45%	15,000	12,000	600.00	9,000	3,000	6,750	150.00	1,013	1,988
900.00	15,000	65%	50%	9,750	8,775	600.00	5,850	2,925	4,875	150.00	731	2,194
1000.00	12,000	60%	55%	7,200	7,200	600.00	4,320	2,880	3,960	150.00	594	2,286
1100.00	6,000	35%	80%	2,100	2,310	600.00	1,260	1,050	1,680	150.00	252	798

For Assessment Opportunity #10 (Performance Management), the candidate must be ranked in one of the following five categories:

Not addressed – The candidate does not address this assessment opportunity.

Nominal competence – The candidate does not attain the standard of reaching competence.

Reaching competence – The candidate attempts to recommend a price.

Competent – The candidate recommends a price with sufficient support.

Competent with distinction – The candidate recommends a price with thorough qualitative and quantitative support.

Assessment Opportunity #11

The candidate evaluates management's strategic priorities for the new owners.

The candidate demonstrates DEPTH in the Performance Management role.

Evaluation of Management's 2016 Plans

Management identified three priorities for 2016. In this section of our report, we will evaluate the merits of those priorities.

1. Regaining the lost customer

Retaining distributors is a key success factor for the residential tank business, especially because there are no organic growth opportunities in this mature and declining market.

Management's plan to offer an additional price discount may be effective; however, it poses additional risks. A 5% discount equates to approximately $26 per residential tank and will significantly erode gross profit margin. The risks with this approach are as follows:

- The 2016 forecast could be lower if the 5% offer is unsuccessful and the lost volumes are not regained.
- The duration of the discount is uncertain. It may be harder to reinstate normal pricing after offering a discount.
- This is not the only distributor affected by the shipment of the defective tanks. It just happens to be the only distributor that has changed suppliers. If other distributors find out that a discount has been offered, then they too may request a discount and further erode the gross profit margins on all tank sales.
- Lowering prices in a declining market may set off a pricing war with other distributors, which tends to happen when one player is attempting to grab market share from another.
- The discount does not address the underlying issue that pertained to a compromise in quality.

<u>Recommendations for Management to Consider</u>

Regaining the lost distributor should be a key initiative for management. However, management should seek to renegotiate terms that do not involve reducing the price of its tanks.

Management may decide to continue to offer its warranty replacement program as one alternative.

Since TankCo is forecasting a gross profit of $3.4 million for residential tanks, the company should be able to design an attractive incentive program to entice the company back to TankCo as its supplier while addressing the distributor's concern about quality.

Beyond the distributor that has already left TankCo's customer base, management should also be proactively solidifying the remaining customer base to avoid losing any other distributors. Other defective tanks may not be detected yet and may continue showing up in years to come, which may compound the company's problems and give rise to additional lawsuits.

2. Completing development of the fibreglass tank business

From a strategic perspective, the opportunity has a number of pros and cons.

Pros:

- Offering a fibreglass tank diversifies the company's product line.
- Offering a wider product line will help solidify relationships with distributors seeking to consolidate partnerships with a single supplier and perhaps negotiate larger volume discounts.
- A diversified product line creates the potential to approach and acquire new distributors.
- Fibreglass tanks are profitable and potentially provide a better profit margin than steel tanks (dependent on selling price).
- TankCo has already invested over $560,000 in research and development.

Cons:

- Testing and certification are still outstanding. While costs should be reasonable, there is uncertainty.
- The new line will lead to cannibalization of existing steel tank sales.
- Plant capacity needs to addressed. Currently the two existing divisions occupy 100% of the plant's floor space.
- The impact on TankCo's overhead costs is uncertain. No capital costs have been discussed yet (i.e., whether new equipment is required to mass produce the tanks).
- Pursuing this opportunity requires incremental capital, which the company may not have.
- The competitive reaction is unclear, and it could set off pricing pressure when a player attempts to grow market share.
- The business will continue to cannibalize some of the existing steel tank volumes and lengthen the replacement cycle in years to come.

Recommendations for Management to Consider

TankCo should continue to prioritize the completion of the fibreglass tank initiative. Given the declining sales in the existing residential steel tank market, the new fibreglass tank will help TankCo regain sales volumes for the residential division. Also, by offering a new product, TankCo may gain new distributors, which will have a positive sales impact.

Management will have to investigate what capital costs are required. If the necessary new machinery is very expensive, it could change the decision from a profitability point of view. As well, expensive machinery may be difficult for TankCo to finance since it is currently stretched financially, with its debt-to-equity covenant in jeopardy.

3. Phasing out commercial tank operations

Management's plan to phase out commercial tank operations is misguided. The management report suggesting that the commercial tanks are unprofitable is not entirely accurate, as we discussed earlier in our costing analysis findings.

In fact, the 2015 gross profit from the commercial tank segment is $385,000 and likely profitable in 2016. Because the commercial tank operation shares a facility with the residential tank

operation, and because it has relatively low capital intensity, very few of the indirect overheads would be saved if the division were to be sold or closed. This would shift these costs over to the residential segment, resulting in lower profits.

Additionally, the commercial tank segment is a growing sector of the market, whereas the residential market has shrunk 2% annually. Management should also determine whether there are opportunities to increase prices, since the key success factor in this business is the ability to deliver the tanks on time, not pricing.

Therefore, we recommend that management *not* wind down the commercial division, but instead look at ways to optimize and grow this segment of the business further. Perhaps TankCo could investigate building a fibreglass tank for the commercial division instead of the residential division. Given the changing environment in the residential tank industry with declining sales, longer replacement cycles, and a shrinking market, TankCo should be looking for ways to exit that business.

For Assessment Opportunity #11 (Performance Management), the candidate must be ranked in one of the following five categories:

Not addressed – The candidate does not address this assessment opportunity.

Nominal competence – The candidate does not attain the standard of reaching competence.

Reaching competence – The candidate attempts to discuss management's strategic priorities.

Competent – The candidate provides a balanced discussion of management's strategic priorities with reasonable recommendations.

Competent with distinction – The candidate provides a thorough discussion of management's strategic priorities with provides reasonable recommendations.

Assessment Opportunity #12

The candidate evaluates and establishes viable strategic options for the company.

The candidate demonstrates DEPTH in the Performance Management role.

The new owners are unsure what they should do with TankCo. They are unfamiliar with the industry and with operating the business. They have identified options for the future of TankCo and would like an opinion on whether they should

- liquidate the company;
- sell the business or part of the business; or
- continue the business.

At a strategic level, these are the options that the board must consider in conjunction with their discussions with the new ownership group (i.e., the children). However, the frame of the strategic alternatives does not fully address the current situation, and, in fact, the alternatives may be considered sequentially rather than as specific competing alternatives. For example, liquidating the company will likely yield the lowest amount of value derived from the future earnings potential of the business. Selling the business would also sub-optimize proceeds because buyers will be weighing recent performance more heavily in their offer. Therefore, to maximize proceeds, should the shareholders wish to divest of the business, it may be more profitable to turn around the business first then sell it at a later date.

Another possibility that might be explored for maximizing value is to separately sell off the different segments of the business:

- The commercial tank division could be sold as a standalone segment. Using the acquisition multiple of 4 times (from financial statement notes) and the revised 2015 budgeted gross profit of $385,000, this division might be worth $1.54 million.

- The residential tank division might not be as attractive since the sales volumes are in slow decline. However, other competitors will be looking to maximize capacity at their existing plants and could take the TankCo volume and fill it using their own idle production capacity. Strategic buyers will pay more for businesses that have natural synergies to their own.

- The fibreglass tank project is nearly complete and shows a favourable return potential. However, until government certification of the tank is received, this asset comes with considerable risk to a purchaser. Waiting a few more months could make this a valuable asset available for sale.

A decision to maintain the business has a number of variations that need to be considered. For instance, continuing the business might include

- severing one of the segments (residential or commercial) to raise funds or reduce losses;
- organically growing the business through such opportunities as the fibreglass tank; and

- organically growing the business to capitalize on the existing expertise to manufacture other metal fabrication products.

The board should establish criteria against which the strategic alternatives can be evaluated. Such criteria might include the following:

- The strategy has a reasonable probability of generating returns that meet or exceed the company's cost of capital.
- The strategy minimizes the amount of new capital required or specifies the risk tolerance in dollar amounts.
- The strategy maintains an operating presence in the existing location to preserve Lou's legacy in the community.

Conclusion

TankCo is in a good position. Appropriate reallocation of costs shows both divisions are profitable. The residential tank division is a little concerning, given the declining market; however, the new fibreglass tanks may give the division a boost in sales. The decline in the market should be monitored closely, and, if this trend continues, TankCo should start looking for an exit strategy. The commercial division doesn't have the same volume or profitability (%) as residential, but the long-term health of the industry is more favourable.

The new owners should discuss the future strategy for TankCo with the board and then assess whether continued ownership makes sense. If the owners are considering selling, they should do so while profitability continues to look good to maximize the selling price.

For Assessment Opportunity #12 (Performance Management), the candidate must be ranked in one of the following five categories:

Not addressed – The candidate does not address this assessment opportunity.

Nominal competence – The candidate does not attain the standard of reaching competence.

Reaching competence – The candidate attempts to discuss the owners' alternatives for TankCo.

Competent – The candidate discusses the owners' alternatives for TankCo and provides a reasonable conclusion.

Competent with distinction – The candidate thoroughly discusses the owners' alternatives for TankCo and provides a reasonable conclusion that is consistent with prior analysis.

DAY 2 – MARKING GUIDE – TAXATION
TANKCO LIMITED

In the Taxation role, the candidate is expected to calculate the 2015 taxes payable for TankCo Limited to support the year-end financial reporting and tax compliance work. The candidate is also expected to prepare an estimate of after-tax proceeds to the shareholders to respond to a request from the shareholders. As well, the executor of the estate has asked for an indication of Lou Marshall's tax on death.

Finally, the candidate is required to consider the tax and structuring implications of the fibreglass tank project. This includes a general discussion of SR&ED credits.

Note for markers regarding tax rates: Bill C-2, which amended the Income Tax Act for several tax rate changes, was introduced but not enacted by December 31, 2015, and thus is not examinable. Candidates who choose to apply the new rates should not be penalized for doing so – where applicable, the new rates have been mentioned in the guide below. None of the underlying principles have changed.

See Assurance Guide for the Common Assessment Opportunities #1 to #6.

Memo
To: Madeline Murphy
From: Tax CPA
Re: Tax analysis

Assessment Opportunity #7

The candidate calculates the 2015 year-end taxes payable.

The candidate demonstrates DEPTH in the Taxation role.

As requested, I have evaluated the information provided by the client for the purposes of determining the preliminary taxes payable of TankCo Limited for the year ending December 31, 2015. The tax return is not due until June 30, 2016, and it looks like no amount is due for 2015.

CALCULATION OF 2015 ESTIMATED CORPORATE TAX LIABILITY

			Active business income
Net income before tax per financial statements	Note 1	-	827
Add back depreciation			692
Add back ending reserve for lawsuits beyond insurance coverage ($355 + $420)			775
Deduct opening reserve for lawsuits beyond insurance coverage		-	180
Add back the provision for the tank replacement warranty			20
Add back 50% of meals and entertainment	2		1
Add back key man life insurance premiums			3
Add back country club dues			5
Deduct capital cost allowance	Note 2	-	2,234
Deduct CEC	Note 3	-	84
Add back development costs			409
Deduct SR&ED expenditures		-	409
Taxable income		-	1,829
Effective tax rate for active business income (SBD)			15%
Taxes payable before SR&ED ITC's			-
Investment tax credits	Note 4		-
Taxes payable for 2015			-
Refund associated with carryback of 2015 non-capital loss:			
At 28% ($1.18 million - $500,000)*	680		190
At 15% (remainder)	1,149		172
			363

* Assumed 2014 is the only year with income in excess of SBD. Further information required to determine final amounts.

Note 1: Revised financial statement income

As presented	-	56	
Bill and hold sales		48	(Tax treatment will follow accounting - no s. 1 adjustments required).
Warranty provision	-	20	
Lawsuit provision	-	355	
Development costs	-	444	
	-	827	

Note 2: CCA

		2015			
		UCC, BOY	Additions	CCA	UCC, EOY
Class 1	4%	944	10	38	916
Class 8	20%	80	1	16	65
Class 29	50% SL	3,029	641	2,180	1,490
		4,053	652	2,234	2,471

Note 3: Cumulative eligible capital

Addition			CEC, BOY	CEC deduction	CEC, EOY
	2015	7%	1,207	84	1,123

Note 4: SR&ED

Only $383 was eligible for SR&ED ITCs – the remaining balance of R&D expenditures are deductible as regular business expenses, as discussed below.

ITC eligible expenditures		383
	Rate	20%
		77
	Claim	-
	Available for carry forward	77

Note that none of the ITCs are refundable as 2014 income was more than $500,000.

For Assessment Opportunity #7 (Taxation), the candidate must be ranked in one of the following five categories:

Not addressed – The candidate does not address this assessment opportunity.

Nominal competence – The candidate does not attain the standard of reaching competence.

Reaching competence – The candidate attempts to calculate the taxable income or loss for the year.

Competent – The candidate provides a reasonable calculation of the tax liability or non-capital loss carryforward.

Competent with distinction – The candidate provides a thorough calculation of the tax liability or non-capital loss carryforward.

Assessment Opportunity #8

The candidate discusses whether the fibreglass tank costs qualify for Scientific Research and Experimental Development costs and the tax implications.

The candidate demonstrates DEPTH in the Taxation role.

Scientific Research and Experimental Development (SR&ED) provides a tax incentive for the performance of research and development activities inside Canada. TankCo spent $564,000 on developing a new fibreglass fuel containment tank. In this portion of my report, I will discuss whether the project qualifies and, if it does, what is the tax treatment of SR&ED expenditures.

To qualify for SR&ED, three criteria must be satisfied before the work may be eligible.

1. There was scientific or technological uncertainty. For this criterion to be met, there needs to be have been an uncertainty about the fibreglass tank that was not known at the time the project was undertaken. Because the tank was developed using a new resin that creates a longer-lasting tank than other comparable fibreglass tanks, this criterion is defendable.
2. Scientific or technical content was developed. This requires that a formal scientific process was followed, including the development of a hypothesis and testing. The contractor was engaged to test different formulations of resins, which suggests this criterion is defendable.
3. There was a scientific or technological advancement. The development of the new tank product, which improved durability and lengthened the life by five years, is evidence that supports achievement of this criterion.

Because there is a defensible position for each of these criteria, a SR&ED claim should be filed. To file a claim, the company will complete form T661, which calculates the amount of eligible expenditures. The filing will require a description of the scientific or technological uncertainties

that were overcome, the work to achieve this, and the results. The company has 18 months after the taxation year in which the expenditures were incurred to file its claim.

Eligible expenditures include

- salaries;
- materials;
- contract payments at 80%; and
- overhead, which may be based on direct costing or use of the proxy method (which equates to 55% of direct labour).

	Costs Expended to Date	**SR&ED Eligible Expenditures**
Tank design costs (contractor)	$130,000	$104,000 (80%)
Direct labour hours attributed to the project	120,000	120,000
Direct material attributed to the project	70,000	70,000
Pre-marketing costs to gain purchase orders	35,000	0
Overhead costs allocated to the project	89,000	89,000*
Non-refundable deposits on equipment	120,000	0
Total eligible for ITC	**$564,000**	**$383,000**
Add: 20% of contractor costs		**26,000**
Total eligible for SR&ED pool		**$409,000**

*The company could use the proxy method as a simplified method of calculating overhead. This method uses direct labour costs multiplied by 55% to determine eligible overhead costs. Since the proxy method yields a lower amount than the allocation method ($130,000 × 55% = $71,500 versus $89,000), the claim would be maximized by using the allocation method.

Tax Implications

Any SR&ED-eligible expenses that were already deducted while computing income in the financial statements are added back when computing taxable income, before considering the impact of the SR&ED expenditure pool.

All SR&ED-eligible expenditures are added to the SR&ED expenditure pool. The ending SR&ED expenditure pool balance may be deducted in the current year on the T2 schedule 1, or carried forward to be deducted in future years. The SR&ED expenditure pool does not expire, as opposed to non-capital losses, which expire after 20 years.

It should be noted that the expenses that are not SR&ED eligible (pre-marketing costs) are deductible as general business expenses. Deposits on equipment are considered part of the cost of the equipment and will be added to the tax cost of the equipment when it is acquired. Since the equipment is not in use yet, no CCA can be claimed on it yet. Since the deposits have not been deducted for financial statement purposes, no adjustment is required on schedule 1.

Investment Tax Credit (ITC)

Canadian-controlled private corporations (CCPCs) are eligible to receive a 35% investment tax credit on eligible SR&ED expenditures. The expenditure limit is $3 million; however, this would be reduced for TankCo because its taxable income in the previous year exceeded $500,000. The limit gets completely eliminated when the taxable income for the previous year reaches $800,000, which it does in TankCo's situation (2014 taxable income was $1,180,000). Therefore, TankCo will not be able to claim the extra 20% ITC on these expenditures.

Refundable ITC

A refund can be made for up to 40% of the ITC earned, provided the corporation is a CCPC with taxable income in the previous year of $500,000 or less before carrybacks. (Note: Had the company been eligible for the enhanced ITC at 35%, its ITC would have been 100% refundable. Because TankCo had taxable income in 2014 of $1,180,000, its ITC is not refundable.) Thus, the total amount of ITC for 2015 is $76,600 (20% of $383,000), which can be used to offset taxes payable in future years or can be carried back up to three years against prior year taxes. The balance claimed will reduce the SR&ED pool in 2016. Unused credits can be carried forward 20 years.

For Assessment Opportunity #8 (Taxation), the candidate must be ranked in one of the following five categories:

Not addressed – The candidate does not address this assessment opportunity.

Nominal competence – The candidate does not attain the standard of reaching competence.

Reaching competence – The candidate recognizes that research and development costs may qualify for SR&ED treatment and attempts to quantify the impact.

Competent – The candidate discusses SR&ED treatment for the research and development costs and calculates the impact.

Competent with distinction – The candidate discusses, in depth, SR&ED treatment for the research and development costs and performs a detailed calculation of the impact.

Assessment Opportunity #9

The candidate discusses the options for the legal structure of the new fibreglass business to optimize tax and business considerations.

The candidate demonstrates DEPTH in the Taxation role.

Currently, the client has accumulated the costs of developing the fibreglass project in a separate general ledger account. Operations have yet to commence, and no capital expenditures have been incurred except for a deposit on some equipment. The manufacturing facility for the fibreglass tank is planned to be separate from the manufacturing facility for the steel tanks.

The issue we have been asked to address is how to legally structure the business, should it proceed, to optimize tax and business planning. The options would be as follows:

1. The fibreglass operations could operate as a division within TankCo.
2. The fibreglass operations could be set up as a separate corporation, owned either directly by TankCo or by the children.
3. The fibreglass operations could be set up as a limited partnership underneath TankCo or the children – either one holding the general partner units (or having a shell company hold the units).

1. Within TankCo

Pros	Cons
The simplest to do. No incremental books, tax returns, or legal entities to manage.	The SR&ED credits for 2015 are ineligible for refund because TankCo made too high a taxable income in 2014.
Any start-up losses could be used to offset income from other divisions.	Exposes the fibreglass operations to the potential lawsuit and provisional obligations of the steel tank divisions.

2. As a standalone corporation

Pros	Cons
Contains legal exposure between the different lines of business (i.e., isolates the fibreglass business from the lawsuits pertaining to the steel tanks) if the new corporation is held separately by the siblings.	Incremental books, tax returns, and legal entities to now manage.
Opportunity to hire a new workforce – TankCo is unionized and the new corporation would not need to be.	Start-up losses and SR&ED credits could be trapped in the new corporation. As a CCPC, the new corporation will be eligible for 35% investment tax credit, of which 40% is refundable, subject to limits due to association with TankCo.
	May be more difficult to coordinate orders from the same customer if they get filled from two different companies.

3. As a limited partnership

4. Pros	Cons
Any start-up losses will flow through TankCo and can be used to offset income from other divisions.	Incremental books, partnership information returns with the CRA, and legal entities to now manage.
Contains legal exposure between the different lines of business.	The SR&ED investment tax credit would be limited to 20%, not 35%.
	May be more difficult to coordinate orders from the same customer if they get filled from two different entities.
	Assuming TankCo remains as the limited partner (and a shell company holds the general partner units), start-up losses that flow through to TankCo will be limited by TankCo's at-risk amount in the partnership, which could seriously reduce the total losses ultimately claimed by TankCo.

I recommend that, for convenience and simplicity, the fibreglass operations be set up as a division within TankCo Limited. If there is a desire to move the operations into either a corporation or a partnership at some point in the future, this can still be done using section 85 or 97, respectively, of the Income Tax Act.

For Assessment Opportunity #9 (Taxation), the candidate must be ranked in one of the following five categories:

Not addressed – The candidate does not address this assessment opportunity.

Nominal competence – The candidate does not attain the standard of reaching competence.

Reaching competence – The candidate attempts to discuss the implications of incorporating the division.

Competent – The candidate discusses the implications of incorporating the division.

Competent with distinction – The candidate discusses thoroughly the implications of incorporating the division.

Assessment Opportunity #10

The candidate provides an estimate of the corporate income resulting from liquidation.

The candidate demonstrates DEPTH in the Taxation role.

(Calculation and discussion combined with Assessment Opportunity #11 – see below.)

For Assessment Opportunity #10 (Taxation), the candidate must be ranked in one of the following five categories:

Not addressed – The candidate does not address this assessment opportunity.

Nominal competence – The candidate does not attain the standard of reaching competence.

Reaching competence – The candidate determines the impact on taxable income of the disposition of some assets.

Competent – The candidate determines the impact on taxable income of the disposition of several assets.

Competent with distinction – The candidate determines the impact on taxable income of the disposition of most assets, including the land and building.

Assessment Opportunity #11

The candidate provides an estimate of the after-tax proceeds, capital dividend account, and refundable dividend tax on hand for the corporation in the event of liquidation.

The candidate demonstrates DEPTH in the Taxation role.

The board has requested a calculation of the after-tax proceeds the corporation might expect if it were liquidated today. I have included my detailed calculations below, which indicate the corporation would have approximately $4.8 million of cash available after tax if it were liquidated today. I have assumed that the company has operated on a break-even basis between January 1, 2015, and today. The liquidating dividend will be more than sufficient to get a refund of the full refundable dividend tax on hand (RDTOH) balance (under either 2015 or 2016 rules).

Note: The calculations that follow are for Assessment Opportunities #10 and #11. AO #10 assesses the calculation of income and gains, and AO #11 assess the calculation of CDA, RDTOH, and taxes payable.

For Assessment Opportunity #11 (Taxation), the candidate must be ranked in one of the following five categories:

Not addressed – The candidate does not address this assessment opportunity.

Nominal competence – The candidate does not attain the standard of reaching competence.

Reaching competence – The candidate determines taxes payable, reflecting appropriate tax rates, CDA, or RDTOH.

Competent – The candidate determines taxes payable, applies different rates to business versus investment income, and calculates either CDA or RDTOH.

Competent with distinction – The candidate determines taxes payable, applies different rates to business versus investment income, and calculates both CDA and RDTOH.

Calculation of Taxable Income and Taxes Payable from Liquidation of the Corporation's Assets and Liabilities

Note that candidates are not *responsible for applying the 2016 tax laws, including the effect of the change in the RDTOH inclusion rate from 26 2/3% to 30 2/3%. The calculation applies the 2015 laws; however, if a candidate were to use the new laws, this would be acceptable. Note also that under the new legislation, the property income tax rate would likely be higher, so a candidate who chooses to use a higher tax rate should not be penalized for doing so.*

Given:

	Disposition costs	8%
	Professional fees	$50

AO4 AO5

Corporate taxes:		Adjusted Balance, Dec 31, 2015	ACB	UCC (Appendix A Note 1 & 2)	Estimated market value	Disposition costs	Net realizable value	Business income (loss)	Taxable capital gain	Capital dividend account	RDTOH @26.67%
Cash		89			89		89				
Life insurance proceeds					500		500			500	
Receivables		2,410			2,410		2,410				
Tax refund receivable (from AO1)					363		363				
Inventories		2,683			2,683	- 215	2,468	- 215			
Prepaids		368			368		368				
Land		500	500		2,000	- 160	1,840		670	670	179
Building		854	5,185	916	4,000	- 320	3,680	2,764			
Equipment		2,352	10,610	1,555	1,500	- 120	1,380	- 175			
Goodwill		2,000		1,123			-	- 1,123			
Bank indebtedness		2,883					- 2,883				
Payables		1,433					- 1,433				
Long term debt		3,500					- 3,500				
Adjusted equity							5,283				
Less professional fees							- 50	- 50			
Taxable amounts								1,202	670	1,170	179
Less corporate taxes											
ABI	15%							- 75			
Over the ABI	28%							- 197			
Property income	47%								- 315		179
SR&ED ITC carryforward, applied against 2016 taxes								77			
							- 331	- 195	- 315	-	179
Proceeds available for distribution							4,902				

AO5

Assessment Opportunity #12

The candidate provides an estimate of the after-tax proceeds for the children in the event of liquidation.

The candidate demonstrates DEPTH in the Taxation role.

I have performed a calculation to show that the after-tax cash to be received by each of the two children is $1,693,000. In addition, each child would have a capital loss of $1,950,000 available to offset future taxable gains.

While the children receive their shares from their father at the fair market value at the date of his death ($4 million), the paid-up capital of the shares remains the amount contributed at issuance ($100,000). This creates a large deemed dividend and a large capital loss at wind-up. The dividend is taxable (resulting in $1.5 million in total personal taxes in addition to the $330,000 of corporate taxes), but there are no offsetting capital gains to use the capital loss. In essence, there will be double taxation between what gets taxed on Lou's final return and the wind-up of the corporation.

Rob and Sarah should investigate further whether it would be possible to sell the shares of the corporation. This could yield zero taxes payable on the sale since there would be a capital gain of zero on the sale.

The taxable amount of the dividend is reduced by the balance in the capital dividend account, which is created by the non-taxable portion of the capital gains on the real estate and the receipt of the life insurance proceeds.

TankCo could be liquidated and the proceeds held inside the corporation until required to defer the payment of the personal taxes on the deemed dividend. However, the balance in the capital dividend account should still be paid out.

Personal taxes:			
Deemed dividend			
	Proceeds available for distribution		4,902
	less PUC		- 100
	Deemed dividend on wind-up		4,802
	Less capital dividend account		- 1,170
	Deemed taxable dividend		3,632
	GRIP:		
	Opening balance	600	
	Reduction for 2015 loss carryback: [$680K x 72%]	- 490	
	Additions ([active business income minus $500,000] x 72%)	505	
	Total GRIP (equals eligible dividend paid on wind-up)		616
	Other than eligible dividends paid		3,016
Capital gain (loss)			
	Proceeds available for distribution		4,902
	less deemed dividend		- 4,802
	Adjusted proceeds of disposition		100
	less the ACB of shares (equal to FMV at time of inheritance)		- 4,000
	Capital gain (loss)		- 3,900
Income tax on deemed dividend and capital gain			
	Eligible dividend (grossed up by 38%)		850
	Other than eligible dividend (grossed up by 17%)		3,529
	Capital gain (50%)		-
			4,379
	Taxes payable (45%)		1,971
	Dividend tax credit (eligible, 6/11ths of the gross-up)		- 128
	Dividend tax credit (other than eligible, 21/29ths of the gross-up)		- 371
			1,472
Proceeds to each shareholder:			
	Proceeds available for distibution		4,902
	Personal taxes		- 1,472
	After tax proceeds		3,430
	For each shareholder (50/50)		1,715

For Assessment Opportunity #12 (Taxation), the candidate must be ranked in one of the following five categories:

Not addressed – The candidate does not address this assessment opportunity.

Nominal competence – The candidate does not attain the standard of reaching competence.

Reaching competence – The candidate identifies that a deemed dividend would occur on wind-up of the company and attempts a calculation.

Competent – The candidate identifies that a deemed dividend would occur on wind-up of the company and performs a reasonable calculation.

Competent with distinction – The candidate identifies that a deemed dividend would occur on wind-up of the company and performs a thorough calculation.

Assessment Opportunity # 13

The candidate discusses some of the tax issues associated with the death of an individual and discusses filing requirements.

The candidate demonstrates DEPTH in the Taxation role.

At the time of death, Lou is deemed to have disposed of all of his assets at their fair market value for tax purposes, which may result in a gain or a loss. The aggregate gain and loss will be taxable in the year of death and included in computing the deceased’s taxable income.

In the case of assets left to Thelma, Lou’s wife, the disposition takes place at the deceased’s cost. This allows for a tax-deferred rollover of the property to the remaining spouse.

If, in the first year after his death, his estate incurs capital losses, they may be claimed against any gains incurred on his terminal return.

One significant difference in the final return relates to the calculation of the donation credit. This is important, because any bequests made in the will are deemed to have been made in the year of death. In this case Lou made a bequest of $600,000. In the year of death, 100% of net income is eligible for the donation credit (as opposed to the normal 75% limitation).

The taxable capital gain on publicly traded securities (including bonds) is deemed to be nil when the security is disposed of by way of donation to a registered charity. In the case of the utility bond, assuming it is publicly traded, there will be zero inclusion of this income.

Even though the final return is for a shortened period of the year, the full amount of the basic personal amount is available. This credit may be multiplied through the use of optional returns.

It will be important to determine whether Lou’s shares in TankCo are eligible for the lifetime capital gains exemption. This requires that the shares be qualified small business corporation (QSBC) shares. QSBC shares must meet three criteria:

1. The shares must have been owned by the individual or related parties for the preceding 24 months, which Lou achieved since he has been the sole shareholder for decades.

2. Throughout the 24-month holding period, more than 50% of the fair market value of the corporation's assets must have been used in an active business carried on primarily in Canada. This has been achieved since all of TankCo's business activities pertain to generating active business income.

