

# CPA Common Final Examination

## BOARD OF EXAMINERS' REPORT

September 2015



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**September 2015**

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## **THE BOARD OF EXAMINERS' REPORT ON THE 2015 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.

Seven appendices provide more detailed information on the design, guide setting, and marking of the 2015 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 of six 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.

**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.

Detailed comments by the board on each of the 2015 CFE Day 2 and Day 3 simulations appear in **Appendix E**.

### 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 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 simulation and **Appendix C and D** for Day 2 and Day 3 simulations and marking guides. The marking results, by Assessment Opportunity, appear in the statistical reports found in **Appendix F**.

**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 chair of the board participates 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

## 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 area 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

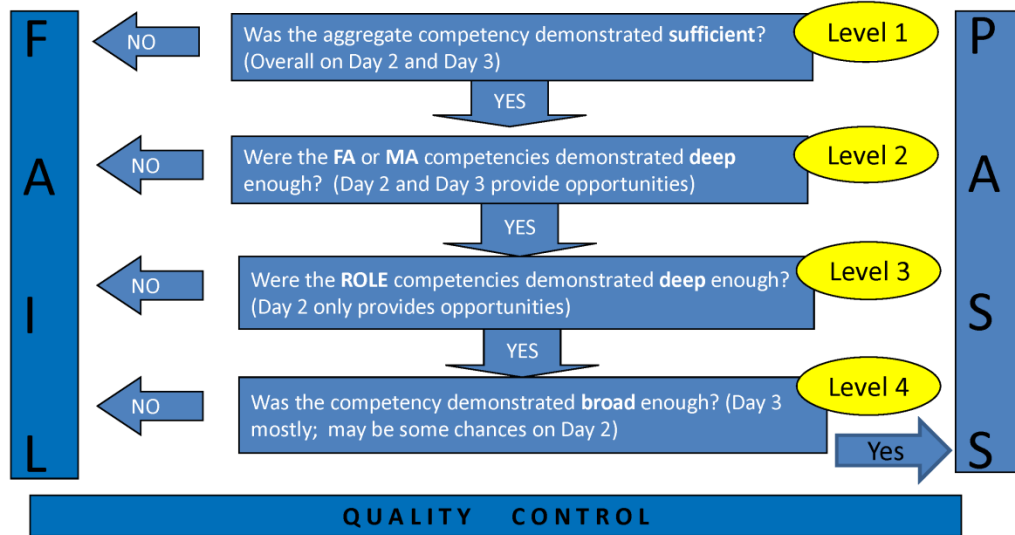
The decision model used by the board is presented in Exhibit I. Four key decision points, or levels, are applied in reaching a pass or fail decision, as follows:

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**

## 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.

A handwritten signature in black ink, appearing to read 'P. Norwood', with a horizontal line underneath.

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 and meet the two depth standards and the breadth standard.***

### INTRODUCTION

Information on candidates' performance on the first offering of the Common Final Examination (CFE) is provided here, in a summary format, to help candidates understand how to improve their performance. A copy of the simulations for all days of the examination and the detailed marking guides for Day 2 and Day 3 can be found in **Appendices B, C and D**. ***The marking guide for the Day 1 simulation will not be disclosed until version 2 of the case is written, which will be in May 2016.***

### Nature of the 2015 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

The Board was quite impressed by the quality of candidate responses. The Board noted that the level of communication on all days was clear and professional. For the most part, candidates' responses were well organized, with a logical flow. The exception often was in the quantitative analysis, since candidates did not always explain the details of their calculation, such as the assumptions they used or the underlying formulas. An example of where candidates could have done a better job of documenting their calculation was on Day 2 (common to all roles), AO#5, where candidates had to revise the financial statements for the accounting errors. Although some candidates clearly laid out their adjustments by putting them in a separate column and explaining the calculation performed, others embedded their adjustments within the cell and did not reference them at all. This made it difficult at times to tell which adjustments were being made and how the numbers were derived. The same applied to Day 3, Question 1, AO#1, where often it appeared that candidates had made several different attempts at the same calculation, likely because they were unsure of how to approach the Q1/Q2 direct labour shortage, without explaining the calculation.

In many cases it was difficult to decipher what the candidates' calculations were intended to do. The Board advises candidates to clearly label and explain all calculations in future. Candidates should not assume that markers will be able to figure out what the calculation is and should refer to the SecurExam instructions for further details on how to explain calculations clearly. The logic and flow should be made obvious. Candidates are warned that extraordinary steps will not be taken to interpret their calculations. (See the marking guides, which illustrate how each assumption is clearly noted. In addition, candidates should show their "cell" formulas.)

The majority of candidates used the cut and paste function in order to provide excerpts from the *Handbook* to support their financial reporting discussions. Most candidates made good use of the cut and paste function without abusing it by copying sections that did not apply. In most cases, the excerpts used were relevant, and candidates did a good job of integrating case facts and analysis to the excerpts, especially when it came to the analysis of specific criteria. However, some candidates copied sections that were not relevant, or copied relevant sections without providing any interpretation of the standards being quoted. Candidates are reminded to use the *Handbook* to support their own analysis. The *Handbook* quotes should be integrated with the case facts to form the technical analysis. *Handbook* quotations should never be used on a standalone basis.

### Time Management

The Board noted time management issues on all three days. More specifically, on Day 1, many candidates spent an inordinate amount of time doing a situational analysis, but often failed to tie it into their analysis of the alternatives. Some candidates ran out of time, in spite of the fact that Day 1 was not time-constrained, indicating that some of the time spent detailing all the aspects of the situational analysis should have been redirected to the other parts of the response. The Board wishes to remind candidates that the effort directed to the situational analysis is only beneficial if it is later used in evaluating the issues and making supported recommendations.

On Day 2 (all roles), some candidates spent more time than expected analyzing the common financial reporting issues. Some spent time discussing accounting balances and treatments that were in fact properly recorded. These candidates did not appear to spend sufficient time thinking about an issue before beginning to write their response. As a result, they misallocated time that could have been better spent discussing accounting issues in which there were errors or the other requirements related to their role. The Board wishes to remind candidates to take time to plan responses and to do some preliminary analysis of the issues before they begin writing their response. Day 2 in particular is designed to allow time for filtering information and planning the response. Candidates are encouraged to use the time that is provided.

The Board also saw evidence of poor time management on Day 3. Time management was critical on Day 3 because there were multiple questions to answer, each with seven or eight elements requiring attention. Candidates appeared to spend a significant amount of time on Day 3, Q1 (Bamboo), particularly on the quantitative analyses, perhaps to the detriment of Q3 (Katwill), on which some candidates did not address all the required elements. The Board reminds candidates that time management is an important skill on the CFE.

**Additional Day 1 Comments**

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

The Board was surprised that some candidates did not provide a quantitative analysis of the major issues presented. Candidates are reminded that Chartered Professional Accountants are expected to perform both quantitative and qualitative analyses, as appropriate, to support their recommendations.

A large number of candidates spent a large part of their response (one-third) on a situational analysis. The points made were typically valid and identified many of the decision factors to be considered. However, these points were simply listed as pros or cons, or they were part of a SWOT analysis that was done as an independent section of the response. Many candidates failed to then take this great up-front analysis and incorporate it into their discussions of the specific issues and the recommendations they were making. Candidates are reminded that the situational analysis is there to help provide a frame of reference for the decision factors they should be bringing into their analysis of the issues in order to help them make relevant recommendations that consider the goals, objectives, mission, vision, et cetera, of the company.

**Additional Day 2 and Day 3 Comments**

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

**Identification of Issues to be Addressed and Level of Direction**

The Board noticed that some candidates discussed topics that were not relevant to the simulation or the role. For example, on Day 2 (Assurance role), many candidates gave K-Med's management advice on whether they should be going public or what they should do following the IPO, instead of discussing the IPO itself and the related prospectus, which was the required. Many candidates also discussed the composition of the board of directors, which was not one of the requireds. Candidates are reminded that on Day 2 they are specifically directed to the issues. They should, therefore, focus on discussing the issues identified for them in the case.

On Day 3, Question 2 (ESL), there was also evidence of candidates trying to find a home for commentary that was not suited to the role and requireds. Candidates discussed the need to revise the mission and vision. There was nothing in the simulation to lead candidates to this discussion. Candidates should keep their role in mind and ensure that the discussions they have are relevant to the stakeholders and address critical issues, particularly when considering the time-constrained nature of Day 3.

The Board also noted that candidates did not perform as well on non-directed indicators on Day 3. For example, on Day 3, Question 2 (ESL), candidates were expected to identify the fact that there was a potential cannibalization issue with the introduction of online versus classroom instruction. On Day 3, Question 3 (Katwill), AO#7, candidates were expected to identify the disconnect between Carrie's vision and the proposed expansion. In both cases, not a lot had to be said. Candidates simply needed to identify the issue. The Board considered these to be undirected assessment opportunities. Candidates are reminded that they will not be specifically directed to all the issues the Board considers mission critical. Candidates need to take time to understand the situation, their role, and the needs of their client, and to address all the significant issues, whether directed or not. Interestingly, candidates attempted to discuss governance issues in many other places on the CFE, but in those cases it was not relevant or the discussion was not suited to their role.

### Technical Knowledge

Candidates had to demonstrate technical knowledge throughout the CFE. Most candidates were able to do so. On Day 2, candidates were generally able to demonstrate competence in financial reporting through their accounting discussions, using *Handbook* references and case facts as support. However, they struggled when it came to translating their work into a journal entry. Many candidates were confused as to which account to adjust and sometimes used accounts that were not reasonable. Some candidates also provided journal entries that did not balance. It is a critical skill for a CPA to be able to translate an adjustment into a journal entry in order to provide a set of revised financial statements, and the Board was disappointed to see candidates struggle with this fundamental element of accounting.

Most candidates were able to provide a complete analysis of the basic accounting issues but struggled to address more complex accounting issues. For example, on Day 2, AO#3 (common to all roles), candidates had to discuss the research and development (R&D) costs that had been capitalized to decide whether they should have been expensed. In order to do so, candidates had to first discuss the R&D criteria in general to determine if the costs related to the K-Med product met the criteria. Then, candidates had to address the specific costs that had been capitalized to decide whether capitalization was allowable according to the *Handbook*. Many candidates either jumped straight to a conclusion without first analyzing the case facts and the relevant *Handbook* guidance or performed only a partial analysis by discussing one of the two issues. A similar pattern was witnessed on Day 3, Question 2 (ESL), which also tested R&D (intangibles).

On Day 2, AO#4 (common to all roles), candidates had a difficult time dissecting the technical guidance and explaining the different steps in deciding whether the leasing operations qualified as discontinued operations. This issue required candidates to go through a few steps before concluding, and some candidates jumped to a conclusion after analyzing only one of the steps.

Candidates also had a difficult time on topics that are less regularly seen, such as the auditor's responsibilities related to an IPO (Day 2 (Assurance role), AO#12). The Board was not surprised that candidates were not familiar with this topic but was disappointed that candidates did not know where to find the relevant guidance in the *Handbook*. Many candidates provided technical guidance that was not relevant and, therefore, were unable to adequately respond to the required.

Candidates sometimes struggled with technical quantitative analysis, particularly for the management accounting requirements. Many candidates had a difficult time performing the required calculations. For example, they struggled with Day 2 (Assurance role), AO#7, for which they had to perform a ratio analysis. Candidates struggled to pick the right numbers for their calculation, not knowing exactly how to calculate a specific ratio. They also had a difficult time interpreting the ratio once it was calculated. Candidates also struggled on Day 3, Question 1, AO#1, where it appeared that their technical competence was weak because they had difficulty performing a contribution margin analysis to address the direct labour constraint. They struggled as well on AO#3, #4, and #5, where they often attempted to compare "apples" and "oranges" when they performed their incremental analyses by comparing, for example, per-unit amounts with fixed amounts.

Candidates are reminded that the CFE, although designed to assess candidates' professional skills, also requires a strong technical foundation of knowledge in order for candidates to clearly demonstrate competence.

## **APPENDIX A**

### **EXAMINATION DESIGN, MARKING GUIDE DEVELOPMENT, AND MARKING OF THE 2015 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.

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. All required tasks, regardless of the role, are clearly directed. 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 (45 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 other 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 weighted such that each of Day 2 and Day 3 are weighted equally.

## The Development of Marking Guides and the Provincial Review Centre

In May 2015, provincial reviewers met to examine the 2015 Common Final Examination and the preliminary marking guides. The provincial reviewers' comments were considered by the board when it finalized the examination set in June 2015 and again when the senior markers reviewed the marking guides in the context of actual responses in September 2015.

## **Evaluation Centre**

From the marker applications received, approximately 80 individuals were chosen to participate in the 2015 CFE marking centre. The criteria for selection included marking experience, motivation, academic achievement, work experience, personal references, and regional representation.

Before the opening of 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 this meeting.

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, an assistant leader, and both French-speaking and English-speaking markers. Each team had one or more markers who were capable of marking in both languages.

The Day 1 linked case was marked by a team of 13 markers in Montreal from October 11 to October 26, 2015. Day 2 Assurance was marked by a team of 29 markers in Montreal from October 16 to October 29, 2015. The other three Day 2 roles were marked in Toronto over a five-day period in September, immediately following the PEC. The Day 3 cases were marked in Montreal from October 11 to October 26, 2015. Each Day 3 case was assigned marking teams of between 12 and 14 markers.

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)**

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 consistently apply 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 Day 1, Day 2, Day 3, or any combination of 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 16, 2015 – DAY 1 SIMULATION**

***The Marking Guide for the Day 1 simulation will not be disclosed until version 2 of the case is written, which will be in May 2016.***

**Common Final Examination  
September 16, 2015 – Day 1**

**Case**

**(Suggested time 240 minutes)**

It is March 15, 2018, and Jacob Rubinoff, your boss at the professional services firm, Rubinoff & Rubinoff (RR), tells you that RR has another consulting engagement with Rejuvenating Spa Inc. (RSI). You, along with the other team members that worked on the original consulting engagement, will also be working on this one.

Jacob met with Sally Rice and other board members of RSI in order to gather information (Appendix I). In general, the spa industry is continuing to grow, and the trends that were expected to occur in the industry are bearing out. The International Spa Association suggests that the wellness spa trend is on the rise. Offered in a comfortable and welcoming environment, wellness spas provide healthy food, intensive fitness programs and other stress-relieving options. Halifax is continuing to grow as a tourist destination, which has been good for RSI. However, looming in the background is the threat of a downturn in the economy in the next year or two.

As is normal practice, RSI's mission and vision are reviewed at each annual general meeting. No changes were made to the wording last time, but Sally admitted that the Board of Directors is gravitating back to RSI's original mission of "running a profitable business by providing affordable massage and other spa services in a warm and welcoming environment." The vision is expected to remain the same.

RSI and related companies are once again in the process of making changes, and have some major decisions to make. Jacob assigns you the following tasks: "Please prepare a draft report to RSI. Taking into account what you have learned about RSI in the previous engagement, please recap the important decision factors for RSI's board to consider, highlighting any changes from the previous situational analysis. Further, provide your assessment of the major issues facing RSI. A detailed analysis is not required as it will be completed later by internal or external teams, as deemed appropriate by the board. For each of the major issues, we need to advise the board of any significant factors they may not have considered, and identify any additional information they must obtain before making their decisions. RSI is asking us to consider the strategic and operational issues that are related to each decision. Finally, where there is sufficient information to do so, please suggest a course of action."

## **INDEX OF APPENDICES**

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**APPENDIX I**  
**JACOB RUBINOFF'S NOTES FROM HIS MEETING WITH SALLY RICE**  
**AND OTHER RSI BOARD MEMBERS**

**General discussion**

I met with Sally and two other board members for RSI, Bob Gallant and Lisa Wiley. We talked about the several changes that have occurred over the past few years.

I compiled the following summary of the major events relating to RSI:

2014	January 1	RSI purchases shares of Lavish Spa Inc. (Lavish)
2015	June	Sally Rice starts as CEO of RSI
2016	February 1	Rubinoff & Rubinoff LLP consulting engagement (Capstone 1)
2016	July 1	Lavish and RSI are amalgamated; Lavish is rebranded in line with RSI
2016	July 1	RSI and Forevermore Fit Limited (FFL) sign an agreement; Massage Therapy Centre Inc. (MTC) is launched
2017	January 1	Five of the ten RSI shareholders <sup>1</sup> purchase the shares of Pure Substance Inc. (Pure); Matthew Chung, Pure's previous owner and manager, stays on for one year as manager and to train replacement
2017	June 1	Ben Daniels is hired and starts as manager-in-training of Pure
2017	December 31	Matthew Chung finishes as manager of Pure
2017	December 31	Lavish's lease with Opal Hotel is renewed for a five-year term
2018	January 1	Ben Daniels officially assumes the role of Pure's manager
2018	January 1	FFL gives notice of intent to buy RSI's shares in MTC
2018	March 1	RSI receives FFL's purchase offer for RSI's shares in MTC

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<sup>1</sup> Sally Rice, Bob Gallant, Cary Gammon, Dave Conyers, Marilyn Cote

**APPENDIX I (continued)**  
**JACOB RUBINOFF'S NOTES FROM HIS MEETING WITH SALLY RICE**  
**AND OTHER RSI BOARD MEMBERS**

**Specific items of discussion**

1. Lavish Spa Inc.

*Lavish's location*

Lavish was brought under the RSI name shortly after an amalgamation was done in 2016. The rebranding has not been successful, mainly because Lavish remains in its original location, and is therefore still perceived by its customers as a high-end spa. It has not been able to draw on the same customer base as RSI's other spas.

Lavish's lease expired in 2017. The rate had been significantly below market and, as expected, there was a large increase upon renewal. Lavish also made a lump sum payment on renewal for the right to extend the lease, and signed for a five-year term (2018 to 2022). Sally explained that, at the time they renegotiated the lease, they did not see any other options.

Recently, a property became available on the outskirts of Halifax. It was operated as a day spa by Joey Jones until about two months ago, when Joey closed the business to study yoga in India. Joey has offered to lease the property, with the option of buying it, to Sally, who believes that Lavish could move in with very little effort required to renovate the space. The spa has not been closed for long and she expects that some of the previous clientele could be recovered. As Sally strongly believes that the move would be good for RSI, she had RSI's accounting calculate some values (Appendix II). According to the accounting department and based on discussions with the bank, RSI would pay 7% interest on any funds borrowed for this property.

Bob suggested moving and rebranding Lavish again, but this time as an urban wellness retreat; he thinks that, rather than being grouped in with RSI's spas, it is perhaps better suited to that niche of the market.

Sally loves the idea of capitalizing on the urban wellness retreat trend. She sees an opportunity to expand the services Lavish offers by adding saunas and steam baths, and exercise and diet programs, which would enhance current services and bring in revenue with minimal costs. Sally would love to open more of those kinds of spas. There is extra space that can be rented out until a decision is made on the extra services.

Lisa expressed some concern that the new lease with Opal Hotel was just signed and that Lavish has made significant payments already. She also wondered whether an urban retreat is in alignment with RSI's current mission and vision.



**APPENDIX I (continued)**  
**JACOB RUBINOFF'S NOTES FROM HIS MEETING WITH SALLY RICE**  
**AND OTHER RSI BOARD MEMBERS**

Bob asked about the pricing structure for Lavish. Although all the spas are now under the same RSI brand, Lavish is still selling at much higher prices than RSI; beyond renaming Lavish as RSI, not much else has changed. Bob questioned what will happen to the brand if they reposition it again.

Lisa suggested increasing all the RSI locations' prices to match Lavish's rates, as that would provide additional funds for expansion. She suggested that all discounts should be eliminated at the same time, which would also provide additional funds. In addition, Lisa does not like that certain customers get discounts while others do not.

Sally has asked for our assessment of the Lavish situation and whether the move makes sense, and for advice on pricing.

2. Pure Substance Inc.

Overall, Sally is pleased with how well Pure is doing since being purchased by some of RSI's shareholders. Revenue continues to increase and RSI is benefitting from the synergies.

*Drug store chain offer*

When Pure was purchased, Matthew Chung, the previous owner and manager, had mentioned the possibility of a sales contract with Health and Beauty (HB), a large Canadian drug store chain. HB wants the exclusive right to retail Pure products (outside of those sold to spas). If Pure accepts the contract with HB, it must guarantee to supply the volume required. The board members agree they would not cut current sales volumes to fill this new contract.

Sally is excited and believes the deal has enormous potential for Pure, and could help expand RSI and Lavish through increased exposure of the products they use in RSI's spas.

Sally admits the size of the contract is a bit intimidating. To handle this contract, Pure must increase capacity. She is considering two short-term options: using overtime; or using an imported ingredient to supplement what it currently produces.

Lisa expressed her, and the board's, concern that using imported material will support foreign producers rather than supporting the Canadian market. She is also worried about adversely affecting the quality of the product.

**APPENDIX I (continued)**  
**JACOB RUBINOFF'S NOTES FROM HIS MEETING WITH SALLY RICE**  
**AND OTHER RSI BOARD MEMBERS**

Sally responded that she thinks they can allow up to 20% of imported material to be added without affecting the quality of the product, and still be able to label it as local and organic.

Sally provided a draft of Pure's 2017 statement of earnings (Appendix III), excerpts from the draft agreement with HB (Appendix IV), and some preliminary analysis of the offer (Appendix V). Pure's existing sales are expected to continue to grow at an average of 5% per year.

To increase capacity on a longer-term basis, consideration needs to be given to adding a second shift, expansion of the facility, and automating certain functions within the production process. Sally has asked for our thoughts on both the short- and long-term decisions.

*Government assistance programs*

The company received a letter from the government, advising that the terms of a grant Pure received do not appear to have been met. As a result, the funds will have to be repaid, subject to a government audit, which will begin in two weeks from now. Sally recalled Matthew saying he had obtained several government grants for Pure.

Sally obtained additional information on the government grants received by Pure in 2015 and 2016 (Appendix VI). She is unsure what to do with the information, and asks us to look it over and recommend next steps.

3. Massage Therapy Centre Inc.

In accordance with the final agreement between RSI and FFL (Appendix VII), two large and two small locations have been opened. A manager has yet to be hired, and Andy Johnson, the owner/manager of FFL, is acting as manager in the interim.

Andy approached RSI with an offer for FFL to buy its shares in MTC. The offer, which expires on June 30, 2018, consists of a base price of 50% of the book value of MTC's net assets, plus an additional payment of 50% of the net earnings for the three years subsequent to the date of the sale for all locations in operation at the time of the buyout (paid out after each year end).

Sally has mixed feelings about the offer. If bought out, RSI will miss the opportunity to share in the growth of MTC. Based on MTC's statement of earnings for the year ended December 31, 2017 (Appendix VIII), MTC is doing relatively well, although not to the extent originally anticipated, but she sees the potential for growth.

**APPENDIX I (continued)**  
**JACOB RUBINOFF'S NOTES FROM HIS MEETING WITH SALLY RICE**  
**AND OTHER RSI BOARD MEMBERS**

On the other hand, if RSI is bought out, Sally sees an opportunity to dedicate more time to Pure, in which she also sees potential for growth, or to return to exploring the franchising option for RSI.

Sally learned that Andy wants to integrate MTC into FFL, using the combined staff to reduce overhead costs and gain other efficiencies. In the MTC agreement, only FFL members are entitled to discounts. FFL's gym memberships have been dropping off lately and Andy has instituted a points program at MTC for FFL members, effective March 1, 2018. He is also now offering commissions and bonus incentives to MTC employees who sell FFL gym memberships. Andy believes the changes will benefit both MTC and FFL.

Bob expressed concern that Andy is introducing programs, such as the FFL points program, that had specifically been left out of the joint venture agreement when negotiated. He worries that decisions are being made without going through the management committee.

For comparison to Andy's offer, Sally will ask RSI's accounting group to value MTC using an industry capitalization rate of six times earnings. Before looking at the numbers in any detail however, she wants the board to identify and discuss the significant factors to be considered in making the decision of whether to accept the buyout offer.

4. Additional comments from Lisa and Sally during the meeting are as follows:

Sally reminded the others that, as per the Pure purchase agreement, the former owner, Matthew Chung, is liable for any additional liabilities identified by June 30, 2018, and that they need to think about whether there are any issues that need to be raised with him.

Sally also reminded Bob and Lisa that, at the next meeting, they would be reviewing and approving the annual financial statements for both RSI and Pure, for presentation at a combined annual general meeting. Lisa questioned why they would approve both sets, as only five of the ten RSI shareholders have ownership in Pure.

## **APPENDIX II INFORMATION REGARDING LAVISH SPA INC.'S LOCATION DECISION**

### **Opal Hotel Lease**

- Term: January 1, 2018, to December 31, 2022
- Rate: \$32,500 per month
- Upfront, non-refundable payment made on renewal: \$90,000
- Cancellation penalty: 6 months' rent (\$195,000)
- Included in rent: operating costs for utilities, property tax and maintenance; free parking for customers; advertising of Lavish Spa on the hotel's website

### **Lease with purchase option/ Establish an urban wellness retreat in new location**

- Term: July 1, 2018, to December 31, 2022
- Rate: \$25,000 per month
- Appraised value on January 1, 2018: \$5 million
- Estimated annual appreciation in property value: 4%
- Option to purchase: on December 31, 2022, for 73% of the market value of the property at the time
- Estimated operating costs for utilities, property tax and maintenance: \$7,500 per month
- Rental revenue from extra space: \$5,000 per month (any additional operating expenses would be insignificant)

**APPENDIX II (continued)**  
**INFORMATION REGARDING LAVISH SPA INC.'S LOCATION DECISION**

The accounting department has prepared the following quantitative analysis of the two alternatives:

	<b>Opal Hotel Lease</b>	<b>Urban Retreat Lease</b>
Monthly lease payments	\$ 32,500	\$ 25,000
Monthly operating costs	included	7,500
Incremental monthly revenues-extra space	NA	(5,000)
Net cost	32,500	27,500
Tax savings at 27%	(8,775)	(7,425)
Net monthly cost after tax	<u>\$ 23,725</u>	<u>\$ 20,075</u>
Present value (7% for 54 months)	<u>\$ 1,096,270</u>	<u>\$ 927,613</u>
Present value of lease cancellation	<u>\$ NA</u>	<u>\$ 195,000</u>
Present value of purchase option(if sold)	<u>\$ NA</u>	<u>\$ 932,748</u>
Total present value of each alternative	<u><u>\$ 1,096,270</u></u>	<u><u>\$ 189,865</u></u>

Sally has confirmed that the above numbers, provided by the accounting department, accurately reflect the information she gave them to work with. She is unsure of the cost of the renovations, moving, marketing, offering new services, etc. Sally said she will get those figures to them later, but she believes they will be insignificant.

**APPENDIX III**  
**NET EARNINGS FOR PURE SUBSTANCE INC.**

*Pure Substance Inc.*  
*Year ended December 31, 2017*  
*(in thousands of dollars)*

	<b>Bulk (spa use)</b>	<b>Consumers (sold by spas directly to customers)</b>	<b>Total</b>
<b>Revenue</b>			
Sales	\$ 4,747	\$ 17,860	\$ 22,607
Discount of 20% (to RSI and MTC)	(31)	(116)	(147)
Net sales	<u>4,716</u>	<u>17,744</u>	<u>22,460</u>
<b>Production cost</b>			
Direct costs			
Labour	1,779	5,134	6,913
Material	1,264	3,466	4,730
Packaging	200	1,925	2,125
Overhead (25% of direct labour)	445	1,284	1,729
Shipping	321	1,027	1,348
Total cost of goods sold	<u>4,009</u>	<u>12,836</u>	<u>16,845</u>
Gross margin	<u>707</u>	<u>4,908</u>	<u>5,615</u>
Gross margin (% of gross sales)	15%	27%	25%
Administration			3,420
Advertising			201
Community support			5
Other			402
Depreciation of building and equipment			<u>677</u>
Earnings before income tax			910
Less income tax			<u>182</u>
Net earnings			<u>\$ 728</u>

**APPENDIX IV**  
**EXCERPTS FROM HEALTH AND BEAUTY DRUG STORE CHAIN OFFER**

The offer from the Health and Beauty (HB) drug store chain includes the following:

- In the first year of the contract, Pure must be able to provide a minimum volume of \$5 million in sales to HB. However, HB does not guarantee it will purchase this volume.
- Pure will provide a graduated discount to HB, as follows:
  - Purchases up to \$5 million 10%
  - Purchases from \$5,000,001 to \$6 million 12%
  - Purchases of \$6,000,001 and above 15%
- Pure will pay shipping to HB's central warehouse in Ontario; orders will be for full truckloads; HB will pay shipping for any rush orders.
- HB will advertise Pure's products. Pure will pay 10% of HB's advertising costs, to a maximum of 1% of HB's annual gross purchases from Pure.