3. At the time of disposition, the corporation must have been a small business corporation, meaning:

- The corporation is a Canadian-controlled private corporation, which it is since the owners are all resident in Canada; and,
- all or substantially all (90%) of the fair market value of the corporation's assets were used in an active business carried on primarily in Canada. This has been achieved because all of TankCo's business activities pertain to generating active business income.

Therefore, Lou will be entitled to claim the $824,176 lifetime capital gains exemption to offset some of the deemed capital gains on the deemed disposition of shares of his company to his children.

Some planning may be available to have TankCo's shares stay in Lou's estate before the wind-up so that the capital losses incurred at that time (as discussed previously) can be carried back against Lou's capital gains in the year of death. The balance of proceeds could then be distributed to the children.

There are two tax returns yet to be filed on Lou's behalf:

- His 2015 individual tax return, which is due the later of the normal deadline or 6 months from his date of death. The later of these two dates is July 24, 2016.
- His final return, which will include income from January 1 until January 24, his date of death, plus any income arising from the deemed disposition of property. This return will be due April 30, 2017, the normal deadline for a 2016 return.

It is possible for Lou to file an optional return to allow for the use of additional non-refundable tax credits and graduated tax brackets. This might result in income tax savings in the year of death; however, I believe its benefit will be limited since the only rights or things Lou was entitled to at his date of death was a nominal amount of interest on his bond investment. If he does file this return, an election must be made to do so at the time the return is filed.

For Assessment Opportunity #13 (Taxation), the candidate must be ranked in one of the following five categories:

Not addressed – The candidate does not address this assessment opportunity.

Nominal competence – The candidate does not attain the standard of reaching competence.

Reaching competence – The candidate identifies some of the relevant tax impacts resulting from the death of Lou.

Competent – The candidate discusses several of the relevant tax impacts resulting from the death of Lou.

Competent with distinction – The candidate discusses most of the relevant tax impacts resulting from the death of Lou.

Assessment Opportunity #14

The candidate estimates the tax liability on the death of an individual.

The candidate demonstrates DEPTH in the Taxation role.

Below, I have prepared an estimate of Lou's 2016 personal federal tax liability and calculated it as $286,813. This balance will be due by April 30, 2017. Once Lou's tax returns have been assessed, it will be appropriate to request a clearance certificate from the CRA before distributing the assets of the estate.

It should be noted that Lou's country club dues were paid by TankCo. These may be considered a taxable benefit, but further analysis should be performed to confirm this.

The calculation that follows assumes that Thelma earns no income in 2016, as has been the case in the past. However, if she rolls the RRIF into another RRIF instead of an RRSP, she will likely earn some income during the year.

Deemed disposals	Fair market value	Adjusted cost base	Deemed proceeds of disposition	Adjusted cost base	Capital gain or loss	Tax implications
Personal residence	$ 900,000	$ 400,000	$ 400,000	$ 400,000	$ -	Principle residence/spousal rollover
100 shares of TankCo	4,000,000	100,000	4,000,000	100,000	3,900,000	
Boat	40,000	100,000	40,000	100,000	-	Personal property, loss denied
Personal stamp collection	10,000	60,000	10,000	60,000	- 25,000	Listed personal property, loss limited - can only be applied against other LPP (painting)
Painting	50,000	25,000	50,000	25,000	25,000	Listed personal property
Utility bond	33,000	30,000	33,000	30,000	-	Taxable capital gain deemed zero on donation of publicly-traded securities
					3,900,000	
Capital gains inclusion rate					50%	
Taxable capital gains					1,950,000	
Lifetime capital gain exemption			- 824,176	50%	- 412,088	
Full income inclusion:						
RRIF/TFSA					-	Transfers to spouse's RRSP or RRIF, no tax implications; TFSA no tax implications
Interest on bond	30,000	7%			138	Could be set up on a separate return for rights and things, minimal impact.
CPP					876	
OAS					574	
Clawback of OAS					- 574	Clawed back as income is over the threshold of $60,750
Taxable income					1,538,926	
Federal tax estimate						
15%	45,282				6,792	
20.5%	90,563				9,283	
26%	140,388				12,955	
29%	200,000				17,287	
33%					441,846	
					488,162	
Personal tax credits:						
Basic					11,474	
Spousal					11,474	
Medical expenses	Amount spent			5,420		
	Threshold			2,237	3,183	
					26,131	
Federal non-refundable tax credit rate					15%	
					3,920	
Donations 200	15%				30	
599,920	33%				197,974	$120 of donations made before Lou's death + $600,000 by will
Total federal non-refundable tax credits					201,923	
Net federal taxes payable					286,239	
OAS clawback					574	
Total federal taxes payable					286,813	

Note: Indexed tax brackets under former legislation have not been prepared by the CRA for 2016 because changes to the tax law pre-empted the release of indexed amounts. As a result, the calculation above uses 2016-enacted figures throughout. Candidates who use amounts based on 2015-enacted laws should be rewarded for their calculations. The significant changes are as follows:

- The second tax bracket was formerly at 22%, not 20.5%.
- The 33% tax bracket did not exist, so all income over the top threshold was 29%.
- Donations in excess of $200 received a credit at 29%. Under the new tax laws, since Lou's income was well in excess of the $200,000 threshold, all such donations receive a credit at 33%.

For Assessment Opportunity #14 (Taxation), the candidate must be ranked in one of the following five categories:

Not addressed – The candidate does not address this assessment opportunity.

Nominal competence – The candidate does not attain the standard of reaching competence.

Reaching competence – The candidate attempts to calculate taxable income.

Competent – The candidate calculates taxes payable for Lou's year of death.

Competent with distinction – The candidate performs a thorough calculation of taxes payable for Lou's year of death.

APPENDIX D

SEPTEMBER 23, 2016 – DAY 3 SIMULATIONS, SOLUTIONS AND MARKING GUIDES

Day 3-1 (PCI) (Suggested time 80 minutes)

Play Canada Inc. (PCI) was incorporated in 2014 by Sarah and Sam Wright. The Wrights live in Toronto and work at PCI's office and warehouse, also located in Toronto. Their three young sons love building-block sets. The expense of constantly purchasing new sets inspired their business plan of renting out building-block sets for a fixed monthly fee.

The Wrights strongly believe that gaining customers' trust by providing quality service and safe products is the key to ensuring PCI's growth. PCI has grown rapidly since its inception. Customers' requests are made online and sets are delivered and returned via Canada Post, with customers assuming the shipping costs. PCI rents out an average of 90,000 sets per month, but keeps approximately 120,000 sets on hand to allow for periods of higher-than-usual activity.

It is August 2016, and Sarah and Sam have come to Marwick and Associates (Marwick) for assistance. You, CPA, work at Marwick, a firm that specializes in advising small business owners. Your manager has asked you to draft a report to the Wrights, addressing their needs.

PCI wants advice regarding the sanitization process used on the building-block sets. Each returned set is thoroughly cleaned, using a Health-Canada-approved solution and process that kills 99.99% of germs. Sarah has always overseen the sanitization process, managing a team of trained employees who operate the specialized equipment at the warehouse. The sanitization team works hard and no product safety incidents have been reported by clients. A recent customer survey indicated that customers are very satisfied with how blocks are maintained like new.

However, as the business grows, both Sam and Sarah have had less time for their children. Sarah wonders if outsourcing the sanitization process is a viable option (Appendix I). Outsourcing would allow Sarah to work part-time so she can spend more time at home caring for their children. Her time in the business would all be spent performing on-site quality control checks at the outsourcer.

The Wrights are also considering whether PCI should provide different pricing options. They would like to know which alternative maximizes cash flows (Appendix II).

The Wright family is also considering some other changes (Appendices III and IV).

APPENDIX I
INFORMATION ABOUT OUTSOURCING SANITIZATION PROCESS

Clean Crew (CC), a small private firm specializing in sanitizing toys and household products, is located in Newmarket, 50 kilometres north of Toronto, and has been in business for two years. CC has a reputation for providing high quality services to its customers. Recently, CC accepted contracts from several prominent clients, including hospitals and other health care facilities and a large chain of indoor playgrounds. CC's quoted price for its sanitization service is $0.21 per set.

The process that CC uses is similar to PCI's process, and guarantees the elimination of 99.99% of germs. CC will ship the sets to and from PCI's warehouse in Toronto at an extra charge of $8,000 per month, regardless of volume.

PCI employs eight full-time employees in the sanitization department, at an average salary of $30,000 per year, including benefits. If sanitization is outsourced, these employees would be laid off. The Wrights heard about negative repercussions from other companies after laying off their employees. The Wrights think that they may be able to reduce the negative impact by paying severance of three months' salary, which is more than the one week of salary per year of service required by law. PCI would also offer re-employment counselling to these employees. The estimated costs of counselling are $5,000 in total.

The sanitization equipment cost $250,000 in 2014. PCI's sanitization process requires annual repairs and maintenance of $20,000, which is expected to maintain the equipment for the foreseeable future. If PCI decides to outsource, this equipment could be sold for $65,000.

The cleaning solution used in PCI's sanitization process costs $0.056 per set cleaned, costing roughly $60,000 in 2015. The current staff level is appropriate for the current cleaning volume, but an employee must be hired for every additional 25,000 sets per month cleaned, at an annual cost of $30,000 per employee.

APPENDIX II
PRICING ALTERNATIVES

Customers currently pay a $25 monthly fee, borrowing an average of three sets per month, of the maximum eight sets per month. PCI has an average of 30,000 monthly customers, who generate yearly revenues of around $9,000,000. The following alternatives are being considered.

Alternative 1: Customers have two options: current monthly flat fee or a "pay as you play"

The Wrights estimate that 75% of current customers would continue with PCI's current plan and that the remaining 25% would switch to "pay as you play." The Wrights anticipate that adding this option may attract some new customers as well.

Alternative 1 would not require purchasing additional building-block sets but would add administration costs of approximately $50,000 annually. The anticipated pricing structure, estimated monthly "pay as you play" volumes and yearly revenue are as follows:

	Small sets	Medium sets	Large sets	Total
Monthly volume	5,000	5,000	4,000	
Rental price per set	$3	$8	$15	
Yearly revenue	$180,000	$480,000	$720,000	$1,380,000

Alternative 2: Customers have three options: current monthly flat fee, Junior-Builder plan, or Master-Builder plan

Under Alternative 2, customers could choose the current plan, or choose from two other pricing options (below). The Wrights estimate that 50% of current customers would continue with PCI's current plan.

	Junior-Builder	Master-Builder
Monthly fee	$15	$45
Size available	Small sets only	All sizes
Maximum per month	8 sets	Unlimited sets
Number of customers expected	8,000 current customers and 2,000 new customers	7,000 current customers
Average rental rate	2 sets per month	8 sets per month

The Junior-Builder plan would target families of younger children just starting to play with building blocks. These families only rent smaller sets and rent less frequently. The Master-Builder plan would target families of children who use their building blocks daily and complete sets quickly. The Master-Builder plan would require buying more building-block sets, for $125,000 annually.

APPENDIX III
PLANS TO MOVE

The Wright family plans to move to Newmarket, 60 kilometres away from PCI, in December 2016, as they want to have a large property as their sons grow older. This will result in a longer commute for Sam, who will continue to work at the PCI office in Toronto. However, the Wrights believe the move will be better overall for their family, especially if PCI outsources sanitization to CC as this will minimize Sarah's commute to CC's location.

The move would also have the added benefit of being closer to their cottage, which was purchased by Sam and Sarah in 2005 for $250,000.

The Wrights' current home, which cost $600,000 in 2008, can be sold for $825,000. Due to a tremendous increase in popularity of the area, the cottage is now worth $750,000. Real estate commissions on either property would be 5%.

Sam and Sarah hope they can deduct all their moving costs on their personal tax returns. They expect to incur the following costs:

Costs to renovate Toronto home before sale	$15,000
Professional movers	10,000
Utility hook-ups and disconnections	200
Legal fees for purchase of new home	2,000
Travel expenses for house-hunting trip	350

APPENDIX IV
DETAILS OF THE WRIGHT FAMILY'S POTENTIAL INVESTMENTS

Last month, Sarah's uncle passed away and left Sarah $200,000 in his will. Sam and Sarah have decided to use this money to finance their children's university education, which is expected to happen in about 10 years. They have identified three potential investments and would like your advice on the most appropriate option, given their objective. The potential options are as follows:

	Option 1 – real estate	**Option 2 – Government of Canada ten-year bond**	**Option 3 – commodity mutual fund**
Amount	$200,000	$200,000	$200,000
Description	Four acres of land in northern Ontario, in "cottage country."	10-year bonds guaranteed by the Government of Canada.	Assets in this mutual fund include shares of mining companies whose mines are currently being developed in South Africa.
Other information	The land is currently zoned for a single-family dwelling. Hopefully, it will be rezoned to allow subdivision into eight, half-acre lots. Each lot could then be sold for an estimated $50,000.	Interest rate is 2.1% per annum.	Once developed, these mines will produce copper, diamonds and zinc. The anticipated return on the mutual fund is 29% per annum.
Beta	Not available	0	4.5

MARKING GUIDE 3-1
PLAY CANADA INC. (PCI)
ASSESSMENT OPPORTUNITIES

Note: Day 3 of the CFE assesses candidates' technical abilities at the common Core Level. However, the level of judgment and skill expected of candidates is that of an entry-level CPA, a CPA entering the profession.

Memo

To: Sarah and Sam

From: CPA, Marwick and Associates

Re: Issues Facing PCI

Assessment Opportunity #1 (Depth Opportunity)

The candidate analyzes the pricing alternative to determine which maximizes cash flows.

The candidate demonstrates competence in Management Accounting.

CPA Map Competencies:
3.4.1 Evaluates sources and drivers of revenue growth (Level B – Core)

Change in Fee Structure at PCI

I performed the following quantitative analysis of the pricing alternatives:

Purpose: To analyze the pricing alternatives to determine which one maximizes cash flows.

Current Pricing:

Revenue: (30,000 customers × $25 ×12 months)	**$9,000,000**

Alternative #1:

75% of current revenue:	6,750,000
New "Pay as you play" estimated yearly revenue:	
small sets (5,000 × $3 × 12 months)	180,000
medium-sized sets (5,000 × $8 × 12 months)	480,000
large sets (4,000 × $15 × 12 months)	720,000
Less: Additional administration costs	(50,000)
Add: Savings from sanitization fluid (Note 1)	5,712

Total	**$8,085,712**
Alternative #2:	
Current customers: (50% × 30,000 customers × $25 × 12 months)	4,500,000
Junior builder (10,000 customers × $15 × 12 months)	1,800,000
Master builder (7,000 customers × $45 × 12 months)	3,780,000
Less: Building block purchase	(125,000)
Less: Additional cost of sanitization (Note 2)	(20,832)
Less: Additional cleaning employees (Note 3)	(60,000)
Total:	**$9,874,168**

Note 1: Under the current plan, 90,000 sets are borrowed per month, which equals 1,080,000 sets per year. Under Alternative #1, fewer sets will be borrowed. Therefore, PCI will save costs from using less sanitization fluid. Sanitization fluid is a variable cost; therefore, the cost saving is $5,712 (102,000 sets annually × $0.056).

Note 2: Under Alternative #2, the volume will increase by 31,000 sets per month, or 372,000 sets per year. Therefore, PCI will require additional sanitization fluid, which will cost $20,832 (372,000 × $0.056).

Note 3: Under Alternative #2, because the volume increases from the current level, additional sanitization employees are required. Increase in volume per month: 31,000 sets ÷ 25,000 sets = 1.24 employees, or 2 employees = $30,000 × 2 employees = $60,000.

Current volume	Monthly Volume	Annual Volume	
30,000 customers × 3 sets	90,000	1,080,000	
New volume under Alternative #1			
75% of current plan (22,500 × 3 sets)	67,500	810,000	
Small sets	5,000	60,000	
Medium-sized sets	5,000	60,000	
Large sets	4,000	48,000	
	81,500	978,000	
Decrease in volume	(8,500)	(102,000)	
Savings from sanitization solution required (102,000 sets × 0.056)		(5,712)	Note 1
New volume under Alternative #2			
50% of current plan (15,000 × 3 sets)	45,000	540,000	
Junior builders (10,000 × 2 sets)	20,000	240,000	
Master builders (7,000 × 8 sets)	56,000	672,000	
	121,000	1,452,000	
Increase in volume	31,000	372,000	
Additional sanitization fluid required (372,000 sets × 0.056)		20,832	Note 2
Additional cleaning employees required (31,000 ÷ 25,000) = 1.24 = 2 additional employees are needed		60,000	Note 3

Recommendation

I recommend that PCI adopt Alternative #2, since it maximizes cash flows. However, management needs to consider the potential additional revenue from new customers in Alternative #1 before making a final decision.

For Assessment Opportunity #1, the candidate must be ranked in one of the following five categories:

Not addressed – The candidate does not address this assessment opportunity.

Nominal competence – The candidate does not meet the standard of reaching competence.

Reaching competence – The candidate attempts an analysis of the pricing alternatives presented.

Competent – The candidate analyzes the pricing alternatives presented, compares them against the current revenue being generated at PCI, and provides a recommendation.

Competent with distinction – The candidate analyzes the pricing alternatives presented, compares them against the current revenue being generated at PCI, and provides a recommendation. The candidate integrates the additional costs of sanitization into the analysis.

A competent candidate should provide a reasonable quantitative analysis of the pricing options under consideration, compare it to the status quo, and provide a supported recommendation as to which pricing option to pursue. The candidate's analysis should correctly consider the different volumes of sales under each alternative. A strong candidate should integrate the sanitization decision into the analysis, recognizing the increase in the number of sets sanitized, which increases the sanitization costs.

Assessment Opportunity #2 (Depth Opportunity)

The candidate analyzes the option of outsourcing the sanitization process is a viable option, from a quantitative perspective.

The candidate demonstrates competence in Management Accounting.

CPA Map Competencies:
3.3.2 Evaluates and applies cost management techniques appropriate for specific costing decisions (Level B – Core)

Decision to Outsource

Sarah has indicated that she would like to reduce her involvement at PCI and wonders whether outsourcing to Clean Crew (CC) is a viable option. A quantitative analysis has been performed, and the results are as follows:

Purpose: To evaluate the outsourcing decision from a quantitative perspective, under the current pricing plan

# of sets cleaned (per year)	1,080,000	Note 1
Quoted price	$0.21	
Cost paid to CC for cleaning	$226,800	
Incremental cost: Delivery cost ($8,000/month)	96,000	
Annual incremental cost at current volume	322,800	
Incremental savings: Salaries for 8 employees	240,000	
Incremental savings: Repairs and maintenance	20,000	
Incremental savings: Sanitization solution	60,000	
	320,000	
Incremental net savings (cost) of outsourcing:	**$ (2,800)**	

Conclusion: There is a marginal net annual cost to outsourcing of $2,800.

Note 1: Average 90,000 sets per month × 12 months = 1,080,000 sets

There are three one-time costs:

Severance: ($30,000 × (3 ÷ 12)) × 8 employees	$(60,000)
Counselling	(5,000)
Proceeds of sanitization equipment	65,000
	$ 0

Severance costs:
The above analysis does not take into account the one-time costs that would be incurred if PCI decided to close down in-house sanitization and outsource to CC. The 8 laid-off employees would be owed severance equal to 3 months' salary. Since the average salary is $30,000 per year, we can estimate the severance to be at least: $30,000 × (3 ÷ 12) × 8 employees = $60,000 (the company started in 2014, so they have likely worked between 1 and 2 years at PCI).

Counselling costs:
The estimated counselling costs, a one-time cash outflow that should be considered, are $5,000.

Equipment disposal:
The impact of the equipment disposal must be considered. Although PCI would realize a loss on the sale of the equipment (since the proceeds would be significantly less than the original price paid), the original price paid is a sunk cost and should not be considered in this analysis. However, the proceeds on the sale of the equipment are relevant and need to be considered. Estimated sale proceeds are $65,000.

Therefore, the net cash flow is nil and the one-time costs have no impact on the outsourcing decision. Quantitatively speaking, outsourcing is a viable alternative.

The quantitative analysis discussed the annual incremental cost of outsourcing under the current pricing strategy. However, if PCI decides to adopt the pricing strategy recommended above, the difference between in-house sanitization and outsourcing will be as follows:

Net annual cost to outsourcing (per above):	$ (2,800)
Cost paid to CC (372,000 × $0.21) (Note 1)	(78,120)
Incremental cost savings for not hiring additional employees ($30,000 × 2 in wages) (Note 2)	60,000
Cost savings from sanitization fluid (372,000 × $0.056)	20,832
	$ (88)

Note 1: Assuming Alternative #2 is chosen (the more profitable option), the additional rental volume from the new pricing option (see AO#1) is 372,000 over the current program. Therefore, PCI will pay CC $78,120 for the cleaning.

Note 2: If PCI decides to outsource the cleaning, it will save $60,000 from not hiring additional cleaning employees. PCI needs to hire an additional employee for every 25,000 sets per month cleaned at an annual cost of $30,000 per employee. If PCI chooses to go with Alternative #2, 372,000 additional sets will need to be cleaned per year. Therefore, it will need two additional employees (372,000 ÷ 12 months = 31,000 sets/month).

Conclusion

There will be an estimated incremental net annual cost to outsourcing of $88 if the decision to proceed with the new pricing strategy is chosen (Alternative #2). If PCI chooses Alternative #2, the decision whether to outsource has close to no quantitative impact. Qualitative factors will weigh heavily in this decision.

For Assessment Opportunity #2, the candidate must be ranked in one of the following five categories:

Not addressed – The candidate does not address this assessment opportunity.

Nominal competence – The candidate does not meet the standard of reaching competence.

Reaching competence – The candidate attempts an analysis of the outsourcing alternative.

Competent – The candidate analyzes the outsourcing alternative in comparison to the status quo, taking into account most costs under each option.

Competent with distinction – The candidate prepares a thorough analysis of the outsourcing alternative in comparison to the status quo, taking into account most costs under each option.

A competent candidate should prepare a reasonable analysis, which includes looking at the outsourcing alternative, taking into account most costs under each option, not treating the one-time costs as annual costs, and treating the sunk cost of the equipment properly. Strong candidates should also integrate their discussion of expansion options, considering the additional costs of the choice they make.

Assessment Opportunity #3 (Breadth Opportunity)

The candidate evaluates the qualitative factors related to the outsourcing of the sanitization process.

The candidate demonstrates competence in Strategy and Governance.

CPA Map Competencies:
2.3.3 Evaluates strategic alternatives (Core – Level B)

As mentioned, when taking into account the marginal increased annual cost of outsourcing versus sanitizing in-house, as well as the significant savings related to the capital reinvestment under outsourcing, outsourcing is a viable option from a purely quantitative perspective.

However, there are several qualitative factors that should also be considered before making a final decision.

Benefits of outsourcing:

- Outsourcing will help you, Sarah, reduce your involvement in PCI to part-time in order to have more time at home with your sons. On the other hand, even without outsourcing, you could still switch to a part-time role and simply hire another employee to cover your responsibilities.

- CC is located in Newmarket, which is where you wish to move later this year. Sarah, this will reduce your commute time for the control checks, which again allows you to spend more time with your family. This point could be a con if you decide not to move to Newmarket.

- CC has gained a reputation for delivering quality service to clients. This reputation aligns with what you believe contributes to the company's success; i.e., gaining the trust of customers by providing high-quality and safe products.

- Currently, the costs are a mix of variable costs, step costs (a sanitization employee must be hired for every 25,000 sets per month), and fixed costs. With outsourcing, sanitization becomes a variable cost, which may make it easier for PCI to manage its operating costs when revenue varies.

Risks of outsourcing:

- Although PCI is trying to minimize the negative impact of laying off employees, there is still a risk that laying off employees may hurt the morale of the employees who remain employed by PCI. This is mitigated by the fact that PCI is offering re-employment counselling and a severance package that is generous compared to what is legislatively required.

- CC has been in business for only two years. This is not a significant length of time, and PCI must consider whether two years of successful operation is sufficient to determine whether CC will be a stable and effective partner. To mitigate this risk, you should ensure that CC's financial health is adequate. You do not want to engage CC's services only to have it go out of business in the near term.

- CC has recently accepted many contracts from big clients, and the sudden increase in volume may negatively affect the quality of service the company provides to PCI. Inadequate sanitization has the potential to spread germs and bacteria, which could have disastrous results if a child were seriously harmed due to inadequate cleaning. PCI must be sure of CC's qualifications and the adequacy of its processes before allowing it to manage such a risky aspect of the business. Due diligence must be performed to ensure that CC conducts this service to the same standards as PCI. Given that hospitals use CC, it is probable that it operates under very high standards. However, it is essential to have this confirmed before entering into an agreement. PCI may also want to audit this process regularly.

- You should ensure a contract between PCI and CC is drawn up with the assistance of legal professionals. The contract must include minimum performance standards with respect to ensuring all pieces of sets stay intact, turnaround of cleaning, timings of deliveries, etc.

- Customers view the in-house sanitization process as a value-added factor when they consider PCI for building block rental. In fact, a recent customer survey indicated that customers are very satisfied with how blocks are maintained like new. Outsourcing this part of the operation may change the customer's impression. PCI should consider the publicity impact of outsourcing this part of the operation and how CC could perhaps improve the good reputation of the company overall, which could potentially increase sales.

We must determine what the cost of replacing you, Sarah, will be. Although much of your work will be performed by CC, you will need to be at CC for quality control. For example, you will need to randomly inspect the returned product for quality of cleaning at CC's location.

As well, are there any other tasks you currently perform that will need to be covered by someone else? Assuming you will take on the same amount of compensation, this will be an added cost to the operation. These costs need to be factored into the outsourcing decision.

Have the prices quoted by CC been confirmed, or are they estimates? How long of a period will CC commit to charging those prices? If prices were to increase, this would have a significant impact on PCI.

As well, we must question the accuracy of the estimates of units to be cleaned. Did management at PCI exercise diligence when making the estimates? Was customer input taken into account?

Recommendation

As long as the above risks can be adequately mitigated, PCI should engage the services of CC.

For Assessment Opportunity #3, the candidate must be ranked in one of the following five categories:

Not addressed – The candidate does not address this assessment opportunity.

Nominal competence – The candidate does not meet the standard of reaching competence.

Reaching competence – The candidate discusses some risks and some benefits of outsourcing.

Competent – The candidate discusses some risks and some benefits of outsourcing and provides a recommendation.

Competent with distinction – The candidate discusses most risks and most benefits of outsourcing, provides advice for mitigating the risks, and provides a recommendation.

A competent candidate should discuss both sides – the risks and the benefits – of the decision to outsource. Strong candidates should provide a more thorough analysis, including useful advice in terms of risk mitigation.

Assessment Opportunity #4 (Breadth Opportunity)

The candidate discusses the sale of the Wright family's Toronto home.

The candidate demonstrates competence in Taxation.

CPA Map Competencies:
6.2.2 Determines income taxes payable for an individual in routine situations (Level B – Core)

Sale of Toronto Home

It is now August 2016. Sarah and Sam, you plan to sell your Toronto home by December 2016 and acquire a residence outside of the city. There may be an income tax implication associated with this move. A family can claim the principal residence exemption (PRE) for only one property that is ordinarily inhabited by the family during the year. Since you owned a house for the years from 2008 to 2016 and a cottage from 2005, you will have to decide which property to claim the PRE on for those years. It makes sense to claim the PRE on the property with the highest average annual gain to reduce the capital gain on that property to zero. The average annual gains for each property are as follows:

Home: (825,000 − 41,250 − 600,000 − 15,000*) ÷ 9 years = $18,750

Cottage: (750,000 − 37,500 − 250,000) ÷ 12 years = $38,542

*The $15,000 in costs to renovate the home before sale are considered capital costs, as discussed later in this memo with respect to moving expenses. These are added to the adjusted cost base.

The cottage has a significantly higher average annual gain. The "+1" in the numerator of the formula means one less year can be designated than the total number of years owned, while still exempting 100% of the gain. I recommend, therefore, that the PRE be allocated to the cottage for 2005 through 2015, and the PRE be allocated to the house for 2016. The taxable capital gain on the house would then be calculated as follows:

= $168,750 total gain − ($168,750 × (1 + 1) ÷ 9)

= $168,750 total gain − $37,500

= $131,250

× 50% = taxable capital gain of $65,625

On the other hand, if the PRE were allocated to the house to reduce the gain on the house to zero, there would be no income inclusion for 2016. This means there would be a taxable capital gain on the cottage at the point in time when it is disposed of. You may prefer to defer the tax bill to the future, although this would be at the risk that the bill will be greater.

For Assessment Opportunity #4, the candidate must be ranked in one of the following five categories:

Not addressed – The candidate does not address this assessment opportunity.

Nominal competence – The candidate does not meet the standard of reaching competence.

Reaching competence – The candidate attempts a discussion of the taxation of the house sale.

Competent – The candidate discusses the principal residence exemption and concludes on which property to designate as a principal residence.

Competent with distinction – The candidate discusses the need to designate one of the two properties as a principal residence, provides calculations on both properties to conclude on which property to designate as a principal residence, and provides tax-planning advice with regards to the decision.

A competent candidate should discuss the principal residence exemption in sufficient depth to provide advice to the Wright family. The advice must be consistent with tax law. The candidate should have an understanding of the principal residence designation and recommend which one of the two residences to designate as the principal residence. Strong candidates should address some of the intricacies of this concept and provide further tax-planning advice with regards to the decision.

Assessment Opportunity #5 (Breadth Opportunity)

The candidate discusses the tax implications of moving expenses.

The candidate demonstrates competence in Taxation.