Note: estimates of gross sales volume for the first year range from a low of \$5 million to a high of \$7 million.

**APPENDIX V**  
**PRELIMINARY QUANTITATIVE ANALYSIS OF HEALTH**  
**AND BEAUTY DRUG STORE CHAIN OFFER**

*Health and Beauty (HB)*  
*(in thousands of dollars)*

	Low	Mid	High
Revenue			
Gross Sales	\$ 5,000	\$ 6,000	\$ 7,000
Promotional fund (max of 1% of sales)	(50)	(60)	(70)
Volume discount (10%/12%/15%)	(500)	(620)	(770)
Net sales	4,450	5,320	6,160
Production costs			
Direct costs			
Labour	1,438	1,725	2,013
Material	970	1,164	1,358
Packaging	539	647	755
Overhead (25% of direct labour)	359	431	503
Shipping (at 2%)	100	120	140
Total cost of goods sold	3,406	4,087	4,769
Gross margin	\$ 1,044	1,233	1,391
Gross margin (% of gross sales)	21%	21%	20%

Assumptions made for the above calculations are as follows:

- Direct costs and overhead are estimated using Pure's Consumers sale percentages, which may not be the same as the drug store retail market. Adjustments are required depending on the capacity decision made (see next analysis).
- Shipping costs on sales to HB will be 2% of sales, which is significantly less than on current sales, because Pure will only have to ship to HB's central warehouse.



**APPENDIX V (continued)**  
**PRELIMINARY QUANTITATIVE ANALYSIS OF HEALTH  
AND BEAUTY DRUG STORE CHAIN OFFER**

**Short-term decision – Incremental analysis of overtime or use of imported material**

At 100% production \$25,119,000 in gross sales can be generated. To meet the 5% increase expected in existing sales and the minimum \$5 million in sales to HB, the revenue needs to increase by another \$3,618,000.

Overtime

To meet that demand solely through overtime, a rate premium of 50% is applied, resulting in added labour costs. The incremental cost of overtime, for all three levels in the HB contract, is estimated at:

Incremental cost (in thousands of dollars):	Low	Mid	High
Labour – overtime premium of 50% (at 28.7% of gross sales)	\$ 520	\$ 664	\$ 808
Overhead (at 25% of direct labour)	130	166	202
Incremental cost of overtime	<u>\$ 650</u>	<u>\$ 830</u>	<u>\$ 1,010</u>

Import

By using an imported ingredient, Pure will no longer have to process one of its raw materials, and can use that capacity to meet the extra demand. Therefore there is no incremental labour cost. The increase in direct material cost is 50%. The incremental cost of importing, for all three levels in the HB contract, is estimated at:

Incremental Ingredient Cost (in thousands of dollars):	Low	Mid	High
Existing cost (19.4% of gross sales)	\$ (702)	\$ (896)	\$ (1,090)
If purchased at 50% higher cost (represents 29.1% of gross sales)	1,053	1,344	1,635
Incremental cost of importing ingredient	<u>\$ 351</u>	<u>\$ 448</u>	<u>\$ 545</u>

Note: Based on our analysis, when demand goes up to \$6 million, Pure will exceed the 20% allowable maximum.

**APPENDIX VI**  
**INFORMATION REGARDING GOVERNMENT ASSISTANCE**  
**TO PURE SUBSTANCE INC.**

Based on a review of Pure's files, the company appears to have received a total of seven grants in 2015 and 2016. The following sample was reviewed.

**Environmental Energy Saver Program**

Pure obtains funding regularly through this program, which covers 50% of the cost of renovations to make buildings or equipment more energy-efficient.

The latest grant was for building upgrades. Eligible expenses included windows, insulation and new heating equipment (furnace) for renovations made between June 1, 2015, and May 31, 2016. The grant file includes the grant form, a purchase order and the related invoices. The dates on some invoices are outside of the allowed dates and the invoices include one for labour hours to install the new windows, which was carried out by Pure employees and charged at market rates.

**Capital funding under the same energy program**

The requirements for the grant were as follows:

- The grant will fund 75% of the purchase cost of the energy-efficient equipment, up to a specified maximum.
- The piece of equipment is to be used for a minimum of five years.
- If the equipment is taken out of use or sold before five years' time, repayment is required equal to the fair market value at the time the piece of equipment is taken out of service.

Two invoices related to this equipment grant were in the file. One was for \$500,000, the other for \$375,000. Both invoices are from the same supplier and have the same invoice number and date. When checked to the grant file, the \$500,000 supplier invoice was the one filed with the claim, and a grant of \$375,000 (75%) was received.

The accounts payable clerk remembers talking to Matthew about this at the time. Matthew explained that, in this case, the actual equipment cost came in under the original estimate of \$500,000. He said that it sometimes works out the other way, with the equipment costing more than the maximum allowed. Matthew said they therefore were okay to receive the full grant of \$375,000, since it works itself out over multiple claims. Full payment was made to the supplier for \$375,000.

The equipment is being stored under a tarp on the shop floor in case it is needed, but is currently not in use.

**APPENDIX VI (continued)**  
**INFORMATION REGARDING GOVERNMENT ASSISTANCE**  
**TO PURE SUBSTANCE INC.**

**Advertising support**

This program will reimburse 10% of total advertising costs to a maximum of \$50,000 per year if the company agrees to use the “100% Made on Prince Edward Island” tagline and the related logo in its advertising. The program, which was started in 2016, is ongoing. The reimbursement claims are for advertising Pure’s products as one-hundred-percent organic and local in trade magazines. The funding received under this program was \$44,000 in 2016, and \$25,000 in 2017.

**APPENDIX VII**  
**EXCERPTS FROM MASSAGE THERAPY CENTRE INC. FINAL AGREEMENT**

**Final Agreement**

**NOTE: major additions from draft are italicized and bolded; major deletions from draft are struck out and bolded.**

Management

**FFL and RSI will form a partnership, MTC. A new corporation**, Massage Therapy Centre Inc. (MTC) **will be established**, which will operate massage therapy centres in selected FFL locations. **RSI and FFL will each make an initial investment in share capital of \$100,000 cash.**

There will be a management group comprised of one representative from each of RSI and FFL, and the manager hired for MTC. This management group will make all major decisions for MTC.

Profits will be shared equally between FFL and RSI. Operating cash flows from the **partnership joint venture** will be distributed to the **venturers partners** quarterly.

Identity, image and branding

The massage therapy centres will be called “Forevermore Fit – Massage Therapy Centres.”

Locations and financing

FFL will decide where **and when to open** MTC locations. ~~It plans to start by opening two MTCs in larger facilities and two in smaller centres.~~ The expectation is to have MTCs in all of FFL’s centres within five years.

FFL will provide the space in its facilities at no charge. MTC will pay the costs of renovating the space, where required, and will lease the necessary equipment. ~~FFL will provide funds required for renovation and charge MTC interest on the borrowing at prime plus 2%.~~

~~FFL and RSI will invest \$15,000 per small centre and \$60,000 per large centre that is opened to cover opening costs and provide initial working capital (including uniforms, linens and supplies). FFL and RSI will also guarantee any financing required by MTC. After the initial investment in share capital is used, FFL and RSI will each provide debt financing on a 50-50 basis, to cover investment in new centres. FFL will provide funds required for renovation and charge MTC interest on the borrowing at prime plus 2%. Each will make its own financing arrangements.~~

FFL and RSI will guarantee any financing required by MTC.

**APPENDIX VII (continued)**  
**EXCERPTS FROM MASSAGE THERAPY CENTRE INC. FINAL AGREEMENT**

Human resources

RSI and FFL will jointly hire the manager for MTC. This manager **and FFL** will work together to hire the staff for the MTC locations. RSI will provide the initial training for therapists, at no charge. Subsequent professional development will be provided by RSI for a fee. Only qualified massage therapists will be hired.

In the larger centres, there will be a separate receptionist and multiple therapy rooms; in the smaller centres, the fitness centre receptionist will handle MTC as well, and there will be only one therapy room.

Services

A range of massages, but no other services, will be offered — the emphasis will be on deep tissue massage and other types of massage specific to sports and fitness. Direct billing to insurance companies will be provided and promoted.

FFL members will receive a 10% discount off the regular price of products and services. ~~Members will also earn 'points' for massage treatments and for reaching their fitness goals that they can redeem for massage treatments, product purchase, or personal fitness consultations. A process will be put in place to track where points are earned and spent.~~

Financial

***MTC's financial statements will be prepared in accordance with ASPE.***

**APPENDIX VIII**  
**FINANCIAL INFORMATION – MASSAGE THERAPY CENTRE INC.**

<b>Massage Therapy Centres</b>	<b>6 months ended Dec 31, 2016</b>	<b>Year ended Dec 31, 2017</b>
Therapy revenue	\$ 533,033	\$ 981,708
Product sales	63,964	98,171
	<u>596,997</u>	<u>1,079,879</u>
Expenses:		
Wages and benefits	293,167	539,940
Cost of product sales	30,063	46,140
Administrative and other costs	235,259	418,594
Interest	0	7,677
Total expenses	<u>558,489</u>	<u>1,012,351</u>
Earnings before income tax	38,508	67,528
Income tax	<u>11,552</u>	<u>20,258</u>
Net earnings	<u>\$ 26,956</u>	<u>\$ 47,270</u>
<b>Investment made</b>		
Renovations	\$ 31,200	\$ 20,450
Equipment	76,450	46,620
Uniforms and linens	22,630	12,600
Working capital	<u>60,000</u>	<u>30,000</u>
	<u>\$ 190,280</u>	<u>\$ 109,670</u>
<b>Funded by</b>		
Original investment – equity		
RSI	\$ 100,000	NA
FFL	\$ 100,000	NA
<b>Subsequent funding – debt</b>		
RSI	NA	\$ 54,835
FFL	NA	\$ 54,835

Note: MTC is accounted for by RSI as a joint venture, using the equity method in RSI's financial statements.

**APPENDIX C**

**SEPTEMBER 17, 2015 – DAY 2  
SIMULATION AND MARKING GUIDES**

**Common Final Examination  
September 17, 2015 – 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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## **COMMON – BACKGROUND**

K-Med Ltd. (K-Med) is a private company owned equally by two siblings, Kaylee and Kevin Olesen, who inherited the company from their father when he passed away ten years ago. K-Med operates in two business segments: health operations and real estate leasing. Kaylee studied naturopathic medicine. Now the VP Health Operations, she oversees product development. Kevin was appointed CEO of K-Med ten years ago. He spends his time focusing on the company's other business segment, real estate leasing, which helps fund K-Med's research and development activities. K-Med's board of directors consists of Kaylee, Kevin and three independent directors — a lawyer, retired doctor, and fitness instructor, all of whom are friends of the Olesen family and have no other board experience.

### **Health operations**

The late Mr. Olesen was a pioneer in the commercialization of oil harvested from krill, a crustacean similar to shrimp. The oil, which is extracted from the krill by a process patented by K-Med, can be sold in bulk or further refined into capsules. In 2004, K-Med produced the first krill oil capsule on the market, called K-Krill Oil®. Currently, K-Krill Oil® is the company's only product and is sold to Canadian distributors in capsule form only.

Until recently, production was limited due to manufacturing plant capacity constraints. However, with a plant expansion completed in May 2015, production of K-Krill Oil® increased to meet current market demand. But demand continues to grow. Operational details for K-Krill Oil® are provided in Appendix II.

To further increase production capacity, to meet the anticipated sales growth of K-Krill Oil® and the possible commercialization of other products, the board has decided to pursue an initial public offering (IPO). An underwriting firm has agreed to complete the IPO for December 1, 2015.

### **Real estate leasing**

The real estate leasing operation consists of leases of commercial real estate purchased over the years.

It is now October 20, 2015. Kevin has been looking to exit the company and start his own real estate investment business. Meanwhile, Kaylee is interested in a greater leadership role as she wants to position K-Med as the leading krill oil manufacturer. In June of this year, Kevin incorporated a private company, K-Lease Ltd. (K-Lease), and became president of that company. On November 30, 2015, K-Med will sell the real estate leasing business segment to K-Lease for a \$200,000 cash down payment, and Kaylee will take over the K-Med CEO role from Kevin. The remainder of the purchase price, yet to be determined, will be due in June 2017. Details regarding the corporate structure are provided in Appendix I.

**COMMON – BACKGROUND (continued)**

You, CPA, are in a meeting with Tracey Allen, CFO, the auditors, and members of the K-Med finance department. Tracey has indicated that the current-year financial statements and the prior-year comparative figures have been prepared under International Financial Reporting Standards (IFRS) in anticipation of the IPO. Unfortunately, the finance department is currently without a controller; on October 15, the previous controller accepted a position as VP Finance and CFO of Kevin's new company, K-Lease. Although Tracey expects to fill the controller position before year end, she is relying on the finance and administration team to put in the extra effort required to complete the restructuring, ensure a successful IPO and prepare for the December 31 year-end audit. Excerpts from the prior year's financial statements and third-quarter results are presented in Appendix III, along with other significant financial information.

Additional information, customized to your role, is presented in your role package.

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

**ASSURANCE REQUIREMENTS**

You, CPA, are an audit manager at Quest & Arnold LLP (Q&A).

Q&A has been engaged by the board to audit the financial statements of K-Med for the year ending December 31, 2015. Over the past five years, Q&A has maintained a good relationship with K-Med, usually completing the audit by April 30. There have been no significant audit issues that would impact the key financial statement users, which include K-Med's lenders and owners. However, the firm has become aware of a newly imposed bank covenant requiring K-Med to maintain a current ratio of 1.5:1.

Your firm recently learned of K-Med's planned IPO. As Tracey Allen, K-Med's CFO, indicated in the meeting, the draft financial statements have been prepared under IFRS.

You meet with the engagement partner, who says to you: "Tracey confidentially expressed concern about the controller's sudden departure to K-Lease, shortly after the investment property fair value calculation was done for the year-end financial statements.

"I would like you to prepare a memo discussing K-Med's financial reporting issues, and to provide me with revised financial statements that take into account any necessary accounting adjustments that you note. I would also like your thoughts on whether the real estate leasing operations that are being disposed of qualify as a discontinued operation. Please analyze whether the transaction meets the criteria, but don't make any adjustments for it until I have had a chance to discuss the issue with upper management.

"I recognize that the IPO is fast approaching, but for the time being, I'd like you to start the year-end audit plan. I would like you to begin with an overall look at the financial situation of the company. To accomplish this, I suggest you prepare a detailed analytical review of the income statement items, as well as an analysis of the key financial ratios compared to the prior year. Following that, I would like an assessment of the overall financial statement risk, including a discussion of its impact on your planned approach and materiality. Also, please provide procedures to address any financial reporting issues you have identified and any other significant risks related to the financial statement items. After the tax provisions are completed by K-Med's tax team, they will be reviewed by Q&A tax specialists.

"In addition to preparing the audit plan, I would like you to discuss the impact on the audit report of finding accounting errors.

"Please also prepare a memo, describing the auditor's responsibilities related to the IPO and the related prospectus."

In addition to the common appendices (I to III), information provided in Appendix IV (Assurance) is relevant for your analysis.

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

**FINANCE REQUIREMENTS**

You, CPA, work as a financial analyst in the finance department at K-Med.

Tracey Allen, CFO, has asked you to prepare a memo discussing K-Med's financial reporting issues, and to prepare revised financial statements that take into account any necessary accounting adjustments that you note. Where applicable, Tracey would like you to incorporate the impact of these financial reporting issues when you address her additional requests. Tracey has also asked for your thoughts on whether the real estate leasing operations that are being disposed of qualify as a discontinued operation. She has asked you to analyze whether the transaction meets the criteria, but does not want you to make any adjustments for it until she has had a chance to discuss the issue with upper management. Tracey has informed you that work related to the tax provisions will be performed separately by a senior tax analyst.

Tracey would like your comments on any issues that you see with respect to the IPO, and would like to know what other viable alternatives are available to K-Med in order to raise funds.

As well, to provide the K-Med board with the information that it needs to price the impending sale, she would like you to provide a valuation of K-Lease.

Also, assuming the IPO is successful and the leasing operations are spun-out to K-Lease, she would like you to analyze the resulting financial state and key ratios of K-Med.

Tracey would also like you to calculate the production capacity of K-Med, and determine whether capacity will be an issue going forward.

Tracey believes that K-Med will begin generating significant cash flows from its operations over the next two years (2016 and 2017), and would like you to confirm her beliefs. She would also like to know if the IPO proceeds and the cash flow from operations will be enough to fund the capital expenditure and other cash requirements of K-Med in 2016 and 2017.

Tracey would also like you to estimate a weighted average cost of capital (WACC) for both K-Med and K-Lease after the IPO, and discuss relevant factors that you used in determining each WACC.

Last, Tracey is concerned about the ability of K-Lease to pay K-Med for the purchase of the leasing operations. She would like to know what cash K-Lease will have available from its operations each year to repay K-Med, and what alternatives K-Lease might have to raise the funds necessary to repay K-Med. Clearly, the sooner K-Lease can repay the amount owing to K-Med, the better the financial situation will be for K-Med.

*(Requirements continued on next page.)*

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

**FINANCE REQUIREMENTS (continued)**

Tracey reminds you that she will use your analysis to assist with her presentation to the board, and therefore requests that you provide clear rationale for your recommendations.

In addition to the common appendices (I to III), information provided in Appendix IV (Finance) is relevant for your analysis.

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

**PERFORMANCE MANAGEMENT REQUIREMENTS**

You, CPA, work as a financial analyst in the finance department at K-Med.

Tracey Allen, CFO, has asked you to prepare a memo discussing K-Med's financial reporting issues, and to prepare revised financial statements that take into account any necessary accounting adjustments that you note. She has also asked for your thoughts on whether the real estate leasing operations that are being disposed of qualify as a discontinued operation. She has asked you to analyze whether the transaction meets the criteria, but does not want you to make any adjustments for it until she has had a chance to discuss the issue with upper management. Tracey has informed you that work related to the tax provisions will be performed separately by a senior tax analyst.

She would also like you to analyze the significant variances between the year-to-date actuals and the flexible budget of the health operations. She will review your assessment and supporting comments before presenting them to the board, who will be meeting soon to discuss the corporate reorganization and IPO.

Tracey has also asked you to prepare a qualitative and quantitative analysis of the health operations business segment. Based on your evaluation, she would like you to discuss any operational issues related to the 2016 strategic plan, as well as possible budget implications.

In addition, Tracey has asked you to prepare an analysis of whether K-Med should begin selling bulk krill oil to other manufacturers, or if the company should continue to increase production of the K-Krill Oil® capsules. While a consultant has suggested the market will bear a price of \$165 per kilogram for the bulk krill oil, Tracey wants to know what price you think K-Med should sell the bulk krill oil for.

Kaylee is excited to have complete control of K-Med and expects the company will take off. Tracey would like your thoughts on whether Kaylee is being too optimistic about K-Med's future after the proposed transactions.

In addition to the common appendices (I to III), information provided in Appendix IV (Performance Management) is relevant for your analysis.

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

**TAXATION REQUIREMENTS**

You, CPA, work as a tax analyst in the finance department at K-Med.

Tracey Allen, CFO, has asked you to prepare a memo discussing K-Med's financial reporting issues and to prepare revised financial statements that take into account any necessary accounting adjustments that you note. Where applicable, Tracey would like you to incorporate these financial reporting impacts when you address her additional requests. Tracey has also asked for your thoughts on whether the real estate leasing operations that are being disposed of qualify as a discontinued operation. She has asked you to analyze whether the transaction meets the criteria, but does not want you to make any adjustments for it until she has had a chance to discuss the issue with upper management. Tracey has informed you that work related to the deferred tax provisions will be performed separately by another tax analyst after her review of your work.

Tracey has directed you to estimate the income for tax purposes for the 2015 taxation year(s), using the third-quarter, year-to-date financial statement results as a base, and including the planned sale of leasing assets in your calculation. She would then like you to calculate the estimated tax liability and/or loss available for carry forward with respect to the current fiscal year end. For the purposes of this calculation, she would like you to assume that K-Med will sell the assets to K-Lease at fair value, as this will help Kevin with his negotiations with Kaylee.

In addition, Tracey has requested that you draft a memo for the owners, advising them of any relevant general corporate and personal tax impacts that will result from the IPO and the resulting public company status. Due to the number of shares being offered, it is expected that the shares will be widely held.

Since Kevin expects K-Lease to be profitable, he is wondering how the income from the rental operations will be taxed. Because of the losses it has incurred, K-Med has not paid tax for years. Kevin is also considering how to personally withdraw cash from K-Lease on an ongoing basis.

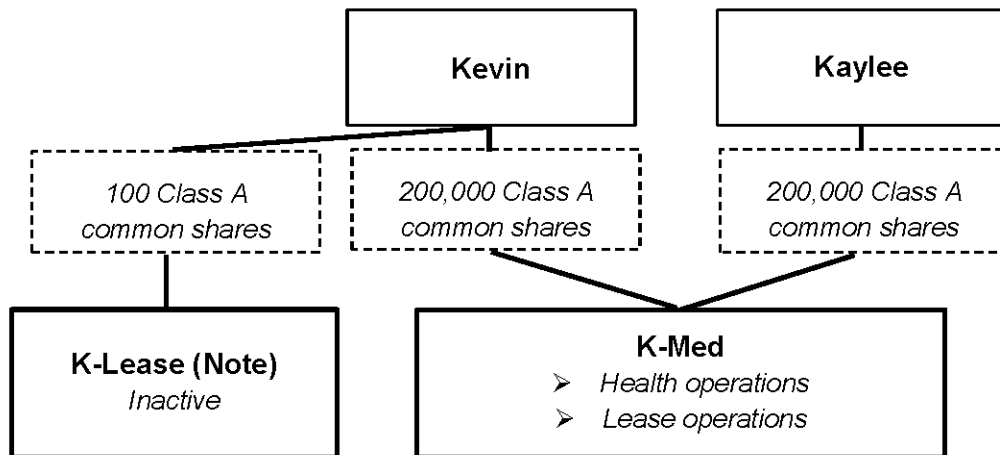
Tracey informs you that Kevin would also like further guidance on how to structure the transaction to separate K-Lease from K-Med. He would like the most tax-effective option available, but would like you to identify some alternatives so that he can discuss them with Kaylee.

Kevin has told Tracey that he plans to dispose of all his K-Med shares after the escrow period, to allow him to exit the company and provide cash for further investment in K-Lease. Tracey has asked you to draft a separate memo to Kevin, advising him of any tax deferral planning opportunities specific to the sale of his shares, and to provide him with an estimate of the after-tax cash he will receive from his future K-Med share disposition.

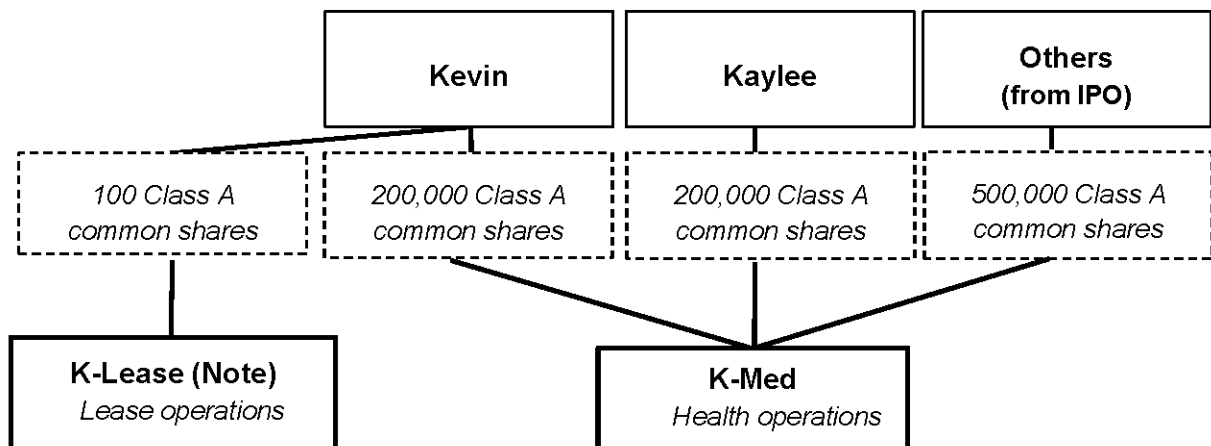
In addition to the common appendices (I to III), information provided in Appendix IV (Taxation) is relevant for your analysis.

## APPENDIX I CORPORATE STRUCTURE

**K-Med – Corporate structure (as at October 20, 2015) before IPO and before sale of leasing operations to K-Lease:**



**K-Med and K-Lease – Corporate structure (as at December 1, 2015) after IPO and after sale of leasing operations to K-Lease:**



Note: K-Lease was incorporated on June 1, 2015. The company issued a total of 100 Class A common shares, with a total paid-up capital of \$10,000. Kevin Olesen, president, holds 100% of the company's Class A shares. To date, K-Lease has earned no income and has incurred nominal expenses. K-Lease has no employees other than Kevin and the VP Finance.



## **APPENDIX II OPERATIONAL INFORMATION**

### **Health operations**

#### Product overview

When krill is harvested and extracted through K-Med's patented process, it results in two byproducts: oil and protein. The oil is used to create the K-Krill Oil® product; it is encapsulated through a standard capsulation process and sold in bottles of 60 capsules. The protein is considered waste and is discarded.

In 2015, to make use of the protein, K-Med started researching the development of a krill protein concentrate, K-Krill Protein®, and is now almost ready to commercialize it. K-Krill Protein® facilitates digestion in animals, and K-Med researchers think a similar product might also aid humans. Meaningful revenues are not expected to be generated from this product for the next two fiscal years.

Due to the health demands of an aging population, the demand for dietary supplements such as K-Krill Oil® and food additives such as K-Krill Protein® is growing rapidly. It is estimated that producers in this industry earn a gross margin of approximately 43%.

#### Primary raw material – krill

Krill is considered an abundant and accessible resource. Although alternative suppliers are readily available, K-Med sources Antarctic krill from two suppliers.

One of K-Med's competitive advantages is that it has been approved by an independent, international organization to make certain environmental claims on its product labels related to its krill-harvesting processes.

The company's research and development activities have determined that its krill oil has levels of antioxidants that surpass those of cheaper fish oil products (the competition). In fact, two recent independent studies found that regular intake of K-Krill Oil® can reduce the risk of cardiovascular disease.

**APPENDIX II (continued)**  
**OPERATIONAL INFORMATION**

Manufacturing

It takes 0.03 kilograms of krill oil to make one bottle of the K-Krill Oil® dietary supplement.

Partway through 2015, K-Med expanded its facility, thereby increasing its krill oil extraction capacity to 130,000 kilograms per year. With the expansion, K-Med expects to extract a total of 86,466 kilograms of krill oil in 2015, based on year-to-date results. To meet expected sales demand, K-Med likely needs to increase production by 4% per month. The expanded facility now accommodates the company laboratories, administrative offices and production plant. To increase production capacity any further, K-Med will need to obtain approval from the ministry of the environment.

Overall, cost of sales was not expected to increase with the expansion, even though raw material costs increased. It was expected that improvements to the manufacturing process would result in lower direct labour hours per production run. The budget for cost of sales was based on the prior year's actual costs and the expected current-year sales volume.

Sales and distribution

K-Med's health products must receive regulatory approval before they can be sold for human consumption, but there are different regulatory agencies for different markets. Therefore, a product approved for sale in Canada might not be approved in the United States. However, all indications are that K-Krill Oil® will be approved in the United States in the near future.

To explore the possibility of expanding the use of K-Krill Oil® into packaged food products, K-Med entered into discussion with two multinational food corporations. Due to capacity production constraints, however, K-Med decided to continue to focus on the existing dietary supplement market. During the first nine months of 2015, K-Med earned 96% of its revenues from sales of K-Krill Oil®. Sales are not cyclical or seasonal.

During 2015, K-Med spent a large sum of money on marketing in order to partner with two new distributors, resulting in additional sales in different market segments. As of September 30, 2015, K-Med is distributing K-Krill Oil® through health food stores, pharmacies and direct sales.

**APPENDIX III**  
**FINANCIAL STATEMENTS EXCERPTS AND**  
**OTHER SIGNIFICANT FINANCIAL INFORMATION**

*K-Med Ltd.*

*Draft Statement of Financial Position*

*As at*

	September 30, 2015 (unaudited)	December 31, 2014 (audited)
<b><u>Assets</u></b>		
Current assets:		
Cash	\$ 207,545	\$ 214,113
Accounts receivable	1,546,465	1,577,415
Inventory (Note 1)	3,554,834	3,135,309
Tax credit receivable	0	622,377
Other assets	182,407	199,935
	<u>5,491,251</u>	<u>5,749,149</u>
Non-current assets:		
Grant receivable	25,000	75,000
Property, plant and equipment (Note 2)	3,847,790	3,042,890
Intangible assets (Notes 3, 4)	818,630	634,434
Investments (Note 5)	5,277,280	5,093,580
	<u>\$ 15,459,951</u>	<u>\$ 14,595,053</u>
<b><u>Liabilities</u></b>		
Current liabilities:		
Bank overdraft	\$ 283,516	\$ 0
Accounts payable and accruals	2,095,296	1,962,077
Advance payments (Note 6)	484,951	480,630
Current portion of long-term debt (Note 7)	958,702	772,699
	<u>3,822,465</u>	<u>3,215,406</u>
Non-current liabilities:		
Long-term debt (Note 7)	10,086,257	9,252,145
	<u>13,908,722</u>	<u>12,467,551</u>
<b><u>Capital</u></b>		
Share capital (Note 8)	2,800,000	2,800,000
Deficit	(1,248,771)	(672,498)
	<u>1,551,229</u>	<u>2,127,502</u>
	<u>\$ 15,459,951</u>	<u>\$ 14,595,053</u>

**APPENDIX III (continued)**  
**FINANCIAL STATEMENTS EXCERPTS AND**  
**OTHER SIGNIFICANT FINANCIAL INFORMATION**

*K-Med Ltd.*  
*Draft Statement of Comprehensive Income*  
*For the*

	9 months ended September 30, 2015 (unaudited)	12 months ended December 31, 2014 (audited)
Revenue (Note 9)	\$ 10,056,907	\$ 10,083,287
Cost of sales	<u>(4,588,278)</u>	<u>(5,573,400)</u>
Gross profit	5,468,629	4,509,887
Other income	49,905	31,674
Amortization (Notes 2,3, 4)	(358,036)	(294,240)
Selling, general and administration	(3,529,783)	(3,030,847)
Research and development (Note 4)	(1,822,632)	(1,979,242)
Fair value adjustments on investments	83,700	120,335
Finance costs, net	<u>(468,056)</u>	<u>(417,101)</u>
Loss before income tax	(576,273)	(1,059,534)
Income tax	<u>0</u>	<u>0</u>
Net loss and comprehensive loss	<u><u>\$ (576,273)</u></u>	<u><u>\$ (1,059,534)</u></u>

**APPENDIX III (continued)**  
**FINANCIAL STATEMENTS EXCERPTS AND**  
**OTHER SIGNIFICANT FINANCIAL INFORMATION**

**1. Inventory**

At period end, inventory consisted of the following items:

	<u>September 30, 2015</u>	<u>December 31, 2014</u>
Raw materials	\$ 654,564	\$ 1,280,889
Work in process	542,270	675,420
Finished goods	<u>2,358,000</u>	<u>1,179,000</u>
Total inventory	<u>\$ 3,554,834</u>	<u>\$ 3,135,309</u>

Inventory is measured at the lower of cost and net realizable value, with the cost being assigned using the first-in, first-out method. During April, the company was able to lower the cost of its production to \$2.50 per bottle from the previous \$3.00 per bottle. The company has continued to value its finished goods inventory at \$3.00 per bottle.

Production increased significantly in 2015 to meet new consumer demand, and the company expects inventory to turn over every four months. On September 30, 2015, there were 786,000 bottles in inventory, compared to only 393,000 on December 31, 2014.

**APPENDIX III (continued)**  
**FINANCIAL STATEMENTS EXCERPTS AND**  
**OTHER SIGNIFICANT FINANCIAL INFORMATION**

**2. Property, plant and equipment**

	Land	Building and building components	Laboratory and plant equipment	Furniture and office equipment	Computer equipment and software	Total
<b>Cost:</b>						
Balance at Dec 31, 2014	\$19,816	\$2,242,552	\$3,201,273	\$162,047	\$189,450	\$5,815,138
Additions	0	686,072	467,855	22,257	67,936	1,244,120
Disposals	0	0	0	(8,692)	(92,210)	(100,902)
Balance at Sep 30, 2015	<u>\$19,816</u>	<u>\$2,928,624</u>	<u>\$3,669,128</u>	<u>\$175,612</u>	<u>\$165,176</u>	<u>\$6,958,356</u>
	Land	Building and building components	Laboratory and plant equipment	Furniture and office equipment	Computer equipment and software	Total
<b>Accumulated depreciation:</b>						
Balance at Dec 31, 2014	\$0	\$386,338	\$2,178,535	\$108,432	\$98,943	\$2,772,248
Additions	0	108,839	220,680	13,879	21,289	364,687
Disposals	0	0	0	(5,624)	(20,745)	(26,369)
Balance at Sep 30, 2015	<u>\$0</u>	<u>\$495,177</u>	<u>\$2,399,215</u>	<u>\$116,687</u>	<u>\$99,487</u>	<u>\$3,110,566</u>
	Land	Building and building components	Laboratory and plant equipment	Furniture and office equipment	Computer equipment and software	Total
<b>Net carrying amounts:</b>						
Balance at Dec 31, 2014	<u>\$19,816</u>	<u>\$1,856,214</u>	<u>\$1,022,738</u>	<u>\$53,615</u>	<u>\$ 90,507</u>	<u>\$3,042,890</u>
Balance at Sep 30, 2015	<u>\$19,816</u>	<u>\$2,433,447</u>	<u>\$1,269,913</u>	<u>\$58,925</u>	<u>\$ 65,689</u>	<u>\$3,847,790</u>

**APPENDIX III (continued)**  
**FINANCIAL STATEMENTS EXCERPTS AND**  
**OTHER SIGNIFICANT FINANCIAL INFORMATION**

**3. Intangibles**

Patents are amortized on a straight-line basis over the 20-year estimated useful life, from the date that they are available for use.

As trademarks and licences have indefinite useful lives, they are recognized using the cost model. During the year, in anticipation of beginning commercial production in 2016, K-Med registered the K-Krill Protein® trademark in certain Canadian provinces. Market studies have indicated that there will be a significant demand for this product.

	Patents	Development costs	Licences	Trademarks	Total
<b>Cost:</b>					
Balance at Dec 31, 2014	\$352,555	\$184,499	\$91,165	\$56,098	\$684,317
Additions	50,873	109,769	39,759	3,513	203,914
Balance at Sep 30, 2015	<u>\$403,428</u>	<u>\$294,268</u>	<u>\$130,924</u>	<u>\$59,611</u>	<u>\$888,231</u>

	Patents	Development costs	Licences	Trademarks	Total
<b>Accumulated amortization:</b>					
Balance at Dec 31, 2014	\$49,883	\$0	\$0	\$0	\$49,883
Additions	19,718	0	0	0	19,718
Balance at Sep 30, 2015	<u>\$69,601</u>	<u>\$0</u>	<u>\$0</u>	<u>\$0</u>	<u>\$69,601</u>

	Patents	Development costs	Licences	Trademarks	Total
<b>Net carrying amounts:</b>					
Balance at Dec 31, 2014	<u>\$302,672</u>	<u>\$184,499</u>	<u>\$91,165</u>	<u>\$56,098</u>	<u>\$634,434</u>
Balance at Sep 30, 2015	<u>\$333,827</u>	<u>\$294,268</u>	<u>\$130,924</u>	<u>\$59,611</u>	<u>\$818,630</u>

**APPENDIX III (continued)**  
**FINANCIAL STATEMENTS EXCERPTS AND**  
**OTHER SIGNIFICANT FINANCIAL INFORMATION**

**4. Research and development**

Capitalized development expenditures are measured at cost less accumulated amortization and impairment losses. Amortization is on a straight-line basis over the five-year estimated useful life, from the available-for-use date. Research and development expenditures that do not meet the criteria for capitalization are expensed in the period incurred.

Development costs capitalized for the first nine months of 2015 for K-Krill Protein® consisted of the following components, as tracked by the project management system:

	Cost
Salaries and employee benefits — final product testing	\$ 45,009
Salaries and employee benefits — product logo and brand development	9,060
Salaries and employee benefits — initial sales plan development	10,700
Subcontracting to conduct final product testing	25,000
Study expenses	<u>20,000</u>
K-Krill Protein® product development costs	<u>\$ 109,769</u>

**5. Investments**

During the year, K-Med invested \$100,000 in 10-year Government of Canada bonds, paying interest at 2%. Investments in preferred shares of private companies were sold during the year, and a gain on the sale was recorded in other income in the amount of \$10,000.

Investments in real estate leasing properties are measured at fair value through profit or loss. These properties, with an original cost of \$3.5 million, were valued at \$5,177,280 at the end of the period. The company has switched to a different realtor this year to perform the valuation. The new realtor was recommended by the former controller.

**6. Advance payments**

K-Med received advance payments from certain distributors to guarantee delivery of K-Krill Oil® by a specific date. Deposits from leasing tenants are also recorded as advance payments.



**APPENDIX III (continued)**  
**FINANCIAL STATEMENTS EXCERPTS AND**  
**OTHER SIGNIFICANT FINANCIAL INFORMATION**

**7. Long-term debt**

Borrowings secured by investment properties amounted to \$1,885,213 at September 30, 2015, bearing interest at a rate of 4%.

Borrowings secured by property, plant and equipment amounted to \$9,159,746 at September 30, 2015, bearing interest at a rate of 4%.

**8. Share capital**

K-Med has a total of 400,000 Class A common shares, with a paid-up capital of \$2.8 million. Kevin and Kaylee Olesen each hold 50% of the Class A shares.

**9. Revenue**

Revenue includes income from real estate leasing and health operations.

For the health operations, revenue is recognized upon receipt of the products by the distributor.

During the first nine months of 2015, the company sold 1,768,643 bottles at \$5.45 per bottle, compared to 1,782,640 bottles at \$5.35 per bottle in all of 2014. In January of 2014, K-Med started selling inventory on consignment. Ten per cent (10%) of the current year's, and the previous year's, sales were on consignment to two of the company's 12 distributors. These distributors had an inventory turnover similar to K-Med.

**APPENDIX III (continued)**  
**FINANCIAL STATEMENTS EXCERPTS AND**  
**OTHER SIGNIFICANT FINANCIAL INFORMATION**

**10. Segmented information***K-Med Ltd.**Statement of Financial Position**For the nine months ended September 30, 2015*

	Health operations	Lease operations	Total
<b><u>Assets</u></b>			
Current assets:			
Cash	\$ 0	\$ 207,545	\$ 207,545
Accounts receivable	1,527,256	19,209	1,546,465
Inventory	3,554,834	0	3,554,834
Tax credit receivable	0	0	0
Other assets	165,184	17,223	182,407
	<u>5,247,274</u>	<u>243,977</u>	<u>5,491,251</u>
Non-current assets:			
Grant receivable	25,000	0	25,000
Property, plant and equipment	3,847,790	0	3,847,790
Intangible assets	818,630	0	818,630
Investments	100,000	5,177,280	5,277,280
	<u>\$ 10,038,694</u>	<u>\$ 5,421,257</u>	<u>\$ 15,459,951</u>
<b><u>Liabilities</u></b>			
Current liabilities:			
Bank overdraft	\$ 283,516	\$ 0	\$ 283,516
Accounts payable and accruals	2,052,991	42,305	2,095,296
Advance payments	458,365	26,586	484,951
Current portion of long-term debt	752,935	205,767	958,702
	<u>3,547,807</u>	<u>274,658</u>	<u>3,822,465</u>
Non-current liabilities:			
Long-term debt	8,406,811	1,679,446	10,086,257
	<u>11,954,618</u>	<u>1,954,104</u>	<u>13,908,722</u>
<b><u>Capital</u></b>			
Share capital	2,800,000	0	2,800,000
Retained earnings (deficit)	(4,715,924)	3,467,153	(1,248,771)
	<u>(1,915,924)</u>	<u>3,467,153</u>	<u>1,551,229</u>
	<u>\$ 10,038,694</u>	<u>\$ 5,421,257</u>	<u>\$ 15,459,951</u>

**APPENDIX III (continued)**  
**FINANCIAL STATEMENTS EXCERPTS AND**  
**OTHER SIGNIFICANT FINANCIAL INFORMATION**

**Segmented information (continued)**

*K-Med Ltd.*

*Statement of Comprehensive Income*  
*For the nine months ended September 30, 2015*

	Health operations	Lease operations	Total
Revenue	\$ 9,639,104	\$ 417,803	\$ 10,056,907
Cost of sales	(4,421,608)	(166,670)	(4,588,278)
Gross profit	5,217,496	251,133	5,468,629
Other income	30,862	19,043	49,905
Amortization	(358,036)	0	(358,036)
Selling, general and administration	(3,508,460)	(21,323)	(3,529,783)
Research and development	(1,822,632)	0	(1,822,632)
Fair value adjustments on investments	0	83,700	83,700
Finance costs, net	(412,326)	(55,730)	(468,056)
Income (loss) before income tax	(853,096)	276,823	(576,273)
Income tax	0	0	0
Net income (loss) and comprehensive income (loss)	\$ (853,096)	\$ 276,823	\$ (576,273)

<p><b><i>ASSURANCE ROLE</i></b></p> <p><b><i>ADDITIONAL INFORMATION</i></b></p>
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## **APPENDIX IV**

### **ASSURANCE – ADDITIONAL INFORMATION**

#### **Operational oversight**

As the VP of health operations, Kaylee has been responsible for all aspects of product development. She is committed to ethical and responsible activities, and believes that all of K-Med vendors and customers share the company's commitment to ethical business practices.

Kaylee reviews the research, development and production reports on a quarterly basis, relying on long-term supervisors to make the daily business decisions. As she transitions to the role of CEO at the end of November, Kaylee has identified a need to document the company's policies and procedures for board review, and she knows that, once K-Med goes public, she will need to establish an audit committee.

#### **Control environment**

Budgets for the next fiscal year are set by the senior management team in November of each year. For variance analysis purposes, the budget is updated with actuals on a quarterly basis. The senior management team reviews actual results and variance comments at the end of each quarter.

The company uses an accounting system that has inventory, fixed asset, accounts payable and accounts receivable subledgers. Real estate investment properties are tracked in a separate category within the fixed-asset subledger, and the automatic depreciation calculation is disabled.

Over the past couple of years, K-Med had been using a new production system that interfaced with the inventory subledger in the accounting system. During 2015, however, this system was abandoned due to limited vendor support and the realization that the system was not functioning as originally intended.

As a result of the abandonment, inventory costs and quantities are currently tracked in detail on a spreadsheet maintained and monitored by the production managers. Every quarter, a financial analyst conducts a standard cost analysis based on information contained in the spreadsheet and the general ledger cost centre accounts. At that time, adjustments are made to the inventory balance in the general ledger.

Research and development costs are tracked in a project management system. Costs are manually recorded in the general ledger, by cost centre, on a weekly basis, and adjustments to capitalize certain costs are made by manual journal entry on a monthly basis, as approved by the controller.

The controller prepares a monthly reporting package for the CFO's review. The board reviews the reporting package annually, after the audit is complete.

<p><b><i>FINANCE ROLE</i></b> <b><i>ADDITIONAL INFORMATION</i></b></p>
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## **APPENDIX IV**

### **FINANCE – ADDITIONAL INFORMATION**

#### **Key components of 2016 strategic and business plan**

K-Med will:

- file patent applications in the U.S. to allow for the human consumption of K-Krill Protein® and the use of krill extracts to reduce the risk of certain medical conditions. This will allow the company to position itself against competitors in the U.S. market.
- establish partnerships with American distributors, to make K-Krill Oil® available to consumers through large department stores.
- continue to educate consumers on the benefits of krill oil.
- obtain the financial and human resources needed to increase production capacity, to meet consumer demand.
- explore both government subsidies and loans as possible sources of financing.
- continue to conduct clinical trials and to publish the results.
- adopt best practices in corporate governance, including the establishment of committees of the board to assist in policy and procedural development.

#### **2016 and 2017 Projection assumptions**

In September 2015, K-Med produced and shipped an all-time high of 249,800 bottles of K-Krill Oil®. K-Med anticipates that the market will continue to grow at a rate of 4% per month over the next three years. Prices for K-Krill Oil® are expected to rise to \$6.00 in 2016, and to \$6.50 in 2017. K-Med believes that any price increases in excess of these amounts would negatively affect demand, as being a superior product, K-Krill Oil® is currently priced higher than many of its competitors.

Cost of sales relates to costs directly attributable to K-Krill Oil®. Raw material costs make up 16% of cost of sales. Direct labour costs make up 22%. The remaining 62% relate to production overheads that fluctuate with volume.

Based on discussions with suppliers, the cost of raw materials is expected to increase at a rate of 5% per year. To limit employee turnover and training costs, all employees will receive an annual salary increase of 7%.

It is expected that expansion to the U.S. market will increase selling expenses from the current 20% of sales, to 30%.

At its current location, K-Med has enough land to be able to double its capacity. Building costs would be approximately \$6.5 million, and plant equipment capital costs would amount to \$2,340,000. It would take approximately 18 months to construct additional production facilities, with costs incurred equally over this time frame. Construction could begin in June 2016.

**APPENDIX IV (continued)**  
**FINANCE – ADDITIONAL INFORMATION**

*Krill operations* – Furniture and office equipment, and laboratory equipment replacement costs are expected to amount to \$20,000 in 2016, and \$50,000 in 2017. There are currently no plans to increase research and development staffing over the next few years, but due to the rapidly changing nature of the industry, this could change.

As part of the reorganization of the company, the bank has imposed a new bank covenant requiring K-Med to maintain a current ratio of 1.5:1. Also, as a result of the leasing business spin-out, the interest rate on K-Med's bank loan will be increased from 4% to 7%.

*Leasing operations* – No new investment property purchases are planned. Commercial lease revenues are anticipated to increase by 3% each year over the next two years, and related expenses by 2%. Due to volatility in the real estate market, the VP of real estate leasing budgets an annual 1% increase in the value of the investment properties.

**Initial public offering (IPO) details**

K-Med plans to go public on December 1, 2015, with an issuance of Class A shares. Prospectus costs, excluding the underwriter's fee, are expected to total \$300,000.

Initial public offering

The offering is 500,000 shares at \$9.00 per share. The underwriter's fee is 8%.

Escrow period

In common with many IPOs, the existing shareholders of K-Med (Kaylee and Kevin) will not be allowed to sell their existing shares of K-Med for 18 months following the IPO date.

Estimated future share value and future dividend obligations

Based on the underwriter's best estimate, the market value of a biotech company is likely to double after the release of positive results of a clinical study. K-Med plans to release such results in June 2017, after the escrow period.

K-Med does not plan to declare any dividends until the company is no longer in a product-development stage, which could be in a number of years.



**APPENDIX IV (continued)**  
**FINANCE – ADDITIONAL INFORMATION**

K-Med has been approached by venture capital firms regarding potential investments. However, K-Med has not been able to agree to terms with any of the venture capitalists to date. In these discussions, one venture capitalist noted that industry betas for the real estate income trust (REIT) industry and the pharmaceutical industry were 0.6 and 2.3 respectively. The expected return on a diversified market portfolio was estimated at 8%.

<p><b><i>PERFORMANCE MANAGEMENT ROLE ADDITIONAL INFORMATION</i></b></p>
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**APPENDIX IV**  
**PERFORMANCE MANAGEMENT – ADDITIONAL INFORMATION**

**Annual operating budget**

2015 Budget – approved in November 2014

	2015 Health operations	2015 Lease operations	2015 Total (budget)
Revenue	\$ 10,746,689	\$ 551,600	\$ 11,298,289
Cost of sales	<u>(6,026,170)</u>	<u>(226,150)</u>	<u>(6,252,320)</u>
Gross profit	4,720,519	325,450	5,045,969
Other income	10,000	25,000	35,000
Amortization	(450,000)	0	(450,000)
Selling, general and administration	(3,383,131)	(27,580)	(3,410,711)
Research and development	(3,000,000)	0	(3,000,000)
Fair value increase on investments	0	50,930	50,930
Finance costs, net	<u>(500,000)</u>	<u>(74,000)</u>	<u>(574,000)</u>
Profit (loss) before income tax	<u>\$ (2,602,612)</u>	<u>\$ 299,800</u>	<u>\$ (2,302,812)</u>

**APPENDIX IV (continued)**  
**PERFORMANCE MANAGEMENT – ADDITIONAL INFORMATION**

**2015 Budget assumptions – made in November 2014**

Sales and cost of sales (health products)

To generate new revenue, K-Med focused on increasing volume rather than price. K-Krill Oil® was budgeted to sell at the 2014 price of \$5.35 per bottle. Cost of sales was budgeted at \$3.00 per bottle. Volume was expected to increase by 15%, to 2,008,727 bottles. Selling expenses were budgeted at 12% of sales.

Research and development (health products)

In addition to the new K-Krill Protein® product, K-Med has increased its research and development budget to work towards prescription drug product development. It was the intent of the company that these products would provide safe and effective treatment of cardiovascular diseases and related conditions. The amount budgeted was an estimate of the amount of research and development the company hoped to do in 2015, but the actual amount is always limited by available funding.

Plant facilities (health products)

Due to completion of the recent plant expansion in 2015, property, plant and equipment amortization costs were expected to increase.

**Preliminary 2015 budget variance comments**

The sales price adjustment to \$5.45 per bottle, which was not expected to occur until late in 2015, was put into effect on January 1, 2015. K-Med plans to focus on increasing volumes before prices are adjusted again in 2017. Selling expenses were about 20% of sales.

Staff are still collecting additional detailed cost data, but have provided the following actuals:

	Direct labour hours	Machine hours
Extraction	34,500	108,000
Encapsulation	13,500	77,500

Although the company is getting closer to commercialization of the K-Krill Protein®, additional research will be necessary to develop a similar product for human consumption and to pursue prescription drug research. Therefore, expenditures will continue at current rates.

An increase in selling, general and administration expenses of \$500,000 in 2015 was expected, due to the plant expansion.

**APPENDIX IV (continued)**  
**PERFORMANCE MANAGEMENT – ADDITIONAL INFORMATION**

**Key components of 2016 strategic and business plan**

K-Med will:

- file patent applications in the U.S. to allow for the human consumption of K-Krill Protein® and the use of krill extracts to reduce the risk of certain medical conditions. This will allow the company to position itself against competitors in the U.S. market.
- establish partnerships with American distributors to make K-Krill Oil® available to consumers through large department stores.
- continue to educate consumers on the benefits of krill oil.
- obtain the financial and human resources needed to increase production capacity, to meet consumer demand.
- explore government subsidies and loans as possible sources of financing.
- continue to conduct clinical trials and to publish the results.
- adopt best practices in corporate governance, including the establishment of committees of the board to assist in policy and procedural development.

**Patented extraction process to produce K-Krill Oil®**

Financial aspects of K-Med's patented extraction process are as follows:

Direct materials cost	\$13.33 per kg
Variable manufacturing overhead rate	\$5.20 per machine hour
Direct labour cost	\$19.82 per hour
Amount of oil per bottle	0.03 kilograms

To extract 86,466 kilograms of oil, the following is required:

Direct labour hours	60,000
Machine hours	180,245

**Standard encapsulation process to produce K-Krill Oil® capsules for bottling**

To encapsulate 86,466 kilograms of oil, the following is required:

Direct labour hours	20,000
Machine hours	124,600
Direct materials	\$0.87 per bottle
Fixed selling and administration	\$1.27 per bottle

Direct labour costs and variable manufacturing overhead costs are the same as for the extraction process.

**APPENDIX IV (continued)**  
**PERFORMANCE MANAGEMENT – ADDITIONAL INFORMATION**

**K-Krill bulk oil**

If K-Med pursued bulk oil production, the encapsulation process would not be applicable; however, container costs for bulk oil would amount to \$33.50 per kilogram.

An external consultant suggested that demand for K-Krill bulk oil would exceed current plant capacity, and that buyers would be willing to pay approximately \$165 per kilogram.

**Operational oversight**

Kaylee reviews the research, development and production reports on a quarterly basis, relying on long-term supervisors to make the daily business decisions. As she transitions to her new role at the end of November, Kaylee has considered establishing some board committees, such as an audit committee.

**Business information systems**

Budgets for the next fiscal year are set in November of each year and are prepared using a spreadsheet.

The company uses an accounting system that has inventory, fixed asset, accounts payable and accounts receivable subledgers. Real estate investment properties are tracked in a separate category within the fixed-asset subledger, and the automatic depreciation calculation is disabled.

Over the past couple of years, K-Med had been using a new production system that interfaced with the inventory subledger in the accounting system. During 2015, however, this system was abandoned due to limited vendor support and the realization that the system was not functioning as originally intended.

As a result of the abandonment, inventory costs and quantities are currently tracked in detail on a spreadsheet maintained and monitored by the production managers. Every quarter, a financial analyst conducts a standard cost analysis based on information contained in the spreadsheet and in the general ledger cost centre accounts. At that time, adjustments are made to the inventory balance in the general ledger.

Research and development costs are tracked in a project management system. Costs are manually recorded in the general ledger, by cost centre, on a weekly basis, and adjustments to capitalize certain costs are made by manual journal entry on a monthly basis, as approved by the controller.

The controller prepares a monthly reporting package for the CFO's review. The board reviews the reporting package annually, after the financial statement audit is complete.

<p><b><i>TAXATION ROLE</i></b></p> <p><b><i>ADDITIONAL INFORMATION</i></b></p>
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## **APPENDIX IV TAXATION – ADDITIONAL INFORMATION**

### **Initial public offering details (IPO)**

K-Med plans to go public on December 1, 2015, with an issuance of Class A shares. Prospectus costs (all to be incurred by November 30) are expected to total \$300,000, excluding the underwriter's fee. These costs will decrease equity, which Tracey has confirmed with the auditors is the appropriate accounting treatment.

At the time Kevin and Kaylee's father died, K-Med was worth a total of \$3 million.

### **Initial public offering**

The offering is 500,000 shares at \$9.00 per share. The underwriter's fee is 8%.

### **Escrow period**

In common with many IPOs, the existing shareholders of K-Med (Kaylee and Kevin) will not be allowed to sell their existing shares of K-Med for 18 months following the IPO date.

### **Estimated future share value and future dividend obligations**

Based on the underwriter's best estimate, the market value of a biotech company is likely to double after the release of positive results of a clinical study. K-Med plans to release such results in June 2017, after the escrow period.

K-Med does not plan to declare any dividends until the company is no longer in a product-development stage, which could be in a number of years.

K-Med has been approached by venture capital firms regarding investment; however, these firms were concerned with the lack of profit and felt that the risk of loss was too high.

### **Kevin's personal tax information**

Kevin's salary from his role as CEO of K-Med was \$150,000. As president of K-Lease, he plans to draw a salary of \$70,000. Kevin has never used any of his lifetime capital gains exemption.



**APPENDIX IV (continued)**  
**TAXATION – ADDITIONAL INFORMATION**

**Excerpts from K-Med's tax return**

The following tax balances are from K-Med's 2014 corporate income tax return.

Tax balance	Total amount (\$)
Capital dividend account	60,000
Refundable dividend tax on hand	40,000
Ending UCC balance	
Class 1	1,309,603
Class 8	51,926
Class 12	2,800
Class 43	233,268
Class 44	206,971
Class 46	3,681
Class 50	70,169
CEC — ending balance	194,643
Non-capital losses carried forward	781,610

**Additional taxpayer information**

CCA has never been claimed on the investment properties held for real estate leasing. They are included in separate classes, and are not included in the total amounts above. The non-capital losses will begin to expire in 2020.

With the exception of continued research and development expenditures, K-Med has not yet made, and does not anticipate making, any material capital asset or intangible additions between October 1 and December 31, 2015. The two dispositions during the year took place at net book value, so there are no gains or losses recorded in the financial statements (the furniture was sold for \$3,068 and the computer hardware was sold for \$71,465).

The tax credit receivable on the balance sheet represents the scientific research and experimental development program (SR&ED) investment tax credit for 2014. All of K-Med's research expenditures have historically qualified for SR&ED treatment.