CPA Map Competencies:
6.2.2 Determines income taxes payable for an individual in routine situations (Level B – Core)

Moving Expenses

Eligibility of Move

Although many of the expenses listed are eligible moving expenses, moving expenses can only be deducted when the move brings an individual at least 40 kilometres closer to a new place of work. This move is actually moving the family further away from PCI, which is where Sam will continue to be employed. Therefore, the moving expenses will not be deductible for Sam.

However, if PCI chooses to outsource to CC, Sarah will no longer be working at PCI's Toronto location, but instead will be working at CC's site, which conveniently is in Newmarket, the same

city as the Wrights' proposed new home. This would be considered a new work location. It was noted that Newmarket is 50 kilometres from Toronto, meaning that a move to Newmarket from Toronto would bring Sarah more than 40 kilometres closer to this new work location (this should be confirmed). Therefore, Sarah would be eligible to claim the moving expenses.

Costs

Not all the costs listed will qualify for deduction because there are strict rules for what costs can and cannot be deducted.

Costs That Qualify for Deduction

The 5% real estate commissions incurred ($41,250) will qualify for deduction, as will the costs of the moving company ($10,000), the utility hook-ups and disconnections ($200), and the legal fees incurred on the new home purchase ($2,000). The total costs that qualify, therefore, will be $53,450.

Costs That Do Not Qualify

Costs to renovate a home in advance of a qualifying move do not qualify for deduction as a moving expense. The $15,000 to be incurred in renovations will be considered a capital cost and added to the adjusted cost base (which has been done in the calculations in the previous section).

Travel expenses of $350 for the house-hunting trip also do not qualify for moving expenses. The Canada Revenue Agency considers these to be personal costs.

Limitation on Deduction

Deductions for moving expenses incurred are limited to 100% of the "net eligible income" earned by the taxpayer at the new work location after the move. The net eligible income is the employment or self-employment income earned at the new work location. Therefore, the deduction for 2016 will be limited to the employment income Sarah earns after the move in December. Given that she will be working only part-time, in this circumstance, it is likely her income will be below the $53,450 of eligible costs noted above.

Fortunately, if she cannot use all the moving expenses in 2016, she will be able to carry them forward and use them in 2017 against her employment income in that year. Given that Sarah and Sam are the proprietors of this business, it may be advantageous to pay Sarah a bonus in late 2016 or in 2017, which would provide her with additional employment income to deduct the costs against.

For Assessment Opportunity #5, the candidate must be ranked in one of the following five categories:

Not addressed – The candidate does not address this assessment opportunity.

Nominal competence – The candidate does not meet the standard of reaching competence.

Reaching competence – The candidate attempts a discussion of the moving expenses issue.

Competent – The candidate discusses the moving expenses issue.

Competent with distinction – The candidate discusses the moving expenses issue in depth.

A competent candidate should discuss the moving expenses in sufficient depth to provide advice to the Wright family. The advice must be consistent with tax law. The candidate should demonstrate an understanding of the moving expenses rules (i.e., identify why the moving expenses will be deductible) and explain that some expenses qualify and others do not. Strong candidates should provide further insight by integrating facts provided elsewhere in the case.

Assessment Opportunity #6 (Breadth Opportunity)

The candidate discusses the investment options available to the Wright family.

The candidate demonstrates competence in Finance.

CPA Map Competencies:
5.2.2 Evaluates the entity's investment portfolio (Core – Level B)

Sarah has recently inherited $200,000 and would like some advice on how to invest the money. The objective is to invest this money for 10 years and then use it to finance the education of their three children. Three options have been provided in the case for consideration.

We must first determine the objectives of the investment. Given the purpose of the funds (for their children's education in 10 years), the Wrights would be very interested in capital preservation – they do not want to lose money on their investment because it needs to be available in 10 years to pay for the education. A secondary objective would be to earn a reasonable return over the 10-year time frame.

Option #1 – Real Estate

In the past, the Wrights have done very well investing in real estate, as evidenced by their home and cottage investments. As well, should the rezoning be approved, the land is expected to double in value. This equates to a return of 7.2% compounded annually (($200,000 × (1 + 0.072)^10) ≈ $400,000), which is substantially higher than the Government of Canada bond rate of return.

However, real estate in general is a risky market and is subject to the ebbs and flows of property values within the specific area of investment (in this case, in the northern Ontario cottage

industry). As well, it appears as though the success of this investment is dependent upon the rezoning of the land. This further increases the risk of the investment because it is dependent on government decisions, which can be highly unpredictable. In addition, the real estate would cost $200,000, which would mean putting all of your eggs in one basket, so to speak. You would, therefore, not receive the benefits of diversification of risk through various investments. You already own a cottage and a house and have no investments outside of the real estate. Diversity is an important consideration in building an investment portfolio, so it would be preferable to have non–real estate investments to round out your portfolio.

Finally, real estate is not a very liquid investment, especially speculative land, and, therefore, it may be difficult to sell when the money is required.

<u>Option #2 – Government of Canada 10-Year Bond</u>

The return on this investment is quite low, at 2.1% per year, and approximates the expected inflation rate over the next 10 years. Therefore, the actual rate of return would effectively be close to zero on this investment. The return might even be negative if taxes are taken into consideration. The expected value of this investment at the end of 10 years would be approximately $246,000 (($200,000 × (1 + 0.021)^^{10}) ≈ $246,000).

However, the main advantage of this investment vehicle is that the capital would be preserved. There is virtually no chance that the investment would be worth less than $200,000 in 10 years because it is guaranteed by the government of Canada. The liquidity of the bonds is also excellent since they can be sold at any time if required.

<u>Option #3 – Commodity Mutual Fund</u>

The third option provides an extremely high potential return, which is estimated at 29% per annum. Should this return be realized, the investment would have an approximate value of over $2.5 million at the end of 10 years (($200,000 × (1 + 0.29)^^{10}) ≈ $2,552,000).

However, there are very high risks associated with this investment. The underlying assets associated with this mutual fund are mines under development in South Africa. There are numerous risks associated with these assets, including development risks, foreign exchange risks, political risks, and commodity price fluctuations. The risk is evident in the mutual fund's beta, which is extremely high at 4.5 (a beta of 1 indicates a risk that is equal to an overall market portfolio). As well, this investment carries the "all eggs in one basket" problem, since all of the funds would be invested in the South African mining industry. In essence, the likelihood of a decrease in the value of this investment is quite high.

Summary and Recommendation

All three of these investments have advantages and disadvantages. Each has a risk/return profile based on the underlying nature of the assets involved. Given that the Wrights' primary objective for this investment is capital preservation, I recommend that Option #2 – Government of Canada bonds – be selected. Even though the interest rate is low, the amount is guaranteed and will be available in 10 years. The risks under both Option #1 and Option #3, with respect to the preservation of capital, are simply too high to warrant the full investment.

As an alternative, the Wrights should consider a well-diversified investment portfolio. The benefits of diversification help to reduce risk while leading to larger returns, avoiding the "all eggs in one basket" problem. A well-diversified portfolio over 10 years would be expected to earn approximately 8% per annum (equivalent to the expected return on the market as a whole). This would more than double the investment over the 10-year time frame and would allow the risk to be minimized (although not eliminated, as it would be with the bonds). A well-diversified portfolio can eliminate unsystematic risk (also called idiosyncratic risk) for any one investment but cannot eliminate the overall market risk (also called systematic risk) of such a portfolio.

Another alternative is to invest in RESPs. Since your goal for investing the inherited money is to finance your children's university education, you should consider investing part of the $200,000 in RESPs. When investing in an RESP, you name your children as the beneficiaries of the plan, and you can choose between a specified plan and a family plan. You can contribute up to a maximum of $50,000 per child in a lifetime. The main advantage of an RESP is that the government will match, generally speaking, 20% of your contributions, up to a maximum of $500 per year, with a lifetime maximum of $7,200. When the time comes for your children to go to university, the funds will be available to use.

For Assessment Opportunity #6, the candidate must be ranked in one of the following five categories:

Not addressed – The candidate does not address this assessment opportunity.

Nominal competence – The candidate does not meet the standard of reaching competence.

Reaching competence – The candidate discusses the three investment options from either a risk perspective or a return perspective.

Competent – The candidate discusses the three investment options from both a risk perspective and a return perspective and makes a reasonable recommendation.

Competent with distinction – The candidate discusses the three investment options from both a risk perspective and a return perspective and makes a reasonable recommendation. The candidate also demonstrates an understanding of the benefits of diversification or discusses the option to invest in RESPs.

A competent candidate should discuss the investment options from a risk/reward perspective, taking into account the life stage and objectives of the family. Strong candidates should discuss the benefits of diversification or introduce other options, such as the use of RESPs.

Day 3-2 (Dogani) (Suggested time 70 minutes)

In 2000, Roger Gardner incorporated Dogani Inc. (DI). In 2010, Roger's children, Gale, Louis and Marc took over ownership from Roger.

DI's top-selling product, Stop Barking (SB), is a collar that releases a spray to condition a dog to stop barking. Considered the most humane solution on the market for nuisance barking, its effectiveness has been demonstrated by DI's researchers and is supported by customer feedback. DI's other products include vitamins and invisible fencing for pets.

In early January 2015, DI received a significant order from the Royal Canadian Mounted Police (RCMP) for a modified version of SB for its police dogs, called SB2. In late 2015, the Ontario Provincial Police indicated that they would also be interested in ordering the SB2.

Due to the increased product demand and anticipated future expansion, DI's owners decided to construct a new manufacturing facility and warehouse. On November 30, 2015, DI obtained the land for its expansion through an exchange with an unrelated company, Riverview Real Estate Ltd. (RREL), and approached its bank to borrow $2.5 million for the construction (Appendix I).

It is now March 1, 2016, and Gale, DI's CEO, has hired Uptown LLP to perform the first-time audit of DI's financial statements, as required to obtain the loan. You, CPA, work for Uptown LLP. You meet with Gale to discuss DI's financial reporting processes, draft financial statements and some tax-related matters (Appendix II).

The partner asks you to discuss any significant financial reporting issues that will need to be addressed by management. He also asks you to assess the risks related to the audit, suggest an audit approach, and determine materiality, but not to design the procedures yet.

The partner also asks that you address Gale's email (Appendix III).

Finally, Gale wants to make sure DI has the best chance of getting the financing required from the bank to proceed with the construction. She knows the bank will require security and will need to be convinced that DI will be able to make the payments required to pay back the $2.5 million borrowed, along with interest. She is planning to provide information to the bank (Appendix IV). She would like you to comment on whether this information will be useful to the bank, and to know what other information it might require.

APPENDIX I
DETAILS REGARDING THE EXCHANGE WITH RREL AND BANK FINANCING

DI transferred land located downtown to RREL. In return, DI received land adjacent to its current location in an industrial park. DI had acquired the downtown land several years ago in anticipation of future expansion.

Details regarding the parcels of land are as follows:

Downtown land

Size:	15,000 square feet
DI's acquisition cost:	$400,000
Estimated fair value at November 30, 2015	$500,000

Industrial park land

Size:	15,000 square feet
RREL's acquisition cost:	$390,000
Estimated fair value at November 30, 2015	$500,000

The real estate appraiser engaged to determine the fair values of the properties was unable to complete his work as there have been no land sales for two years, given the depressed real estate market. The estimated value of DI's downtown land was based on the listed sales price for other similar parcels of land. The estimated value of RREL's industrial park land was determined by increasing its acquisition cost for inflation as per the consumer price index.

DI had a new controller start in September 2015. She recorded a gain of $100,000 on the exchange.

Bank financing

DI plans for DI's bank to finance the construction of the new manufacturing facility and warehouse, advancing the funds in four equal quarterly instalments, with the first advance to be made on April 15, 2016. DI will have to provide audited financial statements prepared in accordance with IFRS for the year ended December 31, 2015, and will likely have some covenants to meet.

APPENDIX II
NOTES FROM MEETING WITH GALE

Shortly after the 2010 change in ownership, a professional services firm was hired by DI to design and document DI's processes and controls. Although Gale is generally satisfied that these processes are being followed, she mentioned that she found a few exceptions. She also recognizes that changes have occurred since the last review, and therefore hired the same professional services firm to take a fresh look at processes and controls, beginning in July 2016. She will ask them to take a closer look at the accounts receivable processes, since collection has slowed down significantly.

According to the draft financial statements for the year ended December 31, 2015, DI reported total assets of $3.9 million, total liabilities of $1.7 million, revenues of $7.8 million, finance (interest) costs of $120,000, pre-tax income of $820,000 and net income of $655,000.

Although DI operates in Canada only, with the construction of the new manufacturing facility, the owners are eager to expand to Europe. In anticipation of this, Louis and his wife attended several exhibitions in Europe during 2015, promoting DI to European distributors. Louis' wife participated in some of the exhibitions but chose to go sightseeing rather than attend other exhibitions. DI paid for all travel-related costs (airfare, hotel, taxis and meals) for Louis and his wife. Gale was not sure how paying for these expenses would affect DI's corporate income taxes.

The other corporate tax issues that Gale raised relate to a researcher hired in 2015. DI agreed to provide this researcher with an interest-free home relocation loan. DI also leased a luxury sport utility vehicle, at a cost of $1,500 per month, for the researcher to use for business purposes only.

APPENDIX III
EMAIL RECEIVED FROM GALE

From: gale.gardner@dogani.ca
To: partner@uptownllp.ca
Subject: Should we buy instead of manufacturing?

I received an offer from Sensit Inc. (SI). SI manufactures and sells body rhythm monitors similar to the monitors we use as a component of our SB products. SI quoted a price of $38 per monitor for the 75,000 monitors that DI would normally require for its annual production of SB and SB2. I was also provided with contact information for three SI customers so that I could perform reference checks. The customers commented that there were no quality concerns and that all orders were filled on time.

DI's production manager provided the following details regarding the costs incurred to manufacture 75,000 monitors in house:

	Costs	Note
Direct materials	$ 1,875,000	
Direct labour	937,500	
Overhead	375,000	1
	$ 3,187,500	

Note:

1. Overhead is allocated to production based on direct labour hours. Included in overhead is $75,000 paid to the product line supervisor, who would be laid off if the monitors are purchased from SI. Utility costs of $35,000 could also be avoided.

Partner, please advise us on the offer.

Gale

APPENDIX IV
PROPOSED INFORMATION FOR THE BANK

Gale is proposing to present the following information to the bank:

- A draft pro-forma statement of financial position for DI, showing total assets of $6.2 million and total liabilities of $4.5 million after the facility is built.
- A letter from Gale's uncle, who Gale considers to be financially stable, who may be willing to provide a personal guarantee for the loan.
- A letter from Gale, stating that she believes the new building will be worth at least $2.8 million and a request for a five-year loan term with annual principal payments of $500,000 plus interest of prime plus 5%.
- An email from a member of the Ontario Provincial Police, indicating interest in ordering a large amount of product from DI.
- An aged listing of accounts receivable and payable and a list of inventory.
- Proof of directors' and officers' liability insurance.
- Personal tax returns of the three shareholders and corporate tax returns, for the past three years.

MARKING GUIDE 3-2
DOGANI INC. (DI)
ASSESSMENT OPPORTUNITIES

Memo
To: Partner
From: CPA
Re: Dogani Inc. (DI) Audit Planning Memo

In this memo you will find a discussion of the significant financial accounting issue I noted that needs to be corrected so that DI's financial statements for the year ended December 31, 2015, comply with International Financial Reporting Standards (IFRS). In addition, I have addressed the audit engagement planning considerations by performing an assessment of the risks related to the audit and determining the audit approach and materiality.

Further, I have provided some suggestions regarding additional information and arguments that should be presented to the bank to help DI secure the loan.

I have then noted some taxation issues that require follow-up to avoid negative tax consequences.

Lastly, I have drafted a response to Gale's email about whether to buy rather than make the body rhythm monitors.

Assessment Opportunity #1 (Depth Opportunity)

The candidate discusses the accounting for the exchange of the parcels of land in accordance with IFRS.

The candidate demonstrates competence in Financial Reporting.

CPA Map Competencies:
1*.2.3 Evaluates treatment for non-routine transactions (Core – Level B)*

The accounting for DI's November 30, 2015, exchange of a parcel of downtown land with Riverview Real Estate Ltd. (RREL) for a parcel of land adjacent to its current location in an industrial park is governed by the guidance provided in *IAS 16 – Property, Plant and Equipment*.

According to paragraphs 24 and 25:

> *24. One or more items of property, plant and equipment may be acquired in exchange for a non-monetary asset or assets, or a combination of monetary and non-monetary assets. The following discussion refers simply to an exchange of one non-monetary asset for another, but it also applies to all exchanges described in the preceding sentence. The cost of such an item of property, plant and equipment is measured at fair value unless (a) the exchange transaction lacks commercial substance or (b) the fair value of neither the asset received nor the asset given up is reliably measurable.… If the acquired item is not measured at fair value, its cost is*

measured at the carrying amount of the asset given up.

25. An entity determines whether an exchange transaction has commercial substance by considering the extent to which its future cash flows are expected to change as a result of the transaction. An exchange transaction has commercial substance if:

(a) the configuration (risk, timing and amount) of the cash flows of the asset received differs from the configuration of the cash flows of the asset transferred; or
(b) the entity-specific value of the portion of the entity's operations affected by the transaction changes as a result of the exchange; and
(c) the difference in (a) or (b) is significant relative to the fair value of the assets exchanged.

Therefore, it is necessary to determine if either of the exceptions to the requirement to measure the exchange at fair value applies to this exchange.

Commercial Substance

Regarding commercial substance, we will look at each criterion outlined above to assess if this exists.

(a) the configuration (risk, timing and amount) of the cash flows of the asset received differs from the configuration of the cash flows of the asset transferred;

It could appear as though the nature of each parcel of land is different due to the distinct locations, one being in the downtown area and the other in an industrial park. However, when we look at the configuration of the cash flows associated with the two parcels of land, they do not seem to differ, at least not significantly, given that DI's intent was to use the land it held, as well as the land acquired in the exchange, to expand its operations. Further, there is nothing to suggest that the magnitude of the expansion would differ between the two parcels of land. The only difference that may result is that cash outflows may be reduced somewhat due to efficiencies of operating from an adjacent property rather than one downtown. However, any reduced cash outflows are not likely to be significant.

(b) the entity-specific value of the portion of the entity's operations affected by the transaction changes as a result of the exchange; and

The entity-specific value is not expected to change following the exchange, given that the parcels of land are to be used in a similar manner.

(c) the difference in (a) or (b) is significant relative to the fair value of the assets exchanged.

Because fair value cannot be determined (see discussion that follows), it is not possible to assess if it differs significantly between (a) and (b). Therefore, this criterion cannot be supported.

Because none of the criteria is met, the transaction lacks commercial substance.

Fair Value

Per IAS 16, paragraph 6, fair value is "*the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date.*" We have been provided with estimates for both parcels of land, suggesting that the fair values are measurable. However, when the methodologies used to determine the estimates are considered, these amounts are likely not reliable.

For the parcel of land previously owned by DI, the fair value was based on listing rather than selling prices for similar properties. The listing price is not necessarily indicative of the price another party is willing to pay for a property, in particular given the absence of such transactions during the past two years. This lengthy stretch of time and the fact that the land is still for sale suggests that the listing prices may be in excess of fair value.

Similarly, the estimate for the parcel of land previously owned by RREL is questionable because there are no other transactions to support the estimate. Further, it was based on applying the consumer price index to the acquisition price. Although the consumer price index is intended to reflect inflation, it does so for a bundle of all goods and is not specific to real estate assets. Therefore, a reasonable conclusion is that neither fair value amount is reliably measureable.

Because neither exception outlined in paragraph 24 applies, the cost of the parcel of land adjacent to the current location in the industrial park should be the carrying amount of the parcel of downtown land or $400,000. Accordingly, the $100,000 ($500,000 − $400,000) gain recorded by the controller during the year ended December 31, 2015, should be reversed.

For Assessment Opportunity #1, the candidate must be ranked in one of the following five categories:

Not addressed – The candidate does not address this assessment opportunity.

Nominal competence – The candidate does not meet the standard of reaching competence.

Reaching competence – The candidate attempts to discuss the accounting treatment for the exchange of the parcels of land.

Competent – The candidate provides a reasonable discussion of the accounting treatment for the exchange of the parcels of land and concludes on the value to be used.

Competent with distinction – The candidate provides a thorough discussion of the accounting treatment for the exchange of the parcels of land and concludes on the value to be used.

A competent candidate should provide a reasonable discussion of the accounting for the exchange of the parcels of land and conclude on the appropriate treatment. A strong candidate should also provide a thorough discussion and recommend that the exchange be accounted for at the carrying amount of the parcel of land given up, as a result of the questionable methods used to determine the fair values.

Assessment Opportunity #2 (Breadth Opportunity)

The candidate advises on whether the information that Gale is proposing to give the bank will be useful in securing the loan and suggests other information the bank may require.

The candidate demonstrates competence in Finance.

CPA Map Competencies:
5.1.2 Develops or evaluates financial proposals and financing plans (Core – Level B)

As Gale noted, the bank will be interested in information that will help it determine whether DI has adequate security for the loan (in case of default) and will be able to make the payments required to pay back the $2.5 million borrowed, along with the interest.

Gale's List and Other Information the Bank May Require

Gale has supplied a list of information she is proposing to give the bank to support obtaining the $2.5 million construction loan. I have analyzed each item and also suggested additional items that the bank may find useful.

A draft pro-forma statement of financial position:

- This will be useful because it will help the bank understand the anticipated financial position (and degree of financial leverage) that DI will have following the loan advancement and the construction of the building.
- In addition, the bank will be very interested in seeing a multi-year cash flow forecast that will help it understand whether DI will be able to meet the principal and interest payments as they come due. DI should prepare this forecast and also provide support for the significant assumptions that were used in the forecast, such as sales assumptions.

A letter from Gale's uncle, who may be willing to provide a personal guarantee:

- The bank may be interested in having someone guarantee the debt, since it would provide further security to the bank in the event of default. However, the most logical personal guarantees would be from DI's existing three shareholders.
- If the bank requires such guarantees, then the shareholders (or Gale's uncle) may be required to provide personal net worth statements and support to substantiate the significant amounts on the net worth statements (such as real estate appraisals for personal homes).

At the outset, I suggest that the shareholders not offer personal guarantees unless guarantees are asked for. The bank may not request them, and offering guarantees when they are not needed opens you up to unnecessary risk.

A letter from Gale stating she believes the new building will be worth at least $2.8 million:

- The bank would be very interested in the expected value of the new building once it is built. However, a letter from Gale would provide little comfort because it is not independent and Gale is not an expert appraiser.
- If DI could obtain an appraisal for the building from an independent third-party appraiser, this would provide significant comfort to the bank. It should be possible for a third party to estimate the fair value of the building if it is going to be similar to other buildings in the area once constructed.

A letter from Gale requesting a five-year loan term with annual principal payments of $500,000 plus interest of prime plus 5%:

- This is useful for the bank to document DI's interest in obtaining the loan.
- However, the bank will likely have its own application form that DI will need to complete in order to demonstrate formal application for the loan.

I have two concerns with the proposed terms of the loan. First, the loan term of five years is extremely short, resulting in very large annual principal payments of $500,000. This amount may chew up almost all of your annual cash flows, given your current level of net income. As well, given the nature of the underlying asset that will support the loan (the land and building), I suggest that the term be extended for 15 or 20 years at a minimum. This would reduce the annual payments and provide some cushion in the event that net income dips in any year. Second, the interest rate of prime plus 5% seems high given the nature of the loan. A loan secured by real property (a mortgage) typically does not carry significant risks and, therefore, should carry a lower interest rate. I suggest that you initially ask for a loan at prime and see how the bank responds. A loan at prime plus 1% may be realistic.

An email from a member of the Ontario Provincial Police indicating interest in ordering a large amount of product from DI:

- The bank would be interested in information that could support an increase in demand. This may help support the cash flow forecasts we proposed earlier in this memo. However, an email indicating interest would provide little comfort.
- If DI has signed contracts guaranteeing significant order volumes from the Ontario Provincial Police or any other customer, these contracts would provide the bank with some comfort.

An aged listing of accounts receivable and payable and a list of inventory:

- These documents would normally support a line of credit for a company. These types of loans are often secured by short-term assets like the ones in the listing. Since DI is building a long-term asset, however, these items will not be useful to the bank. We have assumed that the underlying real estate assets will provide the primary security for the loan.

Proof of directors' and officers' liability insurance:

- This will not provide useful information for the bank because the liability of the directors does not help the bank; it is only helpful to the directors and officers.
- However, the bank would be interested in the insurance that DI will have related to the building during construction and afterwards, since the bank would want to ensure that its primary security for the loan (the real property) is protected. DI could provide copies of any insurance policies it has related to the construction and the real property, or it could provide proof of insurability.

Personal tax returns of the three shareholders and corporate tax returns, for the past three years:

- It is possible the bank could ask for these items. The personal tax returns could provide a limited amount of comfort surrounding the personal financial situations of the shareholders, and the corporate tax returns could provide some comfort that DI is in compliance with the taxation authorities. However, I suggest that you not provide these items unless they are requested. The bank may not need them in this situation. The bank may also ask for other items, such as proof of filing GST returns on a regular basis and proof of payroll remittances, but again, I suggest that you only provide these items if requested.

Other Considerations

The bank may include some covenants in the loan agreement, and you should ensure that you have the proper information available quickly to ensure these covenants are not onerous. It may be prudent to calculate some common covenants, such as debt-to-equity and current ratio, with the pro-forma statements to provide the bank with additional information on expected financial health.

With the changes and documents noted above, we expect DI will be able to obtain the bank loan, given its current financial situation, its financial performance, and the underlying security it is able to provide. I would like to point out that the bank would typically provide a bridge loan for a construction project, with advances being tied to the construction progress on the project. At the end of the project, the bank would then obtain an appraisal of the real property and would plan to provide a long-term mortgage using the underlying real property as security.

For Assessment Opportunity #2, the candidate must be ranked in one of the following five categories:

Not addressed – The candidate does not address this assessment opportunity.

Nominal competence – The candidate does not meet the standard of reaching competence.

Reaching competence – The candidate advises the client on whether the information that Gale is proposing to give the bank will be useful in securing the loan OR how the information provided could be improved.

Competent – The candidate advises the client on whether the information that Gale is proposing to give the bank will be useful in securing the loan AND how the information provided could be improved.

Competent with distinction – The candidate provides thorough advice to the client on whether the information that Gale is proposing to give the bank will be useful in securing the loan and how the information provided could be improved. The candidate may discuss some other considerations regarding the loan.

A competent candidate should comment on whether the information Gale is planning to provide to the bank will be useful for the bank in approving the financing. The candidate should address some, but not all, of the items, explaining why each item is or is not helpful. As well, the candidate should suggest ways to improve the information provided.

A strong candidate would provide a thorough analysis of the information Gale is planning to provide to the bank or would provide additional considerations, making links to case facts.

Assessment Opportunity #3 (Breadth Opportunity)

The candidate assesses the risks related to the audit of DI's financial statements for the year ended December 31, 2015.

The candidate demonstrates competence in Audit and Assurance.

CPA Map Competencies:
4.3.5 Assesses the risks of the project, or for audit engagements, assesses the risks of material misstatement at the financial statement level and at the assertion level for classes of transactions, account balances, and disclosures (Core – Level B)

Risk of Material Misstatement

CAS 315, Identifying and Assessing the Risks of Material Misstatement through Understanding the Entity and Its Environment, requires that, as auditors, we assess the risk of material misstatement for the audit of DI's financial statements. A number of factors must be considered when assessing the risk of material misstatement at the financial statement level, including the following:

- DI has had a new controller since September 2015. The controller may lack familiarity with DI, and there is, therefore, a risk that some transactions have not been recorded properly. We also do not know what happened to the previous controller. We should enquire about the circumstances to see if there is an increased risk due to this departure.
- As discussed previously, the exchange of the land was not accounted for appropriately, since the treatment does not comply with IFRS. This error may be the result of a lack of familiarity with the guidance provided by IFRS and also the complexity of the transaction entered into during the year under audit. This increases the risk that other errors might be present in the financial statements.
- 2015 is also the first year for which DI is required to have its financial statements audited in order to obtain the bank's financing for the construction of its new manufacturing facility and warehouse. There may be undetected errors in the opening balances due to the fact that the financial statements have never been audited.
- The bank is a new user of the financial statements. Thus, there will be higher scrutiny on the financial statements compared to previous years since the bank will be more sensitive to errors in the financial statements. In addition, given the fact that the bank will likely require DI to meet some covenants, there is an incentive for DI's management to manipulate results. Management may have acted on this bias in the preparation of the financial statements, since the error that was found improved DI's bottom line.
- The control environment at DI may be lacking. In the past, DI engaged a professional services firm to design and document its processes and controls. Although Gale is generally satisfied that these processes are being followed, such documentation has not been updated since 2010 and may be out of date. Gale mentioned that she found a few exceptions in which the processes and controls were not followed. This is further evidence that the control environment is lacking. Management has engaged the same professional services firm to update the control documentation, but this will not be completed until after the audit engagement. Therefore, a lack of controls could result in additional misstatements in the financial statements. Gale also mentioned that the accounts receivable collection has slowed down. This might be further evidence that the controls are lacking, which leads to an increased audit risk.

Given these risk factors and the absence of factors that suggest a reduced level of risk, the risk of material misstatement at the financial statement level is assessed as high.

For Assessment Opportunity #3, the candidate must be ranked in one of the following five categories:

Not addressed – The candidate does not address this assessment opportunity.

Nominal competence – The candidate does not meet the standard of reaching competence.

Reaching competence – The candidate discusses some of the risks related to the audit.

Competent – The candidate discusses several of the risks related to the audit.

Competent with distinction – The candidate discusses most of the risks related to the audit.

A competent candidate should provide a reasonable assessment of the risk of material misstatement at the financial statement level. A strong candidate should provide a complete assessment of the risk of material misstatement at the financial statement level.