## DAY 2- ASSURANCE MARKING GUIDE

### K-MED

In the assurance role, the candidate is required to draft the overall audit plan for the 2015 audit using third-quarter financial statement results. The candidate is also expected to identify the significant current and prior-year financial statement errors and any deliberate misstatements, as well as to discuss the impact of all misstatements on the financial statements and engagements related to the initial public offering (IPO).

The plan should include a detailed analytical review of adjusted financial statements as part of the overall risk assessment procedures. The candidate is expected to address areas of high risk, specifically in relation to the planned IPO and sale of the leasing business segment, and the candidate should propose relevant audit procedures to mitigate those risks. Preliminary conclusions on audit approach and materiality would be relevant in the candidate's discussion of auditor responsibilities related to the IPO filings.

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Memo to: Audit Partner, Quest & Arnold LLP  
 From: CPA, Audit Manager  
 Subject: K-Med Audit Plan

**The first five assessment opportunities are common to all roles.**

#### **Assessment Opportunity #1**

The candidate discusses the inventory costing issue.

*The candidate demonstrates DEPTH in Core Financial Reporting.*

K-Med is accounting for inventory in accordance with IAS 2 – *Inventories* by measuring inventory at the lower of cost (using FIFO) and net realizable value. However, four months into the current fiscal year end (April), it was able to lower the production cost to \$2.50 per bottle from the previous \$3.00. According to Note 1 to the financial statements, K-Med is still valuing its finished goods inventory at \$3.00 per bottle (\$2,358,000 in value and 786,000 bottles). Since the production costs were reduced to \$2.50 in April and the statements were produced as at September 30, 2015, the finished goods inventory should be valued at \$2.50 per bottle rather than \$3.00 per bottle. This is because K-Med uses FIFO, and all of the inventory on hand prior to April, which was produced at the higher cost, would have been sold, since the inventory turns approximately every four months.

An adjustment is required to the September 2015 financial statements to adjust the cost of finished goods inventory. The adjustment can be calculated as 786,000 bottles × (\$3.00 – \$2.50) per bottle = \$393,000.

The adjustment is to increase cost of sales by \$393,000 and decrease finished goods inventory by the same amount.

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

**Reaching Competence** – The candidate attempts to discuss the inventory costing issue.

**Competent** – The candidate provides a reasonable discussion of the inventory costing issue.

**Competent with Distinction** – The candidate provides an in-depth discussion of the inventory costing issue.

## Assessment Opportunity #2

The candidate discusses the inventory consignment issue.

*The candidate demonstrates DEPTH in Core Financial Reporting.*

K-Med recognizes revenue upon receipt of the bottles by the distributor, including bottles on consignment. According to IAS 18 – *Revenue*, revenue from the sale of goods should only be recognized when *all* the following conditions have been satisfied:

- The entity has transferred to the buyer the significant risks and rewards of ownership of the goods: because the inventory is held on consignment, this condition is not met. Inventory delivered to the distributors on consignment does not result in a transfer of the risks and rewards of ownership because K-Med retains ownership of the bottles until the goods are sold to a consumer.
- The entity retains neither continuing managerial involvement to the degree usually associated with ownership nor effective control over the goods sold: this condition may be met because the distributor has control over the goods while they are at its location. However, it is likely that K-Med can recall the inventory if it is not sold within a certain time period. We would need to see the details of the agreement.
- The amount of revenue can be measured reliably: this condition is met because K-Med knows the quantities delivered to the distributors and the selling price.
- It is probable that the economic benefits associated with the transaction will flow to the entity: under consignment agreements, the consignor usually receives the cash proceeds from the sale of the good to the third party less a fee or commission retained by the consignee. There is no reason to believe that the resources will not be received from the consignee and therefore, this condition is met.
- The costs incurred or to be incurred in respect of the transaction can be measured reliably: this condition is met because K-Med measures its cost of production, so this cost is known, as is the cost of delivery and the commission fee per the agreement.

Because the significant risks and rewards of ownership of the bottles do not pass to the ultimate buyer until the consignee sells the inventory to a consumer, an adjustment is required to remove the effect of all inventory on consignment with distributors at September 30, 2015, and December 31, 2014.

	<u>2015</u>		<u>2014</u>
Total sales volume	1,768,643		1,782,640
Percent of sales on consignment	× 10%	×	10%
Consignment shipments to distributor	176,864		178,264
Consignment shipments per month	÷ 9	÷	12
Months in consignee inventory	× 4	×	4
Unsold inventory on consignment (in bottles)	<u>78,606</u>		<u>59,421</u>

At December 31, 2014, the following adjustment should have been made:

	<u>Debit</u>	<u>Credit</u>
Sales (overstated by $\$5.35 \times 59,421$ )	317,902	
Inventory (understated by $\$3.00 \times 59,421$ )	178,263	
Accounts receivable (overstated by $\$5.35 \times 59,421$ )		317,902
Cost of sales (overstated by $\$3.00 \times 59,421$ )		178,263

At September 30, 2015, the following adjustment will need to be made to correct for the prior-period error and the error that relates to the current period:

	<u>Debit</u>	<u>Credit</u>
Sales (overstated by $\$5.45 \times 78,606 - \$317,902$ ) <sup>1</sup>	110,501	
Inventory (understated by $\$2.50 \times 78,606$ ) <sup>2</sup>	196,515	
Retained earnings (opening) <sup>3</sup>	139,639	
Accounts receivable (overstated by $\$5.45 \times 78,606$ ) <sup>2</sup>		428,403
Cost of sales (o/s by $\$2.50 \times 78,606 - \$178,263$ ) <sup>1</sup>		18,252

<sup>1</sup>Sales and cost of sales are overstated by the difference in the errors in 2014 and 2015 because the 2014 errors were essentially cut-off errors that were recorded in the wrong period and would reverse in 2015.

<sup>2</sup>The 2014 errors in inventory and accounts receivable would have “flushed through” the cash account in early 2015, and thus the error at September 30, 2015, is the total error in the quantity at this date (i.e., they are balance sheet accounts and must record the proper balances at the period end).

<sup>3</sup>This is the opening adjustment to retained earnings accounts for the adjustment that should have been made at December 31, 2014 (see 2014 adjustment above).

The 2015 income impact (as calculated in AO#5 in this guide) is to reduce net income by \$92,249 and opening retained earnings by a further \$139,639. This adjustment also increases inventory at September 30, 2015, by \$196,515 and reduces accounts receivable by \$428,403. Deferred tax has not been considered in these adjustments because we will talk to the tax specialist later about anything that is tax related.

The 2014 financial statements are also affected, resulting in a reduction to revenue of \$317,902 and a reduction to cost of sales of \$178,263. The overall impact on 2014 net income is significant at \$139,639.

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

**Reaching Competence** – The candidate attempts to discuss the inventory consignment issue.

**Competent** – The candidate provides a reasonable discussion of the inventory consignment issue.

**Competent with Distinction** – The candidate provides an in-depth discussion of the inventory consignment issue.

### Assessment Opportunity #3

The candidate discusses the research and development issue.

*The candidate demonstrates DEPTH in Core Financial Reporting.*

K-Med is currently developing a new product, K-Krill Protein®. In accordance with IAS 38 – *Intangible Assets*, an intangible asset arising from the development phase of an internal project is recognized if the company can demonstrate *all* of the following:

- The technical feasibility of completing the intangible asset so that it will be available for use or sale: based on the fact that K-Med has produced a similar product (K-Krill Oil®) and plans to begin commercial production in 2016, this product is technically feasible and this condition is met.
- Its intention to complete the intangible asset and use or sell it: this condition is met because the company plans to begin commercial production in 2016, has trademarked the product, and has completed final product testing through a third party (subcontract).
- Its ability to use or sell the intangible asset: K-Med has experience in selling similar products, has begun to develop a sales plan and product logo, and has trademarked the product name.
- How the intangible asset will generate probable future economic benefits; among other things, the entity can demonstrate the existence of a market for the output of the intangible asset, the intangible asset itself, or, if it is to be used internally, the usefulness of the intangible asset: this condition is met because the company has had market studies completed that indicate that there will be a significant demand for this product.
- The availability of adequate technical, financial, and other resources to complete the development and to use or sell the intangible asset: because the company is currently operating at a loss position, this availability may be questionable if the IPO is not successful. However, since the company plans to sell the K-Lease division and proceed with the IPO, this condition can be considered met.
- Its ability to reliably measure the expenditure attributable to the intangible asset during its development: this condition is met because K-Med uses a project management system to track the costs and can reliably measure the related expenditures.

Although the above conditions for recognition appear to be met, paragraph 67 explicitly excludes some costs from asset recognition, as follows:

- selling, administrative, and other general overhead expenditures, unless these expenditures can be directly attributed to preparing the asset for use;
- identified inefficiencies and initial operating losses incurred before the asset achieves planned performance; and
- expenditures on training staff to operate the asset.

Paragraph 63 further states that internally generated brands, mastheads, publishing titles, customer lists, and items similar in substance shall not be recognized as intangible assets.

Therefore, the salaries and employee benefits related to developing the product logo, incorporating the company brand (\$9,060), and developing the initial sales plan (\$10,700) would be considered of this nature and are not intangible assets.

Additionally, IAS 38 – *Intangible Assets* specifically excludes recognition of research expenses as an intangible asset. Activities aimed at obtaining new knowledge are considered research expenses and should be expensed when incurred. The \$20,000 of study expenses related to the K-Krill Protein® project should be expensed.

The adjustment is a total reduction in net income of \$39,760 (\$9,060 + \$10,700 + \$20,000).

Additionally, there is a balance of \$184,499 as of December 31, 2014, for development costs. There is no amortization showing in the financial statements related to these costs. The research on the K-Krill Protein® only started in 2015; therefore, the costs as of December 31, 2014, have to be related to the K-Krill Oil®. Since the K-Krill Oil® is already on the market, amortization of these costs should have likely already started. The company's accounting policy is to amortize the costs on a straight-line basis over the five-year estimated useful life, from the available-for-use date. More information is required to determine what the amortization amount should have been as of September 30, 2015.

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

**Reaching Competence** – The candidate attempts to discuss the research and development issue.

**Competent** – The candidate provides a reasonable discussion of the research and development issue.

**Competent with Distinction** – The candidate provides an in-depth discussion of the research and development issue.

#### Assessment Opportunity #4

The candidate discusses the discontinued operations issue.

*The candidate demonstrates DEPTH in Core Financial Reporting.*

You have been asked for your thoughts on whether the real estate leasing operations that are being disposed of meet the criteria, of a discontinued operation, without making any adjustments for it.

According to IFRS 5.32, *“the presentation of an operation as a discontinued operation is limited to a **component** of an entity that either has been disposed of, or is classified as held-for-sale, and:*

- represents a separate major line of business or geographical area of operations;*
- is part of a coordinated single plan to dispose of a separate major line of business or geographical area of operations; or*
- is a subsidiary acquired exclusively with a view to resale.”*

Given these criteria, we must first determine whether the real estate operations meet the definition of a component. This term is defined in IFRS 5 as follows: *“A **component** of an entity comprises operations and cash flows that can be distinguished clearly, both operationally and for financial reporting purposes, from the rest of the entity.”* Additionally, IFRS 5.31 states that, *“In other words, a component will have been a cash-generating unit or a group of cash-generating units while being held for use.”* Note 5 to the financial statements implies that there are several leasing properties, and we would usually expect even a single rental property to be a cash-generating unit (CGU) with its own distinct cash flows (e.g., rent income and cash flows from tenants, property-specific operating costs and cash flows). Additionally, K-Med has presented the leasing operations as a reportable segment in its financial statements. This also suggests that the cash flows from the leasing operations can be distinguished clearly, since IFRS 8 *Operating Segments* requires, among other things, that such a segment be a component for which *“discrete financial information is available.”* [IFRS 8.5]

Next, having concluded the leasing operations are a component, we need to determine if this component *“has been disposed of, or is classified as held-for-sale.”* Since the leasing operations have not been disposed of by September 30, 2015, we will need to determine if they meet the criteria to be classified as held-for-sale (HFS) at this reporting date.

According to IFRS 5, paragraph 6, *“An entity shall classify a non-current asset (or disposal group) as held for sale if its carrying amount will be recovered principally through a sale transaction rather than through continuing use.”* Paragraph 7 continues, *“For this to be the case, the asset (or disposal group) must be available for immediate sale in its present condition subject only to terms that are usual and customary for sales of such assets (or disposal groups) and its sale must be highly probable.”*

K-Med complies with paragraph 6 because it is clear that the leasing operations (i.e., a disposal group) will be sold by K-Med to K-Lease in a sale transaction that will result in its derecognition from the financial statements of K-Med.

We then need to determine if the disposal group is available for immediate sale and if the sale is highly probable. In terms of the first criterion, we don't really have any specific information on the condition of the real estate leasing business, but we have no reason to believe that it's not ready for immediate sale. For example, there is nothing in the information provided to us that would indicate that, prior to sale, the properties must be renovated to a certain standard before Kevin will acquire them or that certain tenant leases need to be renegotiated or terminated prior to sale in a manner that would not be “usual and customary.”

In terms of the second criterion, paragraph 8 states, *“For the sale to be highly probable, the appropriate level of management must be committed to a plan to sell the asset (or disposal group), and an active programme to locate a buyer and complete the plan must have been initiated. Further, the asset (or disposal group) must be actively marketed for sale at a price that is reasonable in relation to its current fair value. In addition, the sale should be expected to qualify for recognition as a completed sale within one year from the date of classification, except as permitted by paragraph 9, and actions required to complete the plan should indicate that it is unlikely that significant changes to the plan will be made or that the plan will be withdrawn. The probability of shareholders’ approval (if required in the jurisdiction) should be considered as part of the assessment of whether the sale is highly probable.”* Therefore, there are many factors listed to determine whether the sale is highly probable:

- Management is committed to the sale – the two co-owners have agreed to the sale.
- There’s an active plan to locate a buyer – a buyer has been located, since Kevin has agreed to purchase the real estate operations.
- The sales price is reasonable in relation to fair value – the sales price has yet to be determined, but there is no information to indicate that the leasing operations will be sold at a substantial discount to Kevin as a condition of sale.
- The sale will take place within one year – the sale is scheduled to occur in just over a month. It is currently October 20, and the sale is scheduled to occur on November 30.
- Significant changes to the plan are unlikely – the sale is only a month away and relations between the buyer and seller seem to be good, so there is no reason to expect significant changes.
- Shareholder approval is probable – K-Med is a privately owned company, and Kevin is one of the two shareholders transacting in the sale, so this is not applicable. The sale of the leasing business will take place prior to the IPO, when K-Med’s shares will be more widely held.

Therefore, the real estate leasing operations appear to qualify as a disposal group held for sale at September 30, 2015. As a result, K-Med should measure the disposal group at the lower of its carrying amount and fair value less costs to sell. The assets of the disposal group would need to be presented separately from other assets on the balance sheet. The liabilities of the disposal group are also presented separately from other liabilities on the balance sheet. Those assets and liabilities are not offset and presented as a single amount (IFRS 5.38). They are presented as current assets and current liabilities (IFRS 5.3). The comparative balance sheet at December 31, 2014, is not re-presented for this classification (IFRS 5.40).

Since we have determined that the leasing operations meet the criteria to be classified as HFS, the remainder of the discontinued operations criteria in IFRS 5.32 will dictate whether the leasing operations can be presented as discontinued in the statement of comprehensive income. The remaining criteria to assess, per paragraph 32, are whether the leasing operations

- (a) *represent a separate major line of business or geographical area of operations;*
- (b) *are part of a single co-ordinated plan to dispose of a separate major line of business or geographical area of operations; or*
- (c) *are a subsidiary acquired exclusively with a view to resale.*

Criteria (b) and (c) are not applicable. Criterion (b) is not applicable because the sale of the leasing operations is not occurring on a piecemeal basis, and (c) clearly does not apply. Therefore, we need to only consider whether the leasing operations represent a separate major line of business or geographical area of operations.



We do not have any information on the extent of the geographical area that the leasing operations cover. However, it does appear that the leasing operations would represent a separate major line of business. Commercial property leasing and health operations are different businesses with different risk and cash flow profiles. One of the strongest indicators that the leasing operations represent a separate major line of business is the fact that they are an operating segment under IFRS 8. IFRS 5 gives no “bright-line” quantitative guidance as to what constitutes “major” because the determination involves judgment. The proposed sale is clearly much more than a restructuring of K-Med. The leasing operations contributed more than 35% of the asset base of the combined entity and 48% (on an absolute basis) of the net income to the combined entity. Additionally, the different cash flow profile expected from the leasing business supports its separate display as discontinued operations because this provides users with information that is relevant in assessing the ongoing ability of the entity to generate cash flows from the continuing health operations, which are incurring significant losses and accumulating a large deficit.

The real estate leasing operations meet criterion (a) and, therefore, should be presented in the statement of comprehensive income as a discontinued operation for the nine months ended September 30, 2015 (with re-presentation for the 2014 year as well (IFRS 5.34)). As a result, the following disclosure requirements apply according to paragraphs 33 and 34:

*An entity shall disclose:*

- (a) a single amount in the statement of comprehensive income comprising the total of:*
  - (i) the post-tax profit or loss of discontinued operations; and*
  - (ii) the post-tax gain or loss recognised on the measurement to fair value less costs to sell or on the disposal of the assets or disposal group(s) constituting the discontinued operation.*
- (b) an analysis of the single amount in (a) into:*
  - (i) the revenue, expenses and pre-tax profit or loss of discontinued operations;*
  - (ii) the related income tax expense as required by paragraph 81(h) of IAS 12; and*
  - (iii) the gain or loss recognised on the measurement to fair value less costs to sell or on the disposal of the assets or disposal group(s) constituting the discontinued operation.*

*The analysis may be presented in the notes or in the statement of comprehensive income. If it is presented in the statement of comprehensive income it shall be presented in a section identified as relating to discontinued operations, i.e., separately from continuing operations. The analysis is not required for disposal groups that are newly acquired subsidiaries that meet the criteria to be classified as held for sale on acquisition (see paragraph 11).*

(c) *the net cash flows attributable to the operating, investing and financing activities of discontinued operations. These disclosures may be presented either in the notes or in the financial statements. These disclosures are not required for disposal groups that are newly acquired subsidiaries that meet the criteria to be classified as held for sale on acquisition (see paragraph 11).*

(d) *the amount of income from continuing operations and from discontinued operations attributable to owners of the parent. These disclosures may be presented either in the notes or in the statement of comprehensive income.*

34 *An entity shall re-present the disclosures in paragraph 33 for prior periods presented in the financial statements so that the disclosures relate to all operations that have been discontinued by the end of the reporting period for the latest period presented.*

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

**Reaching Competence** – The candidate attempts to discuss the discontinued operations issue.

**Competent** – The candidate provides a reasonable discussion of the discontinued operations issues.

**Competent with Distinction** – The candidate provides an in-depth discussion of the discontinued operations issues.

#### **Assessment Opportunity #5**

The candidate prepares adjusted financial statements.

*The candidate demonstrates DEPTH in Core Financial Reporting.*

Total adjustments have resulted in a reduction to net assets of \$664,648 and a reduction to net income of \$525,009, which may have an impact on the success of the IPO (for example, the company may be limited to a lower offering price per share).

The financial statements for 2015 and 2014 will require adjustment due to the cumulative material effect of the misstatements noted previously. These adjusted statements should be used for all further analysis of K-Med. The schedule that follows adjusts the 2015 financial statements. The revised presentation does not take into account the fact that the long-term portion of the debt would need to be classified as short-term in the event that the bank is not willing to lower the covenant and that the company is no longer a going concern.

**Consolidated Statements**Adjusted Statement of Financial Position at September 30, 2015 *(in thousands of dollars)*

	<u>Unadjusted</u>	<u>Adjustments</u>	<u>Ref.</u>	<u>Adjusted</u>
<b>Assets</b>				
Current assets:				
Cash	\$ 207,545	\$		\$ 207,545
Accounts receivable	1,546,465	(428,403)	2	1,118,062
Inventory	3,554,834	(196,485)	1,2	3,358,349
Tax credit receivable	0			0
Other assets	182,407			182,407
	<u>5,491,251</u>	<u>(624,888)</u>		<u>4,866,363</u>
Non-current assets:				
Grant receivable	25,000			25,000
Property, plant and equipment	3,847,790			3,847,790
Intangible assets	818,630	(39,760)	3	778,870
Investments	5,277,280			5,277,280
	<u>\$ 15,459,951</u>	<u>\$ (664,648)</u>		<u>\$ 14,795,303</u>
<b>Liabilities</b>				
Current liabilities:				
Bank overdraft	\$ 283,516	\$		\$ 283,516
Accounts payable and accruals	2,095,296			2,095,296
Advance payments	484,951			484,951
Current portion of long-term debt	958,702			958,702
	<u>3,822,465</u>			<u>3,822,465</u>
Non-current liabilities:				
Long-term debt	10,086,257			10,086,257
	<u>13,908,722</u>			<u>13,908,722</u>
<b>Capital</b>				
Share capital	2,800,000			2,800,000
Deficit	(1,248,771)	(664,648)	1,2,3	(1,913,419)
	<u>1,551,229</u>	<u>(664,648)</u>		<u>886,581</u>
	<u>\$ 15,459,951</u>	<u>\$ (664,648)</u>		<u>\$ 14,795,303</u>

## Adjusted Statement of Comprehensive Income at September 30, 2015

	Unadjusted	Adjustments	Ref.	Adjusted
Revenue	\$ 10,056,907	\$ (110,501)	2	\$ 9,946,406
Cost of sales	(4,588,278)	(374,748)	1,2	(4,963,026)
Gross profit	5,468,629	(485,249)		4,983,380
Other income	49,905			49,905
Amortization	(358,036)			(358,036)
Selling, general and administration	(3,529,783)			(3,529,783)
Research and development	(1,822,632)	(39,760)	3	(1,862,392)
Fair value adjustments on investments	83,700			83,700
Finance costs, net	(468,056)			(468,056)
Loss before income tax	(576,273)	(525,009)		(1,101,282)
Income tax	0	0		0
Net loss and comprehensive loss	\$ (576,273)	\$ (525,009)		\$ (1,101,282)

Note that all adjustments affect the K-Health business segment, not K-Lease.

## Reference Notes:

AJE Dr. (Cr.)	Accounts Receivable	Inventory	Intangibles / R&D	2015 Net Income	Opening Retained Earnings
1		(393,000)		393,000	
2	(428,403)	196,515		*92,249	139,639
3			(39,760)	39,760	
	(428,403)	(196,485)	(39,760)	525,009	139,639

\*Debit to sales for \$110,501 and credit to cost of sales for \$18,252.

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

**Reaching Competence** – The candidate attempts to prepare adjusted financial statements.

**Competent** – The candidate prepares adjusted financial statements.

**Competent with Distinction** – The candidate prepares a complete set of adjusted financial statements.

The following assessment opportunities pertain to the Assurance depth role test.

#### Assessment Opportunity #6

The candidate performs a detailed analytical review of the income statement as part of the audit plan for the 2015 financial statement audit.

*The candidate demonstrates DEPTH in the Assurance role.*

Per CAS 315, assessment procedures include inquiries of management, analytical procedures, and observation and inspection. Below I have presented a preliminary analytical analysis based on the adjusted September 30 financial statements. Since this is a preliminary analysis, it is meant to identify items that need further analysis. Therefore, many items still need work and further information.

#### Overall Financial Statement Analysis

Variance from prior year:

Revenue	Adjusted September 30, 2015	Calculated September 30, 2014 <sup>A</sup>	Variance Amount	Variance %	Initial Comments
Revenue	\$9,946,406	\$7,244,563 <sup>B</sup>	\$2,701,843	37%	Volumes and price have increased, which explains the increase in revenue.
Other income	49,905	23,756	26,150	110%	\$10,000 relates to sale of investment properties, which explains part of the difference.
Cost of sales	4,963,026	4,001,787 <sup>C</sup>	961,239	24%	Volumes have increased, but labour costs have decreased; further analytics required.
Amortization	358,036	220,680	137,356	62%	New plant and equipment, as well as some intangibles, which explains the increase in amortization.

<b>Revenue</b>	<b>Adjusted September 30, 2015</b>	<b>Calculated September 30, 2014<sup>A</sup></b>	<b>Variance Amount</b>	<b>Variance %</b>	<b>Initial Comments</b>
Selling, general and administrative	3,529,783	2,273,135	1,256,648	55%	Selling expense as a percentage of sales increased by 10% and sales volumes increased; additional overhead due to new plant; large sum of money spent in order to partner with two new distributors; further analytics required.
Research and development	1,862,392	1,484,432	377,961	25%	Research of new products being conducted versus development; further substantive testing required.
Fair value on investments	83,700	90,251	(6,551)	(7%)	Unclear where this difference comes from; further information needed.
Finance costs	468,056	312,826	155,230	50%	Line of credit increase or debt financing for new plant may account for increase; further substantive work required.

<sup>A</sup>Per Appendix III, December 31, 2014, × 9/12 months.

<sup>B</sup>Revenue of  $(\$10,083,287 \times 9/12)$  less \$317,902 consignment sales adjustment from above = \$7,244,563.

<sup>C</sup>Cost of sales of  $(\$5,573,400 \times 9/12)$  less \$178,263 consignment sales adjustment from above = \$4,001,787.

**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 #7

The candidate analyzes the key financial ratios as part of the audit plan for the 2015 financial statement audit.

*The candidate demonstrates DEPTH in the Assurance role.*

Before accounting adjustments, the K-Med's current ratio is 1.44 ( $\$5,491,251 \div \$3,822,465$ ), which is just below the newly imposed bank covenant of 1.5. In addition, after the September 30 accounting adjustments for the financial reporting errors, the current ratio is only 1.27 ( $\$4,866,363 \div \$3,822,465$ ). This is a more severe breach of the covenant, and K-Med will need to advise the bank of this breach. Perhaps the bank will be willing to lower the covenant or make a concession since the current ratio is expected to improve once the sale of the lease business segment occurs due to the amount receivable from Kevin for the long-term property investment assets and related debt. From a preliminary standpoint, it appears K-Med may have going concern issues.

The adjusted ratio calculations and preliminary assessment are as follows:

	September 30, 2015 (adjusted)	December 31, 2014 (unadjusted)	Initial Comments
Current ratio <sup>1</sup>	1.27	1.78	Ratio is lower than prior year, indicating a decrease in assets at a higher rate than a decrease in liabilities. It also breaches the newly imposed bank covenant.
Days in accounts receivable <sup>2</sup>	30.7	57.1	Accounts receivable (AR) outstanding is less than prior year; turnover is almost 30 days and much better than the prior year. Decrease is likely due to new distributors. Since days in AR is still slightly over 30, we could follow up to determine if there are any uncollectible accounts.
Days in inventory <sup>3</sup>	185	206	Inventory is expected to turn over every four months, or three times per year. Currently inventory is turning over every six months, compared to less than seven months in the prior year. While this is an improvement, obsolescence may still be a concern, and expiration dates should be examined during the physical inventory count.

	September 30, 2015 (adjusted)	December 31, 2014 (unadjusted)	Initial Comments
Debt to equity <sup>4</sup>	15.69	5.86	Debt to equity has increased significantly with the current loss and line of credit (and possibly additional debt for new plant financing), which could explain the bank's request for a covenant. This ratio will be reduced at year end due to decrease in debt and equity from sale of the leasing business offset by an increase in equity from new share capital.
Gross margin <sup>5</sup>	50%	44%	Gross margin is sitting at 50% this year and 44% in 2014. It has improved since last year, but we need to compare it to the industry standard to see if it is within the range.

<sup>1</sup>Current assets over current liabilities

<sup>2</sup>365 days ÷ (sales ÷ accounts receivable) for 2014. 273 days for 2015.

<sup>3</sup>365 days ÷ (cost of sales ÷ inventory) for 2014. 273 days for 2015.

<sup>4</sup>Total liabilities ÷ total equity

<sup>5</sup>(Revenue – cost of sales) ÷ revenue

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

**Reaching Competence** – The candidate attempts an analysis of the key financial ratios.

**Competent** – The candidate performs a reasonable analysis of the key financial ratios.

**Competent with Distinction** – The candidate performs an in-depth analysis of the key financial ratios.

### Assessment Opportunity #8

The candidate provides an overall financial statement risk assessment as part of the audit plan for the 2015 financial statement audit.

*The candidate demonstrates DEPTH in the Assurance role.*

Although K-Med is a previous audit client with no significant audit issues in the past, the company is drastically changing. There will be additional users of the 2015 audited financial statements, primarily new investors, as a result of these changes.



### **Significant Factors Affecting Overall Audit Strategy (CAS 300)**

The company has a history of operating losses that have been partially financed by the lease income received from the rental business. With the sale of the leasing business during the fiscal year, it is important to consider whether there will be any impact on the company's ability to continue to operate as a going concern. We will also need to assess the impact on our auditors' report of a breach of covenant, should this be the case.

Our review of the draft financial statements resulted in required financial statement adjustments of \$525,009 to reduce net income. This is a significant amount and may indicate a bias to understate the loss on operations in order to obtain a more favourable result from the upcoming initial public offering, or it may simply indicate a concern with the ability of management to prepare financial statements.

In addition, it appears as though there is a newly imposed bank covenant, and we will need to assess whether K-Med is in breach of that covenant, especially since they will have sold a significant amount of assets to K-Lease before the end of the year.

### **Overall Financial Statement Risk Assessment (CAS 315)**

Factors that increase risk include the following:

- Departure of controller; no one is doing that job right now, and finance staff is filling in, which increases the risk of errors.
- Upcoming IPO and reliance on financial statements by a larger, more diverse group of users, which increases the bias management has to want to show better results in order to attract potential investors.
- New lender covenant requirement, which increases the potential risk of bias to manipulate results.
- Upcoming sale of lease operations, which increases potential bias to manipulate the financial statements.
- Discovery of many accounting errors in our analysis of the operations, which brings into question the competence of the people dealing with financial reporting and increases the risk of material misstatements in the financial statements.
- Sale of K-Lease, which is a large and complex transaction that will happen between related parties and increases the risk of errors in the financial statements.

Factors that decrease risk include the following:

- High knowledge and expertise of key staff (Kaylee studied naturopathic medicine and has been involved in the business on a long-term basis).
- Positive history with owners and audit, with no significant issues over the past five years.
- Ethical owners who require high ethics from business partners.

Overall, financial statement risk is assessed as high due to the significance of financial statement errors found to date, the newly imposed bank covenant, and increased reliance on statements as a result of the upcoming IPO.

**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.

**Competent with Distinction** – The candidate performs an in-depth overall financial statement risk assessment.

### Assessment Opportunity #9

The candidate discusses the appropriate audit approach and materiality level as part of the audit plan for the 2015 financial statement audit.

*The candidate demonstrates DEPTH in the Assurance role.*

### Audit Approach and Materiality

Overall, risk is assessed as high due to the increase in users that will result from the IPO, significant changes in account balances from the prior year, and the current breach of the new bank covenant.

### Control Environment

#### Positive Points

- A review of production information and general ledger costs quarterly in preparation of standard cost suggests good reconciliation processes exist.
- The CFO reviews the monthly reporting package prepared by the controller.
- The annual reporting package is reviewed by the board after the audit is complete.
- The controller approves journal entries.

#### Negative Points

- Research and development reports are reviewed on a quarterly basis; could be more timely in order to detect and correct errors.
- The fact that a need has been identified by management to document policies and procedures for board review suggests there is limited board involvement in financial oversight.
- Senior management review quarterly results and variance on a quarterly basis; could be more timely in order to detect and correct errors.
- There is no audit committee, so there is no high-level review to help detect errors.
- There is currently no controller, which might mean the controls as currently set up are not being performed.

Overall, control risk is high due to the fact that there is currently no controller in place. In addition, owner and senior leadership involvement only occurs on a quarterly basis, and there is a lack of board involvement in financial oversight.

The audit approach could rely on controls where available or efficient, but this is unlikely since there is no controller in place at the moment. In addition, inventory and research and development processes are quite manual, so a substantive approach will be required in those areas to address audit risk.

### **Materiality (CAS 320)**

Professional judgment is required in calculating materiality. A percentage is often applied to a chosen benchmark (such as profit before tax) as a starting point in determining materiality for the financial statements as a whole. Because K-Med has a history of losses, profit before tax will not be the best benchmark for determining materiality. Other alternatives include gross profit or total revenue. Since we currently have only the September 30 amounts, we will use these and annualize them to estimate the year-end amounts for purposes of calculating materiality.

K-Med is currently in a growth mode and has a high demand for its health product. As a result, the users of the financial statements will be more attentive to revenue than profit. Therefore, we could consider using a percentage of revenue, such as  $1\% \times (\$9,946,406 \div 9 \times 12) = \sim\$132,600$ .

A slightly higher percentage of gross profit may also be reasonable since users will be interested in gross profit figures to analyze whether the revenues from product sales are sufficient to cover cost of sales. Therefore,  $5\% \times (\$9,946,406 \text{ adjusted revenue less } \$4,963,026 \text{ adjusted cost of sales} \div 9 \times 12) = \sim\$332,000$ .

If we reduce materiality to a level below our prior-year materiality, we will have to do additional audit work on opening balances.

Due to the increased reliance on the financial statements by the lender, investors, and vendor of the lease business, a lower materiality is appropriate to meet their needs, and a preliminary materiality of \$132,600 is recommended. This will be monitored, and potentially adjusted, throughout the audit. Performance materiality will be lower to allow for possible undetected misstatements. A percentage of 60% of materiality would be reasonable; therefore,  $\$79,560 (60\% \times \$132,600)$ .

**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 for the 2015 financial statement audit.

**Competent** – The candidate provides a reasonable discussion of the appropriate audit approach and materiality level as part of the audit plan for the 2015 financial statement audit.

**Competent with Distinction** – The candidate provides an in-depth discussion of the appropriate audit approach and materiality level as part of the audit plan for the 2015 financial statement audit.

**Assessment Opportunity #10**

The candidate recommends appropriate audit procedures as part of the audit plan for the 2015 financial statement audit.

*The candidate demonstrates DEPTH in the Assurance role.*

Based on my review of the significant accounting issues and third-quarter results, I have identified the following high-risk accounts and assertions. The specific risks for each account and assertion are detailed below, along with audit procedures (CAS 330).

<b>Risk Area</b>	<b>Assertion</b>	<b>Specific Risk</b>	<b>Procedures/Extent</b>
Inventory/cost of sales	Valuation/accuracy	Overstatement of raw materials inventory  Overstatement of finished goods inventory/cost of sales due to reduction in standard cost during the year	Review raw material purchase invoices and labour reports (time and rate), and agree to production manager spreadsheet and general ledger. Review variable overhead calculation and trace a sample of component costs to invoices. Review and recalculate standard cost calculation, and trace a sample of entries to finished goods based on production reports and to cost of sales based on sales reports.
Inventory	Valuation/existence	Impairment due to inventory turnover being lower than the company's 4 month target and potential expired products, as well as potential bias to overstate inventory to increase current ratio.	As part of the inventory count, examine the dates of the products to ensure inventory is still in saleable condition.

Risk Area	Assertion	Specific Risk	Procedures/Extent
Intangible assets/ research and development expense	Existence/completeness/valuation/ accuracy	<p>Error found – ineligible expenditures were capitalized for one project</p> <p>Results for IPO are improved if costs are capitalized versus expensed</p> <p>Risk of errors due to manual upload of costs</p>	<p>Review support for manual monthly journal entry, agreeing costs to project management system and source documents, such as invoices and labour reports. Ensure all journal entries are approved by the controller or to a designate in the controller's absence.</p> <p>Agree costs per project management system to general ledger. Examine reconciliations for timeliness and approval, if available.</p> <p>Recalculate amortization for a sample of intangibles.</p> <p>Examine invoices or other source document support for other intangible additions, and look at the nature of the expense to make sure it meets the research and development criteria.</p>

<b>Risk Area</b>	<b>Assertion</b>	<b>Specific Risk</b>	<b>Procedures/Extent</b>
Property, plant and equipment/ amortization expense	Existence/completeness/valuation and allocation/accuracy	<p>New plant in use; ensure all expenditures are capital in nature. Bias to reduce expenses and increase assets for IPO.</p> <p>Ensure asset depreciation began when asset was put in use. Risk that depreciation is not calculated properly since K-Med has disabled the automatic depreciation calculation in the system so it is done manually. Bias will be to reduce amortization expense for IPO.</p> <p>Evidence of impairment for the new production system</p>	<p>Examine project reports and trace into fixed asset subledger. Asset additions should be authorized by project manager. Trace costs to invoices or other supporting source documents to determine if the item is capital in nature.</p> <p>Inquire as to when new production staff were hired to support when asset was put into use</p> <p>Examine useful life estimates and discuss with production staff reasonableness of estimates.</p> <p>Recalculate depreciation for a sample of additions and compare to automatic calculation.</p> <p>Inquire as to use of the new production system (which doesn't seem to be used anymore) and assess whether the system has any value to K-Med.</p>

<b>Risk Area</b>	<b>Assertion</b>	<b>Specific Risk</b>	<b>Procedures/Extent</b>
Product revenue/ accounts receivable	Existence/occurrence/valuation/accuracy	Ensure sales are recorded using appropriate revenue recognition policy, when risks and rewards of ownership transfer, which was not the case for the consignment inventory	<p>Select a sample of sales from the general ledger and trace back to invoice and sales order.</p> <p>Prepare a reasonability analysis of sales based on sales volume report and price.</p> <p>Examine customer deposits and trace back to invoices.</p> <p>Send a confirmation to distributors holding consignment inventory to confirm quantities held at year end.</p> <p>Look at the agreement with the distributors to confirm the goods are returnable and that the sale is a consignment sale.</p>

<b>Risk Area</b>	<b>Assertion</b>	<b>Specific Risk</b>	<b>Procedures/Extent</b>
Investment properties/ lease revenue	Valuation/accuracy/existence/ occurrence/completeness	<p>Estimation involved in fair value</p> <p>Purchaser and board relying on account to determine price</p> <p>Potential bias of the realtor</p>	<p>Review listing of investment properties from fixed asset subledger and agree costs to prior-year audit working paper files (no additions). Due to reliance by purchaser, increase work to agree a sample to original purchase invoices.</p> <p>Obtain fair value calculation and agree values per system to independent real estate market reports. Consider using the work of a specialist.</p> <p>Check credentials, independence, experience, etc., of the realtor hired by K-Med to see if we can rely on his or her work.</p> <p>Based on average rent and occupancy rate, prepare a reasonability of lease revenue based on asset listing.</p>



<b>Risk Area</b>	<b>Assertion</b>	<b>Specific Risk</b>	<b>Procedures/Extent</b>
Selling, general and administrative	Occurrence/accuracy	Increase of 55% over prior year	<p>Prepare reasonability based on increase in costs from prior year as a result of new plant and increase in selling expense.</p> <p>Review sales commission and other selling expense invoices to verify reasonability of increase.</p>
Finance costs/debt	Completeness/valuation/accuracy	<p>Finance costs higher than in prior year</p> <p>Need to confirm whether new debt was issued for plant</p>	Request confirmation for debt balance and interest paid from lender.
Going concern	Presentation	Company is no longer a going concern; need to present financial statements at liquidation value, with debt in current liabilities	<p>Look at projections of cash flows prepared by management.</p> <p>Assess reasonability of assumptions used in the projections.</p> <p>Obtain confirmation from the bank that it is not planning on calling the loan.</p>

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

**Reaching Competence** – The candidate discusses some specific audit procedures for the significant accounts.

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

**Competent with Distinction** – The candidate discusses several audit procedures for most of the significant accounts.

Memo to: Audit Partner, Quest & Arnold LLP

From: CPA, Audit Manager

Subject: K-Health Preliminary Audit Findings and Regulatory Audit Requirements

**Assessment Opportunity #11**

The candidate discusses the audit impact of the accounting errors identified.

*The candidate demonstrates DEPTH in the Assurance role.*

As detailed above, there are a number of accounting errors and misstatements in the third-quarter financial statements as well as in the prior period. If these errors are not corrected, they will result in a material misstatement in the financial statements, affecting the financial statements required to be submitted as part of the IPO process and possibly affecting our audit opinion, as discussed further below.

**Summary of Audit Errors (CAS 450)**

As detailed previously, the unadjusted errors found in a review of the draft financial statements amounted to a reduction in net income of \$525,009, which exceeds preliminary materiality of \$132,600. Management will need to correct the errors to obtain the unqualified audit opinion required for the filing.

If we are engaged to issue a comfort letter to the underwriters (discussed later in this memo), we will need to ensure that any errors are corrected, and we will need to review the offering document to ensure there are no misrepresentations before consenting and issuing a comfort letter.

**Impact of Prior Year Financial Statement Error on Previous Audit Opinion (CAS 560)**

Subsequent to our 2014 audit opinion being released, we have discovered a significant error related to an overstatement of revenue in the amount of \$317,902 and an overstatement of cost of sales of \$178,263, for a net income impact of \$139,639.

Since this error might have resulted in a change in the audit opinion, our responsibility is to first discuss the matter with management and the board. We will then request the financial statements be amended and determine how management will amend the statements (present as restated with a note explaining the statements). We will then need to audit the amendment and related note and review the steps that management has taken to ensure that anyone who has received the previous financial statements (e.g., lender, shareholders, possible vendors, and underwriters) is aware of the situation. Our firm can either amend the auditors' report or provide a new audit report. In either case, an "other matter" or "emphasis of matter" paragraph is required to refer to the financial statement note that discusses the reason for the amendment in more detail.

### Going Concern Issue

Losses have been incurred in the past two years, and the lease operations have been funding the research and development activities of the health operations. There are some signs of a potential going concern issue within the company, and they are as follows:

- Losses: Losses have been incurred in current and previous years, which might indicate there is a going concern issue because the company is not profitable.
- Violation of debt covenant: The company is currently in violation of its covenant. If the bank calls the loan, the company might not be able to continue its operations.
- Loss of key employee: The controller of K-Med has accepted a vice-president of finance position with K-Lease, and K-Med is still without a controller.
- Increased bank indebtedness: There is an increase in the bank overdraft and the long-term debt. This could indicate a potential going concern issue since the company may be having difficulties with cash flow and its ability to pay off debts.

On the other hand, the company has increased production, and demand has increased as well, resulting in higher revenue in 2015 than in 2014. This could be a sign that the company is still a going concern. As previously discussed, we will have to perform audit procedures on this to confirm whether or not we think the company is a going concern. We will first need to decide whether material uncertainty exists. If we decide that there is material uncertainty, adequate disclosure will have to be made in the financial statements. If this is done, we will express an unmodified opinion and include an “emphasis of matter” paragraph in our report. If not, we will have to express a qualified opinion or an adverse opinion. If we decide that the use of the going concern assumption is not appropriate and management does not adjust the financial statements, we will express an adverse opinion.

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

**Reaching Competence** – The candidate attempts to discuss the impact of accounting errors or the potential going concern issue on the audit report.

**Competent** – The candidate discusses the impact of the accounting errors or the potential going concern issue on the audit report.

**Competent with Distinction** – The candidate discusses the impact of the accounting errors and the potential going concern issue on the audit report.

**Assessment Opportunity #12**

The candidate discusses some relevant assurance requirements related to the initial public offering.

*The candidate demonstrates DEPTH in the Assurance role.*

**Initial Public Offering Reporting Requirements**

The new public company (K-Health) will be required to submit interim and annual filings to the Canadian Securities Administrators (CSA), an umbrella organization for the provincial and territorial securities regulators. Below I discuss the additional assurance requirements and auditor responsibilities resulting from those filings at the public offering (prospectus) date.

**CSA Filings**Auditor Prospectus Responsibilities

Auditors of public companies must have written into a participation agreement with the Canadian Public Accountability Board (CPAB). Our firm, as a participating audit firm, will be subject to CPAB oversight through practice inspections and other specific audit requirements.

Furthermore, the audit team will be subject to specific independence rules contained in our provincial rules of professional conduct. For example, our firm cannot provide an audit if members of the firm have family in accounting or oversight roles at K-Med, if a previous audit team member has accepted a financial oversight role at K-Med, or if a member of the firm serves as an officer or director of K-Med. In addition, there are partner and quality control review rotation rules preventing the same firm member from holding a lead role for longer than five years. As well, our firm cannot prepare journal entries for K-Med – the entries prepared in this report will need to be approved by K-Med. Our firm is also unable to provide supplemental services to K-Med, such as valuation, internal audit, information technology, human resources, or actuarial services.

We will need a separate engagement with K-Med to consent to the use of our audit report that will be included in the offering document in accordance with Canadian auditing standards. Key terms of the engagement include that the auditor makes no representations regarding question of legal interpretation and that we will not be performing an engagement to audit or review the offering document as a whole. Therefore, we are not providing assurance over the offering document as a whole, and we will require written representation from management and the board.

Some of the procedures we will perform include the following:

- Read the prospectus and other information, including minutes and possible legal response letters.
- Perform review procedures, such as inquiry, analytics, and discussion, to assess the plausibility of the unaudited September 30, 2015, financial statements.
- If there are pro forma financial statements included, we would
  - verify that historical information included in those statements was derived from the audited financial statements;
  - make inquiries about the basis management used to make pro forma adjustments and if they comply with regulatory form requirements; and
  - recalculate the pro forma adjustments derived from the historical financial statements.

- Verify that financial statements reported on by the auditor have been accurately reproduced in the prospectus.

Our consent will be addressed to the securities regulator and will express our consent to being named in the filings. We will state that we have read the prospectus and have no reason to believe that there are misrepresentations in the information that has been derived from the audited financial statements. We will also state that we have complied with Canadian generally accepted standards for an auditor's consent to the use of our audit reports in the prospectus.

Our firm is not required to provide any assurance related to C-SOX filings required by K-Med.

#### K-Med Prospectus Reporting Requirements

Since the IPO investors will be making their decision to invest in K-Med based on the September 30, 2015, and December 31, 2014, financial statements, it is important that management include a subsequent event note in the interim financial statements detailing the sale of K-Lease. It will be our responsibility to mention this event in a comfort letter provided to the underwriters, and we suggest that the underwriters be informed promptly of this event, if they have not already been. We would appreciate being present when you discuss this item with the underwriters.

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

**Reaching Competence** – The candidate identifies some relevant assurance requirements related to the initial public offering.

**Competent** – The candidate discusses some relevant assurance requirements related to the initial public offering.

**Competent with Distinction** – The candidate discusses several relevant assurance requirements related to the initial public offering.

## DAY 2- FINANCE MARKING GUIDE

### K-MED

In the Finance role, candidates are expected to first evaluate the financial statements of the company by addressing any financial reporting issues and redraft them based on their analysis.

Candidates are then asked to assess the anticipated financial position of the K-Lease operations after the proposed IPO and the spin-out of the leasing operations. As well, candidates are expected to critically analyze the proposed IPO and to suggest alternative sources of financing.

Candidates are then asked to prepare a capacity analysis and two-year cash flow projection to assess the ability of the health operations to generate sufficient cash flows to further expand capacity and meet expected sales demand.

Additionally, candidates are required to determine the appropriate weighted average cost of capital (WACC) for each business segment and the value of the leasing business segment for the board decision related to the sale of this segment to K-Lease. Finally, candidates are asked to consider how K-Lease might repay the amounts that it will owe to K-Med for the leasing operations more quickly.

**See Assurance Guide for the Common Assessment Opportunities**

#### **Assessment Opportunity #6**

The candidate discusses potential issues with the IPO and discusses alternative financing sources.

*The candidate demonstrates DEPTH in the Finance role.*

#### **Success of IPO**

K-Med Ltd. is currently incurring losses and has an accumulated deficit of over \$1.2 million at September 30, 2015 (over \$1.9 million after the accounting adjustments noted). Due to the current financial state of the company, the initial public offering may not be successful. The share price of \$9 may be seen as too high based on the potential risk associated with the investment.

As well, K-Med plans to dispose of its relatively stable leasing operations, which have provided it with a source of financing in the past. Once these operations are spun out, K-Med will consist solely of the riskier health operations. The beta of 2.3 for the health operations is an indication of the riskiness of the pharmaceutical industry in general. In comparison, the REIT industry has a lower beta of 0.6, indicating less volatile operations.

However, investors may be willing to accept a higher level of risk due to the higher-than-industry gross profit margin, competitive advantages, anticipated industry growth, and market demand. In short, potential investors may be willing to accept the higher risk if they can be compensated with higher expected returns.

## **Financing Alternatives**

### Current Investments

Currently, the health operations business segment has investments valued at \$100,000 that could be sold to provide a source of financing.

### Convertible Preferred Shares or Debentures

In the past, K-Med has been approached by venture capital firms regarding investment. One way to provide these firms with an investment opportunity in the company is to issue preferred shares that have desirable features. These features could include the ability to vote (like common shares), a redemption value to force K-Med to buy back the stock, a cumulative dividend rate to increase share value, and a conversion feature to allow the shareholders to convert preferred shares to common shares at any time.

Similarly, investors could be offered a convertible debenture that could carry an interest rate to compensate potential investors for their investment and also contain the ability to convert the debt into common shares, should the value of the company increase substantially. Typically, convertible debt carries interest rates that are below those of standard debt instruments due to the conversion option, while providing the debt holders with some security.

### Proceeds from the Sale of K-Lease

It may be possible for K-Med to receive the proceeds from the sale of the real estate assets to K-Lease sooner. We should discuss this possibility with Kevin to see whether K-Lease has available debt capacity apart from K-Med. In theory, K-Lease should be able to use the real estate assets as security and obtain traditional bank financing. These funds could then be used to pay K-Med for the assets. This possibility is discussed further later in this memo.

### Other Potential Sources of Financing

It is also possible that K-Med could generate additional funds through government grants. Given the nature of its operations (health products), funds may be available to support this healthy living initiative. As well, K-Med might be able to raise funds through a sales-leaseback type arrangement with some of its property, plant and equipment.

## **Other Considerations**

Should the IPO be successful, Kevin and Kaylee will lose control of the company. Through the IPS, 500,000 shares will be issued, and Kevin and Kaylee own, in total, only 400,000 shares. In addition, K-Med would be subject to increased ongoing costs associated with being a public company, such as regulatory filing and other requirements. As a result of going public, K-Med would also need to disclose additional information that competitors could find very useful.

On the other hand, Kevin may be able to dispose of his shares more readily in an IPO (after the escrow period), and this money could be funneled back through K-Lease to K-Med. Going public has additional advantages, such as increased exposure and potentially increased debt capacity.

K-Med could consider delaying its decision to go public until it obtains additional research results on its K-Krill Oil® and K-Krill Protein® products. Positive results could help to create value in the company and increase the likelihood of success of the IPO and/or increase the proceeds raised through an IPO.

## Recommendation

An IPO is a very expensive way to obtain financing. In the case of K-Med, it is not clear if the IPO will be successful given its financial state. I would recommend that K-Med consider other alternatives, such as negotiating acceptable terms with a venture capitalist or angel. These terms could incorporate a conversion feature, allowing the investor to participate in the significant potential upside of K-Med. An IPO could then be revisited in the future, when K-Med's future becomes clearer and financial risks decrease.

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

**Reaching Competence** – The candidate identifies some IPO issues or some alternative financing sources.

**Competent** – The candidate discusses some IPO issues and some alternative financing sources.

**Competent with Distinction** – The candidate discusses the IPO issues and many alternative financing sources.

## Assessment Opportunity #7

The candidate prepares a valuation of the leasing business segment.

*The candidate demonstrates DEPTH in the Finance role.*

I have prepared a valuation of the lease business segment that will be sold to Kevin's private company, K-Lease, on November 30, 2015.

## Alternative Methods of Valuation

There are two general methods of business valuation: asset-based and earnings-based.

Asset-based valuations include book value and liquidation value approaches. The book value, or net asset, approach subtracts the liabilities from the value of the assets. This is a simple method that is often preferred by purchasers. Due to the simple nature of the lease business segment, this approach may be reasonable because the fair values of the investment property assets and the associated debt are easily determined. The liquidation value approach is not applicable in this scenario because the business remains a going concern.

The most appropriate earnings-based valuation approach is the discounted cash flow approach. This valuation method is usually the most accurate and effective way to estimate a value because it is based on future cash flows. This method takes into account the risk and time purchasers must wait for a return on their investment.



## Valuation

The value of the business, using the asset-based approach, is \$3,467,153 (the retained earnings per Appendix III, note 10). Given that the investments are valued at market value each year (per note 10), this amount can be used as an approximation of the fair market value of the net assets of the leasing operations. However, it has been noted that the valuation of the leasing properties was performed this year by a real estate agent recommended by the controller, who is now an employee of K-Lease. We would need to ensure that this valuation is, therefore, accurate, given the potential bias involved.

The estimated value of the business using a discounted cash flows approach would be as follows:

	2016	2017	Ongoing (Terminal Value)
Revenue <sup>1</sup>	\$ 573,783	\$ 590,996	\$
Expense <sup>2</sup>	(255,670)	(260,784)	
Other income <sup>3</sup>	25,391	25,391	
EBIT	343,504	355,603	362,715
Taxes <sup>4</sup>	(153,546)	(158,955)	(162,134)
Depreciation (add back)	0	0	0
Capex <sup>5</sup>	0	0	0
Working capital investment <sup>5</sup>	0	0	0
Free cash flow	189,958	196,648	200,581
Terminal value <sup>6</sup>	0	0	3,550,106
Amount to be discounted	189,958	196,648	3,550,106
Discounted value (@ 7.65%) <sup>7</sup>	\$ 176,459	\$ 169,692	\$ 3,063,467
Total value based on DCF			<u>\$3,409,618</u>

<sup>1</sup>Per Appendix III, note 10, financial statement value is \$557,071 at the end of 2015 ( $\$417,803 \times 12/9$  months), with an assumed 3% annual increase.

<sup>2</sup>Per Appendix III, note 10, financial statement value is \$250,657 at the end of 2015 ( $(\$166,670 + \$21,323) \times 12/9$  months), with a 2% annual increase.

<sup>3</sup>Per Appendix III, note 10, financial statement value is \$25,391 at the end of 2015 ( $\$19,043 \times 12/9$  months); no increase or nominal increase is reasonable.

<sup>4</sup>Not considered active business income (ABI), so tax at the high rate of 34.7% plus 10% provincial tax.

<sup>5</sup>The assumption is that capital expenditures (Capex), depreciation, and working capital investments will be minimal, which is a reasonable assumption given the nature of the leasing operations.

<sup>6</sup>The terminal value represents the discounted value of the cash flows after 2017, assuming constant annual growth of 2% (using the risk-free rate as a proxy for the long-term growth rate). The computation underlying the discounted value of \$3,550,106 is as follows:  $\$200,581 \div (7.65\% - 2\%)$ .

<sup>7</sup>Discount rate of 7.65% per WACC calculation later in this memo.

The DCF calculation returns an estimated value of approximately \$3.4 million for the leasing operations, which is slightly lower than the net asset fair value of approximately \$3.5 million. Since the net assets of this division could be sold for almost \$3.5 million, this is arguably the fair value of the division. Assuming that this is the amount used to sell the leasing net assets to K-Lease, a receivable would be recorded from K-Lease on K-Med's books for this amount.

Note that given the stable nature of the leasing operations, additional valuation alternatives could also be considered, such as a multiples approach based on cash flows or EBITDA. These alternatives would yield results similar to those of this DCF approach.

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

**Reaching Competence** – The candidate attempts a valuation of the leasing business segment.

**Competent** – The candidate prepares a reasonable valuation of the leasing business segment using at least two different approaches.

**Competent with Distinction** – The candidate prepares a thorough valuation of the leasing business segment using at least two different approaches and concludes on a fair value for the leasing operations based on their analysis.

#### Assessment Opportunity #8

The candidate evaluates the financial state of K-Med after the sale of the leasing operations and after the IPO.

*The candidate demonstrates DEPTH in the Finance role.*

I have forecasted the financial position of K-Med subsequent to

1. the accounting adjustments noted previously;
2. the sale of the leasing operations to K-Lease; and
3. the anticipated IPO.

	Health Operations Financial Position at September 30, 2015 (Note 10 to F/Ss)	Accounting Adjustments (from previous calculations)	Effect of Selling Leasing Operations to K-Lease <sup>1</sup>	Effect of IPO <sup>2</sup>	Financial Forecasted Position K-Med
Current assets	\$ 5,247,274	\$ (624,888)	\$ 200,000	\$ 3,840,000	\$ 8,662,386
Non-current assets	4,791,420	(39,760)	3,267,153		8,018,813
Total assets	<u>\$ 10,038,694</u>	<u>\$ (664,648)</u>	<u>\$ 3,467,153</u>	<u>3,840,000</u>	<u>\$ 16,681,199</u>
Current liabilities	\$ 3,547,807				\$ 3,547,807
Non-current liabilities	8,406,811				8,406,811
Total debt	11,954,618				11,954,618
Equity	<u>(1,915,924)</u>	<u>(664,648)</u>	<u>3,467,153</u>	<u>3,840,000</u>	<u>4,726,581</u>
Total liabilities/equity	<u>\$ 10,038,694</u>	<u>\$ (664,648)</u>	<u>\$ 3,467,153</u>	<u>\$ 3,840,000</u>	<u>\$ 16,681,199</u>

<sup>1</sup>Assumes that K-Lease is sold for a value approximating the carrying value at September 30, 2015 (for further analysis, see the valuation analysis of K-Lease later in this memo).