Assessment Opportunity #4 (Breadth Opportunity)

The candidate suggests an audit approach and determines materiality for the audit of DI's December 31, 2015, financial statements.

The candidate demonstrates competence in Audit and Assurance.

CPA Map Competencies:
4.1.2 Evaluates the information system, including the related processes (Core – Level B)
4.3.4 Assesses materiality for the assurance engagement or project (Core – Level B)

Audit Approach

CAS 330, The Auditor's Responses to Assessed Risks, requires that we determine the approach to be used for the audit of DI's financial statements. Based on the information gathered during my meeting with Gale, it would appear that DI has internal controls in place, given that processes were developed and documented by a professional services firm. However, Gale also mentioned that she found a few exceptions in the processes in place.

Once we have completed our documentation of DI's controls, we should assess whether there are controls we may be able to test. For areas in which controls appear to be strong and we can gain efficiencies from relying on them, we can perform tests of controls. Should testing of these controls support that no concerns are evident, it will be possible to adopt a combined audit approach, at least for DI's routine transactions. We will need to take a fully substantive approach in areas in which deficiencies are known.

In addition, we are starting our audit work after year-end, which will limit our ability to test IT controls, and this will need to be considered. This will also have an impact on our ability to support the inventory balance, so we will, therefore, need to look at the possibility of performing a count as soon as possible and completing rollback procedures.

Also, it will be necessary to consider whether we will be able to obtain sufficient appropriate audit evidence to support the opening balances in DI's financial statements. Given the nature of the business, it is conceivable that DI would have a material amount of opening inventory. Should it not be possible to obtain assurance over this or other balances, it may be necessary to qualify our audit opinion. Although such a qualification is not uncommon for a first-time audit, DI should immediately contact the bank to determine if it will accept audited financial statements with such a qualification.

Materiality

CAS 320, Materiality in Planning and Performing an Audit, provides guidance regarding the determination of materiality. According to paragraph 2

Misstatements, including omissions, are considered to be material if they, individually or in the aggregate, could reasonably be expected to influence the economic decisions of users taken on the basis of the financial statements.

Therefore, the determination of materiality should be based on the users of DI's financial statements and their sensitivity to error. Those users would include Gale, Louis, and Marc, who would be using DI's financial statements to assess its performance relative to plans and make adjustments to operations going forward. Also, the bank will be an important user of DI's financial statements. The bank will use the financial statements to make a final decision regarding whether to extend financing for the construction of the new manufacturing facility and also to assess DI's ability to make the ongoing payments associated with the loan, if extended. Profitability is a common measure of performance and can be used as a proxy for cash flows and the ability to repay principal and interest associated with the bank financing.

This is supported by paragraph A4:

Examples of benchmarks that may be appropriate, depending on the circumstances of the entity, include categories of reported income such as profit before tax, total revenue, gross profit and total expenses, total equity or net asset value. Profit before tax from continuing operations is often used for profit-oriented entities.

In addition, paragraph A7 states:

Determining a percentage to be applied to a chosen benchmark involves the exercise of professional judgment. There is a relationship between the percentage and the chosen benchmark, such that a percentage applied to profit before tax from continuing operations will normally be higher than a percentage applied to total revenue. For example, the auditor may

consider five percent of profit before tax from continuing operations to be appropriate for a profit-oriented entity in a manufacturing industry, while the auditor may consider one percent of total revenue or total expenses to be appropriate for a not-for-profit entity. Higher or lower percentages, however, may be deemed appropriate in the circumstances.

As a result, I recommend that materiality be determined based on profit before tax. I suggest using 5% of this amount, given the users' sensitivity to error. There are no other significant considerations that would justify a higher or lower percentage.

Before calculating materiality, net income before tax should be normalized for the gain on the exchange of land (which is also an accounting adjustment, as previously discussed). This provides a value of $36,000 (($820,000 − $100,000) × 0.05).
We should also determine an amount for performance materiality. This amount (or amounts) is set by the auditor at less than materiality for the financial statements as a whole *"to reduce to an appropriately low level the probability that the aggregate of uncorrected and undetected misstatements exceeds materiality for the financial statements as a whole*," per paragraph A12 of CAS 320. According to the *Professional Engagement Manual*, performance materiality is normally set at 60% to 85% of overall materiality. Given the financial statement users and their sensitivity to error, I would recommend using 60%, or $21,600 ($36,000 × 0.6).

For Assessment Opportunity #4, the candidate must be ranked in one of the following five categories:

Not addressed – The candidate does not address this assessment opportunity.

Nominal competence – The candidate does not meet the standard of reaching competence.

Reaching competence – The candidate suggests an audit approach and determines materiality.

Competent – The candidate provides a complete assessment of the audit approach and determination of materiality.

Competent with distinction – The candidate provides a complete assessment of the audit approach and determination of materiality. The candidate also considers the need to normalize net income with the gain on the land before calculating materiality.

A competent candidate should provide a reasonable discussion of the audit approach and recommend a level of materiality (in other words, quantify it). A strong candidate should provide a thorough discussion of the audit approach and recommend levels for both planning and performance materiality. The candidate should also recognize the need to adjust for or normalize net income before calculating materiality.

Assessment Opportunity #5 (Breadth Opportunity)

The candidate discusses the tax issues noted by the client.

The candidate demonstrates competence in Taxation.

CPA Map Competencies:
6.1.2 Determines taxes payable for a corporation in routine situations (Core – Level B)
6.2.2 Determines income taxes payable for an individual in routine situations (Core – Level B)

Travel Expenses Related to Exhibitions in Europe

The Income Tax Act (ITA) allows for the deduction of expenses to the extent that they were incurred to earn business income and were reasonable in the circumstances. It is unclear if the exhibitions would be considered conventions. Since the purpose of these exhibitions appears to be promotion of DI's products, rather than a professional meeting, it is possible that these are not conventions. If this is the case, there is nothing in the information provided by Gale to suggest that the expenses paid by DI were unreasonable. However, if these are in fact conventions, then subsection 20(10) of the ITA limits the deduction of expenses incurred for attending conventions to two a year, provided that the conventions were (a) held by a business or professional organization; (b) attended in connection with the taxpayer's business or professional practice; and (c) held at a location that may reasonably be regarded as consistent with the territorial scope of the organization. Although it may appear that exhibitions in Europe may not be within the territorial scope of the organization, since it operates in Canada, it can be argued that DI is planning to expand to Europe, which would cause that area to be consistent with the territorial scope of the organization. If criteria (a) and (b) are also met, all costs discussed below would only be deductible for two of the events attended.

In either circumstance, the expenses incurred by Louis's wife would not be deductible unless she was an employee of DI and the costs were incurred for business purposes. If there is a business purpose, the exhibitions in which she participated could be deducted. Any expenses incurred for trips when she chose to go sightseeing rather than participate in the exhibitions would not be deductible and would become a taxable benefit to either Louis, if his wife is not a DI employee, or to her, if she is a DI employee.

Regarding the meals paid for by DI, under section 67.1 of the ITA, only 50% of the actual costs incurred can be deducted, and only to the extent they were incurred for business purposes. Any meals paid for by DI for Louis's wife while sightseeing would not be deductible at all and would become a taxable benefit, similar to the above analysis.

The costs incurred for airfare, hotels, and taxis would be considered deductible on the corporate income tax return subject to the two-conference limit, as well as the requirement that they be for

business purposes, as discussed above. Costs related to Louis's travel would not be a taxable benefit to him, since the primary beneficiary of these costs would be DI.

Interest-Free Employee Loan

There is no corporate tax impact of this loan. There is no impact on DI's net income, since the amount is recorded as an asset, which is reduced as payments are received, and nothing in the ITA changes this treatment.

However, when an interest-free loan is made to an employee, the employee is deemed to have received a benefit equal to the amount of interest that is computed at a prescribed rate. Some relief is provided if the loan qualifies as a home relocation loan, which would require that this employee move at least 40 kilometres closer to DI's location and that it be designated by the employer as a home relocation loan. If this is met, the deemed interest on the first $25,000 of funds loaned would not be taxable under the deemed interest benefit rules. DI would be responsible for reporting the benefit on the employee's T4.

Lease of Luxury Sport Utility Vehicle

Regarding the lease of the luxury sport utility vehicle, the ITA restricts the deductibility of the lease payments. The maximum deduction currently allowed is $800 per month plus non-recoverable GST, HST, and PST, subject to an adjustment based on the manufacturer's suggested list price of the vehicle. Given that no personal use is allowed, the employee will have no taxable benefits assessed as a result of this vehicle.

Exchange of Land

Regardless of the accounting treatment for the exchange of the parcels of land, for tax purposes DI has disposed of the old land at fair value and acquired the new land at fair value (since RREL is an arm's-length party, these amounts should be the same figure). It is likely that there is a capital gain to be recorded for tax purposes, half of which will be taxable. Given that the transaction is an exchange of property, the replacement property rules may apply, which would allow DI to fully defer the gain by reducing the adjusted cost base of the new land by the gain on the old land. The replacement property criteria per subsection 44(5) of the ITA are as follows:

(a) It is reasonable to conclude that the property was acquired by the taxpayer to replace the former property;

(a.1) It was acquired by the taxpayer and used by the taxpayer or a person related to the taxpayer for a use that is the same as or similar to the use to which the taxpayer or a person related to the taxpayer put the former property;

(b) Where the former property was used by the taxpayer or a person related to the taxpayer for the purpose of gaining or producing income from a business, the particular capital property was acquired for the purpose of gaining or producing income from that or a similar business or for use by a person related to the taxpayer for such a purpose;

(c) Where the former property was a taxable Canadian property of the taxpayer, the particular capital property is a taxable Canadian property of the taxpayer; and

(d) Where the former property was a taxable Canadian property (other than treaty-protected property) of the taxpayer, the particular capital property is a taxable Canadian property (other than treaty-protected property) of the taxpayer.

Given that DI replaced one piece of land with another and intends to use the new property for the same purpose as the old property, and given that both parcels of land are taxable Canadian property of DI, the criteria apply and the gain can be deferred.

However, the Canada Revenue Agency may argue that the replacement property rules may not apply. Subsection 44(1) of the ITA requires that the property was, immediately before the disposition, a former business property of the taxpayer for replacement property rules to apply. Because DI had not yet used the land to generate business income, it may be deemed a non-business property.

For Assessment Opportunity #5, the candidate must be ranked in one of the following five categories:

Not addressed – The candidate does not address this assessment opportunity.

Nominal competence – The candidate does not meet the standard of reaching competence.

Reaching competence – The candidate discusses some of the tax issues raised by Gale.

Competent – The candidate discusses several of the tax issues raised by Gale.

Competent with distinction – The candidate discusses most of the tax issues raised by Gale.

A competent candidate should identify some of the tax issues in the case and discuss the corporate tax consequences. A strong candidate should provide a discussion of most of the corporate tax consequences.

Assessment Opportunity #6 (Depth Opportunity)

The candidate analyzes the make-versus-buy decision and provides a recommendation to Gale.

The candidate demonstrates competence in Management Accounting.

CPA Map Competencies:
3.3.2 Evaluates and applies cost management techniques appropriate for specific costing decisions (Core – Level B)

Report
To: Gale Gardner
From: CPA
Re: Make-versus-Buy Decision

To determine whether to continue to manufacture the body rhythm monitors or to purchase them from Sensit Inc. (SI), it is necessary to consider relevant costs, or those costs that could be avoided by purchasing from SI.

The relevant costs associated with the annual volume of 75,000 monitors are as follows:

	Total Costs
Direct materials	$1,875,000
Direct labour	937,500
Overhead (Note 1)	110,000
	$2,922,500

Note 1: Total overhead costs of $375,000 are expected in the production of 75,000 monitors. However, the only amounts that can be avoided are the $75,000 paid to the product line supervisor, who could be laid off, and the $35,000 in utilities that could be saved by shutting down this portion of the manufacturing facility. Therefore, the total relevant overhead costs are $110,000.

Should DI choose to purchase from SI, it would be possible to acquire the 75,000 monitors for a total cost of $2,850,000 ($38 × 75,000).

We should also consider the cost of the space used to manufacture the body rhythm monitors. If the manufacturing of the body rhythm monitors is outsourced, it will free up space in the warehouse. There might be an opportunity cost related to this space that should be taken into account in the decision to make or buy. Any opportunity cost would increase the cost of making the units, so, regardless, it would be cheaper to purchase them.

Therefore, ignoring any opportunity cost, from a strictly quantitative perspective it would cost DI $72,500 ($2,922,500 − $2,850,000) less to purchase from SI.

It is important to also consider qualitative factors in your decision. DI needs to consider the ability to control the quality of the monitors purchased and the risk of stock outs that would delay the production of SB and SB2 units. According to the reference checks you performed, there were no concerns with quality and all orders were filled on time. These are positive signs that also support the decision to outsource. However, the references you checked were from customers selected by SI. I advise you to obtain a complete customer list and perform additional reference checks.

The price is currently favourable. You should consider that if you outsource, you lose control over the future cost of the unit. I recommend that if you decide to outsource, you should ensure your price is set for an extended time frame.

The decision to outsource will require laying off the product line supervisor. You should consider the impact this will have on DI's reputation and employee morale.

Lastly, you should consider the fact that DI's bank might not advance the funds necessary to allow for DI's expansion. If this is the case, you may be able to repurpose the production space freed up from outsourcing to expand capacity.

Based on the quantitative and qualitative analyses associated with the make-versus-buy decision, I recommend that you pursue purchasing the required monitors from SI. However, to protect DI, you should have a detailed agreement that stipulates requirements like quality specifications and delivery time frames, as well as significant penalties should SI not fulfill these requirements.

For Assessment Opportunity #6, the candidate must be ranked in one of the following five categories:

Not addressed – The candidate does not address this assessment opportunity.

Nominal competence – The candidate does not meet the standard of reaching competence.

Reaching competence – The candidate prepares a reasonable quantitative analysis or attempts to prepare both a quantitative and a qualitative analysis of the make-versus-buy decision.

Competent – The candidate prepares a reasonable quantitative and qualitative analysis of the make-versus-buy decision and provides a recommendation.

Competent with distinction – The candidate prepares a thorough quantitative and qualitative analysis of the make-versus-buy decision and provides a recommendation.

A competent candidate should prepare a reasonable quantitative analysis of the make-versus-buy decision that considers only relevant costs. The candidate should also consider some of the qualitative factors relevant to the make-versus-buy decision and provide a recommendation on how to proceed. A strong candidate should prepare a complete quantitative analysis of the make-versus-buy decision that considers only relevant costs. The strong candidate should also consider several of the qualitative factors relevant to the make-versus-buy decision and provide a recommendation on how to proceed.

Day 3-3 (Culinary Crawl) (Suggested time 90 minutes)

In April 2016, you treated your spouse to a "date night" of a three-hour "Sophisticated Supper Sampler" tour with Culinary Crawl (CC). The five other couples on the tour were celebrating a special occasion or were tourists. You met Ivy Gilmour, the sole proprietor of CC, who took the group to four high-end restaurants, where you were served a small dinner course. Along the way, she provided interesting details about the history of the buildings, the restaurants, the owners and the food. At the end of the evening, you tipped Ivy and noticed other couples doing the same. Ivy, who had learned that you, CPA, work at a local accounting firm, asked for your business card.

Today is May 9, 2016, and Ivy has come to your office for a meeting:

"First, I need your help determining my business income for my 2015 personal tax return, which was due last week. I've calculated CC's business income but I am not an expert (Appendix I). The only other income I have is the employment income from Cooking Delights Inc. (Appendix II). I have an RRSP contribution of $5,000 and my student loan interest (5%) of $700. A friend told me I could deduct my home office expenses and that I need to have all my house-related receipts. I've summarized my household expenses for the full year (Appendix III). My office takes up one of the ten rooms in my house and I use it daily for CC administrative work.

"I started CC in September 2015. I've taken many culinary classes and a sommelier course at a local college. I also know many owners and chefs and have contracted with four restaurants to be on my tour for one year. The restaurant owners thought this would promote their businesses and fill some seats on quieter nights. It started with my being out every other night, but now I am out almost every night!

"The current tour has been so popular that I'm considering adding either an additional evening tour with different restaurants, or starting a lunch tour. Here are my notes on those options (Appendix IV). I can only add one for now, so please let me know which one you think would be more profitable.

"Can you analyze, from a qualitative perspective, the pros and cons of my business strategy and the environment in which CC operates, since it would help me orient my business?

"The combination of my day job and the tours has been keeping me quite busy. I would love to do the tours full time. I'd like to know how many customers it would take on my current tour to replace my current employment income."

You and Ivy chat about the business operations (Appendix V). Ivy says, "I need to manage my business better, so I have a meeting with a website developer next week. Can you identify some of the control weaknesses in my processes, and suggest functionalities that I should ask to be built into my website to fix these weaknesses? And if you have any other suggestions for other control processes, I am all ears.

"Finally, based on your overall analysis, should I quit my day job?"

APPENDIX I
CALCULATION OF BUSINESS INCOME

September 1 – December 31, 2015
Prepared by Ivy Gilmour

		Note
Sales	$ 24,000	1
Cost of sales – payments to restaurants	(18,000)	2
Computer purchase	(600)	3
Advertising	(2,000)	4
Meals and entertainment	(1,200)	5
Office furniture purchase	(2,500)	3
Office supplies	(600)	
Business insurance (prorated)	(900)	
Interest (18%)	(2,300)	6
Home office	(2,400)	7
	$ (6,500)	

Notes:

1. I charge $100 per person, which I collect in cash at the start of the tour. A few times, a customer hasn't shown up, but I still had to pay the restaurants for their meals.
2. I pay the restaurants a total of $60 per person plus a total in upfront flat fees of $3,000 annually, to guarantee seating in all restaurants.
3. The computer will last for four years, and the office furniture for 10 years.
4. I originally advertised a bit in the newspaper and online, but now manage mostly by word-of-mouth. If I start a new tour or change the restaurants on my current tour, I'll advertise again.
5. These costs are for sampling various restaurants' food selections. As my business's success is dependent on the quality of food and service at the restaurants, I sample three times as many restaurants as I use on the tour.
6. I incurred many expenses upfront and put them on my personal credit cards. As I'm still paying off my student loan and am trying to quickly pay down my mortgage, I haven't managed to pay off my credit cards. I'm not even sure whether I made any of the minimum payments last month.
7. I made an assumption for the household expenses related to the use of my home office.

APPENDIX II
T4 SLIP – 2015

Employer's name – Nom de l'employeur: Cooking Delights Inc.

Canada Revenue Agency / Agence du revenu du Canada

T4

Statement of Remuneration Paid / État de la rémunération payée

Year / Année: 2015

54 Employer's account number / Numéro de compte de l'employeur:

12 Social insurance number / Numéro d'assurance sociale:

Exempt – Exemption 28 CPP/QPP (RPC/RRQ) | EI (AE) | PPIP (RPAP)

10 Province of employment / Province d'emploi: BC

29 Employment code / Code d'emploi:

Box	Description	Amount
14	Employment income – line 101 / Revenus d'emploi – ligne 101	65,000.00
22	Income tax deducted – line 437 / Impôt sur le revenu retenu – ligne 437	20,000.00
16	Employee's CPP contributions – line 308 / Cotisations de l'employé au RPC – ligne 308	2,479.95
24	EI insurable earnings / Gains assurables d'AE	49,500.00
17	Employee's QPP contributions – line 308 / Cotisations de l'employé au RRQ – ligne 308	
26	CPP/QPP pensionable earnings / Gains ouvrant droit à pension – RPC/RRQ	53,600.00
18	Employee's EI premiums – line 312 / Cotisations de l'employé à l'AE – ligne 312	930.60
44	Union dues – line 212 / Cotisations syndicales – ligne 212	450.00
20	RPP contributions – line 207 / Cotisations à un RPA – ligne 207	
46	Charitable donations - line 349 / Dons de bienfaisance - ligne 349	
52	Pension adjustment – line 206 / Facteur d'équivalence – ligne 206	
50	RPP or DPSP registration number / N° d'agrément d'un RPA ou d'un RPDB	
55	Employee's PPIP premiums – see over / Cotisations de l'employé au RPAP – voir au verso	
56	PPIP insurable earnings / Gains assurables du RPAP	

Employee's name and address – Nom et adresse de l'employé

Last name (in capital letters) – Nom de famille (en lettres moulées) First name – Prénom Initial – Initiale

Gilmour, Ivy

Vancouver BC

Other information (see over) / Autres renseignements (voir au verso)

Box – Case	Amount – Montant	Box – Case	Amount – Montant	Box – Case	Amount – Montant

T4 (14)

Protected B when completed / **Protégé B** une fois rempli

Return with T4 Summary – À retourner avec le T4 *Sommaire*

APPENDIX III
SUMMARY OF HOUSEHOLD EXPENSES FOR THE YEAR

Prepared by Ivy Gilmour

Mortgage interest (fixed rate: 3%)	$ 12,000	*
Property taxes	3,500	
House insurance	1,800	
Utilities	6,500	
Internet ($100 per month)	1,200	
Cell phone (of which I use about 50% of the time for CC)	800	
Repairs and maintenance:		
Painting office	500	

* My mortgage is up for renewal soon. The bank is offering a fixed rate of 2.5% or a variable rate of prime plus 1%, both for three years. Prime is currently 1%.

Which one do you think I should choose? Do you have any other advice related to my multiple debts?

APPENDIX IV
EXPANSION OPPORTUNITIES

	Lunch tour	Additional evening tour
Market	▪ Business lunch crowd and tourists	▪ Similar to current tour
Size of tour group expected	▪ Six customers per day from Monday to Friday ▪ For the three weeks before Christmas, this number would probably double	▪ Similar to current tour and on the same days of the week as for current tour
Staffing	▪ I would need to hire a guide at approximately $20 per hour	▪ I would need to hire a guide at approximately $20 per hour
Pricing	▪ I would take customers to three restaurants over two hours, so would set the price at $50 per person ▪ Preliminary restaurant discussions suggest a $25 per person cost of sale, with upfront flat fees totalling $2,000 annually	▪ Same pricing and costing as for current tour
Advertising	▪ Same strategy of initial advertising as for current tour	▪ Same strategy of initial advertising as for current tour
Business insurance	▪ 20% incremental increase	▪ 30% incremental increase

APPENDIX V
DESCRIPTION OF OPERATIONS
AUDIO-RECORDED CONVERSATION WITH IVY

- The current tour is offered every night except Mondays, 50 weeks per year. I am confident that the recently achieved average of 40 customers per week will continue. The $3,000 annual flat fee guarantees 12 seats at each restaurant until 48 hours before the tour. After that, the restaurants can let other customers take those seats.

- To book a tour, customers call my cell phone directly. I scribble down their contact information and tour date on a stack of post-it notes that I carry in my purse. I once had 14 people show up for a tour, so I must not have transferred two names into my manual reservation book. The restaurants were not impressed and everything was delayed that night.

- I call the restaurants 48 hours before a tour to confirm the expected number of customers. There have been a few arguments about this. One restaurant tried to claim that I called after the 48-hour deadline one day, so they wanted to charge for all 12 seats instead of for the seven customers on the tour. Another time, a restaurant claimed that I had said there would be eight customers, but I had told them five. Again, they wanted to charge me for the other three seats.

- On tour nights, customers meet me outside the first restaurant, where I collect the cash payments. I admit that I sometimes mix up the business's money with my personal money. When I return home, it takes extra time to reconcile the cash against my reservation book. I don't worry too much though, as it all ends up in one bank account.

MARKING GUIDE 3-3
CULINARY CRAWL (CC)
ASSESSMENT OPPORTUNITIES

Note: Day 3 of the CFE assesses candidates' technical abilities at the common Core Level. However, the level of judgment and skill expected of candidates is that of an entry-level CPA, a CPA entering the profession.

Assessment Opportunity #1 (Breadth Opportunity)

The candidate calculates Ivy's business income for tax purposes.

The candidate demonstrates competence in Taxation.

CPA Map Competencies:
6.2.1 Assesses general tax issues for an individual (Core – Level B)
6.2.2 Determines income taxes payable for an individual in routine situations (Core – Level B)

Business Income for Tax Purposes

Ivy,

I have calculated your 2015 business income for tax purposes as follows:

		Note
Net loss, as stated originally	$(6,500)	
Adjustments:		
Prepaid portion of annual cost of sales	2,000	1
Computer purchase	600	2
Office furniture purchase	2,500	2
50% of meals and entertainment	600	3
Home office	2,400	4
CCA	(139)	2
Telecommunications	(333)	4
Painting	(500)	4
Home office	(628)	4
Interest on credit cards	?	5
Business income for tax purposes	$ 0	

Notes

The changes I made include the following:

1) You deducted in full the annual flat fee for the restaurant seat guarantee. Although you paid this in 2015, it is good for a full year, so you cannot deduct the entire amount in 2015. The tax system allows for a reserve to be taken if you reasonably expect a service to be provided after year end. For this reason, $1,000 ($3,000 × (4 ÷ 12)) would be deductible in 2015. I have adjusted your income accordingly by adding back the other $2,000 deducted; it can be deducted next year.

2) You deducted in full the amount you spent on capital assets (computer and furniture purchased for your home office). The tax system offers a deduction, but through its capital cost allowance (CCA) system. This means that each asset would be put in the "class" to which it belongs (based on category), and CCA would be taken based on that class's rate.

   I have assumed the computer belongs to class 50, at a rate of 55%, but more information would be needed to know if some of the purchase relates to another class; for example, class 12 (100% rate) for computer application software.

   The furniture belongs to class 8 at a rate of 20%. Because 2015 is the year of purchase, both purchases would be subject to the half-year rule. Since this is the first year of business, the CCA also needs to be pro-rated for the short year (I assumed a business start date of September 1).

   As a result, the purchase price has been added back to net income, and a deduction has been taken for CCA for each item as follows:

   Computer: $600 × 55% × 50% × (122 ÷ 365 days) = $55
   Furniture: $2,500 × 20% × 50% × (122 ÷ 365 days) = $84
   Total: $139

3) While the meals to sample the restaurant food are a legitimate business expense, all meals and entertainment for business purposes are only deductible at 50%. Therefore, 50% of these costs ($1,200 × 50% = $600) has been added back to income.

4) You had some concerns regarding your home office expenses. A deduction is allowed per ITA 18(12) if
   (a) the workspace is the individual's principal place of business; or
   (b) it is used on a regular and continuous basis for meeting clients, customers, or patients of the individual in earning income from business.

   Since you conduct the administrative matters of your business from your home office, a deduction is allowed. However, you should not estimate the amount of household expenses that relate to your business. The amount deducted should be based on actual

expenses incurred, substantiated by receipts. The expenses related to the whole house must be pro-rated by the size of the office compared to the size of your whole house. You have indicated that you use 1 out of 10 rooms. You could use this pro-ration to calculate the amount that is deductible, but using the square footage of the office compared to the square footage of the whole house would be a preferable approach. In addition, because the expenses provided are annual, only the expense related to the four months during which you operated your business would be deductible.

These expenses include the following:

Mortgage interest	$12,000
Property taxes	3,500
Home insurance	1,800
Utilities	6,500
	23,800
	× 1 ÷ 10
	× 4 ÷ 12
	$ 793

The cell phone and Internet would be deductible to the extent that you use them for business rather than personal use. You have indicated that you use the cell phone 50% of the time for business. I have assumed that you use the Internet similarly (although your current operations do not appear to necessitate substantial Internet usage; you will need to confirm the Internet usage for 2015). Again, only 4/12th of the annual expense would be deductible, which is $333 ($1,200 + 800 = $2,000 × 50% = $1,000 × (4 ÷ 12)).

Finally, the cost of $500 for painting the office would be fully deductible, since it relates 100% to your business in 2015.

You will notice that I deducted only $628 of the home office expenses, since these expenses cannot increase or create a loss. You can, however, carry forward the difference of $165 to deduct against business income in future years.

5) You have incurred many business expenses upfront and put them on your personal credit cards. The interest charges on these credit cards may not strictly relate to business expenses, since you likely also have personal charges on your credit cards. Therefore, a portion of these interest charges might not be deductible. You will need to go through your credit card statements and make sure the interest charges deducted for business expenses are documented and traceable back to those expenses.

Tips

One important thing of note relates to tips. I noticed that your calculation of revenue seemed to include only the $100 price of the tour. Many customers (at least on my tour) tipped you. Per the Income Tax Act, tips should be included in income. If you have not kept track of your tips, you should include your best estimate of them in your 2015 tax return. From this point forward, you should be tracking the tips you receive.

Culinary Classes and Sommelier Course

You have not deducted any of the expenses related to the culinary classes and sommelier course you have taken. Since the knowledge you acquired in these courses is what allows you to run interesting tours, they were incurred to generate revenue. Therefore, you should consider deducting the costs incurred to register in these courses.

Filing Deadline

You were also concerned about the filing deadline of April 30. Because you had a self-employed business in 2015, your 2015 T1 is not due to CRA until June 15, 2016, so you are not late.

If a balance was due upon filing, it would have been due on April 30. However, you may be in a refund position. The business did not generate taxable income, and your only other source of income is your employment with Cooking Delights Inc. Typically, employers withhold and remit sufficient tax on behalf of their employees for the employment income earned there, assuming the basic tax credits apply (which they should, since this is your only source of income). Also, you have an additional deduction for the student loan interest and your RRSP contribution, which would help lower your taxable income.

Nevertheless, it is a good idea to compile your full return and ascertain whether you owe anything, especially since you should add in the income from the tips. If you do, pay that balance as soon as possible to avoid any additional interest charges.

GST Registration

You must register for GST when selling goods or services, unless you qualify as a small supplier. If your total sales of goods and services exceed $30,000 in the current calendar quarter or over the preceding four consecutive calendar quarters, you no longer qualify as a small supplier. Your total sales for the four months ended December 31, 2015, were $24,000. At this rate, it is likely your sales for Q4 of 2015 plus Q1 of 2016 exceeded $30,000; therefore, you were required to register for GST on April 30 (30 days after the quarter in which you ceased to be a small supplier). I recommend registering immediately and charging GST on all future sales.

For Assessment Opportunity #1, the candidate must be ranked in one of the following five categories:

Not addressed – The candidate does not address this assessment opportunity.

Nominal competence – The candidate does not meet the standard of reaching competence.

Reaching competence – The candidate attempts a calculation of Ivy's business income for tax purposes.

Competent – The candidate provides a reasonable calculation of Ivy's business income for tax purposes and explains the reasons for the tax treatment.

Competent with distinction – The candidate provides a reasonable calculation of Ivy's business income for tax purposes, explains the reasons for the tax treatment, and discusses other tax implications.

A competent candidate is expected to calculate Ivy's business income for tax purposes, incorporate several of the necessary adjustments, and briefly explain the adjustments. Strong candidates should provide a strong explanation of the adjustments made.

Assessment Opportunity #2 (Depth Opportunity)

The candidate calculates the profitability of the two expansion opportunities.

The candidate demonstrates competence in Management Accounting.

CPA Map Competencies:
3.2.2 Prepares, analyzes, or evaluates operational plans, budgets, and forecasts (Core – Level A)

I have analyzed the two opportunities you have put forward for expansion: the lunch tour and an additional evening tour. I have assumed the tours will run only 50 weeks a year, like the current tour. That would mean 250 days for the lunch tour (50 weeks × 5 days a week). Fifteen of those days are over the Christmas season lead-up, which has higher demand, and 235 days would have the expected six people per tour. I have also assumed that the $20/hour cost you quoted for the guide was the full cost (so either a contractor at $20/hour or an employee, in which case the $20 includes the employer portion of CPP and EI). Finally, I have assumed that the hours required for a guide (two hours for the lunch tour, three hours for the evening tour) represent the full amount of time compensated. If the guide has to arrive early to accept payment or gets paid for learning the factual information about the restaurants, buildings, and such, this has not been factored in and would decrease the profit from these initiatives.

	Note	**Lunch Tour**	**New Evening Tour**
Regular revenue	1	$70,500	$200,000
Holiday revenue	2	9,000	
		79,500	200,000
Variable costs:			
Food	3	39,750	120,000
Labour	4	10,000	18,000
Contribution margin		29,750	62,000
New annual fixed costs:			
Flat charge	5	2,000	3,000
Restaurant sampling	6	900	1,200
Advertising	7	2,000	2,000
Increase in insurance	8	540	810
		5,440	7,010
Profit		$24,310	$ 54,990

Note 1:

Lunch tour: $50 × 6 customers × 235 days

New evening tour: $100 × 40 customers × 50 weeks

Note 2:

Lunch tour: $50 × 12 customers × 15 days

Note 3:

Lunch tour: 50% of revenue (50% × $79,500)

New evening tour: 60% of revenue (60% × $200,000)

Note 4:

Lunch tour: $20/hour × 2 hours/day × 5 days/week × 50 weeks/year

New evening tour: $20/hour × 3 hours/day × 6 days/week × 50 weeks/year

Note 5:

Lunch tour: Given

New evening tour: Same as current tour

Note 6:

Lunch tour: 3 restaurants × 3 samplings × $100

New evening tour: 4 restaurants × 3 samplings × $100

Note 7:

Lunch tour: Same as current tour

New evening tour: Same as current tour

Note 8:

Lunch tour: $900 × (12 ÷ 4) × 20%

New evening tour: $900 × (12 ÷ 4) × 30%

As you can see, the additional evening tour is forecasted to generate more profit than the lunch tour, mainly due to the higher contribution margin. That being said, both tours are profitable, and should you see yourself having time or capacity to add the lunch tour, I advise you to do so.

For Assessment Opportunity #2, the candidate must be ranked in one of the following five categories:

Not addressed – The candidate does not address this assessment opportunity.

Nominal competence – The candidate does not meet the standard of reaching competence.

Reaching competence – The candidate attempts a calculation of the profitability of the two expansion opportunities.

Competent – The candidate provides a reasonable calculation of the profitability of the two expansion opportunities and concludes as to which one is the most profitable.

Competent with distinction – The candidate provides a thorough calculation of the profitability of the two expansion opportunities and concludes as to which one is the most profitable.

A competent candidate is expected to calculate the profit of both the lunch tour and the additional evening tour, incorporating several of the case facts provided. The candidate is also expected to provide a conclusion, based on calculations prepared, that is consistent with his or her analysis. A strong candidate should incorporate more case facts in the analysis before providing a supported recommendation.

Assessment Opportunity #3 (Depth Opportunity)

The candidate calculates the number of customers required on Ivy's current tour to replace her current employment income.

The candidate demonstrates competence in Management Accounting.

CPA Map Competencies:
3.5.1 Performs sensitivity analysis (Core – Level A)

As requested, I have calculated the number of customers needed on your current tour to replace your employment income of $65,000.

CM	100-60	40	
Fixed costs:			
	Restaurant charge	$ 3,000	
	Depreciation		
	Computer	0	Nothing included because this is a sunk cost
	Furniture	0	Nothing included because this is a sunk cost
	Advertising	2,000	To advertise the future tours with new restaurants
	Meals and entertainment	1,200	Incurred annually when change restaurants on tour
	Office supplies	1,800	$600 × (12 ÷ 4)
	Insurance	2,700	$900 × (12 ÷ 4)
	Home office	0	Irrelevant – most incurred anyway, and painting office is non-recurring
	Employer CPP	2,480	Per T4 – would have to pay employer portion as well
	Website	?	
		13,180	
	Salary	65,000	Per T4
	Less: EI	(931)	Per T4 – would no longer have to pay this
	Less: Union dues	(450)	Per T4 – would no longer have to pay this
		$76,799	

$$\frac{76,799}{40} = 1,920 \text{ customers annually}$$

Your current expected customer level for the year is 2,000 customers (40 customers/week × 50 weeks). If you reach that level, you will have met your goal of replacing your employment salary, with a buffer of 80 customers (which is only around 4%). Based on this, you would be able to do the tours full time.

That being said, we need to keep in mind that the numbers above and your expectation of weekly customers are estimates and, therefore, uncertain.

Note: There were alternate approaches to this calculation that were acceptable, such as an analysis that would compare Ivy running the evening tour while working full-time for Cooking Delights Inc., to Ivy running the evening tour only, without working full-time. These analyses would exclude the fixed costs related to the evening tour, since they would be incurred in both situations and, therefore, be irrelevant costs.

For Assessment Opportunity #3, the candidate must be ranked in one of the following five categories:

Not addressed – The candidate does not address this assessment opportunity.

Nominal competence – The candidate does not meet the standard of reaching competence.

Reaching competence – The candidate attempts a calculation of the number of customers that would be required to replace Ivy's current employment income.

Competent – The candidate provides a reasonable calculation of the number of customers that would be required to replace Ivy's current employment income.

Competent with distinction – The candidate provides a thorough calculation of the number of customers that would be required to replace Ivy's current employment income and compares it to her current expected number of customers.

A competent candidate is expected to calculate the number of customers needed on Ivy's current tour to replace her current employment income. The candidate should use her salary and the contribution margin of $40 to do so. Strong candidates should incorporate some of the fixed costs into their calculation and should also compare the number of customers required to the current number of customers to see whether it is realistic to consider replacing Ivy's current employment income with her current tour.

Assessment Opportunity #4 (Breadth Opportunity)

The candidate provides an analysis of the pros and cons of the business strategy and environment in which CC operates.

The candidate demonstrates competence in Strategy and Governance.

CPA Map Competencies:
2.3.2 Evaluates the entity's internal and external environment and its impact on strategy development (Core – Level B)

Internal Environment

Pros

- You have a strong passion for this kind of business, which you have shown through your dedication to this venture. You are currently spending almost all of your free time running this business, which shows a commitment to its success.
- You are knowledgeable about the industry. You have taken many culinary classes, you currently are employed in that field, and you have also taken a college course to become a sommelier. This helps in multiple domains of the business. First, you are better equipped than many to sample, judge, and select the best restaurants for your tours. In addition, when you guide the tour, you can add details about the food, wine, and restaurants, educating your customers and adding value to the experience.
- You have a network in the food industry. You know many restaurant owners and chefs, which made it easy to approach them with your business plan and may again allow for easier contracting when adding to your tour selection or changing the restaurant offerings on your tours.
- CC has already built a good reputation. You noted that you only needed to advertise at the beginning, and since then the business has grown through word of mouth, which is a sign of customers' appreciation.
- You are the key driver of your business – people might like the tours because of all of the information you are giving them on the history of the buildings, the restaurants, the owners, and the food. You have taken many culinary classes and a sommelier course and are very knowledgeable, which might be your competitive advantage. You might not be able to pass this on to employees you hire to run the tours in the future, which could limit CC's growth.
- Your business provides a special outing for people. You could try to capitalize on occasions like birthdays, anniversaries, graduations, and holidays by running promotions related to these milestones and events.
- As you mention, there is plenty of room for expansion: additional times of day, new tours, and maybe eventual expansion into different cities across Canada and the United States.
- Your business provides a value proposition for restaurants in the area. It would be worthwhile to have an analysis done with the current restaurants to see if their hope of

promoting their businesses and filling seats on quiet nights has indeed panned out. This could be used to convince other restaurants to be a part of future tours.
- Currently, obtaining financing is fairly cheap, since interest rates are low. You have some debt you are struggling to pay, so I do not recommend obtaining any more at this time, but this may be useful in the future (if it holds) to help you expand further.

Cons

- You have limited business knowledge. You have never run your own business before. You are struggling to keep track of the business administratively, which has resulted in lost revenue and extra costs.
- Your current business model is very time consuming and is overtaking your personal life. You may want to consider whether you need to go on every tour. As you mentioned, you could hire someone to go on the additional tour; you could also hire someone fairly inexpensively to alleviate some of the burden of the current tour.
- Your business is highly substitutable. Customers could just visit the restaurants themselves, without paying the "premium" for the guided tour, or could do a host of other activities for date night or as tourists.
- There are minimal barriers to entry to this type of business. As you mentioned, it was easy for you to get this business going, and that would likely be the case for others who try to mimic your business (although they may not have the same network or education that you have). There are no legal barriers, and the upfront fixed costs are fairly low. Also, if you hire someone to lead the tour, they could eventually set up their own company and take away your business. There are no unique skills required except knowledge of food, which could easily be learned. But it is the hired person then who would have the connection with the customers instead of you.
- The restaurants have a lot of power, and you rely heavily on them to provide good service and good food during a tour. CC's reputation could be easily damaged if one of the restaurants failed to "perform" at the expected level.
- As you have noted, customers are likely reluctant to pay to go on the same tour again. As a result, you would need to continuously change restaurants to keep things fresh or be continuously engaging with new customers, which is much more work.
- The business model assumes the same level of interest throughout the year and for six days each week. However, the restaurant business is seasonal, and during the busy season they may not want to offer space for your tour, which would affect your revenue.

For Assessment Opportunity #4, the candidate must be ranked in one of the following five categories:

Not addressed – The candidate does not address this assessment opportunity.

Nominal competence – The candidate does not meet the standard of reaching competence.

Reaching competence – The candidate provides a balanced analysis of some of the pros and cons of the business strategy and the environment in which CC operates.

Competent – The candidate provides a balanced analysis of several of the pros and cons of the business strategy and the environment in which CC operates.

Competent with distinction – The candidate provides a thorough balanced analysis of the pros and cons of the business strategy and the environment in which CC operates.

A competent candidate is expected to analyze the pros and cons of Ivy's business strategy and the environment in which CC operates. The candidate should provide some insights that are beyond a repetition of case facts and that would be helpful to Ivy. A strong candidate should provide a thorough analysis of the pros and cons and integrate the analysis with case facts.

Assessment Opportunity #5 (Breadth Opportunity)

The candidate provides an analysis of the current control weaknesses, suggests functionalities that could be built into the website, and suggests other control processes to fix these weaknesses.

The candidate demonstrates competence in Assurance.

CPA Map Competencies:
4.1.2 Evaluates the information system, including the related processes (Core – Level B)

Revenue

You currently accept only cash payments at the beginning of the tour. This has allowed some customers who have reserved a spot to not show up without having to pay for their reserved spot. This is a lost revenue opportunity, since not only do you not collect revenue from the customers who cancelled, but they also may have taken the spot of another customer who would have shown up if the tour was at capacity. In addition, because the restaurants are informed of the number of customers 48 hours in advance of the tour, they are still charging you $60. Based on the financial statements, it looks as though it has occurred about 10 times (revenue suggests $24,000 ÷ 100 = 240 customers, versus $18,000 − $3,000 flat fee ÷ 60 = 250 customers).

Although there are other ways to handle this issue, the website could help by requiring customers to reserve a spot online and pay for their spot in advance. At a minimum, you could ask customers for a deposit that would cover the $60 in fees to be reimbursed to the restaurants in case of cancellation so that you would not lose money. This would reduce the amount of no-shows, and in the event that they were to occur, CC would have the money from the customer to pay the restaurant. The website developer would need to build in a secure payment method that verifies credit card information before confirming the reservation, confirms email addresses so customers can be contacted if need be, and protects customers' data. However, you should know that accepting credit card payments would come with a 2% to 3% administrative charge by the credit card company, which would reduce your profit.

Reservations

Currently, the customers call you on your cell phone to make a reservation. Given that this could occur at any time of the day, you may not be in your office and might scribble the details on Post-it notes that you would later transfer to a manual reservation book.

This process is susceptible to lost information (you may lose the paper on which you made the note) or error (you may transpose the reservation onto the wrong date, etc.). This has resulted in more people arriving on the tour than you confirmed with the restaurant, which causes delays at the restaurant (potentially causing a reduction in quality of the service and food) and may harm your relationships with the restaurants.

There are several ways a website could be of use. First of all, the online reservation process that the customer initiates could create an electronic database, indicating information like the date and time of the tour, the name of the tour (if you add on additional tours), the names of the customers, and their email or phone number. This would eliminate the need to book reservations through calls on your cell phone at all times of the day and would reduce or eliminate errors made in transposing the information into another form. You should provide the fields of information you wish to have to the website developer.

In addition, the website could be designed to allow only 12 people to reserve for a particular tour, avoiding the trouble and embarrassment that comes from overbooking, both from the customer's point of view and the restaurant's.

The database of bookings could also be used to help reconcile your revenue, although reconciling difficulties would largely be mitigated by implementing advanced credit card payments.

You may want to publish a no-cancellation policy on the website, so that people won't ask for a refund within 48 hours of a tour, or specify that a service fee will apply.

The website should be able to generate a list of customers, their contact information, and the date of the tour they booked so that you can check their attendance when you meet with the customers on the tour date.

Restaurant Notifications

There have been disagreements in the past year regarding the number of customers expected at a restaurant and at what time the notification was provided to the restaurant. These are important elements since they both affect the amount the restaurants will charge CC.

The main source of the disagreements seems to occur because the notification was done by phone call, leaving no verifiable documentation. The website should thus be set up to provide this documentation.

For example, the website could be programmed to automatically email all the restaurants 48 hours before each tour to notify them of the number of customers who have reserved a spot, or they could have their own access to see numbers at any time. You could be copied on the email so you have it for your records as well. The website should also be programmed to no longer accept reservations for that tour date from that moment on. The emails would also be date- and time-stamped.

This would alleviate the need for you to remember to call all the restaurants almost every day and would ensure that the news reached them on time. It could also be used to verify if there is a discrepancy between the number of customers in attendance and the number booked. Invoices received from the restaurants should also be compared against these records to make sure they are correct.

Business versus Personal Assets (not related to website)

You have mentioned that you struggle sometimes to know which money came from operating your business versus which was personal. Given you are a sole proprietor, it is all your money, and keeping it separate is not required from a legal perspective as long as you keep proper records of your sales and expenses.

Keeping the business finances separate from your personal finances may help you with your record keeping. The online payments may help prevent mixing up the cash in your purse between personal money and business revenues. Instead, credit card companies would deposit the funds into a specified account. You might want to consider opening a separate bank account into which the credit card companies can deposit those funds and from which you can pay the business expenses. There is an added cost to having a separate business account, but the cost would likely be warranted. Tip money would still be paid in cash at the end of the tour, but as suggested earlier in this memo, it is important for you to document these amounts for tax purposes. If you are not keeping the tips physically separate, it will be critical to note down the tip amounts in a ledger.

You also are putting business expenses on your personal credit cards. Again, while there is nothing specifically wrong with doing so, it can make tracking your business expenses more challenging. In addition, the credit card balances are incurring interest, but some of those balances would relate to business expenses and some to personal expenses. It would be complicated to calculate the amount belonging to each. Only the interest related to your business should be deducted on your tax return.

It is not clear to me what system, if any, you are using to track your business activity. Do you have accounting software? Are you trying to do this with manual records or Excel? If you plan on growing and expanding, a more sophisticated system is likely required. Although perhaps too sophisticated at this stage, it might be worthwhile to inquire with the website developer if any of his or her past website designs have been set up to integrate with accounting software.

For Assessment Opportunity #5, the candidate must be ranked in one of the following five categories:

Not addressed – The candidate does not address this assessment opportunity.

Nominal competence – The candidate does not meet the standard of reaching competence.

Reaching competence – The candidate identifies some of the control weaknesses and provides recommendations to address the weaknesses.

Competent – The candidate discusses some of the control weaknesses and provides recommendations, using the website where possible, to address the weaknesses.

Competent with distinction – The candidate discusses several of the control weaknesses and provides recommendations, using the website where possible, to address the weaknesses.

A competent candidate is expected to address some areas of weakness and explain why they are problematic (their implications). The candidate should provide a recommendation, which involves the use of the website where possible, as requested by the client. A strong candidate should simply address a greater number of weaknesses to provide Ivy with a more complete analysis.

Assessment Opportunity #6 (Breadth Opportunity)

The candidate discusses the deficiency in Ivy’s current debt structure and analyzes which mortgage renewal to pursue.

The candidate demonstrates competence in Finance.

CPA Map Competencies:
5.2.3 Evaluates sources of financing (Core – Level B)

You currently have a running debt on your credit cards of approximately $38,000 ($2,300 ÷ 18% × (12 ÷ 4 months) = $38,333). You also still have your student loan, which is around $14,000 ($700 ÷ 0.05), and a mortgage on your home of $400,000 ($12,000 ÷ 0.03). You are aggressively paying off your mortgage, which normally I would say is a great thing, but in your case, the mortgage is the debt with the lowest interest rate at 3%, versus 5% for the loan and 18% for the credit cards. You would be much better off paying the credit card debt instead of the mortgage. In addition, you contributed $5,000 to an RRSP last year, which again is usually a great thing, but given that you are only in the second tax bracket, the tax savings are not as high as they would otherwise be (i.e., if you were in the third or fourth bracket). The money would be better used to

pay off your debts, in particular the $12,775 balance on your credit cards. You should always make at least the minimum payment required on your credit cards, since failure to do so (as happened last month, when you think you may have not made a payment) can harm your credit rating.

You mentioned that your mortgage is coming up for renewal soon. This would provide an amazing opportunity to consolidate your debt. Instead of renewing for just the outstanding mortgage of $400,000, you could renew for $452,000 and use the additional $52,000 to pay off the student loan and credit card debt, assuming you have equity available on your property to do so. You would still have the same amount of debt, but it would all be at a lower interest rate (either 2.5% fixed or prime + 1%). It would, however, be preferable if you renew your mortgage before you quit your job, if you decide to do so, since the bank will likely look for a stable source of revenue (your current salary from Cooking Delights Inc.) before increasing your outstanding balance.

As to whether a fixed or variable rate is better, that is highly dependent on where the prime rate is going to go in the next three years. If the prime rate stays low (around 1%), you would be better off with the variable rate mortgage. If the prime rate increases above 1.5%, you would be better off with the fixed rate mortgage. Given the rates are so low right now, you do not risk losing much by going with the fixed rate mortgage. In the worst-case scenario, if prime drops to 0% and the variable rate is 1%, this would amount to $6,780 ($452,000 × (2.5% − 1%)) of additional interest paid annually under the fixed rate.

Interest rates have also been low for a long while. If history repeats itself (and it usually does), interest rates are likely going to rise again. I recommend choosing the fixed rate mortgage and increasing the mortgage amount to $452,000 to pay off the credit card debt and student loan.

For Assessment Opportunity #6, the candidate must be ranked in one of the following five categories:

Not addressed – The candidate does not address this assessment opportunity.

Nominal competence – The candidate does not meet the standard of reaching competence.

Reaching competence – The candidate discusses the deficiency in Ivy’s current debt structure OR analyzes which mortgage renewal to pursue.

Competent – The candidate discusses the deficiency in Ivy’s current debt structure AND analyzes which mortgage renewal to pursue.

Competent with distinction – The candidate discusses several deficiencies in Ivy’s current debt structure and analyzes which mortgage renewal to pursue.

A competent candidate is expected to discuss ways for Ivy to manage her debt and analyze which mortgage renewal to pursue. The BOE is looking for candidates to provide practical advice. A strong candidate should discuss several ways to manage Ivy's debt, with a strong analysis of her mortgage renewal.

Assessment Opportunity #7 (Breadth Opportunity)

The candidate provides an overall recommendation regarding whether Ivy should quit her day job, integrating the various analyses done.

The candidate demonstrates competence in Governance and Strategy.

CPA Map Competencies:
2.3.3 Evaluates strategic alternatives (Core – Level B)

I know you are excited about the prospect of quitting your job. There are many factors that suggest you could do so:

- Quantitatively, the business appears to be able to meet the requirement of replacing your salary, plus you could add an evening tour, increasing that income further.
- Qualitatively, you bring many strong attributes to the business, and the environment offers several opportunities on which you could capitalize.

The evening tour could be added at any time without affecting your current employment. It helps for you to test the market receptivity for more tours. The only drawback is that the hired person may be able to run their own business, since the barriers to entry are low and the hired person would develop the connections and a reputation with the customers.

However, your business is new, and I'm not certain if the projections provided have any foundation other than your hopes or gut feeling. The environmental threats are significant, especially if a competitor chooses to enter the market. You also have some debt (credit cards and student loan) that you need to pay off, and having a stable income from employment would be highly valuable until you do so.

I suggest holding off on quitting your day job for now, but I think you should continue to operate CC since it does appear to have significant potential. I recommend pursuing the additional evening tour and training another guide to run it. You should also train a guide to go on your current tour to reduce the amount of time you have to dedicate to the business. Your time would be better served maintaining relationships with current restaurants, building relationships with new restaurants, improving your controls and the administrative side of your business, and getting the website up and running.

Customers may like the food tour because it is led by you. If it is led by a hired guide, will the customers still be interested? You are the key driver of your business, with all of your knowledge of the restaurants, food, and even the sightseeing done within the tour. Hiring a guide to run the

evening tour now, to test it out before quitting your job, may be a good idea so that you can see if the business will be affected by the hired guide.

Once you have paid off your debt and your business has been in operation longer (and you can have more faith in its continuance), we can re-evaluate your desire to make this your full-time job.

For Assessment Opportunity #7, the candidate must be ranked in one of the following five categories:

Not addressed – The candidate does not address this assessment opportunity.

Nominal competence – The candidate does not meet the standard of reaching competence.

Reaching competence – The candidate integrates more than one analysis to support a conclusion on whether Ivy should quit her job.

Competent – The candidate integrates a few analyses to support a conclusion on whether Ivy should quit her job.

Competent with distinction – The candidate integrates several analyses to support a conclusion on whether Ivy should quit her job.

A competent candidate is expected to draw on the quantitative and qualitative analyses performed throughout their response to provide Ivy with a supported conclusion on whether it is a good idea to quit her full-time employment to pursue her business. A strong candidate should provide a more in-depth analysis, integrating a greater number of analyses performed in his or her response.

APPENDIX E

RESULTS BY ASSESSMENT OPPORTUNITIES FOR DAY 2 AND DAY 3

THE LEVEL 2 DEPTH TEST (FR/MA)

FINANCIAL REPORTING:

Day 2 Common		NA	NC	RC	C	CD	C+CD
AO1	Revenue Recognition	3%	7%	19%	61%	10%	**71%**
AO2	Warranty – Cost of Sales	9%	11%	33%	43%	4%	**47%**
AO3	Lawsuits	15%	15%	50%	17%	3%	**20%**
AO4	Development Costs	2%	11%	21%	58%	8%	**66%**
AO5	Covenant and Borrowing Base Recalculation	2%	8%	44%	42%	4%	**46%**
AO6	Goodwill	12%	31%	33%	22%	2%	**24%**
Day 3 – Q2 Dogani							
AO1	Land Exchange	1%	25%	38%	31%	4%	**35%**

MANAGEMENT ACCOUNTING:

		NA	NC	RC	C	CD	C+CD
Day 3 – Q1 Play Canada Inc.							
AO 1	Pricing alternatives	1%	6%	29%	59%	5%	**64%**
AO 2	Outsourcing – Quantitative	0%	12%	42%	36%	10%	**46%**
Day 3 – Q2 Dogani							
AO 6	Make versus Buy	1%	8%	60%	23%	8%	**31%**
Day 3 – Q3 Culinary Crawl							
AO 2	Expansion options	2%	12%	26%	33%	27%	**60%**
AO 3	Number of customers	11%	9%	20%	48%	12%	**60%**

THE LEVEL 3 DEPTH TEST ROLES (DAY 2)

Audit and Assurance		Papers	NA	NC	RC	C	CD	C+CD
AO7	**Engagement issues**	3776	0%	11%	43%	43%	3%	**46%**
AO8	**Risk**	3776	0%	12%	25%	58%	5%	**63%**
AO9	**Materiality & Audit Approach**	3776	0%	4%	36%	56%	4%	**60%**
AO10	**Analytical Review**	3776	3%	27%	23%	42%	5%	**47%**
AO11	**Procedures**	3776	0%	16%	22%	53%	9%	**62%**
AO12	**Internal controls**	3776	1%	8%	27%	58%	6%	**64%**
AO13	**Reports**	3776	1%	14%	49%	33%	3%	**36%**

Finance		Papers	NA	NC	RC	C	CD	C+CD
AO7	**Financial performance**	228	1%	7%	26%	54%	12%	**66%**
AO8	**Financial Position**	228	0%	11%	46%	41%	2%	**43%**
AO9	**Capitalized Cash Flow Value**	228	4%	15%	14%	50%	17%	**67%**
AO10	**Transaction-based Value and overall summary**	228	2%	13%	34%	48%	3%	**51%**
AO11	**Fiberglass Tank Project-Qualitative**	228	3%	12%	31%	50%	4%	**54%**
AO12	**Fiberglass Tank Project-Quantitative**	228	2%	9%	22%	58%	9%	**67%**
AO13	**Suggestions on Improving Liquidity Performance**	228	11%	14%	23%	44%	8%	**52%**
AO14	**Financing options**	228	5%	11%	19%	57%	8%	**65%**

THE LEVEL 3 DEPTH TEST ROLES (DAY 2)

Performance Management		Papers	NA	NC	RC	C	CD	C+CD
AO7	**Situational Analysis-Quantitative**	512	0%	10%	38%	41%	11%	**52%**
AO8	**Situational Analysis-Qualitative**	512	5%	9%	28%	50%	8%	**58%**
AO9	**Cost Allocation**	512	1%	5%	26%	59%	9%	**68%**
AO10	**Pricing for fiberglass tanks**	512	1%	7%	33%	30%	29%	**59%**
AO11	**Prioritize Management Initiatives**	512	1%	12%	36%	37%	14%	**51%**
AO12	**Strategic Recommendations**	512	3%	20%	20%	45%	12%	**57%**

Taxation		Papers	NA	NC	RC	C	CD	C+CD
AO7	**Calculates 2015 Year-End Taxes Payable**	149	0%	1%	30%	62%	7%	**69%**
AO8	**SR&ED and tax implications**	149	3%	23%	34%	38%	2%	**40%**
AO9	**Options for Legal structure of New Fiberglass Tank Business**	149	5%	10%	32%	46%	7%	**53%**
AO10	**Estimate Corporate Income Resulting from Liquidation**	149	3%	21%	36%	37%	3%	**40%**
AO11	**Estimate After Tax Proceeds, CDA & RDTOH**	149	8%	8%	27%	40%	17%	**57%**
AO12	**Estimate After Tax Proceeds for Children on Liquidation**	149	7%	20%	35%	30%	8%	**38%**
AO13	**Tax Issues Related to Lou's Death**	149	1%	15%	33%	44%	7%	**51%**
AO14	**Estimate Tax Liability on death**	149	2%	19%	14%	54%	11%	**65%**

THE LEVEL 4 BREADTH TEST (BY COMPETENCY AREA)

Financial Reporting		NA	NC	RC	C	CD	RC+C+CD
Day 2 Common							
AO1	**Revenue Recognition**	3%	7%	19%	61%	10%	**90%**
AO2	**Warranty – Cost of Sales**	9%	11%	33%	43%	4%	**80%**
AO3	**Lawsuits**	15%	15%	50%	17%	3%	**70%**
AO4	**Development Costs**	2%	11%	21%	58%	8%	**87%**
AO5	**Covenant and Borrowing Base Recalculation**	2%	8%	44%	42%	4%	**90%**
AO6	**Goodwill**	12%	31%	33%	22%	2%	**57%**
Day 3 – Q2 Dogani							
AO1	**Land Exchange**	1%	25%	38%	31%	4%	**73%**

Management Accounting		NA	NC	RC	C	CD	RC+C+CD
Day 3 – Q1 Play Canada Inc.							
AO1	**Pricing alternatives**	1%	6%	29%	59%	5%	**93%**
AO2	**Outsourcing-Quantitative**	0%	12%	42%	36%	10%	**88%**
Day 3 – Q2 Dogani							
AO6	**Make versus Buy**	1%	8%	60%	23%	8%	**91%**
Day 3 – Q3 Culinary Crawl							
AO2	**Expansion options**	2%	12%	26%	33%	27%	**86%**
AO3	**Number of customers**	11%	9%	20%	48%	12%	**80%**

THE LEVEL 4 BREADTH TEST (BY COMPETENCY AREA)

Strategy and Governance		**NA**	**NC**	**RC**	**C**	**CD**	**RC+C+CD**
Day 3 Q1-AO3	**Outsourcing-Qualitative**	1%	6%	16%	60%	17%	**93%**
Day 3 Q3-AO4	**Pros and Cons of Strategy**	13%	17%	14%	40%	16%	**70%**
Day 3 Q3-AO7	**Overall Recommendation**	14%	26%	34%	23%	3%	**60%**

Audit and Assurance		**NA**	**NC**	**RC**	**C**	**CD**	**RC+C+CD**
Day 3 Q2-AO3	**Risk Assessment**	0%	18%	24%	50%	8%	**82%**
Day 3 Q2-AO4	**Audit Approach and Materiality**	0%	13%	25%	49%	13%	**87%**
Day 3 Q3-AO5	**Controls**	2%	6%	32%	45%	15%	**92%**

Finance		**NA**	**NC**	**RC**	**C**	**CD**	**RC+C+CD**
Day 3 Q1-AO6	**Investment Options**	2%	11%	28%	55%	4%	**87%**
Day 3 Q2-AO2	**Information for the Bank**	4%	19%	34%	35%	8%	**77%**
Day 3 Q3-AO6	**Debts**	17%	12%	33%	37%	1%	**71%**

Taxation		**NA**	**NC**	**RC**	**C**	**CD**	**RC+C+CD**
Day 3 Q1-AO4	**Taxation of the House**	11%	12%	34%	40%	3%	**77%**
Day 3 Q1-AO5	**Deduction of Moving Expenses**	3%	9%	50%	33%	5%	**88%**
Day 3 Q2-AO5	**Taxation Issues**	3%	12%	32%	41%	12%	**86%**
Day 3 Q3-AO1	**Calculation of Business Income**	1%	17%	35%	29%	18%	**82%**

APPENDIX F

BOARD OF EXAMINERS' COMMENTS ON DAY 2 AND DAY 3 SIMULATIONS

BOARD OF EXAMINERS' COMMENTS ON DAY 2 SIMULATION

Paper/Simulation:	**Day 2 (TankCo) – Role Case COMMON REQUIREDs**
Estimated time to complete:	300 minutes
Simulation difficulty:	Average
Competency Map coverage:	Common AOs (6 Assessment Opportunities)

Evaluators' comments by COMMON Assessment Opportunity (AO) for all roles

AO#1 (Revenue Recognition)

Candidates were asked to review the draft financial statements, discuss any accounting issues, and propose any necessary adjusting entries. Note 7 to the financial statements supplied candidates with information on a sales contract with Goldie Corp to manufacture four commercial tanks. Candidates were told that, as at year end, three of the four tanks had been completely manufactured and the remaining tank was 90% complete. However, only one of the tanks had been delivered to the customer because the customer had asked TankCo to hold onto the other tanks. The completed tanks were insured by the customer. TankCo had only collected payment for the tank that had been delivered and, therefore, had only recognized one tank in revenue at year end. To demonstrate competence, candidates had to discuss whether the revenue related to the other two completed tanks, which were still in TankCo's possession, should be recognized in revenue using the criteria provided in the *Handbook* as well as case facts. Candidates also had to calculate the adjustment to be made to the financial statements to correct the situation.