<sup>2</sup>500,000 shares at \$9 per share less \$300,000 in prospectus costs and 8% underwriter fee (\$360,000).

### Working Capital (Liquidity)

K-Med will have current assets of approximately \$8,662,386 and current liabilities of approximately \$3,547,807 subsequent to the transactions previously noted. Therefore, K-Med will have working capital of over \$5 million after the sale of the leasing operations and the IPO and a current ratio of 2.44:1, which is substantially higher than the imposed bank covenant of 1.5:1. Importantly, K-Med will also have a substantial amount of cash (over \$4 million) as a result of the sale and IPO.

Liquidity ratios, such as the current ratio, are used to assess the ability of the company to cover its short-term liabilities with short-term assets. As a result of the two transactions referred to, K-Med will have substantially improved liquidity and should not have any difficulties meeting its short-term obligations as they become due.

**Debt (Solvency)**

Total liabilities of the health operations were \$11,954,618. Before the sale of the leasing operations and the IPO, the health operations were in a negative equity situation. However, the sale of the leasing operations and the IPO would add over \$7 million to the equity of K-Med. As a result, K-Med is forecast to have total equity of \$4,726,581 after the transactions. However, the debt-to-equity ratio remains high at 2.53, indicating that even with the positive contributions of the sale and the IPO, K-Med's long-term solvency remains in doubt. In order for this ratio to improve in the future, K-Med needs to become profitable. Continued losses will erode the equity base further and will lead to a solvency issue.

**Profitability**

Currently the health operations of K-Med are not profitable and are burning through cash at a substantial rate. If K-Med is to survive and prosper over the long term, it must generate positive income and cash. The cash generated from the IPO will help K-Med buy some time while it increases sales and becomes profitable. Indeed, K-Med is anticipated to grow by 4% (in terms of volume) each month over the next several years.

It can also be seen that K-Med would be generating positive income and cash flows if it were not investing heavily in research and development. Because these expenses typically provide benefits long into the future, it is difficult to predict the future viability of K-Med. We have prepared a forecast, provided later in this report, for the operations of K-Med that indicate that operations could generate substantial income and cash flows in the future. This forecast is based on a number of assumptions, not the least of which is a very aggressive growth rate for the company's products, and should be monitored closely.

**Summary**

The forecasted financial position of K-Med is substantially improved as a result of the sale of the leasing operations to K-Lease and the proceeds from the IPO. In effect, these transactions will buy K-Med some time while it develops its products and markets more thoroughly. However, K-Med must become profitable over the next few years or it may not survive. Our forecast indicates that K-Med will become profitable and cash-flow positive over the next couple of years, indicating that the company is viable, but this forecast should be monitored closely and adjustments made as necessary.

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

**Reaching Competence** – The candidate attempts to evaluate the financial state of K-Med after the transactions.

**Competent** – The candidate performs a reasonable evaluation of K-Med after the transactions.

**Competent with Distinction** – The candidate performs a thorough evaluation of the financial state of K-Med after the transactions.

**Assessment Opportunity #9**

The candidate evaluates the production capacity of K-Med and determines whether there are any capacity constraints.

*The candidate demonstrates competence in DEPTH in the Finance role.*

To further increase production capacity to meet the anticipated sales growth of K-Krill Oil® and possible commercialization of other products, the board has decided to pursue an initial public offering. Therefore, we need to assess current capacity and anticipate future capacity constraints based on the expected sales growth.

**Capacity Analysis**

Per Appendix II, the total capacity of the new plant is 130,000 kilograms of krill oil per year, or 10,833 kilograms per month. K-Med produced and shipped 249,800 bottles of K-Krill Oil® in September 2015, which equates to 7,494 kilograms of oil at 0.03 kilogram per bottle. Production is expected to increase by 4% a month to coincide with expected sales growth. At this rate, the plant will be operating at 100% of production capacity by July 2016 to meet anticipated sales demand (see the chart that follows). Since sales demand will exceed the current annual production capacity of 130,000 kilograms, a plant expansion needs to occur. It would take 18 months from June 2016 to complete a plant expansion, so I recommend beginning construction in June 2016, with hopes of additional capacity being available for December 2017. This will allow K-Med to meet expected sales demand in late 2017 until the plant once again reaches capacity in January 2018. K-Med should consider further production facility expansion as sales demand exceeds capacity in early 2018.

	Production (kg) – 4% per Month Increase	Sales Demand (kg) – 4% per Month Increase	Unmet Demand per Month (kg)
September 2015 (actual)	7,494 <sup>1</sup>	7,494 <sup>1</sup>	0
October 2015	7,793	7,793	0
November 2015	8,105	8,105	0
December 2015	8,429	8,429	0
January 2016	8,767	8,767	0
February 2016	9,117	9,117	0
March 2016	9,482	9,482	0
April 2016	9,861	9,861	0
May 2016	10,256	10,256	0
June 2016	10,666	10,666	0
July 2016	10,833 <sup>2</sup>	11,093	260
August 2016	10,833 <sup>2</sup>	11,536	703
September 2016	10,833 <sup>2</sup>	11,998	1,165
October 2016	10,833 <sup>2</sup>	12,478	1,645
November 2016	10,833 <sup>2</sup>	12,977	2,144
December 2016	10,833 <sup>2</sup>	13,496	2,663
January 2017	10,833 <sup>2</sup>	14,036	3,203
February 2017	10,833 <sup>2</sup>	14,597	3,764
March 2017	10,833 <sup>2</sup>	15,181	4,348
April 2017	10,833 <sup>2</sup>	15,788	4,955
May 2017	10,833 <sup>2</sup>	16,420	5,587
June 2017	10,833 <sup>2</sup>	17,076	6,243
July 2017	10,833 <sup>2</sup>	17,760	6,927
August 2017	10,833 <sup>2</sup>	18,470	7,637
September 2017	10,833 <sup>2</sup>	19,209	8,376
October 2017	10,833 <sup>2</sup>	19,977	9,144
November 2017	10,833 <sup>2</sup>	20,776	9,943
December 2017	21,607 <sup>3</sup>	21,607	0
January 2018	21,667 <sup>4</sup>	22,471	804
February 2018	21,667 <sup>4</sup>	23,370	1,703
March 2018	21,667 <sup>4</sup>	24,305	2,638
April 2018	21,667 <sup>4</sup>	25,277	3,610
May 2018	21,667 <sup>4</sup>	26,288	4,621
June 2018	21,667 <sup>4</sup>	27,340	5,673
July 2018	21,667 <sup>4</sup>	28,433	6,766
August 2018	21,667 <sup>4</sup>	29,570	7,903
September 2018	21,667 <sup>4</sup>	30,753	9,086

<sup>1</sup>September production and sales = 249,800 bottles @ 0.03 kg per bottle = 7,494 kg of K-Krill Oil®.

<sup>2</sup>Production capacity of 10,833 kg (130,000 kg ÷ 12 months) is reached in November 2016, and capacity continues to be constrained until the expansion of the plant occurs in December 2017.

<sup>3</sup>In December 2017, capacity increases to 21,667 kg per month (260,000 kg ÷ 12 months), and, therefore, production can increase to meet demand.

<sup>4</sup>Once again, capacity is estimated to be constrained beginning in January 2018.

## Discussion

Given the assumptions used in this analysis, capacity will continue to be a significant issue for K-Med over the next several years. K-Med will reach capacity in July 2016 and will not be able to meet the excess demand until the plant expansion becomes operational, forecasted to occur in December 2017. This results in an opportunity cost of 78,707 kilograms of K-Krill Oil® or 2,623,567 bottles of K-Krill Oil®. At \$6.50 per bottle (the expected price in 2017), the estimated lost revenues total \$17,053,186, and the lost contribution (at an approximate 50% margin) would be over \$8.5 million.

There may be some things that K-Med could do to alleviate the capacity constraint in the short-term, such as

1. build up inventory in anticipation of excess demand (produce additional K-Krill Oil® leading up to July 2016);
2. subcontract production to a third party (this may bring up additional concerns, such as product quality and knowledge transfer); and
3. increase prices in an attempt to manage demand.

As well, assuming that demand continues to increase as expected, K-Med will face further production constraints in January 2018. Therefore, rather than building a new facility every year or two, it may make sense to either build one larger facility all at once or plan for a facility that is scalable and can be easily expanded (and contracted) as demand varies.

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

**Reaching Competence** – The candidate attempts to prepare a capacity analysis.

**Competent** – The candidate concludes on whether production capacity is sufficient to meet future sales growth by preparing a reasonable capacity analysis.

**Competent with Distinction** – The candidate concludes on whether production capacity is sufficient to meet future sales growth by preparing a reasonable capacity analysis and supporting qualitative analysis.

**Assessment Opportunity #10**

The candidate prepares a reasonable two-year operating cash flow analysis for K-Med.

*The candidate demonstrates DEPTH in the Finance role.*

**Operating Cash Flow Analysis – Assumptions**

I have prepared a two-year operating cash flow projection for K-Med after the company goes public. This projected cash flow analysis incorporates the health business segment that remains after the sale of the lease business segment to K-Lease.

**Sales Volume Assumptions**

K-Med expects sales volume to grow by 4% per month over the next two years, resulting in an annual increase of 60%. While 2015 annual sales growth over 2014 was approximately 32% (1,768,643 bottles – 1,782,640 × 9/12 months, per Appendix III, note 9), this level of growth seems high. Perhaps with an expansion into the U.S., the nutraceutical market experiencing rapid growth, and other new opportunities, this growth rate is achievable. However, we should perform additional analysis to determine whether this growth rate is achievable and sustainable over the next few years.

From the capacity analysis that we performed, 2016 production and sales volumes have been estimated at 123,147 kilograms, and 2017 production and sales volumes have been estimated at 140,770 kilograms. Note that these numbers take into account the capacity constraints and do not anticipate any of the potential possibilities to alleviate these constraints, as we have noted.

**Sales Price Assumptions**

We have assumed that the price of K-Krill Oil® will increase to \$6.00 in 2016 and \$6.50 in 2017, as outlined by management. Since sales price increases may be difficult as K-Krill Oil® is already priced higher than the competition's products, a sensitivity analysis should ideally be incorporated into the cash flow projections. We will discuss this possibility further below.

**Cost Assumptions**

Cost assumptions have been provided by K-Med and have been used in the forecast. Each of these assumptions should be further analyzed for accuracy and reasonableness.



The forecast of the operational cash flows over each of the next two years is as follows:

Item	2016	2017
Sales <sup>1</sup>	24,629,40	
	\$ 0	\$ 30,500,165
Raw materials <sup>2</sup>	(1,724,058)	(2,069,319)
Direct labour <sup>3</sup>	(2,415,734)	(2,954,739)
Variable overhead <sup>4</sup>	(6,680,725)	(8,018,611)
Gross profit	13,808,88	
	3	17,457,496
Selling <sup>5</sup>	(7,388,820)	(9,150,050)
Normalized general and admin <sup>6</sup>	(2,212,895)	(2,323,540)
Product research and development <sup>7</sup>	(2,702,061)	(2,702,061)
Cash flow from operations	\$ 1,505,107	\$ 3,281,845

<sup>1</sup>Sales for 2016 = 123,147 kg ÷ 0.03 kg per bottle (total bottles = 4,104,900) × \$6.00 per bottle = \$24,629,400. Sales for 2017 = 140,770 kg ÷ 0.03 kg per bottle (total bottles = 4,692,333) × \$6.50 per bottle = \$30,500,165.

<sup>2</sup>Per Appendix IV, raw material cost is 16% of \$2.50 per bottle (Appendix III, note 1), or \$0.40. Expected annual increase of 5% results in a cost of \$0.42 × 4,104,900 bottles in 2016 and \$0.441 × 4,692,333 bottles in 2017.

<sup>3</sup>Per Appendix IV, direct labour cost is 22% of \$2.50 per unit (Appendix III, note 1), or \$0.55. Expected annual increase of 7% results in a cost of \$0.5885 × 4,104,900 bottles in 2016 and \$0.629695 × 4,692,333 bottles in 2017. Note that it is very possible that the labour productivity would increase given the increase in volumes. This has not been factored into the above numbers in order to be conservative, but alternate reasonable assumptions could certainly be made here.

<sup>4</sup>Per Appendix IV, variable overhead cost is 62% (100% – 16% – 22%) of \$2.50 per unit (Appendix III, note 2), or \$1.55. Assume annual increase consistent with raw materials (or other reasonable assumption) of 5% results in a cost of \$1.6275 × 4,104,900 bottles in 2016 and \$1.708875 × 4,692,333 bottles in 2017.

<sup>5</sup>Per Appendix IV, selling expenses are expected to be 30% of sales.

<sup>6</sup>Per Appendix III, note 10, health SG&A = \$4,677,947 (\$3,508,460 × 12/9) less 2015 selling costs of \$2,570,428 (\$9,639,104 × 20% × 12/9, per Appendix IV) = \$2,107,519. Assume 5% (or other reasonable assumption) annual increase consistent with raw materials.

<sup>7</sup>Total expenditure on R&D and other intangibles is applicable for a cash flow analysis and is assumed to remain similar to 2015. Total R&D expense per Appendix III for the first nine months of 2015 was \$1,822,632, and total capital additions for the first nine months was \$203,914 (note 4), which over 12 months would total approximately \$2,702,061.

Note that we have not deducted any ongoing capital expenditures to maintain the capital assets in their present condition. This could be deducted from the above to arrive at a free cash flow figure from operations. However, the capital expenditure amount is not likely to be significant. As well, all significant expenditures on property, plant and equipment have been included in the investing and financing analysis below.

### Sensitivity Analysis

A sensitivity analysis should be performed using the operational cash flow forecast as the most likely scenario. Key inputs, such as sales volumes, sales price, labour costs, raw material costs, and other direct costs, could be adjusted by 10% in either direction to determine the effect on the cash flows. This would provide management with valuable information on the importance of each input.

### Preliminary Conclusions

In both 2016 and 2017, K-Med will generate significant cash flow from its operations. This includes a significant amount spent on research and development each year and, thus, is a strong positive signal of the viability of K-Med.

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

**Reaching Competence** – The candidate attempts to prepare a two-year operational cash flow analysis.

**Competent** – The candidate prepares a reasonable two-year operational cash flow analysis and discusses significant assumptions.

**Competent with Distinction** – The candidate prepares a two-year operational cash flow analysis, discusses the sensitivity of the numbers, and discusses significant assumptions.

### Assessment Opportunity #11

The candidate prepares a reasonable two-year cash flow analysis for K-Med, considering the planned investing and financing activities.

*The candidate demonstrates DEPTH in the Finance role.*

The analysis above confirms that K-Med will be able to generate substantial cash flows from operations over the next two years if its assumptions hold true. However, K-Med needs to consider many other items that are not operational in nature in order to provide a clear financial picture over the next two years.

As a result, we have prepared a complete cash flow projection that incorporates non-operational items. Included in the cash flow projection are the net proceeds from the IPO and the proceeds from the sale of the leasing business segment, as well as capital expenditures and debt repayments (both principal and interest).

<b>Item</b>	<b>2016</b>	<b>2017</b>
Cash flow from operations <sup>1</sup>	\$ 1,505,107	\$ 3,281,845
Net IPO proceeds <sup>2</sup>	3,840,000	0
Capital replacement <sup>3</sup>	(20,000)	(50,000)
New plant – building <sup>4</sup>	(2,527,778)	(3,972,222)
New plant – equipment <sup>5</sup>	0	(2,340,000)
Debt repayment <sup>6</sup>	(752,935)	(752,935)
Interest payments on debt <sup>7</sup>	(601,653)	(548,948)
Proceeds from sale of leasing operations <sup>8</sup>	0	3,267,153
<b>Net cash flows</b>	<b>\$ 1,442,741</b>	<b>\$ (1,115,107)</b>

<sup>1</sup>From previous analysis.

<sup>2</sup>Per Appendix IV, \$4,500,000 – \$360,000 in underwriters fees (8%) – \$300,000 in other prospectus costs.

<sup>3</sup>Per Appendix IV.

<sup>4</sup>Per Appendix IV, total cost of \$6,500,000 × 7/18 months construction in 2016 (June through December) and 11/18 months construction in 2017 (January through November).

<sup>5</sup>Per Appendix IV, assuming plant is completed in 2017.

<sup>6</sup>Per Appendix III, note 10, assuming no new debt.

<sup>7</sup>Assumes an average of \$8,595,044 (\$9,159,746 – \$188,234 in repayments from October to December 2015 and \$752,935 in repayments in 2016) of debt in 2016 and \$7,842,109 (\$752,935 in repayments in 2017) of debt in 2017 at the revised rate of interest of 7%, as outlined in Appendix IV.

<sup>8</sup>Assumes the sale amount for the leasing operations is equal to the net book value of the leasing operations at September 30, 2015 (see further discussion later in this memo). Kevin to pay remainder owing \$3,267,153 (\$3,467,153 – \$200,000 down payment) in June 2017.

This analysis indicates that K-Med will generate positive cash flows after considering all of its planned activities over the next two years, since the positive cash flows generated in 2016 will more than offset the negative cash flows from 2017. However, we would recommend further analysis because the cash flow “cushion” is not large and many of the assumptions should be challenged. It is quite possible that K-Med will not have positive cash flows in the future, and steps should be taken to ensure that any variations in the expected cash flows (from the above) and the actual cash flows are dealt with proactively. As well, we would recommend a monthly cash flow analysis be performed in order to estimate the inflows and outflows more precisely and in an effort to identify potential areas of concern.

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

**Reaching Competence** – The candidate attempts to prepare a two-year cash flow analysis incorporating some investing and financing activities.

**Competent** – The candidate prepares a reasonable two-year cash flow analysis incorporating some investing and financing activities and discusses significant assumptions.

**Competent with Distinction** – The candidate prepares a two-year operational cash flow analysis incorporating most investing and financing activities, discusses the sensitivity of the numbers, and discusses significant assumptions.

### Assessment Opportunity #12

The candidate calculates an appropriate weighted average cost of capital for K-Med and for K-Lease.

*The candidate demonstrates DEPTH in the Finance role.*

In order to estimate the weighted average cost of capital (WACC) for K-Med and for K-Lease subsequent to the IPO, we must estimate the cost of equity and the cost of debt. We will use the capital asset pricing model (CAPM) as the basis for our estimate of the cost of equity for each company.

#### WACC – K-Med

Cost of equity ( $R_e$ ) – Based on the CAPM:

$$R_e = R_f + \beta(R_m - R_f) = 2\% + 2.3 \times (8\% - 2\%) = 15.8\%$$

Where:  $R_e$  = cost of equity

$R_f$  = risk-free rate (using the Government of Canada rate on 10-year bonds of 2%, per Appendix III)

$R_m$  = rate of return expected from the market as a whole (8%)

$\beta$  = beta from the pharmaceutical industry as a proxy for the operations of K-Med

The resulting cost of equity from the CAPM is 15.8%. It would also be prudent to add risk premiums due to the start-up nature of K-Med (making it more risky than a normal pharmaceutical operation) and its small size (relative to other pharmaceutical operations). Assuming a start-up premium of 5% and a size premium of a further 5%, the resulting cost of equity is 25.8%.

Cost of debt ( $R_d$ ) – We are told that the interest rate on K-Med's bank loan will be 7% after the leasing operations are spun out. We will use this as a proxy for the cost of debt.

Market value of equity ( $MV_e$ ) – After the IPO, there will be 900,000 shares outstanding. If we assume that the market value of each share approximates the IPO price of \$9, then the market value of the equity will be \$8.1 million.

Market value of debt ( $MV_d$ ) – After the spin-out of the leasing operations, K-Med will have approximately \$9,160,000 of debt (Appendix III, note 10). We assume that this is close to the market value, given the bank will increase the interest rate to 7%. Note that we have ignored the bank overdraft as at September 30, 2015 (\$283,516), which technically should be included, assuming that it represents an amount actually owed to the bank (and not simply outstanding cheques) and is interest bearing. However, the resulting effect on the WACC would not be significant.

$$\begin{aligned} \text{WACC} = & \frac{MV_e}{8,100 + (8,100 + 9,160)} \times R_e + \frac{MV_d}{8,100 + (8,100 + 9,160)} \times (R_d \times (1 - t)) \\ & 8,100 \div (8,100 + 9,160) \times 25.8\% + 9,160 \div (8,100 + 9,160) \times (7\% - (1 - 30\%)) \\ & 14.71\% \end{aligned}$$

Where:  $t$  = the estimated tax rate for K-Med (any reasonable number would suffice)

Note that this calculation also assumes that this debt and equity mix is the target capital structure for K-Med. This is debatable, and other assumptions could be made. An alternative assumption about the tax rate could also be made. For example, given that K-Med would have substantial tax loss carryforwards available to offset any taxable income in the near future, a reasonable assumption could be made that the tax rate is nil.

Using these assumptions, the WACC for K-Med is approximately 14.71%.

### WACC – K-Lease

Cost of equity ( $R_e$ ) – Based on the CAPM:

$$R_e = R_f + \beta(R_m - R_f) = 2\% + 0.6 \times (8\% - 2\%) = 5.6\%$$

Where:  $R_e$  = cost of equity

$R_f$  = risk-free rate (using the Government of Canada rate on 10-year bonds of 2%, per Appendix III)

$R_m$  = rate of return expected from the market as a whole (8%)

$\beta$  = beta from the REIT industry as a proxy for the operations of K-Lease

The resulting cost of equity from the CAPM is 5.6%. It would also be prudent to add a risk premium due to the small size (relative to other REITs); however, a start-up premium is not considered necessary because K-Lease has been in existence for some time now. Assuming a size premium of 5%, the resulting cost of equity is 10.6%. A premium for remaining a private company could also be considered.

Cost of debt ( $R_d$ ) – The existing debt carries an interest rate of 4%, and we will assume that this will continue moving forward since there is nothing to indicate it will change. We will use this as a proxy for the cost of debt.

Market value of equity ( $MV_e$ ) – We will assume that the book value of the equity from K-Lease (Appendix III, note 10) approximates its market value, which is a fair assumption (see valuation analysis of the leasing operations above). Therefore, the market value of the equity approximates \$3,467,000.

Market value of debt ( $MV_d$ ) – After the spin-out of the leasing operations, K-Lease will have approximately \$1,885,000 of debt (Appendix III, note 10). We assume that this is close to the market value.

$$\begin{aligned} \text{WACC} &= \frac{MV_e}{(MV_e + MV_d)} \times R_e + \frac{MV_d}{(MV_e + MV_d)} \times (R_d \times (1 - t)) \\ &= \frac{3,467}{(3,467 + 1,885)} \times 10.6\% + \frac{1,885}{(3,467 + 1,885)} \times (4\% - (1 - 44.7\%)) \\ &= 7.65\% \end{aligned}$$

Where:  $t$  = the estimated tax rate for K-Lease (note that it is higher than K-Med's due to the nature of the operations – leasing). See below for additional information on the tax rate.

Note that this calculation also assumes that this debt and equity mix is the target capital structure for K-Lease. This is debatable, and other assumptions could be made. Arguably K-Lease would have substantial capacity to increase its leverage (additional debt), which would lower its WACC even further (due to the tax benefits associated with debt). We have also not considered the amount that K-Lease will owe to K-Med as a result of the spin-out of the leasing operations as debt. If this was considered debt, then the proportion of debt would substantially increase (and assuming a similar cost of debt, the WACC would fall further).

Using these assumptions, the WACC for K-Lease is approximately 7.65%.

### Discussion

The WACC for K-Lease is about half of the estimated WACC for K-Med. This is due to the nature of the operations underlying the entities. K-Med is a very risky operation, given its industry and start-up nature. K-Lease is much less risky, given its underlying tangible assets (real estate) and its relatively mature operations.

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

**Reaching Competence** – The candidate attempts to calculate a weighted average cost of capital for both companies.

**Competent** – The candidate calculates a reasonable weighted average cost of capital for both companies.

**Highly Competent** – The candidate calculates a reasonable weighted average cost of capital for both companies and explains the results, including why the calculated amounts are different.

### Assessment Opportunity #13

The candidate discusses the capacity of K-Lease to repay the amounts owed to K-Med and other potential ways to repay the amount quicker.

*The candidate demonstrates DEPTH in the Finance role*

From the previous DCF analysis, we have estimated that K-Lease will generate approximately \$150,000 in free cash flows available for its debt and equity holders. Assuming interest payments on its external debt (the amounts not owed to K-Med) of \$50,000 annually, which approximates the annual amount noted in Appendix III, note 10, there would be \$100,000 remaining to repay K-Med. If we assume that K-Lease will owe \$3,467,153 (the net carrying value) to K-Med as a result of the sale of the leasing operations, then it would take K-Lease over 32 years (the initial \$200,000 payment plus annual payments of \$100,000 each) to repay the amount owing from its free cash flows. Alternatively, if K-Med charged 4% interest on the amount outstanding from K-Lease (\$3,267,153), then the free cash flows generated by K-Lease would not even be enough to meet this interest amount, let alone any principal.

The amount K-Lease must pay K-Med is due in June 2017. It is clear that the free cash flows from K-Lease will not be able to generate sufficient funds to repay this amount. However, K-Lease has a number of options available to raise these funds. The following are some alternatives:

- Once Kevin's shares are released from escrow (2017), he could sell his shares and "lend" the proceeds to K-Lease, which would then repay the amounts due to K-Med. At the current market rate for K-Med's shares, this would total approximately \$1.8 million ( $\$9 \times 200,000$  shares). Alternatively, Kevin's shares could be sold as part of the IPO, which would generate funds immediately for Kevin that he could lend to K-Lease to repay K-Med.
- K-Lease could remortgage its assets based on the value of the properties (over \$5 million) and repay the amount right away. If we assume that K-Lease could obtain a mortgage for 85% of the market value of its properties, this would mean an additional \$2,515,475 ( $\$5,177,280 \times 85\% - \$1,885,213$  of existing debt) that K-Lease could generate to repay the debt owing to K-Med. Another potential source of security for any lender would be Kevin's shares of K-Med.
- K-Lease could also sell additional shares, but since its net assets would be effectively nil after the spin-out, there may be little appetite for these shares.

K-Med should seek these funds from K-Lease as soon as possible to help fund its operations and provide a cushion against unforeseen events. There is no reason why K-Lease could not remortgage its properties sooner than June 2017, for example. Because this amount may not be sufficient to repay the total debt to K-Med, there should be a final payment once Kevin's K-Med shares are released from escrow so that he can lend the amount to K-Lease, which can then forward the amount to K-Med.

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

**Reaching Competence** – The candidate understands that K-Lease owes K-Med a significant amount of money and determines that the free cash flows of K-Lease are not sufficient to repay the amount quickly.

**Competent** – The candidate understands that K-Lease owes K-Med a significant amount of money and discusses reasonable alternatives for repaying the amount.

**Competent with Distinction** – The candidate understands that K-Lease owes K-Med a significant amount of money, integrates the fact that K-Med needs the money, and discusses reasonable alternatives for repaying the amount quickly, including the potential sale of Kevin's shares in K-Med in the IPO.

## DAY 2-PERFORMANCE MANAGEMENT MARKING GUIDE K-MED

In the performance management role, the candidate is expected to analyze the third quarter results and significant accounting transactions to identify and adjust for errors before assessing the likelihood of K-Med achieving annual budget targets through variance analysis.

In addition, the candidate is expected to evaluate the company's external and internal environment to identify operational issues related to the 2016 business plan strategy and budget. The candidate is expected to recommend improvements to internal business systems and governance roles to meet future investor and regulatory reporting needs.

The candidate is required to prepare a reasonable quantitative analysis to assess the profitability of selling bulk krill oil over encapsulated krill oil, considering alternative pricing strategies in the analysis. The candidate should provide an evaluation of alternative cost management techniques and recommend an appropriate product costing method that would meet the new operating company strategy.

### See Assurance Guide for the Common Assessment Opportunities

#### Assessment Opportunity #6

The candidate provides a variance analysis of the health operations segment.