Candidates performed well on this AO. Most candidates were able to use the case facts provided to realize that the current accounting treatment was not appropriate because the performance criteria for revenue recognition in the *Handbook* (ASPE) were met for more than just the one tank. Most candidates were also able to provide a reasonable adjusting entry.

Strong candidates clearly recognized that this was a bill-and-hold situation and went directly to the paragraph in the *Handbook* that provides guidance on this type of transaction. They also provided a more complete set of journal entries, adjusting the cost of goods sold and inventory, in addition to revenue and accounts receivable. They also discussed the recognition of the revenue for the tank that was 90% complete.

Weak candidates sometimes jumped right to a conclusion and calculation, without first analyzing the situation and explaining why the accounting treatment was wrong, and failing to use relevant *Handbook* criteria. Many weak candidates struggled to provide a reasonable adjusting entry to correct the situation.

AO#2 (Warranty – Cost of Sales)

Candidates were asked to review the draft financial statements, discuss any accounting issues, and propose any necessary adjusting entries. Note 8 to the financial statements supplied candidates with information on some lower-quality tanks that were produced by TankCo during a period when replacement workers were used due to a strike by TankCo's unionized employees. Candidates were told that, during that period, 800 residential tanks were manufactured and shipped, 32 of which had already been replaced at a cost of $400 per tank. Management believed that another 50 tanks might be defective and had committed to its distributors to replace any tanks with manufacturing defects for a period of one year after purchase. No amount had been accrued for these tanks in the financial statements. To demonstrate competence, candidates were expected to discuss whether TankCo should accrue the cost of replacing the tanks using appropriate *Handbook* criteria and case facts to support their analysis. Candidates also had to calculate the adjustment to be made to the financial statements to correct the situation. With regards to this issue, candidates could have used either the general liability definition or the contingent liability section to support their analysis.

Overall, candidates performed adequately on this AO. Most candidates used case facts, including management's best estimate that 50 additional tanks would be returned at a cost to TankCo of $400 per tank, and concluded that the loss was both likely and measurable. As a result, they concluded that a liability of $20,000 should be set up on the balance sheet of TankCo at year end.

Strong candidates identified the relevant facts in the case and used these facts to support the likely and measurable criteria from the *Handbook*. Strong candidates also identified the fact that, although this warranty might not meet the legal definition of a liability, it did meet the definition of a constructive obligation and that, therefore, an accrual was required by TankCo.

Weak candidates were unable to support their analysis using appropriate *Handbook* criteria. Many of these candidates jumped straight to the conclusion (accrue $20,000) without first applying relevant case facts to the *Handbook* guidance. Some weak candidates provided conclusions that were inconsistent with their analysis, suggesting that the entire revenue on all 800 tanks should not be recognized because the amount of returns was too unpredictable to be estimated. This could have been an acceptable position to take if supported by case facts, such as the fact that this was a first-time occurrence and management's estimate of 50 additional returns seemed arbitrary. However, many of these weak candidates went on to accrue only $20,000, representing 50 tanks, which was inconsistent with their analysis to not recognize the revenue on all 800 tanks.

AO#3 (Lawsuits)

Candidates were asked to review the draft financial statements, discuss any accounting issues, and propose any necessary adjusting entries. Note 6 to the financial statements contained information on lawsuits that had been launched against the company. The note explained that it was common for the company to get named as a defendant in lawsuits pertaining to oil spills. TankCo was currently named in 21 lawsuits, a significantly higher number than normal. Candidates were also told that, to protect against exposure to payouts on successful claims,

which typically ranged from $255,000 to $410,000 each, the company maintained annual insurance coverage of $5 million, with a $20,000 deductible per claim. When TankCo was named in a lawsuit, the cost of the deductible was accrued. If the lawsuit was subsequently dropped, the amount was reversed. Candidates were also supplied with a continuity schedule of lawsuits outstanding, of which 21 lawsuits were outstanding at year end. To demonstrate competence, candidates were expected to determine whether any additional accrual needed to be made with regards to the lawsuits using appropriate *Handbook* criteria and case facts to support their analysis. Candidates also had to calculate the adjustment to be made to the financial statements to correct the situation.

Overall, candidates performed poorly on this AO. It was admittedly more challenging for candidates due to the insurance element, which many candidates may not have been very familiar with. Many candidates did not discuss the $5 million limit on the insurance and instead focused on the $20,000 deductible per claim. Candidates often argued that the $20,000 deductible did not meet the definition of a contingent loss because the likelihood of the lawsuit being lost could not be determined. Many of these candidates then provided an estimate of the deductibles that should be accrued but had difficulty supporting their analysis and calculations with the appropriate *Handbook* criteria for contingencies.

Strong candidates recognized that the $5 million of insurance coverage would likely be exceeded, given the 21 outstanding lawsuits at year end. They also noted that the *Handbook* recommended accruing the lowest amount in the range when no one amount in the range was more likely than any other. They supported an additional accrual of $355,000 at year end, calculated as the 21 lawsuits outstanding multiplied by $255,000 (the lower end of the range provided), and reduced this amount by the $5 million of insurance.

Weak candidates concluded that the lawsuits were not likely to be successful and, therefore, should not be accrued. However, the only information in the case suggesting that this may be true is that one lawsuit was dropped in 2014. Given the number of lawsuits outstanding over time, the number of successful lawsuits (2 in 2014 and 7 in 2015), and the absence of further information, it was not reasonable to conclude that the lawsuits were not likely. Other weak candidates seemed to be unclear as to how deductibles and insurance proceeds worked, and, as a result, they struggled to discuss the issue.

AO#4 (Development Costs)

Candidates were asked to review the draft financial statements, discuss any accounting issues, and propose any necessary adjusting entries. Note 3 to the financial statements contained information on a new fibreglass tank project. Candidates were told that TankCo had capitalized all costs related to the development of a new fibreglass tank. A working prototype had been built, and distributors were eager to start selling the tanks, but three steps remained before TankCo could proceed with production: government certification, board consent, and financing. The costs incurred to date included a $120,000 non-refundable deposit on equipment and $444,000 of design and other development costs. To demonstrate competence, candidates had to provide a reasonable analysis of the internally generated intangible asset criteria, using case facts to

support their discussion of whether the costs related to the development of the fibreglass tank project could be capitalized. Candidates also had to calculate the adjustment to be made to the financial statements to correct the situation.

Candidates performed well on this AO. Most candidates were able to use the *Handbook* criteria related to internally generated intangible assets to analyze whether the costs could be capitalized, and they provided an adjustment to correct the issue.

Strong candidates provided a well-rounded discussion of the criteria, using specific and relevant case facts to support their conclusion on whether each criterion had been met. They also recognized that the $120,000 non-refundable deposit on the equipment should be recognized separately as a prepaid, and they included this adjustment in their journal entry.

Weak candidates generally provided an incomplete analysis of the issue, either lacking the appropriate *Handbook* criteria or not applying relevant case facts to the criteria. Some weak candidates, although attempting a discussion of each of the criteria, failed to incorporate the specific case facts provided, making their analysis too general to be useful. Candidates were told there were three specific hurdles left for TankCo to overcome before production could begin. Candidates could conclude either way as to whether these hurdles would be overcome, but some candidates ignored a discussion of these hurdles all together.

AO#5 (Covenant and Borrowing Base Recalculation)

Candidates were asked to evaluate the impact of the adjusting entries on TankCo's compliance with the debt-to-equity covenant and its borrowing base. Note 5 to the financial statements contained information on the company's credit facility with the bank. Candidates were told that the line of credit available was equal to 80% of its accounts receivable 45 days and under plus 60% of its finished goods inventory, to a maximum of $4 million. They were also provided with the client's version of the calculation at year end. In addition, they were told that the credit facility required TankCo to maintain a debt-to-equity ratio of no more than 2:1. To demonstrate competence, candidates were expected to recalculate both the debt-to-equity ratio and the borrowing base, taking into consideration a couple of the necessary adjustments, and to conclude as to whether or not they were breached.

Candidates performed relatively well on this AO. Most candidates calculated the debt-to-equity ratio, and many, but not all, also included the borrowing base, taking into consideration their accounting adjustments when performing these calculations and concluding as to whether the covenant was breached and whether the borrowing base was exceeded.

Strong candidates not only picked up on the impact of their adjusting entries on the calculations but also recognized that TankCo's original calculation of the borrowing base was not correct. Therefore, these candidates also made adjustments to remove raw materials and work in progress from the inventory base and accounts receivable greater than 45 days from the accounts receivable base.

Weak candidates only calculated the debt-to-equity covenant and ignored the borrowing base, or their calculation of the borrowing base contained errors. For example, they didn't apply the correct percentages to accounts receivable and inventory or they didn't take into consideration their adjusting entry for the bill-and-hold sales when recalculating the borrowing base.

AO#6 (Goodwill)

Candidates were asked to review the draft financial statements, discuss any accounting issues, and propose any necessary adjusting entries. They were specifically directed to this issue because they were also asked in the requirements for each role to discuss the financial reporting impact of the recent losses in the commercial division and determine whether these resulted in an impairment. Note 4 to the financial statements provided information on an acquisition that TankCo had made in 2012. Candidates were told that goodwill of $2 million arose from the acquisition of a commercial tank manufacturer on January 1, 2012. The assets acquired became the commercial division at TankCo. The purchase price was based on four times earnings before interest, taxes, depreciation and amortization (EBITDA), which was the standard in the industry. Candidates were then supplied with the book value of the commercial division assets at year end and some additional information on the liquidation value of the production equipment of the commercial division. To demonstrate competence, candidates were expected to assess the commercial division, and in particular whether the goodwill related to the commercial division was impaired, using appropriate *Handbook* criteria and case facts to support their analysis. This issue was considered difficult.

Overall, candidates performed poorly on this AO. Most candidates were able to state that the *Handbook* requires goodwill to be tested for impairment whenever events indicate that the carrying amount of the reporting unit may exceed the fair value. They also recognized that there were indicators of impairment in the case. However, they struggled with where to go from there. Many focused specifically on the production equipment and recommended that it be written down to its liquidation value. Many candidates failed to see the larger issue related to the goodwill of the division. Candidates struggled to identify that the entire reporting unit (the commercial division as a whole) needed to be assessed in order to determine whether goodwill needed to be written down.

Strong candidates understood that the recent losses in the commercial division, coupled with the loss of Lou, the driving force of the company for years, were indicators of impairment that required the goodwill to be assessed. These candidates then went on to describe how to determine if an impairment existed. Some candidates went further and made assumptions, tried to calculate the impairment, and provided support for a specific write-down of the goodwill amount. Alternatively, some candidates used the case facts to perform a reasonable recalculation of the income forecast for the commercial division and concluded that the division was profitable and that no write-down was necessary.

Weak candidates zeroed in on the production equipment without recognizing the bigger issue associated with the goodwill of the division, often looking exclusively at Section 3063 of the *Handbook*. Many of these candidates did not recognize that the *Handbook* required that the division be looked at as a whole, rather than the assets being looked at individually. These

candidates often recommended a write-down of $156,000, which was the excess of the carrying amount of the production equipment above its liquidation value, without any further analysis.

Paper/Simulation:	**Day 2 (TankCo) – Role Case ASSURANCE**
Estimated time to complete:	300 minutes
Simulation difficulty:	Average
Competency Map coverage:	Audit and Assurance role (7 Assessment Opportunities)

Evaluators' comments by Assessment Opportunity (AO) for the ASSURANCE ROLE

AO#7 (Engagement Issues)

Candidates were told that, since this was the firm's first time auditing TankCo, the partner wanted them to prepare a memo discussing any engagement issues that they believed need to be considered, including a discussion of any potential issues with the firm's audit independence. To demonstrate competence, candidates were expected to discuss a few of the relevant issues that should be considered for this new audit engagement.

Candidates did not perform well on this AO. Most candidates discussed the potential independence issue with Rita but struggled to discuss any of the other relevant engagement issues. Very few candidates discussed the tight deadline to perform the engagement. TankCo's lending agreement with the bank required that it produce reviewed financial statements within 45 days of the year end, which left the firm only two weeks to complete the engagement. Even fewer candidates discussed the comparative numbers, whether the firm could provide an audit opinion on those, and, if not, what needed to be done.

Strong candidates recognized that Rita was formerly the engagement partner on the TankCo file, until she retired last year, and was now the board chair at TankCo, and they discussed how this could create an independence issue in fact or at least in appearance. They also tended to suggest ways that the firm could help mitigate this issue. In addition, they discussed some of the other relevant engagement issues. Most discussed the fact that this was a first-time audit and, therefore, the firm needed to perform audit procedures to gain comfort over the opening balances.

Weak candidates struggled to identify relevant engagement issues, many just copying and pasting into their response *Handbook* sections that talked about the need to obtain an engagement letter or some other general planning considerations. In addition, while they saw the need to discuss independence issues, they struggled to see how Rita's former role as the engagement partner and her current role as chair of the board could create a potential independence issue. Here again some copied and pasted guidance from the *Handbook* on independence without tying that to the specific case facts.

AO#8 (Risk)

Candidates were asked by the engagement partner to prepare the audit plan for TankCo. The partner specified that the audit plan should include an assessment of the overall financial statement risk. To demonstrate competence, candidates were expected to discuss some of the risk factors that should be taken into account and to conclude on the overall financial statement risk of the audit engagement.

Candidates performed relatively well on this AO. Most were able to provide several risk factors and explain how they had an impact on the financial statement risk, using facts from the case as support. They were also able to provide a conclusion that was in line with their analysis.

Strong candidates provided a more complete list of factors, and for each risk factor they identified, they explained how it would increase or decrease risk. They also provided a logical overall conclusion on the financial statement risk.

Weak candidates generally did not provide a sufficient number of relevant risk factors, or they simply listed factors without explaining how they would increase or decrease the engagement risk. Some candidates also provided business risk factors instead of focusing on financial statement risk factors and, therefore, had difficulty providing a useful analysis.

AO#9 (Materiality and Audit Approach)

Candidates were asked by the engagement partner to prepare the audit plan for TankCo. The partner also specified that the audit plan should include a discussion of materiality and the audit approach. In order to demonstrate competence, candidates were expected to calculate the materiality to be used for the audit engagement, in light of the users, and support the basis chosen with case facts. They also needed to provide a reasonable discussion of the approach that should be followed for the engagement and to support their discussion with case facts.

Candidates performed adequately on this AO. Most candidates were able to provide a reasonable discussion of both the approach and the materiality. When candidates struggled, it was more often with their approach discussion. Most candidates recognized the users and were able to recommend an appropriate basis; however, candidates did not always consistently support their choice of basis by linking it to the users' needs.

Strong candidates provided more depth of discussion in their analysis of the approach by using several case facts about TankCo's control environment to support their chosen approach. They also clearly linked the basis they chose to calculate materiality to the needs of the users.

Weak candidates did not do a good job of applying case facts to their approach discussion. There were a lot of details provided in the case that candidates could have used to discuss their audit approach. Appendix III contained a description of the control environment, including a description of entity-level controls, as well as detailed descriptions of the sales and purchasing cycles. From that exhibit alone there were numerous case facts that could have been used to discuss the approach. For example, candidates could have talked about the impact of Lou's absence, the reliance on the computer system, the strength of the sales cycle, or the weaknesses in the purchasing cycle on the approach that should be taken. Unfortunately, some candidates just made a generic statement (for example, that a combined approach would be used) without supporting it with relevant case facts. Some weak candidates also used an inappropriate basis to calculate materiality or did not link their materiality discussion to the users.

AO#10 (Analytical Review)

Candidates were asked, as part of their risk assessment, to perform an analytical review of the income statement items to identify any changes that could raise additional risks. To demonstrate competence, candidates were expected to compare the December 31, 2015, income statement balances to the December 31, 2014, income statement balances and provide a reasonable explanation for some of the variances. Appendix II contained detailed information on the performance of the company in 2015 and could have been used to help explain the variances and identify any inconsistencies.

Candidates did not perform well on this AO. Most candidates calculated the variances on the income statement balances but then either did not provide explanations for the income statement variances or provided very brief explanations. Strong candidates addressed a greater number of income statement balances and were able to provide a reasonable explanation for the variances using relevant case facts.

Weak candidates either did not comment on the variances at all or had difficulty explaining the variances. Many candidates simply said that the variance needed to be investigated, without providing further discussion.

AO#11 (Procedures)

Candidates were asked by the engagement partner to recommend the procedures that should be undertaken on the high-risk financial statement items. In order to demonstrate competence, candidates were expected to provide a reasonable number of procedures that were specific to the accounting issues or audit risks of TankCo.

Candidates performed adequately on this AO. Most candidates attempted to provide several procedures, and they were able to provide a sufficient number of procedures that would appropriately address the risks related to either the specific accounting issues or other relevant financial statement risks.

Strong candidates were able to provide precise and well-described procedures that were clearly tied to the significant risks identified. Strong candidates also provided more procedures that covered both the specific accounting issues and other relevant risks related to the financial statements.

Weak candidates provided procedures that were too vague to determine what exactly they were proposing to do and what risk they were trying to cover. Weak candidates also tended to provide a list of generic procedures that could have applied to any audit. These procedures did not address either the specific accounting issues or other relevant risks described in the case. As a result, they were of limited value.

AO#12 (Internal Controls)

Candidates were asked by the engagement partner to draft a memo discussing any internal control deficiencies in the sales and purchasing cycles so that she would include them in a management letter. In order to demonstrate competence, candidates were expected to identify

some of the internal control weaknesses, explain the implication of each weakness, and provide a reasonable recommendation to address the problem.

Candidates performed relatively well on this AO. The majority of candidates were able to identify some of the control weaknesses, explain their impact, and provide valid recommendations. The most commonly identified issues were that too many people could authorize purchase orders, the lack of a pre-approved vendor listing, the lack of supporting documentation provided with cheque requests, and the lack of segregation of duties with regards to the accounting clerk's responsibilities.

Strong candidates were able to provide good coverage of the issues and propose practical recommendations to address the weaknesses identified. They also recognized the clear difference in the cycles and only discussed weaknesses in the purchasing cycle, noting that the sales cycle was in fact working appropriately as described.

Weak candidates did not adequately explain why an internal control weakness they identified would cause issues for TankCo or did not provide valid recommendations that would address the weakness. Many weak candidates attempted to create weaknesses where there were none. Appendix III included a description of both the sales and purchasing cycles. However, the sales cycle as described was quite strong, with many good controls in place. The purchasing cycle, on the other hand, contained many obvious weaknesses. Candidates were expected to realize this difference and focus on the purchasing cycle weaknesses.

AO#13 (Reports)

Candidates were told by the engagement partner that the bank had invoked the right to a special report on TankCo. As a result, candidates were asked to prepare a separate memo to the partner explaining the reporting options available. In order to demonstrate competence, candidates were expected to discuss at least two valid reporting options and provide a supported conclusion.

Candidates performed poorly on this AO. Most candidates were unable to identify at least a couple of valid reporting options and discuss how they could meet the bank's needs before concluding. Appendix III contained extracts from the lending agreement with the bank. Included in the extracts was a clause that stated that, upon request by the lender, the borrower would furnish a special report, audited by an independent public accountant, calculating the provisions of this agreement. Despite the fact that the agreement stated that the special report was to be audited, many candidates discussed reports that would not provide an audit level of assurance.

Strong candidates discussed several valid reporting options, demonstrated in their discussion that they understood the fundamental differences between the different reports, and explained what each of them could offer the bank. Their conclusions were appropriate and well supported.

Many weak candidates did not have a good grasp of the reporting options. As a result, they had a hard time explaining the differences between the reports or recommending one that would be best given the situation. Many just addressed the level of assurance provided or the cost of the different reports, without really getting into the nature of the report itself and why it may or may not be good for the bank. Some weak candidates also recommended reports that would not be

appropriate under the circumstances.

Paper/Simulation: **Day 2 (TankCo) – Role Case FINANCE**

Estimated time to complete: 300 minutes

Simulation difficulty: Average

Competency Map coverage: Finance Role (8 Assessment Opportunities)

Evaluators' comments by Assessment Opportunity (AO) for the FINANCE ROLE

AO#7 (Financial Performance)

Rich Mann, a principal at Family Business Consultants, asked CPA to compare TankCo's results with its historical performance and with industry standards. Appendix III of the simulation provided various statistics for the metal fabrication industry, including sales growth, gross profit margin, operating profit margin, and return on equity. In order to provide a complete analysis, candidates were expected to calculate appropriate performance ratios for TankCo and provide an interpretation of the ratios using case facts and the scenario presented to support their analysis.

Overall, candidates performed well on this requirement. Candidates calculated appropriate ratios and properly interpreted them, applying case facts to support their analysis. They understood, on an overall basis, that TankCo was not performing well compared with its competitors and that TankCo's financial performance had deteriorated from the prior year.

Strong candidates were able to calculate all the ratios that were outlined within the scenario and to compare and contrast the ratios with those of the industry and with TankCo's historical (2014) performance. They analyzed each ratio appropriately, noting where TankCo was considerably weaker than the industry (e.g., residential sales growth, operating margin, and return on equity). Strong candidates also used their adjusted financial statements to compute the ratios and tied in case facts to support their analysis. For example, TankCo had an operating margin, after adjustments, that was considerably lower than the industry average, and strong candidates suggested that this was at least partially due to the development activities related to the fibreglass tank project. Finally, strong candidates provided an overall conclusion with respect to TankCo, noting that its financial performance was weaker than that of the industry and had deteriorated over the past year.

Weak candidates were generally able to calculate appropriate ratios, but their interpretation of the ratios was often generic and superficial, limited to stating that the ratio was either higher or lower than that of the industry, and they rarely used case facts to support their analysis. These candidates did not explicitly state whether TankCo was performing well compared to the industry and did not understand the downward trend TankCo was displaying.

AO#8 (Financial Position)

In addition to assessing the financial performance of TankCo for 2015, Rich Mann also asked CPA to discuss the financial condition of TankCo at the end of 2015 and to compare and contrast

the financial position with industry standards and its historical financial position. Appendix III of the simulation provided various statistics for the metal fabrication industry, including the current ratio, receivable turnover, inventory turnover, and debt-to-equity ratio. In order to demonstrate competence, candidates were expected to provide a detailed analysis. Candidates were expected to calculate appropriate financial position ratios for TankCo and provide an interpretation of the ratios using case facts and the scenario presented to support their analysis.

Overall, candidates performed as expected on this requirement. Similar to AO#7 candidates calculated appropriate ratios and properly interpreted the ratios. They understood, on an overall basis, that TankCo's financial position had deteriorated from the prior year and was below the industry average. However, candidates had greater difficulty supporting their analysis with case facts.

Strong candidates were able to calculate all the ratios that were outlined within the scenario and to compare and contrast the ratios with those of the industry and with TankCo's historical (2014) position. They analyzed each ratio appropriately, noting where TankCo was considerably weaker than the industry (e.g., the receivable turnover, inventory turnover, and debt-to-equity ratios). Strong candidates also used their adjusted financial statements to compute the ratios and tied in case facts to support their analysis. For example, TankCo had a receivable turnover ratio, after adjustments, that was considerably lower than the industry average, and strong candidates suggested that this was at least partially due to the recognition of the sales to Goldie Corp at year end for the two undelivered tanks. Strong candidates also provided an overall conclusion with respect to TankCo, noting that its financial position was weaker than that of the industry and had deteriorated over the past year.

Weak candidates were generally able to calculate appropriate ratios, but their interpretation of the ratios was often generic and superficial, limited to stating that the ratio was either higher or lower than that of the industry, and they rarely used case facts to support their analysis. These candidates did not explicitly state whether TankCo's financial position was weak or strong compared to the industry and to TankCo's historical financial position.

AO#9 (Capitalized Cash Flow Valuation)

Candidates were told that TankCo was weighing its strategic options, one of which might be to sell TankCo. To that end, TankCo had already prepared a valuation based on the market value of its net assets (supplied to candidates in Appendix III). Rich asked for valuations of TankCo based on two additional methodologies. First, Rich wanted a valuation based on the capitalized cash flow approach. For this AO, candidates were expected to use TankCo's 2015 income statement to adjust the statement for normalizing items and non-cash items and then to apply a reasonable capitalization rate to come up with an estimated value for TankCo. Normalizing items could have included one-time costs for sales rebates, warranty charges, and other items. Depreciation should have been added back as a non-cash item. Other items that could have been adjusted were sustaining capital expenditures and interest.

Overall, candidates performed well on this AO. Most candidates were able to convert TankCo's 2015 income statement into a cash flow statement (by adding back depreciation) and were able to adjust the statement for one or more normalizing items to come up with a reasonable cash flow amount. Most candidates also calculated a reasonable capitalization rate for TankCo by using the information in Appendix III and estimating TankCo's weighted average cost of capital.

Strong candidates performed detailed calculations, recognizing all of the following items within their calculations: 1) making multiple normalization adjustments, including the one-time sales rebates, the one-time warranty costs, and many of the accounting adjustments they had determined were required in AO#1 through AO#6; 2) adding back depreciation; 3) estimating and including an amount for sustaining capital expenditures; 4) calculating and removing an appropriate amount for taxes; and 5) using an appropriate capitalization rate to calculate the value of TankCo, assuming the calculated cash flows would be received in perpetuity.

Many weak candidates had difficulty incorporating many of the items, ignoring several of the above-noted amounts. They used an inappropriate capitalization rate, such as assuming a multiple of four. As well, some weak candidates did not understand the basic concepts underlying a capitalized cash flow and instead provided either a discounted cash flow or a modified multiple valuation.

AO#10 (Transaction-Based Valuation and Overall Summary)

The second valuation that Rich asked candidates to provide was based on the transactional approach using a multiple similar to recent transactions in the industry. As well, Rich asked for an overall conclusion of the estimated value of TankCo using all of the information at the candidate's disposal. Candidates were expected to quickly compute the 2015 earnings before interest, taxes, depreciation and amortization (EBITDA) for TankCo and to apply a multiple of four as set out in Appendix III of the scenario. Candidates were then expected to compare the three valuation amounts (the adjusted net asset amounts provided to them in Appendix III, the valuation based on the capitalized cash flow approach, and the valuation based on the transactional approach) and to come up with a reasoned supported valuation estimate for TankCo.

Overall, candidates performed as expected on this AO. Candidates were generally able to calculate a reasonable EBITDA for TankCo and applied the four times multiple appropriately. Most candidates were then able to compare the three valuation amounts that they had available and to provide a supported estimate of their opinion on the value of TankCo.

Strong candidates adjusted the EBITDA for normalizing items (such as the normalizing adjustments they used in AO#9,) before applying the four times multiple. Strong candidates also adjusted the net assets valuation provided by the client for their accounting adjustments (AO#1 through AO#6). These candidates then compared the three valuations and provided a reasoned supported estimate of TankCo's value. Many of these candidates noted that the floor price (or lowest value) for TankCo was based on the fair market value of its net assets.

Many weak candidates did not understand the difference between the capitalized cash flow method (AO#9) and the transactional method (based on EBITDA) and blindly applied the four times multiple to the same base. As well, weak candidates did not understand the valuations they had performed and were unable to suggest a reasoned, well-supported overall value for TankCo based on their analysis.

AO#11 (Fibreglass Tank Project – Qualitative)

TankCo was in the midst of developing a new line of fibreglass tanks. In order for Rich to assess the project, he asked CPA to provide both a qualitative and quantitative assessment of the project. AO#11 deals with the qualitative aspects of the decision, while the quantitative aspects are dealt with in AO#12. From a qualitative perspective, candidates were expected to discuss the pros and cons of the fibreglass tank project using case facts to support their analysis.

Overall, candidates performed as expected on this AO. Most candidates were able to provide a balanced discussion of the pros and cons of the project. From a strategic perspective, candidates understood that the future of the tank industry was likely represented by fibreglass tanks and that, as a result, TankCo should develop these tanks and get them to market as quickly as possible. Candidates also understood that there were some risks associated with this project, such as the lack of experience that TankCo had with this new product line and the fact that there was already another competitor in this market space.

Strong candidates supported their analysis by discussing several benefits and risks associated with the new project. They understood the strategic implications of developing this product line and used their analysis to develop a well-supported recommendation on whether TankCo should proceed with the project. Many suggested ways in which TankCo could mitigate any risks they had identified.

Weak candidates simply compiled a laundry list of case facts categorized as either pros or cons, without adding any further analysis or value beyond these case facts. As with any analysis, it is the interpretation of the case facts that provides additional value for the client and not simply the restatement of case facts into various buckets.

AO#12 (Fibreglass Tanks Project – Quantitative)

Candidates were also asked to prepare an analysis of the potential investment in the fibreglass tank project from a quantitative perspective. Candidates were supplied with all of the information required to produce a reasonable quantitative analysis in Appendix III of the case. Candidates were expected to provide a quantitative net present value analysis of the potential investment and to conclude on the appropriateness of the fibreglass tank project from both a quantitative and qualitative perspective.

Overall, candidates performed well on this AO. Candidates were generally able to incorporate the information supplied in the case to quantify the potential investment. They were able to discount the appropriate revenues and expenditures at an appropriate rate and determine a reasonable

net present value for the proposed investment. They typically incorporated all of the significant inputs, including the cannibalization of the existing steel tanks, into their quantitative analysis.

Strong candidates performed detailed calculations, recognizing all of the following items within their calculations: 1) the initial investment; 2) the gross profit from the new fibreglass tank sales; 3) the additional overhead that would be incurred; 4) the lost margin from the cannibalization of the steel tanks; 5) the tax effects associated with the project (the tax shield on the initial investment and the taxes associated with the additional income); and 6) the working capital adjustments at the beginning and end of the project. These candidates then applied an appropriate discount rate (such as TankCo's weighted average cost of capital, which they had calculated for AO#9) to determine a net present value for the project.

Weak candidates had difficulty incorporating many of the items noted in the previous paragraph, ignoring several of the mentioned amounts. In particular, weak candidates did not incorporate any effects of the cannibalization and did not incorporate the working capital adjustments. As well, some weak candidates did not know how to calculate a present value for the project. As a result, their analysis was not reasonable.

AO#13 (Suggestions on Improving Liquidity and Performance)

Rich also asked candidates to use the industry benchmarks and their quantitative analysis to identify possible savings and efficiencies for TankCo and to suggest ways to improve the company's liquidity and financial condition. This requirement was left relatively open ended, and candidates could have offered a wide range of advice to TankCo. Candidates were expected to use their previous analysis (particularly their analysis of the financial performance and position of TankCo) and to develop suggestions on how TankCo could improve its situation. The analysis could cover a wide range of items, including strategic, operational, and financial.

As expected, candidates struggled to come up with valid, reasonable suggestions for TankCo. Most candidates provided suggestions that were limited to improving TankCo's working capital management (its accounts receivable and inventory turnover). While these were certainly valid suggestions and were appropriately rewarded, many candidates did not provide any further suggestions for TankCo.

Strong candidates provided several suggestions over a wide range of items for TankCo. For example, in addition to the suggestions to improve TankCo's working capital position, strong candidates provided strategic advice for TankCo with respect to its future direction (fibreglass tanks or the commercial division) and provided suggestions on potential financing for TankCo beyond the options provided in the case.

Weak candidates often provided inadequate suggestions on TankCo's collection policy and its inventory management, without providing concrete examples of how these suggestions could be implemented.

AO#14 (Financing Options)

Finally, candidates were asked to provide an assessment of the financing options that were presented. Appendix III provided two options for TankCo from a financing perspective. The first was a traditional real estate mortgage using TankCo's land and building as collateral. The second option was a sale lease-back transaction for the land and building. Candidates were expected to compare and contrast the two options and to conclude on the best option for TankCo given its current condition.

Overall, candidates performed well on this AO. Most candidates were able to identify the key differences between the two options and were able to articulate why one option was superior to the other based on the individual differences. These differences included the following: 1) the interest rate; 2) the tax implications of each option; 3) the amount of cash that would be received under each option; 4) the renewal terms of each option; 5) the covenant included in the mortgage option; 6) the impact on TankCo's existing debt-to-equity ratio under each option; 7) the benefits of still owning the real estate in the future; and 8) the various other financing terms incorporated in each option.

Strong candidates discussed many of the above items for both options, comparing and contrasting the items in a logical and comprehensive manner. Many candidates also highlighted the more important items, such as the impact on TankCo's existing debt-to-equity ratio, and integrated their analysis with other areas of their response. These candidates typically provided a well-rounded, supported conclusion based on their analysis.

Weak candidates simply compiled a laundry list of case facts categorized as either pros or cons for each option, without adding any further analysis or value. As a result, their conclusion was weakly supported and of little value to the client.

Paper/Simulation: Day 2 (TankCo) – Role Case PERFORMANCE MANAGEMENT

Estimated time to complete: 300 minutes

Simulation difficulty: Average

Competency Map coverage: Performance Management Role (6 Assessment Opportunities)

Evaluators' comments by Assessment Opportunity (AO) for the PERFORMANCE MANAGEMENT ROLE

AO#7 (Situational Analysis – Quantitative)

CPA works as a management consultant for Family Business Consultants (FBC). Rich Mann, a principal at FBC, was called by Rita McGuire, who asked that FBC help TankCo's board address various issues and assess its strategic options. Candidates were asked by Rich to assess TankCo's current situation; specifically, to compare Tankco's current performance and financial condition to its historical performance and industry statistics. To demonstrate competence on this assessment opportunity, candidates were required to calculate TankCo's financial ratios for both 2015 and 2014 and provide a meaningful interpretation. Interpretation should have also included a comparison with industry ratios, which were provided in a table in the case.

Candidates performed adequately on this AO. The vast majority of candidates made an attempt to calculate the appropriate ratios and provide an interpretation using the case facts provided. Most candidates identified and used the industry ratios provided in the case and compared 2015 results with both 2014 and the industry.

Strong candidates provided very thorough interpretations of their calculated ratios by explaining what each ratio meant to TankCo, as well as possible reasons for the trend or difference. For example, the low commercial sales growth in 2015 was explained by the incorrect exclusion of some of the commercial tank sales to Goldie Corp. Strong candidates also provided an overall conclusion with respect to TankCo, noting that its financial performance was weaker than that of the industry and had deteriorated over the past year.

Weak candidates generally made reasonable attempts at calculating ratios but tended to struggle with interpretations, often providing very simplistic interpretations such as the fact that margins had decreased or inventory turnover was higher. Other weak candidates calculated a very limited number of ratios, ignored industry comparisons, or ignored 2014 figures, or their calculated ratios contained many errors.

AO#8 (Situational Analysis – Qualitative)

Candidates were asked to assess TankCo's current situation. This AO dealt with the qualitative portion of the situational analysis. To demonstrate competence, candidates were expected to discuss positive and negative aspects of both internal and external issues. The discussion points needed to include an explanation of the relevance of the information to TankCo.

Candidates performed adequately on this AO. The vast majority attempted some form of situational analysis. While it was not a requirement, many candidates presented their discussions in a SWOT format. Others used PESTEL or Porter's Five Forces, or they just described the situation in paragraph form.

Strong candidates provided a thorough situational analysis of positive and negative and internal and external points. These candidates included a clear discussion of how the points related to and affected TankCo, and they linked the information to the major decisions of the case. For example, the key success factors for retaining distributor relationships are quality and service, and TankCo's quality was compromised with the strike and use of temporary workers. Strong candidates were able to later link this weakness of compromised quality with the discussion of offering the 5% discount to win back the lost distributor and explain how this initiative did not make sense. Instead they suggested that TankCo should fix the quality assurance process and ensure the lost distributor that there would be no future quality issues.

Weak candidates presented a one-sided discussion of the situation. They presented either all positives or all negatives, or they focused only on internal or external discussion points. These candidates also provided brief bullet points that were simply case facts, with little discussion of their impact on TankCo (for example, "• distributors throughout northeastern North America").

AO#9 (Cost Allocation)

Candidates were explicitly asked "to determine the best cost allocation method and use it to recalculate the costs and the resulting profits for each division." To be considered competent, candidates were expected to calculate the fixed overhead cost allocation using activity-based costing and to also calculate the revised profit for each division. If calculated correctly, the results in the commercial division would show it generating a profit, which candidates should have briefly discussed.

Candidates performed well on this AO, with most appropriately calculating the revised cost allocation and divisional profits. Most candidates discussed how the revisions showed that the commercial division was profitable and that the residential division had not made as much profit as originally shown. Most candidates also carried this discussion forward into their discussion of Josh's priorities.

Strong candidates explained why activity-based costing was appropriate for TankCo, using case facts to support their position. Strong candidates also made attempts to recalculate the 2016 forecast for each division, or they discussed the need to recalculate the forecast and the likely profit in 2016 for the commercial division.

Weak candidates made several errors in their calculations, only calculated the cost re-allocation and did not continue on to the profitability, or only calculated for the commercial division. Other weak candidates simply discussed the reasons that TankCo should convert to activity-based costing using case facts.

AO#10 (Pricing for Fibreglass Tanks)

Candidates were asked to analyze and recommend a pricing strategy for the new fibreglass line that TankCo was close to completing. To be considered competent, candidates were expected to calculate the incremental profit at the various price points. The calculations were expected to include demand level, contribution margin, and opportunity costs for the cannibalized sales of steel tanks. Candidates then needed to provide a recommended price, supported by both their calculation and their qualitative discussion using case facts.

Candidates performed well on this AO. Most candidates completed the calculations using the figures provided in Appendix III, including various price points, market demand, market share, relevant costs, and lost steel sales, and then recommended a price that matched their calculations. Many candidates included a discussion of competitor pricing, quality of the product, and the new market as qualitative points to support their recommendation.

Strong candidates not only completed appropriate and accurate calculations and a discussion of case facts but also discussed several pricing strategies; for example, cost-plus, market, and value-based pricing. They explained which was best based on their calculations and the case facts provided. For example, candidates acknowledged that there was only one other competitor in the market with a product price of $900 and determined that, since TankCo's product would last longer, TankCo should use a value-based approach and price its tank at $1,000, which also provided the highest profit.

Weak candidates struggled with the calculations and made numerous errors or omitted important inputs like opportunity costs. Some weak candidates ignored the calculations entirely and attempted to make a recommendation based only on qualitative facts, often referencing the competitor's price of $900.

AO#11 (Management Priorities)

Candidates were asked to critique a list of management priorities for the new owners of TankCo. To be considered competent, candidates were expected to provide a balance of pros and cons for each of the management priorities, drawing on their knowledge of the company and management, and to conclude on their analysis. The conclusion needed to be convincing, supported, and consistent with their analysis.

Candidates performed adequately on this AO and generally discussed all three management priorities. Discussions were balanced for at least one of the three priorities, and conclusions were provided for all priorities, with at least some support using case facts. For example, many candidates recognized that the commercial tank segment was a growing sector and that TankCo would lose out on potential revenue growth if it phased out the commercial tank division.

Strong candidates were able to provide balanced discussions for all three priorities, clearly showing an understanding of the relevant issues in the case. After their conclusions, they

attempted to mitigate some of the negative factors identified in their analysis. For example, although the fibreglass tanks would cannibalize steel tanks sales, the decrease in steel tank sales would open up plant capacity to be able to manufacture the fibreglass tanks, so the risk of decreased steel tanks sales was acceptable.

Weak candidates tended to present biased discussions that led to unconvincing conclusions or ignored entirely the discussion of one or two of the management priorities. Weak candidates also lacked depth of discussion in their analysis, using brief bullet points that simply restated case facts and did not add value (for example, "Pro: regain distributor with 5% discount").

AO#12 (Strategic Recommendations)

Candidates were asked to recommend a future direction for the new owners of TankCo. The owners wanted advice on whether to liquidate, sell, or continue operating TankCo in light of the company's first loss. To be considered competent, candidates were expected to discuss all the options presented by the new owners and provide a final recommendation that incorporated all of their previous analysis. Candidates needed to be able to step back and assess the company overall to make a convincing recommendation.

Generally, candidates performed adequately, but there was a wide range of performance on this AO. Most candidates identified the options, but the depth of discussion and support for a final recommendation varied widely, with many very strong, well-supported, convincing responses, but also many very weak responses that were inconsistent with their previous analysis and were very brief. Overall, many candidates struggled to demonstrate their ability to take a step back and assess the company on an overall basis.

Strong candidates were able to clearly demonstrate their ability to see the big picture and make a recommendation to the new owners that was well supported and consistent with their previous analysis. They were able to explain the losses in the commercial division, comment on the 2016 forecast, and suggest TankCo's next steps that supported their recommendation. Many of these candidates recommended that the new owners continue to operate TankCo, and they highlighted priorities like completing the fibreglass line before other competitors entered the market and focusing energy on the growing commercial division.

Weak candidates discussed the owners' request in isolation of all their previous analysis. These candidates discussed the pros and cons of liquidating, selling, or continuing to operate TankCo, with little to no consideration of the analysis they had just completed or the case facts. Many explained the difference between liquidating and selling in generic, textbook terms. While the final recommendation of some candidates was logical, it was not supported and failed to demonstrate the candidates' ability to see the big picture. For example, some weak candidates recommended that the new owners keep TankCo because the 2016 forecast was very positive.

Paper/Simulation: **Day 2 (TankCo) – Role Case TAXATION**

Estimated time to complete: 300 minutes

Simulation difficulty: Average

Competency Map coverage: Taxation role (8 Assessment Opportunities)

Evaluators' comments by Assessment Opportunity (AO) for the TAXATION ROLE

AO#7 (Calculates 2015 Year-End Taxes Payable)

CPA works for CPA LLP in the tax group. Candidates were asked to adjust for any accounting issues they identified and, based on the revised net income, to prepare an estimate of the taxable income and the taxes payable or refundable for 2015. Candidates were provided with financial statements from which to start their analysis, as well as some information about tax-specific items (undepreciated capital cost, meals and entertainment, etc.) in Appendix III. To be considered competent, candidates were expected to calculate income or loss for tax purposes, including an adjustment for capital cost allowance, and to conclude on their analysis. They could conclude either by calculating tax (if they determined that there was income) or by explaining what could be done with the calculated loss (carry it forward or back).

Candidates performed very well on this AO. Most candidates revised the financial statement income for the financial reporting adjustments discussed in the common AOs, and then they adjusted this revised income for several, if not most, of the tax adjustments. The average candidate then went on to calculate taxes payable or provide a brief discussion of what could be done with the loss for tax purposes that they had calculated.

Strong candidates integrated the Scientific Research and Experimental Development (SR&ED) deduction (or investment tax credit) from their AO#8 analysis into their AO#7 calculation. They also went on to provide an explanation and calculation of the impact of the carryback of the 2015 loss against the 2014 taxation year.

Weak candidates attempted to calculate taxable income, but many did not understand that CCA could indeed create a loss for a business. Instead, they concluded that CCA was limited to income (confusing this with the rules for rental properties), and, therefore, they did not claim any CCA. Other weak candidates appeared to have chosen – either for no obvious reason, in that there was no explanation as to why, or for a reason that demonstrated they did not understand the fundamental issues involved – to reduce their CCA claim to minimize the tax loss.

AO#8 (Scientific Research and Experimental Development Costs and the Tax Implications)

Candidates were told that TankCo was in the midst of developing a new fibreglass tank, which had involved a lot of research and development activities during the year. They were asked whether there was special tax treatment for research and development costs, and they were asked to provide a report discussing how these costs should be treated for tax purposes.

Candidates were expected to integrate the information provided to them in the financial statements about this R&D project, and they were given more details on it in Appendix III. To be considered competent, candidates were expected to discuss the SR&ED program and to support their discussion with some calculations (of the investment tax credit, the deduction amount, or both) to show the impact.
Candidates' performance on this AO was average. Candidates typically identified that the SR&ED program would be available for the R&D costs incurred, and they attempted to apply this to the numbers provided, usually calculating an investment tax credit at 35% of the total R&D costs.

Strong candidates also explained briefly the nature of research that the program was intended for and why this would apply to the fibreglass tank project. Better responses then revised the total costs for ineligible items before calculating the investment tax credit.

Weak candidates demonstrated that they did not know about the existence of the SR&ED program, or they identified that it existed and then jumped to the conclusion that the fibreglass tank project would not qualify, often for reasons that were not logical, such as ones that depended on the financial accounting treatment of the costs.

AO#9 (Options for Legal Structure of New Fibreglass Business)

Candidates were asked to prepare a memo analyzing the options for the legal structure of the fibreglass operations, being sure to consider tax planning and the company's objectives. Candidates were not given specific information on the structuring in Appendix III, but they were expected to integrate their knowledge of the business gained throughout the case, as well as information on the R&D project that had, so far, made up the entire fibreglass tank division. To be considered competent, candidates were expected to provide sufficient discussion of at least two of the alternatives (division, subsidiary, or limited partnership) by explaining how the structure would be treated from a tax perspective and by considering the specifics of TankCo's situation.

Candidates performed well on this AO, generally discussing both the taxation and legal liability implications of a separate corporation and a division, integrating case facts about expected losses or the ongoing lawsuits or both, as well as recognizing that a subsidiary would have to share certain tax benefits (namely the small business deduction) with TankCo.

Strong candidates also discussed the limited partnership option. Most strong candidates integrated case facts about expected losses or the ongoing lawsuits or both, providing a clear conclusion based on the specific situation at TankCo.

Many weak candidates struggled to provide any analysis of the impact of a division, although most identified some valid points about the subsidiary option. Their responses generally either ignored the limited partnership option altogether or provided discussions that clearly demonstrated they did not understand the fundamental nature of this legal structure (for example, by suggesting it was a taxable entity or that significant deferral opportunities were available with a partnership).

AO#10 (Estimate Corporate Income Resulting from Liquidation)

Candidates were asked to estimate TankCo's net income for tax purposes resulting from the disposition of the corporation's assets. Candidates were provided with details of the company's assets and liabilities in its balance sheet, as well as tax-specific information, such as UCC and additional information, in Appendix III. Fair market value and disposition cost information was also provided in Appendix III. To be considered competent, candidates were expected to calculate the taxable income impact of the disposition of several of the assets or other items (such as the liabilities to be settled and the professional fees).

Candidates performed as expected on this AO. They typically calculated the taxable capital gain on the land, calculated the recapture or terminal loss on the building and equipment (integrating the December 31, 2015, UCC balances from their AO#7 analysis), and either integrated the disposition costs or acknowledged that the other disposed-of assets would not result in any tax consequences.

Strong candidates consistently integrated the disposition costs, and most acknowledged that the other disposed-of assets, as well as the life insurance proceeds, would not result in any tax consequences.

Many weak candidates calculated capital gains or losses on the building and equipment – if they came up with capital gains, it was usually because they did not understand the CCA recapture rules, and if they came up with capital losses, it showed they did not understand that capital losses cannot exist on depreciable property. Many weak candidates also used net book value, instead of the tax values given to them, and attempted to fully tax the proceeds of the life insurance.

AO#11 (Estimate After-Tax Proceeds, CDA, and RDTOH for Corporation in Event of Liquidation)

Candidates were asked to estimate the after-tax proceeds that would be available in the company after a sale of TankCo's assets, assuming for this purpose that the fibreglass tank project would remain inside TankCo and would not be moved into a separate entity before the sale. In addition to the information provided for the asset dispositions, candidates were provided with combined federal-provincial tax rates applicable to TankCo's different types of income. To be considered competent, candidates were expected to calculate corporate taxes payable, appropriately applying differing rates to business and investment income. They were also expected to calculate either the ending capital dividend account (CDA) balance or the refundable dividend tax on hand (RDTOH) balance before the completion of the wind-up.

Candidates performed well on this AO. Candidates typically calculated taxes separately on the active business income (from the CCA recapture net of terminal losses) and on the aggregate investment income (from the capital gain on the land), as well as adding the non-taxable portion of the land to the CDA balance.

Strong candidates also calculated the RDTOH balance, and most used the number from this calculation to subtract the dividend refund from the taxes payable.

Weak candidates generally calculated a single amount of tax based on their calculations of income in AO#10. Most weak responses did not identify CDA or RDTOH at all.

AO#12 (Estimate After-Tax Proceeds for the Children in Event of Liquidation)

Candidates were asked to determine the amount of money each shareholder would be left with after the corporation's after-tax proceeds were distributed and their personal taxes were paid. In addition to the information provided for the asset dispositions, candidates were provided with Rob and Sarah's personal combined federal-provincial marginal tax rates (45%). To be considered competent, candidates were expected to calculate the amount of deemed dividend that would be taxed to Rob and Sarah. They were also expected to perform a calculation of taxes on this dividend that showed they understood its nature and how it would be taxed.

Candidate performance was not strong on this AO; however, most did demonstrate an understanding of some of the basic concepts. Typical candidates calculated a deemed dividend (net after-tax proceeds minus paid-up capital), subtracted CDA, and attempted to apply personal tax to it. The average response attempted to split the dividend between eligible and other-than-eligible.

Strong candidates calculated a deemed dividend and subtracted CDA. They then separated this deemed dividend into eligible and other-than-eligible, and they appropriately applied the gross-up and credit regime to determine the taxes payable and after-tax proceeds from the redemption of the shares.

Most weak candidates demonstrated they did not understand the nature of deemed dividends on the wind-up of a corporation, or on the redemption of shares by a corporation. Many taxed the entire net proceeds at a single 45% flat tax rate or did not tax the proceeds outside of the corporation at all. Other weak candidates instead provided an analysis of salary versus dividends as a means to pay the proceeds out, disregarding the fact that paying salaries or bonuses in this instance would not be practical or deductible to the corporation.

AO#13 (Tax Issues Associated with Lou's Death)

Candidates were asked to explain the tax issues associated with Lou's death and to discuss what returns would need to be filed for Lou, as well as what opportunities may have been available to minimize his taxes payable. Candidates were provided with financial information on TankCo throughout the case and more specific information on the rest of Lou's assets in Appendix III. To be considered competent, candidates were expected to identify that a deemed disposition occurs at the date of death and to provide a discussion of some of the other issues relevant to Lou's situation.

Candidates performed well on this AO. Most explicitly stated that Lou would be deemed to have disposed of all of his assets at fair market value at the time of death and noted that any assets transferred to his spouse would automatically be exempt from this deeming rule. The average candidate identified that the TankCo shares might be eligible for the lifetime capital gains deduction.

Most strong candidates went on to explain why the TankCo shares might be eligible for the lifetime capital gains deduction.

Many weak candidates identified the deemed disposition of properties but could not provide much further analysis. These candidates did not recognize that the automatic rollover to a spouse at tax basis applied. In addition, some weak candidates recognized the potential for the lifetime capital gains deduction but concluded it was not available based on an erroneous analysis of the assets on the balance sheet. In particular, a common technical error was to suggest that the goodwill on the balance sheet was not an active business asset. Other weak responses also attempted to engage in retroactive tax planning (such as performing an estate freeze before Lou's death), not realizing the obvious impracticality of such recommendations.

AO#14 (Estimate Tax Liability on Death)

Candidates were asked to estimate Lou's 2016 federal tax liability. They were provided with specific information on his assets and income to date in Appendix III. To be considered competent, candidates were expected to calculate Lou's taxable income, including the impact of the TankCo shares, and then determine his taxes payable based on this income.

Candidates performed as expected on this AO. The typical candidate attempted a calculation of taxable income for Lou, integrating the deemed disposition of the TankCo shares and several other items. They typically applied a tax rate (although not always the graduated rates) to the income and determined a total taxes payable.

Strong candidates performed a calculation of taxable income for Lou, integrating the deemed disposition of the TankCo shares and several other items, and explained why the principal residence and RRIF were not subject to tax. They typically applied the graduated rates to the income, and they appropriately applied the personal tax credits against this tax to determine total taxes payable.

Many weak candidates did not attempt to calculate taxable income for Lou, despite the fact that this was explicitly requested. Most of these responses simply provided a qualitative discussion of the various components of the calculation. Those candidates who did attempt a calculation usually made significant errors, such as taxing the RRIF proceeds or deducting the various credits from income instead of from taxes payable.

BOARD OF EXAMINERS' COMMENTS ON DAY 3 SIMULATIONS

Paper/Simulation: **Day 3, Question 1 (Play Canada Inc.)**

Estimated time to complete: 80 minutes

Simulation difficulty: Average 1

Competency Map coverage: Finance (1 Assessment Opportunity);
Management Accounting (2 Assessment Opportunities);
Taxation (2 Assessment Opportunities);
Strategy and Governance (1 Assessment Opportunity)

Evaluators' comments by Assessment Opportunity (AO)

AO#1 (Pricing Alternatives)

Candidates were asked to draft a report providing an analysis of two pricing alternatives and conclude on which alternative maximized cash flows. In Appendix II, candidates were provided with details of the two pricing alternatives. In both alternatives, it was stated that a portion of the current customers would continue with the current plan, and the rest would switch to the new pricing alternative. In alternative 1, customers would choose between the new pricing structure – called "pay as you play," in which customers pay a rental fee for each unit rented – and the current plan, which consists of a monthly flat fee. In alternative 2, customers would either continue with the current plan or choose from two other pricing options, both at a fixed monthly fee. The alternatives resulted in a different number of expected monthly units rented, and both introduced additional costs to be incurred. In order to demonstrate competence, candidates had to analyze the pricing alternatives presented, compare them, and provide a recommendation on which one maximized cash flows.

Candidates performed well on this AO. Most candidates were able to correctly incorporate the relevant case facts to provide a reasonable calculation for both alternative 1 and alternative 2, taking into account the additional costs and using the correct treatment for the existing and new sources of revenue. Most candidates also understood the need to compare both alternatives to the status quo to ensure the proposed options were putting PCI in a better cash flow situation than the status quo. Most candidates were able to provide a recommendation that was consistent with their quantitative analysis. However, some candidates also brought up qualitative factors, related to the proposed pricing strategies, despite the fact that they were specifically asked to conclude on which alternative maximized cash flows. These candidates used valuable time discussing these factors and did not provide added value to the client, since there were very few case facts to draw on to make their qualitative discussion relevant.

Strong candidates were able to provide an accurate and complete calculation of the two alternatives with very few errors, comparing the results to the status quo. In addition, strong candidates realized that the choice of pricing alternative would have an impact on the sanitization

cost, incorporating this additional cost into their calculation.

Weak candidates provided an incomplete analysis, missing crucial components of either revenue or expenses related to the alternatives, or analyzed both options using methods that were not comparable. For example, some candidates performed a break-even analysis for one alternative and a cash flow analysis for the other alternative. Weak candidates had several errors in their calculation, and many omitted a comparison to the status quo. Typical errors comparing monthly figures for one alternative to yearly figures for another alternative, misapplying the fee structure in their calculation, or miscalculating the revenue projected for the new plan due to a misunderstanding of the case facts related to the percentage of current customers who would switch to the new plan.

AO#2 (Outsourcing – Quantitative)

Candidates were asked to prepare a report that discussed whether outsourcing the sanitization process was a viable option. In Appendix I, candidates were provided with information about outsourcing the sanitization process. Candidates were also provided with information about Cleaning Crew (CC), including the quoted price for the sanitization service and additional delivery charges that would apply. Appendix I also outlined the incremental cost savings if the outsourcing option were to be chosen (salaries, repairs and maintenance, and cleaning solution), as well as one-time costs related to this option. To demonstrate competence on this AO, candidates had to analyze the outsourcing alternative from a quantitative perspective, in comparison to the status quo, taking into account most costs under each option. In addition, an understanding of the appropriate treatment of the one-time costs was required in order to demonstrate competence.

Candidates performed adequately on this AO. About half of the candidates were able to provide a complete quantitative analysis of the outsourcing option and correctly handle the one-time costs. Candidates compared the outsourcing option with the in-house sanitization process by either comparing the costs of each option or by calculating the incremental net cost of outsourcing. Either method was acceptable, but candidates tended to make more mistakes when approaching this analysis with an incremental calculation.

Strong candidates performed an accurate calculation of the outsourcing option as well as the current costs related to keeping the sanitization process in-house. Understanding that the business was growing, some strong candidates also performed a sensitivity analysis. Strong candidates may have also integrated the results from their analysis in AO#1, with an understanding that changing the pricing strategy would have an impact on the rental volume and, therefore, the sanitization costs. These candidates provided a thorough analysis.