*The candidate demonstrates DEPTH in the Performance Management role.*

*To demonstrate competence, candidates should calculate the 9-month flexible budget so that it can be compared with the 9-month actuals, or convert the 9-month actual to a 12-month projected to compare the projected actuals with the 12-month budget. Stronger candidates will conclude that K-Med should be able to attain the budgeted profit before income tax.*

#### Case facts:

Budgeted sales (in bottles)	2,008,727	App. IV, PM
Sales price	\$5.35	App. IV, PM
Cost per bottle	\$3	App. IV, PM
Actual sales (in bottles)	1,768,643	Note 9, common



## Health operations analysis:

	Notes	Flexible	Actual	Difference
Revenue	1	\$9,462,240	9,639,104	\$176,864
Cost of sales	2	(5,305,929)	(4,421,608)	\$884,321
		\$4,156,311	5,217,496	\$1,061,185
Other income	3	7,500	30,862	23,362
Amortization	4	(337,500)	(358,036)	(20,536)
Selling, general and administration	5	(3,048,781)	(3,508,460)	(459,679)
Research and development	6	(2,250,000)	(1,822,632)	427,368
Fair value increase on investments	7	0	0	0
		(1,472,470)	(440,770)	1,031,700

## Notes

- 1: 1,768,643 bottles (actual) × \$5.35 (budgeted)
- 2: 1,768,643 bottles (actual) × \$3.00 (budgeted)
- 3:  $\frac{3}{4}$  of \$10,000 budgeted for the year
- 4:  $\frac{3}{4}$  of \$450,000 budgeted for the year
- 5: Variable selling: 12% of sales +  $\frac{3}{4}$  of fixed selling and admin (=  $\frac{3}{4}$  × \$2,551,083)  
(fixed selling and admin = \$1.27/bottle with 2,008,727 bottles budgeted to be produced)
- 6:  $\frac{3}{4}$  of \$3.0 million budgeted
- 7: Assumed \$0 as budgeted

<u>9-month actuals projected to annual</u>	<b>9-Month Actual</b>	<b>× 12/9</b>	<b>Standard Cost</b>		<b>Actual Cost</b>	
Revenue	\$ 9,639,104	12,852,139	12,616,320	A×B	12,616,320	A×B
Cost of sales	(4,421,608)	(5,895,477)	(7,074,572)	A×C	(5,895,477)	A×D
Gross profit	5,217,496	6,956,661	5,541,748		6,720,843	
Other income	30,862	41,149	41,149		41,149	
Amortization	(358,036)	(477,381)	(477,381)		(477,381)	
SG&A	(3,508,460)	(4,677,947)	(4,677,947)		(4,677,947)	
R&D	(1,822,632)	(2,430,176)	(2,430,176)		(2,430,176)	
FV adj. on investments	0	0	0		0	
Finance costs, net	(412,326)	(549,768)	(549,768)		(549,768)	
Loss before income tax	(853,096)	(1,137,461)	(2,552,375)		(1,373,279)	

### Variance Calculations

Sales price variance:  $1,768,643 \text{ bottles} \times (\$5.35 - \$5.45) = \$176,864 \text{ favourable}$   
 $1,768,643 \text{ bottles} = 53,059 \text{ kg of oil}$

Direct labour variance:

#### *Extraction*

Budgeted hours:  $60,000 \text{ hours} \div 86,466 \text{ kg} = 0.694 \text{ hour per kg}$

Variance:  $(34,500 - (53,059 \times 0.694)) \times \$19.82 = \$46,040 \text{ favourable}$

#### *Encapsulation*

Budgeted hours:  $20,000 \text{ hours} \div 86,466 \text{ kg} = 0.231 \text{ hour per kg}$

Variance:  $(13,500 - (53,059 \times 0.231)) \times \$19.82 = \$24,644 \text{ unfavourable}$

Variable overhead variance:

#### *Extraction*

Budgeted hours:  $180,245 \text{ hours} \div 86,466 \text{ kg} = 2.085 \text{ hour per kg}$

Variance:  $(108,000 - (53,059 \times 2.085)) \times \$5.20 = \$16,665 \text{ favourable}$

#### *Encapsulation*

Budgeted hours:  $124,600 \text{ hours} \div 86,466 \text{ kg} = 1.441 \text{ hour per kg}$

Variance:  $(77,500 - (53,059 \times 1.441)) \times \$5.20 = \$5,418 \text{ unfavourable}$

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

**Reaching Competence** – The candidate attempts to compare actual with budget or to calculate variances.

**Competent** – The candidate compares actual with budget and calculates at least two variances.

**Competent with Distinction** – The candidate compares actual with budget and calculates all three variances.

### Assessment Opportunity #7

The candidate provides an analysis to assess whether K-Med will achieve 2015 budget targets.

*The candidate demonstrates DEPTH in the Performance Management role.*

*Candidates should discuss the variances and need to recommend remedial actions, including further analysis, to complete the picture.*

Sales improvement: Attributed to the increase in price from \$5.35 per bottle to \$5.45 per bottle. Sales volume variance cannot be calculated since there is not a sales budget for nine months; however, if the pace of sales after nine months continues through the last quarter, K-Med should sell 2,358,190 ( $1,768,643 \div 9 \times 12$ ) bottles for the year. This would equate to \$12,852,139 in revenue, far exceeding budget.

Cost of sales: Direct labour (DL) and variable overhead (VOH) variance analysis shows that both DL and VOH are unfavourable with the encapsulation process, and this should be investigated further. There are some efficiencies in the extraction process.

Since overall cost of sales is \$884,321 favourable, a lot of investigation is still required to identify the cause of this variance. Candidates should highlight possible variances to investigate further, such as Direct Material (DM) price and usage variance, DL price variance, and VOH price variance.

SGA expenses: The biggest part of this variance is attributed to the additional costs of plant expansion of \$500,000. Since selling expenses are higher than expected at 20% and the total nine-month variance is below \$500,000, there are components of SGA in which savings happened, and this should be investigated further.

R&D expenses: To date, R&D spending has been under budget. The spending on R&D in the last quarter will have a big impact on profitability for the year. Since K-Med would like to “work towards prescription drug product development.” it may be pertinent to continue spending to the budgeted \$3.0 million.

Extraction variance: Both DL and VOH variances are favourable, indicating the extraction process is efficient and performing better than budget.

Encapsulation variance: Both DL and VOH variances are unfavourable, indicating the encapsulation process is not efficient and should be examined further. This inefficiency supports the shift in production from encapsulation to selling bulk oil.

## Conclusions

For the first nine months of the year, the health operations have been performing well and the annual budget should be easily achieved. However, there are still a lot of unanswered questions that should be investigated, particularly around cost of sales and the inefficiencies in the encapsulation process. Decisions should be made on how much is being spent on R&D in the last quarter. If spending can be limited, K-Med’s health operations could be profitable.

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

**Reaching Competence** – The candidate discusses few of the significant variances from budget.

**Competent** – The candidate discusses some of the significant variances from budget and areas for further investigation.

**Competent with Distinction** – The candidate discusses most of the significant variances from budget and areas for further investigation.

**Assessment Opportunity #8**

The candidate provides a qualitative analysis of K-Med's health operations' environment.

*The candidate demonstrates DEPTH in the Performance Management role.*

You have requested an external and internal evaluation of the health business segment to be used for K-Med's 2016 strategic business planning and budgeting. Specifically, I will address the health operations business segment in relation to the industry and other external factors, as well as discuss internal factors that will have an impact on the upcoming planning and budgeting process.

**External Analysis**

<b>Strengths</b>	<b>Weaknesses</b>
<ul style="list-style-type: none"> <li>▪ There are a variety of distribution chains – health food stores, direct sales, and healthcare professionals. (App. II)</li> <li>▪ Krill oil has proven cardiovascular disease prevention benefits. (App. II)</li>   <li>▪ Krill oil has higher levels of antioxidants than competitors' fish oil products. (App. II)</li>   <li>▪ The segment is close to commercializing K-Krill Protein®, which uses protein byproduct from the krill oil extraction process. (App. II)</li> <li>▪ There appears to be an opportunity for further price increases, since focus has been on increasing volume and the price adjustment in 2015 was accepted by the market earlier than expected. (App. IV)</li> <li>▪ There's an abundant supply of raw materials. (App. II)</li>   <li>▪ The market of dietary supplements (i.e., K-Krill Oil®) and food additives (i.e., K-Krill Protein®) is growing rapidly due to the health demands of an aging population. (App. II)</li> <li>▪ Market analysis suggests demand for K-Krill bulk oil would exceed current plant capacity. (App. IV)</li> </ul>	<ul style="list-style-type: none"> <li>▪ There is only one product on the market, and K-Med relies on continued demand. (p. 3)</li> <li>▪ Although plant expansion occurred in 2015, sales demand is expected to exceed capacity by the end of 2016, which may result in loss of market share since K-Med will be unable to meet customer demand. (p. 3)</li> <li>▪ Without an IPO, there appears to be a lack of cash needed to complete further expansion. (p. 3 and App. III)</li> <li>▪ Production capacity constraints exist, preventing expansion with multinational food companies. (App. II)</li>   <li>▪ The product requires regulatory approval, which is complex depending on the geographic market. (App. II)</li>   <li>▪ There is uncertainty that all vendors share the company's commitment to ethical business practices. (App. IV)</li> <li>▪ K-Krill Protein® is not expected to generate revenue for at least two more years. (App. II)</li> <li>▪ Environmental permits are required for any increase in production capacity. (App. II)</li> <li>▪ K-Med has limited R&amp;D funding. (App. IV)</li> </ul>

<b>Strengths</b>	<b>Weaknesses</b>
<ul style="list-style-type: none"> <li>▪ Kaylee, the new company president, is experienced in the health product industry and studied naturopathic medicine in college. (p. 3)</li> <li>▪ A monthly reporting package is prepared and reviewed by the CFO. (App. IV)</li> <li>▪ K-Med owns a patented krill oil extraction process. (App. II)</li> <li>▪ K-Med spent lots of money on marketing, resulting in new distributors and sales expansion. (App. II)</li> <li>▪ Sales are not cyclical or seasonal. (App. II)</li> <li>▪ K-Med has been approved by an independent, international organization to make certain environmental claims on its product labels related to its krill harvesting processes. (App. II)</li> <li>▪ K-Med explored the use of K-Krill Oil® in packaged food products with two multinational food corporations (App. II), suggesting product is supported by industry partners.</li> <li>▪ Expansion into prescription drug market is possible. (App. IV)</li> </ul>	<ul style="list-style-type: none"> <li>▪ K-Med has no board committees. (App. IV)</li> <li>▪ The board is unfamiliar with public company operations. (p. 3)</li> <li>▪ Kaylee may need to spend time acquiring business skills she will require to act as company president, or she will need to rely on trusted business advisors. (p. 3)</li> <li>▪ The most significant costs – operating and research and development – are manually tracked, leading to manual reconciliation processes and increased chance of errors in data entry. (App. IV)</li> <li>▪ The board has limited involvement in reviewing results, currently only reviewing the annual reporting package after the audit is complete. (App. IV)</li> </ul>

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

**Reaching Competence** – The candidate identifies few relevant qualitative factors in their evaluation of the health operations business segment.

**Competent** – The candidate identifies some relevant qualitative factors in their evaluation of the health operations business segment.

**Competent with Distinction** – The candidate discusses many relevant qualitative factors in their evaluation of the health operations business segment.

### Assessment Opportunity #9

The candidate provides a quantitative analysis of K-Med's health operation's environment.

*The candidate demonstrates DEPTH in the Performance Management role.*

### Quantitative Analysis (Prior to Accounting Adjustments)

*Competent candidates will calculate and comment on at least one ratio in most categories (liquidity, solvency, activity, profitability), as well as a year-to-year change or change versus budget. Competent candidates should note that most profitability ratios are meaningless since K-Med has lost money and note that K-Med health operations has no cash and considerable debt, with no operating profits to sustain the debt payments. Stronger candidates will calculate and comment on at least one ratio in all four categories, as well as year-to-year change or change versus budget with a focus on profitability and liquidity, since K-Med is focused on expansion, growth, and an IPO.*

This is a typical (but not comprehensive) list of ratios candidates could calculate and comment on:

		<b>September 30, 2015 (adjusted)</b>	<b>December 31, 2014 (unadjusted)</b>	<b>Initial Comments</b>
Liquidity	Current ratio <sup>1</sup>	1.27	1.78	Ratio is lower than prior year, indicating a decrease in assets at a higher rate than a decrease in liabilities. It also breaches the newly imposed bank covenant.
Activity	Days in Accounts Receivable <sup>2</sup>	30.7	57.1	A/R outstanding is less than the prior year; turnover is almost 30 days and much better than the prior year. The decrease is likely due to new distributors. Since days in A/R is still slightly over 30, we could follow up to determine if there are any uncollectible accounts.

		<b>September 30, 2015 (adjusted)</b>	<b>December 31, 2014 (unadjusted)</b>	<b>Initial Comments</b>
Activity	Days in inventory <sup>3</sup>	185	206	Inventory is expected to turn over every four months, or three times per year. Currently inventory is turning over every six months compared to less than seven months in the prior year. While this is an improvement, obsolescence may be a concern and expiration dates should be examined during the physical inventory count.
Solvency	Debt-to-equity <sup>4</sup>	15.69	5.86	Debt-to-equity has increased significantly with the current loss and line of credit (and possibly additional debt for new plant financing), which could explain the bank's request for a covenant. This ratio will be reduced at year end due to decrease in debt and equity from sale of lease business, offset by increase in equity from new share capital.
Profitability	Gross margin <sup>5</sup>	50%	44%	Gross margin has increased due to higher price (by \$0.10) and lower cost of sales (by \$0.50).

<sup>1</sup>Current assets over current liabilities

<sup>2</sup>365 days ÷ (sales ÷ accounts receivable) for 2014. 273 days for 2015.

<sup>3</sup>365 days ÷ (cost of sales ÷ inventory) for 2014. 273 days for 2015.

<sup>4</sup>Total liabilities ÷ total equity

<sup>5</sup>(Revenue – cost of sales) ÷ revenue

Note: most profitability ratios are meaningless since K-Med has lost money.

Since K-Med's health operations has no cash and considerable debt, with no operating profits to sustain the debt payments, can conclude there is a liquidity issue.

The year-to-date performance as compared with 2014: Sales have increased significantly (over \$2 million), cost of goods has decreased, SG&A is on pace to be way over budget, and there is uncertainty around R&D spending.

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

**Reaching Competence** – The candidate attempts to discuss quantitative factors in their evaluation of the health business segment.

**Competent** – The candidate calculates some quantitative analysis in their evaluation of the health business segment.

**Competent with Distinction** – The candidate calculates and discusses some quantitative analysis in their evaluation of the health business segment.

**Assessment Opportunity #10**

The candidate makes recommendations to address operational issues that will affect the 2016 strategic business plan and resulting budgeting process, including a discussion of the changes required to internal governance structures, business systems, and processes as a result of the planned initial public offering.

*The candidate demonstrates DEPTH in the Performance Management role.*

*Candidates can discuss many operational issues with K-Med as they relate to the current business plan (in Appendix IV, PM) and the weaknesses they identify in AO#8. Candidates should address the required “budget implications” by recognizing the impact on costs and the budgeting process (for example, don’t consider U.S. growth in future budgets until more definitive information is obtained).*

<b>Current Business Plan Component</b>	<b>Operational Issues</b>	<b>Recommendation</b>
Apply for patents in U.S. for K-Krill Protein®.	Risk that the patents are not approved  Possible lengthy timeline for approval	Continue to monitor progress of applications. Do not include K-Krill Protein® in forecasts and budgets until more definitive information is obtained.
Expand operations into the U.S.	Little knowledge of the U.S. market and regulations  Insufficient capacity to service the U.S. market	Need to investigate regulatory requirements for food and ensure K-Krill Protein® meets all requirements.  Limit distribution to the U.S. until manufacturing capacity is sufficient.
Continue to educate consumers on the benefits of krill oil.	Cash flow issues restricting spending on educational materials and communications	Since the market is expected to grow, K-Med may want to reduce spending until it is in a better cash situation.
Hire financial and human resources staff to increase capacity.	Uncertainty of funds available to hire, train, and retain staff  Current shortfall of cash in health operations (until proceeds from the K-Lease sale are received)	Ensure annual salary increases are in line with competitors’ and explore profit sharing plan options.  Build HR and financial requirements from sales budget.  Review sales expenses (budgeted at 12%, but hit 20% in actuals).



Current Business Plan Component	Operational Issues	Recommendation
Explore government subsidies and loans as possible sources of funding.	Traditional loans potentially difficult to obtain since K-Med already appears to be highly leveraged through debt financing (It has received government grants in the past, but there is a risk that competitors will also be pursuing available government funding.)	Keep up to date on government policy and grant announcements; establish key relationships within government and advocate health benefits of K-Med products; and economic benefits of product manufacturing.
Adopt best practices in corporate governance, including establishing committees of the board to assist in policy and procedural development.	<p>Structure of board and skills of board members may not accommodate desired outcomes (Current board includes Kevin and Kaylee as well as a lawyer, a retired doctor, and a fitness instructor.)</p> <p>Board currently only reviews annual reporting package</p>	<p>Recommend expanding board to accommodate a human resource professional and a financial expert. A larger board will allow for a larger skill set and additional committee members to provide advice and direction to management. The board of directors and management will need to effectively and efficiently guide the public company within its regulatory environment, setting policy to meet regulations. Corporate governance policies should be designed to strengthen the ability of the board to effectively supervise management and enhance long-term shareholder value. K-Med should establish a governance committee, an audit committee, and a human resource committee. Each audit committee member must satisfy the independence, financial literacy, and experience requirements of all applicable regulatory requirements. The board of directors should also self-assess its effectiveness on an annual basis. In addition, the board of a public company is responsible for reviewing quarterly filings that will be filed with regulatory bodies.</p>

Additional Business Plan Components	Operational Issues	Recommendation
Invest in information systems to provide timely and accurate financial reporting for daily operating decisions.	<p>R&amp;D and production reports only reviewed on a quarterly basis, which increases the likelihood of undetected errors.</p> <p>Most significant costs – operating and research and development – are manually tracked, leading to manual reconciliation processes and increased chance of errors in data entry.</p>	Include budget dollars to source an information system that will accurately interface with the general ledger for financial reporting purposes and will meet the needs of production and R&D users. Ensure qualified technical support is available, users are well trained, and system is tested prior to implementation.
Include issues identified in the SWOT (AO#8).	There are no board committees.	K-Med should expand its board and create committees to divide up the work by expertise.
	The board is unfamiliar with public company operations.	Introduce experienced board member(s).
	Kaylee may need to spend time acquiring business skills required for her to act as company president or will need to rely on trusted business advisors.	<p>Provide additional training opportunities to Kaylee.</p> <p>Strengthen the skills of the board with additional members with various skill sets and experience.</p>
	The board has limited involvement in reviewing results, currently only review annual reporting package after the audit is complete.	Expand the board and require more involvement from the board, especially with a new CEO.

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

**Reaching Competence** – The candidate identifies few operational issues related to the key components of the K-Med public company business plan and makes appropriate recommendations to address those issues.

**Competent** – The candidate discusses some operational issues related to the key components of the K-Med public company business plan and makes appropriate recommendations to address those issues.

**Competent with Distinction** – The candidate discusses many operational issues related to the key components of the K-Med public company business plan and makes appropriate recommendations to address those issues.

**Assessment Opportunity #11**

The candidate prepares a product profitability analysis and makes appropriate costing and pricing recommendations.

*The candidate demonstrates DEPTH in the Performance Management role.*

**Margin Analysis**

I have prepared an analysis to assess whether K-Med should begin selling bulk krill oil to other manufacturers, or if the company should increase production of the K-Krill oil capsules. By the end of 2015, the company will be operating at 67% of capacity (86,466 kg ÷ 130,000 kg per Appendix IV) and meeting current sales demand for bottles of capsules. In fact, it is likely that the company will require additional capacity to meet the demand for K-Krill oil capsules, as an estimated sales growth of 4% per month (per Appendix II) would result in a demand of 138,435 kilograms of oil ( $86,466 \times 1.04^{12}$ ) by the end of 2016. Therefore, it is important to analyze which product, bulk oil or bottled capsules, has the higher contribution margin in order to address whether the additional 43,534 kilograms of 2015 excess capacity should be used to produce bulk oil or increase capsule production.

	<b>K-Krill Capsules per kg</b>	<b>Bulk Oil per kg</b>	<b>Calculation</b>	<b>Appendix Reference</b>
Sales price	\$181.67	\$165.00 <sup>1</sup>	\$5.45 ÷ 0.03 kg for capsules	IV
Antarctic krill labour	\$13.33 \$13.75	\$13.33 \$13.75	provided \$19.82 × 60,000 DLH ÷ 86,466 kg	IV IV
MOH	\$10.84	\$10.84	\$5.20 × 180,245 ÷ 86,466 kg	IV
Total extraction costs	\$37.92	\$37.92		
Encapsulation labour	\$4.58	0	\$19.82 × 20,000 hours ÷ 86,466 kg	IV
Encapsulation MOH	\$7.50	0	\$5.20 × 124,600 hours ÷ 86,466 kg	IV
Encapsulation direct materials	\$29.00	0	\$0.87 ÷ 0.03 kg	IV
Total encapsulation costs	\$41.08	0		
Total bulk container costs	0	\$33.50	provided	IV
Total operating costs	\$79.00	\$71.42	\$2.50 per bottle ÷ 0.03 kg for capsules	III, note 1
Profit margin	\$102.67 56.5%	\$93.58 57%		
Variable selling costs <sup>2</sup>	\$36.33	\$33.00	20% of sales	IV
Contribution margin	\$66.33	\$60.58		

<sup>1</sup> Maximum price is \$165 per kilogram per Appendix IV market study.

<sup>2</sup> Selling costs are variable at 20% of sales. General and administrative costs of \$18.67 per kilogram (\$1.65 ÷ 0.03 kg per bottle less \$36.33 selling costs) are considered fixed overhead and will be incurred regardless of the product produced.

### Production Conclusions

While the sale of bulk oil is profitable, a slightly higher margin is realized on the sale of bottled capsules. In addition, because there is sufficient demand for the bottled K-Krill oil capsules and excess production capacity will be nil before the end of 2016, it is recommended that K-Med continue producing K-Krill oil capsules and not bulk oil at this time.

## Pricing Conclusions

During the year, the company successfully implemented a 2% price increase earlier than expected, to bring the price per bottle of capsules to \$5.45 from \$5.35.

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

**Reaching Competence** – The candidate attempts a margin analysis.

**Competent** – The candidate makes a product recommendation to address excess production capacity based on a reasonable margin analysis and qualitative analysis.

**Competent with Distinction** – The candidate makes a product recommendation to address excess production capacity based on a reasonable margin analysis and strong qualitative considerations.

## Assessment Opportunity #12

The candidate determines an appropriate price for bulk krill oil.

*The candidate demonstrates DEPTH in the Performance Management role.*

Note: Tracey's question about pricing of the bulk oil can be addressed in different ways.

**Calculate the price to generate the same amount of 2015 revenue:**

	Budget	9-Month Actual	Forecast
Revenue (in \$)	11,298,289	9,638,669	12,851,558
Production (in kg)	86,466	64,850	86,466
Price per kg	\$130.67	\$148.63	\$148.63

**Calculate the price to break even using 2015 figures:**

	Budget	9-Month Actual	Forecast
Fixed costs*			
Amortization	\$ (450,000)	\$ (398,036)	\$ (530,715)
SGA	(3,410,711)	(3,489,783)	(4,653,044)
R&D	(3,000,000)	(1,862,392)	(2,483,189)
Total fixed expenses	\$(6,860,711)	\$(5,750,211)	\$(7,666,948)
Production (in kg)	86,466	64,850	86,466
CM required (per kg)	\$ 79.35	\$ 88.67	\$ 88.67
Variable costs (from AO#11)	37.92	37.92	37.92
Bulk containers	33.50	33.50	33.50
Selling price	\$150.77	\$160.09	\$160.09

\*A portion of the operating expenses is fixed and should be included in the calculation. However, it is not easily calculated, so a calculation excluding this would be acceptable.

### Calculate the price to match the contribution margin of the capsules:

Contribution margin (as calculated in AO#11) is \$62.01 for capsules and \$60.58 for bulk oil (at the maximum selling price of \$165); therefore, the price of the bulk oil would need to be \$166.50 per kilogram. This would be beyond the maximum price the market is willing to pay.

Qualitatively, candidates could discuss the following points:

- The results of the variance analysis suggest the encapsulation process is not efficient, which could have an impact on comparisons and related pricing decision.
- While the market price is suggested, the market demand for bulk oil is unknown.
- K-Med may be giving up capsule sales of K-Krill since other manufacturers may make it now that they can purchase bulk oil. Perhaps the bulk oil should be sold at a premium price.
- What is the production capacity in the future and when would it increase? If the capacity is not increasing in the near future, then an opportunity cost of lost capsule sales should be considered.
- After the IPO, could the board change the strategic direction of bulk oil sales?

Candidates may make calculation errors in AO#11, but they should carry over the contribution margins they calculated in AO#11 to estimate a selling price.

**Nominal Competence** – The candidate did not attain the standard of reaching competent.

**Reaching Competence** – The candidate attempts a price analysis.

**Competent** – The candidate makes a price recommendation based on a reasonable qualitative and quantitative analysis.

**Competent with Distinction** – The candidate makes a price recommendation based on a reasonable quantitative and a strong qualitative analysis.

### Assessment Opportunity #13

The candidate discusses their overall assessment of the health operations.

*The candidate demonstrates DEPTH in the Performance Management role.*

*Candidates should provide their overall assessment of the health operations of K-Med. Overall, candidates should recognize that there are substantial issues with K-Med's health operations that need to be addressed.*

Points to discuss include the following:

- ✓ K-Med should easily achieve the budgeted operating income.
- ✓ Continued growth is expected.
- ✓ Expansion in the U.S. is possible.
  
- × Loss of control would come with an IPO.
- × K-Med has lost the profitable lease operations
- × The controller left abruptly to join Kevin at K-Lease, which could be a sign of internal problems.
- × Auditors did not catch the consignment error in 2014.
- × There is zero cash.
- × The inventory level is very high and growing.
- × There is a very large and growing deficit, eroding share capital.
- × Continuing losses cast significant doubt upon the company continuing as a going concern.
- × Long-term debt is growing
- × Several variances should be calculated to truly understand what's happening with operations. Why is cost of sales so favourable? If the encapsulation process is truly inefficient, it would support the move to selling bulk oil.

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

**Reaching Competence** – The candidate attempts to conclude their overall analysis.

**Competent** – The candidate highlights many key issues at K-Med and concludes that K-Med should proceed with caution.

**Competent with Distinction** – The candidate highlights most key issues at K-Med and concludes that K-Med should proceed with caution.

**DAY 2- TAXATION MARKING GUIDE**  
**K-MED**

In the taxation role, the candidate is expected to contribute to the overall financial reporting process by calculating the expected corporate tax liability based on an analysis of the third-quarter financial results, significant accounting transactions, and any accounting adjustments.

The candidate is also expected to provide advice to the shareholders in a corporate and personal context as it relates to the corporate reorganization, including the change in corporate status and the divestiture of the leasing business segment.

In addition, the candidate is required to prepare a calculation, using any tax deferral planning opportunities, to estimate the after-tax cash Kevin Olesen will receive from the future disposition of his K-Med public shares.

**See Assurance Guide for the Common Assessment Opportunities.**

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Memo to: Tracey Allen, CFO  
From: CPA, Tax Analyst  
Subject: K-Med Financial and Corporate Tax Analysis

**Assessment Opportunity #6**

The candidate calculates the estimated tax liability or non-capital loss carryforward for the 2015 fiscal year.

*The candidate demonstrates DEPTH in the Taxation role.*

On December 1, 2015, the company will go public. Under subsection 249(3.1), since the corporation will no longer be a Canadian-controlled private corporation (CCPC) at this point in time, there will be a deemed year end immediately before the status change. A new taxation year will be deemed to begin immediately after the change in status.

In the following schedule I have estimated the tax liability for the CCPC at the deemed year end to be nil and have shown the loss carryforward and scientific research and experimental development (SR&ED) refund balances.