Weak candidates did not convey an understanding of one-time costs, often including them in their calculation of annual cost savings, when deciding which option should be chosen. Weak candidates also had other conceptual errors in their calculation, such as double-counting the salary savings by including the employee salaries in the cost of the in-house option and including the salary savings in the outsourcing option. These candidates presented calculations that included conceptual mistakes that kept them from demonstrating sufficient competency in this

AO.

AO#3 (Outsourcing – Qualitative)

Candidates were asked to prepare a report discussing whether the outsourcing option was a viable option. Throughout the case, candidates were provided with information about Sam, Sarah, PCI, and CC that would affect the decision of whether to outsource the sanitization process. To demonstrate competence in this AO, candidates had to provide a balanced discussion of the qualitative factors to consider in making the decision. Their discussion had to include both risks and benefits and be supported by relevant facts from the case.
Candidates performed very well on this AO. They were able to identify the relevant case facts that should be considered in the decision and determine the implications of outsourcing based on the needs of the clients. They were able to demonstrate their breadth of understanding through a balanced discussion, considering both the pros and cons of outsourcing.

Strong candidates were able to provide a balanced discussion, providing great breadth of analysis by incorporating several risks and benefits into their discussion, and they provided a supported recommendation as to whether the outsourcing option should be chosen. In addition, strong candidates also included suggestions to mitigate some of the risks identified.

Weak candidates simply restated case facts. Their response lacked analysis, did not add any value to what was already stated in the case, and was, therefore, not helpful to the clients. They also did not provide a balanced discussion about whether the outsourcing option should be chosen, focusing solely on either the risks or the benefits.

AO#4 (Taxation of the House)

Candidates were not directed to this AO, other than by a mention on the first page of the case that the Wright family was also considering some other changes, with a reference to Appendices III and IV. In Appendix III, candidates were provided with information about the potential move, along with information about the current home and the family cottage, which included the original cost, the year acquired, and the current value of each property. To demonstrate competence in this AO, candidates had to provide a discussion of the principal residence exemption and a recommendation as to which property to designate as the principal residence, based on the average annual gain on each property.

Candidates struggled with this AO. Most of them were able to identify that the principal residence exemption exists and is available to taxpayers to allow them to reduce the amount of the taxable capital gain upon the sale of a principal residence. However, candidates struggled with the application of the rules. They had difficulty providing a supported recommendation on which one of the house or the cottage to designate as the principal residence. Many candidates provided a recommendation without explaining why one residence should be designated over the other or simply based their recommendation on the total capital gain, rather than the average annual gain.

Strong candidates were able to thoroughly discuss the principal residence exemption, calculating the average annual gain for both the home and the cottage and concluding on which property

should be designated as the principal residence based on this calculation. They also incorporated some tax-planning advice, suggesting that if the cottage was not going to be sold for a long period of time, the client might want to designate the home as the principal residence in order to defer the payment of taxes on the capital gain.

Weak candidates did not understand the technical requirements related to the principal residence exemption. They did not calculate the average annual gain or did not realize that they needed to designate either the home or the cottage as the principal residence. These candidates typically just focused on the capital gain of the home without considering the cottage. Some candidates also provided unrealistic recommendations, such as selling the cottage in order to apply the principal residence exemption to it, although the Wrights had clearly indicated that they wanted to sell their house, not their cottage.

AO#5 (Deductibility of Moving Expenses)

Candidates were not directed to this AO, other than by a mention on the first page of the case that the Wright family was also considering some other changes, with a reference to Appendices III and IV. In Appendix III, candidates were provided with information about the location of the move and the moving costs incurred by the family. In particular, information was provided on the distance between the new location and PCI, including the fact that it would be a longer commute for Sam but a shorter one for Sarah if they were to decide to outsource the sanitization process to CC. To demonstrate competence, candidates had to first discuss whether the moving costs were eligible to be deducted (based on the 40 kilometre rule) and then discuss which moving costs were deductible on the Wrights' personal tax returns.

Candidates struggled with this AO. Most candidates identified that there is a tax rule related to the number of kilometres a taxpayer needs to move closer to the new workplace by in order to be able to deduct moving expenses. However, many candidates were not able to clearly explain this rule and were confused when applying it, often unclear how the 40 kilometre distance applied. Candidates also struggled to explain which specific moving costs would be deductible. Although many attempted to discuss the individual costs, they seemed to be unclear on which costs were eligible and which ones were not and, as a result, provided the client with incorrect information.

Strong candidates provided a more thorough discussion of the 40 kilometre rule, with the understanding that Sarah might be able to deduct the moving expenses since the family is moving closer to CC. When analyzing the specific moving costs provided in the case, strong candidates were able to correctly identify which ones were deductible and which ones were not. Some candidates also incorporated a discussion about moving expenses being limited to the net eligible income earned by the taxpayer at the new work location after the move. This demonstrated a deep understanding of the tax rules around the deductibility of the moving expenses.

Weak candidates did not correctly apply or understand the 40 kilometre rule. Many stated that the taxpayer simply needs to move 40 kilometres to be eligible to deduct moving expenses, without explaining that the taxpayer needs to be moving closer to the work location. Weak candidates also demonstrated their technical weakness by providing the client with inaccurate information on the deductibility of the individual moving costs.

AO#6 (Investment Options)

Candidates were not directed to this AO, other than by a mention on the first page of the case that the Wright family was also considering some other changes, with a reference to Appendices III and IV. In Appendix IV, candidates were provided with information on three potential investment options the Wrights were considering. Candidates were expected to advise the Wrights of the most appropriate investment option, given their objective to use these funds to finance their children's university education in 10 years' time. The three investment options presented in Appendix IV were as follows: real estate, Government of Canada bonds, and commodity mutual funds. To demonstrate competence, the candidates had to discuss the three investment options from both a risk perspective and a return perspective and make a reasonable recommendation on which investment the Wrights should go with.

Candidates performed well on this AO. Most candidates understood that there is a trade-off between the risk and return of an investment. They were able to apply case facts to appropriately analyze the risks of each investment and provide a reasonable discussion about the return. They were able to provide a recommendation about which investment they should choose, keeping in mind that the Wrights' primary objective was capital preservation.

Strong candidates provided a balanced discussion, analyzing the risks and returns of each investment. They were able to compare the potential returns of the investments using a consistent approach and to incorporate case facts to analyze the risks related to the investments. Some strong candidates discussed RESPs as another potential alternative, including the benefits of using them. Some also discussed the benefits of a diversified portfolio.

Weak candidates did not discuss the trade-off between risk and return. Instead, they simply listed one or two of the main risks or rewards. They did not address each of the investment options, or they did not integrate case facts to appropriately analyze the risks of the investments. Some weak candidates struggled to put the investments on equal footing to compare them to each other. For example, some of these candidates calculated the total return for one investment option, the annual return for another, and the future value of the investment in 10 years for another. Although these results were not comparable, they compared them in order to recommend an investment option.

Paper/Simulation: **Day 3, Question 2 (Dogani)**

Estimated time to complete: 70 minutes

Simulation difficulty: Average 1

Competency Map coverage:

Audit and Assurance (2);
Finance (1);
Financial Reporting (1);
Management Accounting (1)
Taxation (1);

Evaluators' comments by Assessment Opportunity (AO)

AO#1 (Land Exchange)

Candidates were asked to discuss any significant financial reporting issues that would need to be addressed by management. Details were provided in Appendix I regarding the exchange of land between Dogani Inc. and Riverview Real Estate Ltd. Candidates were given specific information regarding the reason for the exchange, the size of the two pieces of land, the acquisition cost, and the estimated fair values at November 30, 2015. Candidates were also told that the real estate appraiser who was engaged to determine the fair values of the properties was unable to complete his work due to the fact that there had been no land sales for two years. In order to demonstrate competence, candidates had to provide a reasonable analysis of the non-monetary transaction criteria found in *IAS 16 – Property, plant and equipment* using case facts to support their discussion of whether the land exchange should be recorded at carrying value or fair value.

Candidates struggled on this AO. A surprising number of candidates did not recognize there were specific criteria that applied to this transaction under IFRS, assuming none existed because there was not a separate *Handbook* section for non-monetary transactions in IFRS. Many candidates appeared confused and quoted ASPE criteria even though the case clearly stated that Dogani Inc. reported under IFRS. When candidates were able to identify the correct *Handbook* criteria to analyze, their analysis often lacked depth, despite the many case facts that they could have used to support their analysis.

Strong candidates were able to identify the correct *Handbook* criteria, often addressing both commercial substance and fair value in a reasonable manner. These candidates were able to support their discussions with specific case facts, such as what Dogani Inc.'s plans were for the land or the size of the land, to support their discussion on whether commercial substance is lacking, and the fact that the real estate appraiser was unable to complete his work and discuss whether the estimated fair values were appropriate to support their discussion on whether there were reliable fair values.

Weak candidates either quoted incorrect *Handbook* criteria in their analysis, such as applying *IAS 18 – Revenue*, or identified the correct *Handbook* criteria to apply but did not provide depth in their analysis, often jumping to the conclusion that commercial substance was lacking or that fair values were unreliable without supporting their conclusion. Some weak candidates provided

conclusions that were inconsistent with their analysis (e.g., concluding the transaction should be recorded at fair value even though a commercial substance was lacking).

AO#2 (Information for the Bank)

Candidates were asked to comment on whether the information Gale planned on providing the bank (for a potential loan to proceed with the construction) would be useful to the bank. Gale also wanted to know what other information the bank might require. Details on the proposed information to be provided to the bank were provided in Appendix IV. In order to demonstrate competence, candidates had to address several of the items suggested by Gale, explain why the information would or would not be useful in securing the loan, and explain how the information provided could be improved. Candidates were provided with a list of items, most of which contained notable flaws, and were expected to explain to Gale not only whether the information was useful but also how the flaws could be addressed.

Candidates performed well on this AO, especially given the fact that this was an unusual required. Most candidates were able to address several of the items suggested, explain the usefulness of each item addressed, and provide a recommendation to improve the information for each item. The most commonly addressed items were the draft pro-forma statement of financial position, the personal guarantee letter from Gale's uncle, the letter from Gale with her estimate of the new building value, and the email from the Ontario Provincial Police.

Strong candidates were able to address more issues, with better discussions. They provided discussions that explained both why the information provided would be useful or not and how to improve the information. Strong candidates also tended to step back and assess whether there was information outside of the listing that could be provided to further strengthen Dogani Inc.'s application for the loan (e.g., covenant calculations), or they explained that perhaps not all the information suggested was necessary, since it exposed the company to unnecessary risk (e.g., a personal guarantee should only be provided if requested by the bank).

Weak candidates were not able to provide a complete discussion of each item. Many either simply stated whether the item was useful or not to the bank, without explaining why that would be the case, or provided a way to improve the information, without explaining what the problem was with the information as currently suggested by Gale. In addition, weak candidates addressed fewer of the items on the list.

AO#3 (Risk Assessment)

Candidates were asked by the engagement partner to assess the risks related to the audit. The case provided information in many areas that pointed to factors that affected the risk of material misstatement for the audit. In order to demonstrate competence, candidates had to address several of the factors and explain why these factors affected the risk of the audit.

Candidates performed well on this AO. Most candidates were able to address several of the factors that affected risk of material misstatement and conclude on the overall audit risk of the engagement. The most common factors addressed by the candidates included the fact that Dogani Inc. had a new controller start in September 2015 (increasing risk of error due to the controller's lack of familiarity), the fact that this was a first-time audit for Dogani Inc. (increasing

risk that opening balances could contain undetected errors), and the fact that the bank was requiring audited financial statements as part of the loan application (increasing risk that management might feel pressure to manipulate the financial statements to make them look better).

Strong candidates were able to address many of the significant factors and provided reasonable explanations as to why these factors would affect risk of material misstatement. They were also able to provide a conclusion on the overall risk of material misstatement.

Weak candidates did not address as many of the significant factors that would affect the risk of material misstatement as stronger candidates did. Those who did identify the factors did not explain why each factor would affect risk. Overall, the discussions from weak candidates lacked depth.

AO#4 (Audit Approach and Materiality)

Candidates were asked by the engagement partner to suggest an audit approach and determine materiality. The simulation provided opportunities to comment on whether the audit should have a combined or substantive approach, and what should be done in terms of auditing of the opening balances. In addition, there were specific case facts provided in order to help candidates with their discussion and calculation of materiality. In order to demonstrate competence, candidates had to provide a complete discussion of the audit approach and determine materiality.

Candidates performed well on this AO. Most candidates were able to provide a recommended audit approach, touching on whether a combined or substantive approach should be taken and what to do regarding opening balances. Most candidates also provided a reasonable discussion of materiality that considered the users of the financial statements and what they would focus on, and they then went on to calculate the materiality to be used in the audit.

Strong candidates were able to support their recommended audit approach with specific case facts, recognizing, for example, that a professional services firm had been hired by Dogani Inc. to design and document the company's processes and controls but that a few exceptions had been found. They also recognized that, since this was a first-time audit, special considerations for opening balances needed to be addressed. Furthermore, strong candidates linked their materiality calculation to the users of the financial statements, recognizing that the bank was a new user this year. They demonstrated good integration, accounting for any adjustments that were required from the discussion of the accounting issues, in their materiality calculations.

Weak candidates were not able to apply case facts to support their recommended audit approach and materiality, instead providing generic comments in their audit plan that could have been applied to any scenario. Many jumped straight to the basis and percentage to be used in calculating materiality without first considering the users of the financial statements and what they may be interested in. Many weak candidates also demonstrated technical weaknesses, suggesting, for example, an inappropriate percentage to be used when calculating materiality.

AO#5 (Tax Issues)

Candidates were asked to look at some tax issues when they were told the following: "You meet with Gale to discuss DI's financial reporting processes, draft financial statements, and some tax-related matters (Appendix II)." In Appendix II, candidates were provided with hints that Dogani Inc. had corporate tax issues that needed to be addressed with Gale. Candidates were told that Gale was not sure how paying for exhibition expenses for Louis and his wife would affect Dogani Inc.'s corporate income taxes. In addition, Gale raised another corporate tax issue related to a researcher hired in 2015, since the researcher was provided with an interest-free home relocation loan and a leased luxury sport utility vehicle, at a cost of $1,500, for the researcher to use for business purposes. In order to demonstrate competence, candidates had to address several of the tax issues raised by Gale.

Candidates performed well on this AO. Most candidates were able to address several of the issues raised by Gale and provided good insight on the tax rules that need to be considered by Dogani Inc. Candidates generally provided relevant tax advice supported by the correct tax treatment on the issues. The most commonly discussed issues were the fact that Louis's wife's expenses for the exhibition were likely not deductible, that the meal expenses incurred for the exhibition would only be deductible at 50%, that the interest-free home relocation loan would be an interest benefit to the researcher unless certain conditions were met, and that there was an $800 limit on the lease payments for the vehicle.

Strong candidates were able to address several of the issues raised by Gale and discussed them in sufficient depth. Their discussions provided adequate explanations to help Gale understand why a certain tax treatment would be necessary. Strong candidates also provided more complete discussions for each issue, addressing, for example, both the fact that Louis's wife's expenses would not be deductible to Dogani Inc. and the fact that her expenses would be a taxable benefit.

Weak candidates addressed a fewer number of issues and tended to focus on what Dogani Inc. was already doing right (e.g., deducting Louis's exhibition expenses) instead of what needed to be fixed (e.g., Louis's wife's expenses may not be deductible). In addition, many weak candidates provided incorrect tax knowledge (e.g., suggesting that the vehicle lease payments were fully deductible). Some weak candidates spent a significant amount of time discussing issues that were not relevant, such as the standby and operating charge that might apply for the leased vehicle, ignoring the clear case fact that the vehicle was to be used for business purposes only.

AO#6 (Make versus Buy)

Candidates were asked to address Gale's email (Appendix III), which detailed Dogani Inc.'s current manufacturing costs for body rhythm monitors and a proposal from Sensit Inc. to manufacture the monitors for a price of $38 per monitor. The email also mentioned that the customers of Sensit Inc. commented that there were no quality concerns and that all orders were filled on time. In order to demonstrate competence, candidates had to prepare a reasonable quantitative and qualitative analysis of the make-versus-buy decision and provide a recommendation.

Candidates struggled on this AO. While most candidates were able to provide some of the qualitative factors to consider and recommend a course of action, many were not able to adequately consider the relevant costs for this decision. Many candidates did not understand that unavoidable costs would not be relevant in decision-making.

Strong candidates were able to adequately address the avoidable costs in their analysis. In addition, they provided several qualitative factors to consider, the most commonly addressed ones being the fact that Dogani Inc. should consider its ability to control the manufacturing and the impact of the required layoff on the staff and Dogani's reputation. They also provided better integration in their discussions, recognizing, for example, that the potential Ontario Provincial Police order and the future expansion to Europe were important considerations as well. Strong candidates provided recommendations that were supported by their quantitative and qualitative analysis.

Weak candidates were not able provide a reasonable quantitative analysis for Gale on the issue. They either failed to consider at all what portion of the overhead was avoidable or did not adjust for it appropriately. Weak candidates also did not provide a reasonable qualitative analysis, focusing only on the fact that the references provided by Sensit Inc. stated that there were no quality concerns or delays, without challenging the source of these references or going beyond this fact to bring to light other factors that should be considered.

Paper/Simulation:	**Day 3, Question 3 (Culinary Crawl)**
Estimated time to complete:	90 minutes
Simulation difficulty:	Average 1
Competency Map coverage:	Audit and Assurance (1 Assessment Opportunity); Finance (1 Assessment Opportunity) Management Accounting (2 Assessment Opportunities); Strategy and Governance (2 Assessment Opportunities); Taxation (1 Assessment Opportunity);

Evaluators' comments by Assessment Opportunity (AO)

AO#1 (Calculation of Business Income)

Candidates were asked to help determine Ivy's business income for her 2015 personal tax return. In Appendix I, candidates were provided with her calculation of Culinary Crawl's (CC's) business income, along with some notes. The notes provided candidates with information on the items included in her calculation, such as an annual upfront fee that was included in cost of sales, capital purchases (computer and office furniture), meals and entertainment costs, the nature of the interest costs, and an assumption on the home office expenses, with an itemized listing of her household expenses presented in Appendix III. Candidates were expected to review the calculation and notes and make the necessary tax adjustments to recalculate the business income. In order to demonstrate competence, candidates also had to explain the reasons for the proposed tax treatments.

Candidates performed adequately on this AO. Most candidates attempted several tax adjustments, specifically to the capital items, the meals and entertainment, and the home office expenses. Most candidates also discussed the reasoning behind the adjustments, including the 50% deductibility of meals and entertainment, the criteria for home office eligibility, and CCA. Most candidates used the incremental method to make their adjustments, using Ivy's calculated business income as a starting point.

Strong candidates were able to correctly discuss the tax treatment of a greater number of items, including those that were not as obvious, such as the cell phone and office painting. These candidates were also inclined to provide additional information to Ivy, most notably the filing deadlines and the treatment of the interest costs.

Weak candidates attempted to make tax adjustments, but they were either incorrect or the reasons for the proposed adjustments were not adequately explained. Typical errors included using the useful life of the computer and furniture for the purpose of calculating CCA, instead of using the appropriate rate as per the Income Tax Act, and not explaining why the allocation of home office expenses was warranted. When using the incremental method, many weak candidates forgot to add back the cost of the computer and office furniture after deducting CCA.

AO#2 (Expansion Options)

Candidates were asked to let Ivy know which one of the additional tour options would be more profitable, given that she could only add one for now. Appendix IV provided the details of each expansion option, including the size of tour groups, staffing, pricing, and additional costs. The majority of the lunch tour information was provided in this appendix, but candidates were required to use information from other parts of the case to calculate the profitability of the additional evening tour. Appendices I and V provided information about the current tour that the candidates were expected to leverage in their calculation of the additional evening tour. In order to demonstrate competence, candidates had to calculate the profitability of each expansion opportunity and provide a conclusion on which one would be more profitable.

Candidates performed well on this AO. Many candidates were able to incorporate the Appendix IV information into their calculation of the lunch tour profitability, including the regular and holiday revenue streams, food costs, and additional staffing, and attempted to include some fixed costs, such as the flat fee, advertising, and business insurance. Most candidates calculated the additional evening tour profitability using the customer base from the current tour, as per Appendix V, as well as the current pricing and costs from Appendix I and fixed costs from Appendix IV. Based on their calculations, candidates concluded on which tour was more profitable.

Strong candidates were able to gather the correct case information to calculate the lunch and evening tour revenue and variable costs, and they did a thorough job of including the correct fixed costs for the flat fee, advertising, and incremental business insurance. After these calculations were completed, strong candidates concluded on which tour was more profitable.

Weak candidates were not able to integrate the case information into their analysis and had issues with the calculations. A common challenge for weak candidates was calculating the number of annual customers for the regular and Christmas season to determine the revenue and variable costs. Another area of difficulty was using the current tour information to calculate the evening tour profitability. Many candidates used the sales figure from Appendix I to calculate the revenue and expected costs, instead of using the better estimate for the future provided by Ivy, in Appendix V. Many candidates who used the information in Appendix I also failed to consider that the information was only for a four-month period of time, and they used the amounts as annual figures. Many candidates also provided a qualitative analysis of the two options, ignoring that Ivy had asked to conclude on which tour was more profitable.

AO#3 (Number of Customers)

Candidates were asked to calculate how many customers Ivy would require on her current tour to replace her current employment income. The 2015 T4 slip in Appendix II indicated her employment income along with her union dues and EI payments. Information was also provided throughout the case on the costs related to the business. Candidates were expected to use that information in order to provide Ivy with the number of customers she would need to replace her current employment income.

A fair number of candidates did not address this AO. Of those who did address it, most understood how to perform the calculation and used information from the case, as well as the $40 contribution margin, to determine the number of customers required to replace Ivy's T4 salary. Depending on how the candidates interpreted the requirement, they might also have incorporated some of the fixed costs that were incurred to operate the current tour, including the upfront flat fee, advertising costs, and food sampling costs. Once the total employment income was calculated, candidates were expected to divide this by the current contribution margin of $40 to arrive at the number of customers.

Strong candidates either understood that there were fixed costs incurred on the current tour that would need to be incorporated into their analysis or stated that they were not including the fixed costs in their calculation since these were incurred anyway, seeing as Ivy was already running the tour while being employed. When candidates compared Ivy being employed full-time without operating the tour to her operating the tour without being employed, the fixed costs became an important element of the calculation. They would not have been incurred had the current tour not been in operation and, therefore, should have been taken into account in the calculation to provide a more accurate representation of the breakeven of her comprehensive income. Other adjustments that were part of stronger responses included removing EI and union dues that would not have to be paid if Ivy no longer had employment income.

Weak candidates used incorrect amounts to attempt their calculation of the number of customers to replace Ivy's employment income. Some examples of weaker responses included using the selling price of $100 or the variable cost of $60 instead of the contribution margin of $40. Other weak responses used the forecasted figures from the expansion options even though the case explicitly asked for the number of customers on the current tour. Some weak candidates also used Ivy's after-tax salary in their calculation, even though all of the other figures used were before tax. As a result, their calculation was not internally consistent, which skewed the number of customers needed to replace the employment income.

AO#4 (Pros and Cons of Strategy)

Candidates were asked to analyze, from a qualitative perspective, the pros and cons of Ivy's business strategy and the environment in which Culinary Crawl operated. There were many points mentioned throughout the case for the candidates to incorporate into their discussion. Examples included comments such as, "She provided interesting details about the history of the buildings"; "I've taken culinary classes and a sommelier course"; and "Manage mostly by word-of-mouth." The candidates were required to focus on the business strategy and environment rather than the pros and cons of the expansion options.

A fair number of candidates did not address this AO. Most candidates who identified this AO realized that Ivy was looking for a balanced analysis of her current strategy and the environment in which she operated. They provided relevant pros and cons that were directly tied to the case facts and provided a value-added discussion that extended beyond a rehash of case facts. Many candidates prepared their analysis using point-form pros and cons and provided a sufficient number of items in each section. Many candidates also incorporated the control weaknesses into

their cons discussion, which was a good demonstration of integration of case facts.

Strong candidates addressed this AO using a SWOT analysis and incorporated several points into each of the strengths, weaknesses, opportunities, and threats. They typically provided a few items in each section and a good balance of internal and external environment pros and cons. Many strong candidates also attempted to provide recommendations on remediating the cons.

Weak candidates misinterpreted this requirement and attempted the AO within the context of the expansion options only. Many attempted to do a qualitative analysis of the lunch tour and additional evening tour, even though, in AO#2, the case asked only which option would be more profitable and, in AO#4, for the pros and cons within the business strategy and operating environment context. Other weak candidates lacked breadth in their response and attempted only a few pros and cons within their discussion or simply repeated case facts.

AO#5 (Controls)

Candidates were asked to identify some of the control weaknesses in Ivy's processes and suggest functionalities to be built into her website to fix these weaknesses. There were many control weaknesses provided throughout the case that the candidates were expected to address. For example, in the notes to Appendix I, Ivy mentioned payments to restaurants for customer no-shows because she didn't collect cash from customers until the start of the tour. In Appendix V, she also mentioned that there were misplaced reservations due to her scribbling customer information on Post-it notes, disagreements with restaurants around accuracy and the timing of the 48-hour notification, and the mixing up of business and personal money.

Candidates did generally well on this AO. Most were able to identify and address the control weaknesses noted in Appendix V of the case. Candidates typically took the weakness, implication, recommendation format to address this requirement and were generally able to provide an adequate discussion of each weakness they addressed. Most candidates managed to link at least one of their recommendations to the website functionality, and it typically related to having an online booking function or ability for customers to pay their fees electronically through the website.

Strong candidates provided website-related recommendations to each of their identified weaknesses. They addressed several individual weaknesses, including some that went over and above what was explicitly stated in the case (i.e., collecting cash increases the risk of theft and loss). Some strong candidates also addressed the website functionality in a separate section after the controls discussion to provide further value on how to use the website to remediate the control weaknesses.

Weak candidates had difficulty clearly linking the recommendation to a valid weakness and implication. For example, some candidates recommended getting a separate business phone line to address the weakness of inaccurate transference of customer information. However, the key issue was that this process was being performed manually, which led to the risk of data input error, and getting a separate phone line would not have fixed that weakness. Other weak

candidates did not address the website functionality and provided recommendations that were either generic or electronic but not necessarily related to the website. Typical recommendations included using a spreadsheet instead of Post-it notes and having an alarm set 48 hours before the tour.

AO#6 (Debts)

In Appendix III, candidates were asked to address Ivy's mortgage renewal options (fixed versus variable rate), as well as provide any other advice related to her multiple debts. The current mortgage was at a fixed rate of 3%, and she was contemplating a three-year renewal with either a fixed rate of 2.5% or a variable rate of prime plus 1%, prime currently being 1%. In terms of Ivy's multiple debts, the case identified that she had a student loan at 5% interest and personal credit cards at 18% interest to go along with the aforementioned mortgage. Ivy also stated in Appendix I that she was unsure whether any of the minimum credit card payments had been made last month, and that she was trying to quickly pay down her mortgage while still paying off her student loan.

Many candidates did not address this AO at all, and those who did struggled to provide a complete response. The discussions for this required were fairly concise and did not provide a lot of value added for Ivy. The mortgage discussion typically addressed the risk involved with the variable rate if the prime rate went up but did not go further to integrate it with Ivy's risk tolerance, her debt situation, the three-year timeframe for the renewal, or anything else that would have made the analysis more relevant. The debt advice provided by candidates was fairly concise and typically involved suggestions to consolidate her debt or prioritize debt payments to focus on the higher interest vehicles first.

Strong candidates put a greater emphasis on the debt advice, recognizing that Ivy was in a difficult debt situation, and provided numerous recommendations to help manage that situation. The more common recommendations included setting up a line of credit to consolidate the debt into a lower-interest vehicle, setting up automated minimum credit card payments, and paying off the credit cards first since they had the highest interest rate.

Weak candidates attempted to calculate the net present value of both mortgage options, not realizing that this did not provide any additional information to Ivy to help with the renewal decision. Many weak candidates' discussions failed to take Ivy's situation into account when analyzing the mortgage options. When weak candidates did address the mortgages, often their explanation was that the variable interest rate would vary while the fixed interest rate would not, failing to explain why this was a concern to Ivy. Finally, weak candidates did not place much emphasis on the debt advice, often ignoring it completely.

AO#7 (Overall Recommendation)

Candidates were asked to address Ivy's question of whether she should quit her day job, based on their overall analysis of her situation. Candidates were expected to integrate the analyses from the other AOs to provide an appropriate recommendation to Ivy, considering the various risks to be managed.

Candidates did not do very well on this AO. Many candidates addressed this AO after their analysis of the number of customers needed to replace Ivy's employment income, and they concluded on whether she should quit her day job solely based on that one analysis. Other candidates addressed it as an overall conclusion but did not properly explain why they concluded a certain way and did not use their previous analyses to support their recommendation.

Strong candidates realized this AO required solid integration with their overall analysis. These candidates were able to provide an overall recommendation that specifically tied back to Ivy's situation. The most common discussion points brought up by candidates to support Ivy quitting her day job included the calculation of number of customers needed to replace her employment income, which showed she would be able to replace her current income; the expansion opportunity, which showed a great potential for growth; and her passion for the business, which would allow her to thrive. Common discussion points brought up by candidates to support Ivy not quitting her day job included the weak control environment, her precarious debt situation, and the fact that she'd only been in business for four months, which was too early to determine whether she would be successful.

Weak candidates provided unsupported conclusions such as, "Based on the above, I would suggest you quit your day job," which addressed the required very superficially. Other weak candidates provided conclusions at the end of each issue they discussed but failed to address on an overall basis whether Ivy should quit her day job.

The CPA certification program prepares future CPAs to meet the challenges that await them For more information on the qualification process, the common final examination (CFE), and the specific education requirements for your jurisdiction, contact your provincial/regional CPA body.

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