	Deemed Taxation Year November 30, 2015			Short Taxation Year December 31, 2015 Health
<b>Schedule 1</b>	<b>Lease</b>	<b>Health</b>	<b>Total</b>	
Adjusted net income for accounting <sup>1,2</sup>	\$ 338,339	\$ (1,684,351)	\$ (1,346,012)	\$ (122,365)
Add:				
Amortization of tangible and intangible assets <sup>3</sup>	0	437,600	437,600	39,782
Taxable capital gains <sup>4</sup>	838,640	5,000	843,640	0
Reserves <sup>5</sup>	26,586	458,365	484,951	0
Prior year SR&ED credit in excess of SR&ED expenditures <sup>6</sup>				839,437
Scientific research expenditures deducted per financial statements <sup>6</sup>	0	2,252,106	2,252,106	204,737
Total additions	865,226	3,153,071	4,018,297	1,083,956
Deduct:				
FV increase in assets <sup>7</sup>	(102,300)	0	(102,300)	0
Gain on disposal of assets <sup>4</sup>	0	(12,222)	(12,222)	(1,111)
Capital cost allowance <sup>8</sup>	0	(381,909)	(381,909)	(37,217)
Cumulative eligible capital <sup>9</sup>	0	(14,547)	(14,547)	(1,264)
Deductible reserves SR&ED expenditures claimed in year <sup>6</sup>	0	(1,715,296)	(1,715,296)	0
Prospectus costs <sup>10</sup>		(120,789)	(120,789)	(11,211)
Total deductions	(128,886)	(2,703,128)	(2,832,014)	(50,803)
Net income for income tax purposes	\$ 1,074,679	\$ (1,234,408)	\$ (159,729)	\$ 910,788
Loss carryforward/ applied			(159,729)	910,788
Opening loss carryforward			(781,610)	(941,339)
Ending loss carryforward			(941,339)	(30,551)
SR&ED refund <sup>11</sup>			\$ 1,051,953	\$ 0

<sup>1</sup>Per Appendix III, note 10, lease accounting income = \$276,823 × 11/9 months = \$338,339.

<sup>2</sup>Adjusted net loss above of \$(1,101,282) less lease net income of \$276,823 = \$(1,378,105) × 11/9 months = \$(1,684,351); and \$(1,346,012) × 1/11 months = \$(122,365). Note that some

items in the January–September income are likely non-recurring, so actual results for December may be different.

<sup>3</sup>Adjusted amortization above =  $\$358,036 \times 11/9 \text{ months} = \$437,600$ ; and  $\$358,036 \times 1/9 \text{ months} = \$39,782$ .

<sup>4</sup>See next section.

<sup>5</sup>Financial statement reserves are not deductible for income tax purposes. Specific reserves are allowed under the Income Tax Act for prepaid rent and deposits for goods to be provided in future. These amounts must, therefore, be added back into income, and then a corresponding deduction is taken. Ending balances are not known, so no adjustments were made for the short taxation year.

<sup>6</sup>See next section.

<sup>7</sup>Fair value increase in assets =  $\$83,700$  at September 30. However, since this amount was included in the lease accounting income that was prorated, we need to deduct  $\$102,300$  ( $\$83,700 \times 11/9 \text{ months}$ ) for November 30.

<sup>8,9</sup>See next section.

<sup>10</sup>Per Appendix IV, a total of  $\$300,000$  of prospectus costs are expected before the IPO (i.e., within the November 30, 2015, taxation year). There will be an additional 8% agent's fee on  $\$4.5$  million of shares ( $500,000 \times \$9$ ), totalling  $\$360,000$ . These costs are 20% deductible per ITA 20(1)(e), pro-rated for the short taxation year. This will result in a deduction in the November taxation year of  $\$660,000 \times 20\% \times 334/365 = \$120,789$  and in the December taxation year of  $\$660,000 \times 20\% \times 31/365 = \$11,211$ . Note that while the full amount will be recorded in equity on December 1 for accounting purposes, this accounting treatment will have no impact on the taxable income.

<sup>11</sup>CCPCs are eligible for a 100% refund of tax credit on eligible expenditures under  $\$3$  million. Credit for 2015 is 35% federal plus 10% provincial (assumed) =  $45\% \times$  eligible expenditures of  $\$2,337,673 = \$1,051,953$ . Public companies are not eligible for a refund; the credit totals 25% (15% plus 10%) and can be used only to reduce taxes payable. No taxes are payable in the short taxation year, so a tax credit of  $25\% \times \$212,515 = \$53,129$  can be carried forward 20 tax years from December 31, 2015.

There could be further adjustments to the tax calculations as a result of some of the accounting adjustments in the schedule above. Specifically, we would need more information regarding the consignment sales, such as when payment is received and when title legally transfers, to determine if the tax treatment will follow the accounting treatment. If there was an error in the prior year, then an amended T2 return may need to be filed.

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

**Reaching Competence** – The candidate attempts to calculate the non-capital loss carryforward.

**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 #7

The candidate calculates the taxable capital gain and deductible SR&ED expenditures for the 2015 years.

*The candidate demonstrates DEPTH in the Taxation role.*

<sup>4</sup>Taxable capital gains on the sale of leasing business assets (pro-rated to November 30) and the sale of investments in private companies (CCPCs), calculated as follows (assuming no other gains or losses in 2015):

Leasing Business Net Assets <sup>A</sup>	Proceeds	Original Cost <sup>B</sup>	Capital Gain	Taxable Capital Gain
Cash	\$ 207,545	\$ 207,545		
Accounts receivable	19,209	19,209		
Other assets	17,223	17,223		
Property	5,177,280	3,500,000	\$1,677,280	\$838,640
Accounts payable	(42,305)	(42,305)		
Advance payments	(26,586)	(26,586)		
Current long-term debt	(205,767)	(205,767)		
Long-term debt	(1,679,446)	(1,679,446)		
Net asset increase (estimated October/November) <sup>A</sup>	61,516	61,516		
Totals	\$3,528,669	\$1,851,389	\$1,677,280	\$838,640
Gain on private company share sales <sup>C</sup>			10,000	5,000
Totals for T2, Schedule 1				\$843,640

<sup>A</sup>Per Appendix III, note 10, at September 30, 2015, plus income for 2 months of \$276,823 × 2/9 months = \$61,516 estimated net asset increase.

<sup>B</sup>Cost approximates fair value for all financial assets and liabilities except for investment properties, with an original cost of \$3.5 million per Appendix III, note 5.

<sup>C</sup>Appendix III, note 5; the only accounting gain to deduct since the only gain included in net income. Will need to pro-rate deduction as included in pro-rated net income, so \$10,000 × 11/9 months (\$12,222) and \$10,000 × 1/9 months (\$1,111).

It should be noted that K-Med may be eligible for a capital gains reserve, since only \$200,000 of the proceeds are received at the time of sale. The lesser of 4/5<sup>th</sup> or the percentage of proceeds that are not yet received can be deferred to future years. I have assumed for this analysis that Kevin and Kaylee would like to know the total tax impact for the purpose of negotiations, so this reserve is not reflected in the calculation above.

<sup>6</sup>SR&ED does not include work with respect to market research or sales promotion, quality control, or routine testing of materials, devices, products, or processes.

	September (S)	November (S × 11/9 months)	December (S × 1/9 months)
Adjusted R&D expenses per statement of operations <sup>D</sup>	\$1,842,632	\$2,252,106	\$ 204,737
Add: Eligible development expenditures capitalized <sup>E</sup>	70,009	85,567	7,779
Amount eligible for SR&ED credit		2,337,673	212,516
Less: Prior-year SR&ED credit		(622,377)	(1,051,953)
Deductible SR&ED expenditures	\$1,912,641	\$1,715,296	\$ 0

The excess of the prior-year SR&ED credit over the remaining deductible expenditures, \$839,437, is included in income in the short taxation year (December).

Consideration should be given to using the proxy amount for overhead instead of actual amounts. Further information is required to determine these amounts.

<sup>D</sup>SR&ED claim cannot include work with respect to market research or sales promotion, quality control, or routine testing of materials, devices, products, or processes. Per Appendix III, note 3, logo and brand development of \$9,060 and sales plan development of \$10,700 are ineligible for a total of \$19,760 at September; assume this continues at the same rate for the remainder of the year. These items are, however, otherwise deductible because they are laid out to earn business income (paragraph 18(1)(a)), so they have not been added back to income at all (these are simply ordinary deductible business expenses). Assume no other ineligible expenditures in financial statement amounts. Amount to September, then, is \$1,862,392 less \$19,760, or \$1,842,632.

<sup>E</sup>Per Appendix III, note 4, additions to the development costs intangible asset of \$109,769 less accounting adjustment (in Common Assessment Opportunities) of \$39,760 = \$70,009; assume expenditures continue at the same rate for the remainder of the year.

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

**Reaching Competence** – The candidate attempts to calculate the taxable capital gains and the SR&ED OR the candidate calculates the impact of the sale of the lease operations OR the candidate calculates the impact of the SR&ED.

**Competent** – The candidate calculates the taxable capital gains and the impact of the SR&ED OR performs a thorough calculation of taxable capital gains or SR&ED.

**Competent with Distinction** – The candidate calculates the taxable capital gains and the impact of the SR&ED. The candidate considers the ability to claim a capital gains reserve or recognizes that the ineligible SR&ED expenses can be deducted as regular business expenses.

**Assessment Opportunity #8**

The candidate calculates the impact of capital cost allowance (CCA) and cumulative eligible capital amount (CECA).

*The candidate demonstrates DEPTH in the Taxation role.*

<sup>8</sup>Beginning UCC balance is per Appendix IV, and additions and dispositions information is from Appendix III, note 2. Assume no further additions or disposals in 2015:

Class	UCC Beginning	Additions	Dispositions <sup>F</sup>	UCC for CCA Calculation <sup>G</sup>	Rate	CCA - November (Reduced UCC × Rate × 334/365)	UCC (UCC beginning + additions - dispositions - CCA) at Nov 30	CCA - December (Nov 30 UCC × Rate × 31/365)
Class 1	1,309,603	686,072		1,652,639	10%	151,228	1,844,447	15,665
Class 8	51,926	22,257	-3,068	61,521	20%	11,259	59,856	1,017
Class 12	2,800			2,800	100%	2,562	238	20
Class 43	233,268	467,855		467,196	30%	128,255	572,868	14,596
Class 44	206,971	50,873		232,408	25%	53,167	204,677	4,346
Class 46	3,681			3,681	30%	1,011	2,670	68
Class 50	70,169	67,936	-71,465	68,405	55%	34,427	32,213	1,505
						381,909	2,716,969	37,217

<sup>F</sup>Dispositions are at lesser of cost and proceeds; in both instances, this amount is the proceeds because they are less than cost.

<sup>G</sup>50% of net additions in accordance with ½ year rule (reg. 1100(2)).

<sup>9</sup>Beginning cumulative eligible capital (CEC) balance per Appendix IV; additions and dispositions information from Appendix III, note 3:

CEC Beginning	Additions <sup>H</sup>	Balance for Calculation <sup>I</sup>	CECA November (Balance × 7% × 334/365)	Ending Balance at Nov 30	CECA December (Balance × 7% × 31/365)
194,643	43,272	227,097	14,547	212,550	1,264

<sup>H</sup>Eligible trademarks (\$3,513) and licences (\$39,759). Since licences are not being amortized, they are assumed to be of indefinite life. If they had a definite life, they would be considered Class 14 depreciable assets.

<sup>I</sup>75% of additions and disposals.

Note that there may be an advantage to claiming less CCA to reduce the losses carrying forward. Since they are expiring quicker (as discussed in the next section) as a result of the deemed year end, CCA could be reduced to use up losses quicker.

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

**Reaching Competence** – The candidate attempts to calculate the CCA deduction or the CECA deduction.

**Competent** – The candidate calculates the CCA deduction and attempts to calculate the CECA deduction, OR the candidate prepares a thorough calculation of the CCA deduction.

**Competent with Distinction** – The candidate prepares a thorough calculation of the CCA deduction and the CECA deduction.

Memo to: Kevin and Kaylee Olesen, K-Med Shareholders  
 From: CPA, Tax Analyst  
 Subject: Tax Impacts and Planning Opportunities for Upcoming Business Transactions

### Assessment Opportunity #9

The candidate discusses relevant corporate and personal tax impacts resulting from the IPO transaction and change in status.

*The candidate demonstrates DEPTH in the Taxation role.*

### Potential Acquisition of Control

Depending on the structure of the IPO, there is the possibility of an acquisition of control. If, for example, at some point Kaylee obtains either de facto or de jure control, she will have acquired control of the corporation (Kaylee does not currently control K-Med because you each own 50% of its shares). There is also the possibility that other investors could obtain control, depending on the number and type of investors that participate in the IPO.

If this does happen, the business losses will be restricted for use only against the same or similar business in which they were earned. Given the intention to continue the business, this restriction is likely not a concern.

Note that net capital losses and property losses cannot be carried forward after an acquisition of control, but since K-Med does not have a net capital loss balance, this is not a concern. If the rental properties are responsible for any portion of the non-capital loss carryforwards, these will expire immediately if an acquisition of control takes place.

### Impact at Time of Change in Status

Regardless of whether there is an acquisition of control, there will be several consequences of the change in status from CCPC to public company.

#### Loss Carryforward Balances (Deemed Year End)

As discussed previously, at the IPO date there will be a deemed year end immediately before the change in status occurs, and a new taxation year will be deemed to begin immediately after the change in status. This means that in fiscal 2015, there will be two taxation years: January 1 to November 30 and December 1 to December 31.

The primary impact of the deemed year end is that K-Med will lose one year of non-capital loss carryforwards, and several tax deductions are pro-rated. The reduced deductions have been reflected in the calculations above. The quicker loss expiration could be a concern if the company does not generate taxable income before the non-capital losses begin to expire in 2019.

A planning consideration could be to elect a November 30 year end going forward. This may be more work logistically, but it could further delay the loss expiries.

### **Impact of Being a Public Company (Going Forward)**

#### Small Business Deduction

Since K-Med will lose its CCPC status, it will also lose its ability to claim the small business deduction (SBD) on active business income earned up to \$500,000. This means that the federal tax rate will increase to 15% from 11% when K-Med is a public company. Provincial rates are also higher for public companies. This may not make a difference, since K-Med's taxable capital is already well above the \$10 million threshold at which the SBD begins to be phased out, and K-Med has been incurring losses over the last several years.

In addition, non-CCPCs are required to pay their balance of tax two months after the end of the taxation year, whereas CCPCs must pay their balance within three months.

#### Part IV Tax

Public companies do not pay Part IV tax on taxable dividends received. While K-Med has investments in Canadian private companies, it does not appear to have received any dividends in the current year.

#### RDTOH Account

The refundable dividend tax on hand (RDTOH) account accumulates a pool of high-rate tax paid under Part I on investment income and all the Part IV tax. These taxes may be refundable to a corporation when it pays taxable dividends to its shareholders. Since this account is no longer available when a company goes public, K-Med should pay out dividends to its shareholders prior to going public. Below I have calculated the balance at the IPO date and dividend required to bring the balance to nil before going public:

Balance at beginning of year and end of year	<u>\$ 40,000</u>
Required dividend payout ( $\times 3$ ) to reduce account to nil	<u>\$120,000</u>

### Capital Dividend Account

The capital dividend account (CDA) represents a pool of money that has been received tax-free by the corporation. The corporation can elect to pay dividends out of the CDA, resulting in tax-free income to the shareholders. Like the RDTOH account, this account is no longer available when a company goes public, so K-Med should elect to pay dividends to Kevin (\$451,820) and Kaylee (\$451,820) prior to the company going public. Below I have calculated the balance at the IPO date and the available tax-free dividend that should be elected to bring the balance to nil before going public:

Balance at beginning of year	\$ 60,000
Add: Non-taxable portion of capital gains \$843,640	<u>843,640</u>
Balance at November 30, 2015	<u>\$903,640</u>

It should be noted that K-Med does not have the \$1 million in cash required to pay these two dividends. Please see my discussion later in this memo regarding structuring for ways to address this issue.

### SR&ED

As discussed in the previous tax calculation, CCPCs are entitled to a 35% federal tax credit on all eligible SR&ED expenditures. This credit is 100% refundable for expenditures under \$3 million (in some provinces, the limit is \$4 million). This means that even if the company has a loss for tax purposes, a refund is still available. Once the company goes public, however, the federal tax credit is reduced to 15% of all eligible expenditures. In addition, this credit is not refundable and can only be applied to reduce taxes payable. Since K-Med is currently receiving a significant tax refund from the government for its SR&ED expenditures, this will have an impact on future cash flows.

### GRIP and LRIP

Whereas K-Med currently pays a lower-rate ("eligible") taxable dividend when it has a balance in the general rate income pool (GRIP), after the change of status to a public company, K-Med dividends will be eligible by default. However, if any amount has accumulated in the low rate income pool (LRIP), dividends must first be paid by the public company that are other than eligible. At the time K-Med goes public, a calculation must be performed to determine the LRIP balance. Since the company has a history of losses, there appears to be no GRIP or LRIP balance.

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

**Reaching Competence** – The candidate identifies some of the relevant corporate and personal tax impacts resulting from the company's change in status from a Canadian-controlled private corporation to a public corporation.

**Competent** – The candidate discusses several of the relevant corporate and personal tax impacts resulting from the company's change in status from a Canadian-controlled private corporation to a public corporation.

**Competent with Distinction** – The candidate discusses most of the relevant corporate and personal tax impacts resulting from the company's change in status from a Canadian-controlled private corporation to a public corporation.



**Assessment Opportunity #10**

The candidate discusses the difference between business income and investment income and discusses how Kevin can extract cash from K-Lease.

*The candidate demonstrates DEPTH in the Taxation role.*

You have specifically requested a discussion on how the income in K-Lease will be taxed. I have also included planning considerations related to Kevin's purchase of the leasing business net assets from K-Med.

**Active Business Income versus Investment Income**

Active business income, as defined by the Income Tax Act, excludes income from property and capital gains. This means that lease income earned on the investment properties may not qualify for the small business deduction and would be taxed as aggregate investment income at the high rate of tax versus the low rate of tax on active business income when K-Med is a CCPC.

If the income from property is "incidental or pertains to" an active business, then the income is considered active business income. An example is interest collected on overdue accounts receivable. Another exception is if property is used or held principally for the purpose of gaining or producing income from an active business. This would be, for example, rent received from a tenant who occupied part of K-Med's business premises. The last exception is if the income from property is received from an associated corporation that is claiming the item as an expense against its own active business income. That covers a situation in which the shareholders of K-Med hold the business's real estate in a separate company. Any rent from K-Med is considered active business income in the separate company. This is not the case for K-Med.

While it does not appear that K-Med fits into the exceptions above, the two principal exclusions from active business income are income arising from either a specified investment business or a personal services business.

A specified investment business is one in which the main purpose is to derive income from property, including rent, but excluding the leasing of non-real property. There is an exception when the business employs more than five full-time employees throughout the year. Since K-Med's primary operations are to manufacture nutraceutical products, the fact that it has more than five full-time employees does not automatically disqualify the leasing business from being a specified investment business (each "business" is considered separately; that is, the rental business and the nutraceutical business). Therefore, this exclusion does not apply.

The second principal exclusion is for a personal services business. A personal services business arises when the person who performs services on behalf of the corporation is a specified shareholder (owns 10% or more) and would reasonably be regarded as an employee of the person to whom the services are provided. Since K-Med is not providing services to anyone, K-Med's business income is not considered a personal services business, so this exception is not applicable.

For the taxation year ended November 30, 2015, the income earned from the investment property is not considered active business income and is considered aggregate investment income. However, since there are significant losses for the corporation as a whole, this has no impact on the tax rates applied for the corporation or the RDTOH balance.

However, since Kevin has incorporated K-Lease only for the purpose of generating income from real property leases, the business will likely be a specified investment business. From the information provided, we know that Kevin will draw a salary from K-Lease, as will the vice-president of finance (Appendix I). We will need to determine if there will be other employees in the new corporation, which may put it over the threshold of having five full-time employees occupied in the business. Given the annual revenue is \$417,803 at the moment, this seems highly unlikely. If Kevin expands the investment operations to the point of employing more than five full-time employees, the income may qualify as active business income. Until then, the income will all be subject to treatment as aggregate investment income.

As a result, the income earned will not meet the definition of active business income and will not be eligible for the small business deduction. The tax on income will be significantly higher at a rate of approximately 46% versus 14%. As discussed previously, 26 2/3% will be added to the RDTOH balance and refundable at a rate of \$1 for every \$3 of taxable dividends paid to Kevin.

### **Compensation**

You also asked about how to compensate yourself from K-Lease once it is established. The two primary ways of withdrawing cash from the corporation are salaries and dividends.

Salaries to yourself will be deductible as expenses against the leasing income, given you will be providing services to operate the leasing activities. They will be fully taxable to you when you are paid but deductible to the corporation when the services are performed. This could allow for some tax deferral if the corporation declares a bonus to you before year end and pays it to you after year end. Provided payment is made within 179 days after year end, the amount is deductible to the corporation in the year it is declared.

Dividends will not be deductible by the corporation, but will be taxed at a preferential rate to you. Since K-Lease will remain a CCPC and will not be eligible for the small business deduction at all, dividends paid to you will be “other than eligible,” meaning they will be grossed up by 18% and included in your income. You will be eligible for a tax credit of 13/18<sup>th</sup> of the gross-up. The advantage of paying dividends is that, as discussed previously, the RDTOH balance will be refunded when dividends are paid at a rate of \$1 of refund for each \$3 of taxable dividends paid.

The two options will require an analysis on an annual basis to determine the “best” choice for the year. It is likely a combination of salary and dividends will be required each year to minimize the taxes payable.

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

**Reaching Competence** – The candidate identifies some of the differences between aggregate investment income (All) and active business income (ABI) OR attempts to determine whether the income is All or ABI OR attempts to analyze the salary versus dividend issue.

**Competent** – The candidate discusses whether the income is All or ABI, the difference between business income and investment income, and the personal tax impacts of paying salary or dividends to Kevin.

**Competent with Distinction** – The candidate discusses, in depth, whether the income is All or ABI, the difference between business income and investment income, and the personal tax impacts of paying salary or dividends to Kevin.

**Assessment Opportunity #11**

The candidate discusses possible structures for the transfer of assets to K-Lease.

*The candidate demonstrates DEPTH in the Taxation role.*

You have asked for information about how to structure the sale of the assets of the leasing operations from K-Med to K-Lease. Several potential options are available. Since K-Lease has already been incorporated, all options discussed will result in K-Lease controlling the operations.

**Direct Sale**

I have discussed the impacts of this alternative above (AO7). Essentially, this involves K-Med selling the assets at their fair values to K-Lease and paying tax on the capital gains. As discussed previously, there is the potential for a capital gains reserve if this alternative is chosen.

**Dividend-In-Kind**

As discussed above, K-Med will need to pay roughly \$1 million of dividends in order to use up its CDA and RDTOH balances before the company goes public. K-Med does not have the cash to do this because it is currently in an overdraft position. Part of the solution to this could involve K-Med distributing some of the leasing operations assets as a dividend in kind. Since the buildings are currently worth almost \$5.2 million, it can be assumed there is more than one building. If K-Med can isolate one building that is worth around \$1 million, it could distribute this to the shareholders. The portion from CDA would be tax-free to the shareholders, and the remainder would be taxable to the shareholders, but K-Med would receive a dividend refund. The corporation itself would pay tax on a deemed sale of the assets in the same manner as if it had sold them at fair value.

This would then result in Kevin and Kaylee each owning 50% of the distributed building. Kaylee could sell her 50% to Kevin at fair value. Her cost base would be the fair value at the date of the in-kind dividend, yielding no capital gain for her. Kevin could then transfer the building to K-Lease in exchange for debt or shares, depending on his preference. There would be no need to use section 85 because Kevin's cost base would be equal to the fair value of the property at that point anyway.

Additionally, a return of capital could be performed (rather than or in addition to a dividend), which would follow a similar structure (and require payment to both shareholders) but could further reduce the taxable portion of the distribution. K-Lease has paid-up capital (PUC) of \$2.8 million, and this could be used to minimize taxes payable.

An alternative version of this could involve simply redeeming some of Kevin's shares by distribution of some of these assets. The consequences would be the same but would not require paying out a portion of the assets to Kaylee. This would leave Kaylee with a larger portion of the remaining shares and would allow Kevin to sell fewer of his shares later. The taxable portion of a redemption would be the fair value distributed less PUC associated with the redeemed shares (total of \$2.8 million, pro-rated by the number of shares redeemed).

## Section 85 Rollover

Given that Kevin is willing to put down only \$200,000 at the time of acquisition of the leasing operations and he will be drawing only \$70,000 each year as salary, it seems unlikely he will have the \$5.2 million he will require to eventually pay for these assets. A solution could be to finance the purchase through the operations of K-Lease.

K-Lease could incorporate a new subsidiary, K-Sub, with nominal common share capital. K-Med could then transfer the leasing operations assets into K-Sub using section 85, taking back preferred shares. K-Sub could then redeem these preferred shares over time as funds become available from operations. Additional research should be performed to ensure this does not fall offside from anti-avoidance provisions, since the redemption of the preferred shares will be treated as tax-free dividends to K-Med. If the ultimate result is recharacterization to capital gain, this should be acceptable because K-Med would have paid tax on capital gains anyway.

An alternative twist on this transaction could be for Kevin and Kaylee to incorporate a new corporation together, K-New, and have K-Med roll the health operations assets into K-New using section 85. K-Med would then hold the leasing operations assets plus shares in K-New worth the current value of the health operations. K-New could be the corporation that goes public, and K-Med could redeem Kaylee's shares over time by using cash from the leasing operations, by distributing shares of K-New to her (to the extent they exceed the CDA balance, these redemptions would be taxable to Kaylee as deemed dividends), or by doing both. This would allow K-Med to preserve its CCPC status (and thus allow for CDA to be paid over a longer period of time and give more time for RDTOH to be refunded), as well as deferring gains on the various sales. Once all of Kaylee's shares have been redeemed, Kevin could then amalgamate K-Lease and K-Med, or he could simply change the name of K-Med and wind up K-Lease altogether.

These transactions could also be done using a partnership and section 97.

## Butterfly Transaction

We should also consider the possibility of using a butterfly transaction to divide up the company in a tax-effective manner. This would likely require the services of a tax specialist at a professional services firm, but it could be a useful tool to divide up the corporation before the IPO.

*Note that there are likely several other ways to structure this transaction. Markers are directed to accept valid alternatives provided they are technically correct and supported.*

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

**Reaching Competence** – The candidate identifies an alternative for the transfer of assets to K-Lease.

**Competent** – The candidate identifies some alternatives for the transfer of assets to K-Lease or discusses one alternative.

**Competent with Distinction** – The candidate discusses some alternatives for the transfer of assets to K-Lease.

Memo to: Kevin Olesen, President, K-Lease Ltd.  
From: CPA, Tax Analyst  
Subject: Future K-Med Share Disposition

**Assessment Opportunity #12**

The candidate recommends tax-planning strategies to minimize Kevin's future tax liability and calculates the estimated after-tax cash proceeds resulting from the planned sale of K-Med public company shares.

*The candidate demonstrates DEPTH in the Taxation role.*

You have requested advice on tax planning opportunities, including an estimate of the after-tax cash you will receive from your future K-Med share disposition after the escrow period.

**Capital Gains Exemption on Qualified Small Business Corporation Shares**

Shareholders who own qualified small business corporation (QSBC) shares, such as those of K-Med if it qualifies (discussed further in the next section), are entitled to a lifetime capital gains exemption of \$813,600. If you both sell the shares of the company when the company is a CCPC, you will pay no tax on the first \$813,600 capital gains amount. There is no capital gains exemption available on public company shares. Therefore, if you sell shares after the company is public, you will pay tax on the entire capital gain.

**Tax Planning**

There is an election that is available for shareholders of certain private company shares to reduce taxes payable upon disposition of those shares once they are public. This election allows shareholders to elect to dispose of their shares at the IPO date, essentially increasing the adjusted cost base of the shares, which will result in a lower capital gain (proceeds less original cost) upon future sales of shares. This is an important election to make if you have any remaining capital gains exemption (a lifetime capital gains amount that is not subject to tax). Per Appendix IV, you have not used any of your lifetime capital gains exemption, so it is beneficial to you to elect to dispose of your K-Med shares on your December 31, 2015, personal tax return.

Before making the election, we should confirm that your K-Med shares qualify as QSBC shares. The criteria are as follows, from subsection 110.6(1):

- At the time of (deemed) disposition, the shares must be of a small business corporation (SBC). An SBC is defined in subsection 248(1) which requires both of the following criteria be met:
  - The corporation is a CCPC – this is met before the sale, since it is a private corporate and controlled by you and Kaylee, who are both Canadian residents.
  - 90% of the fair market value of the assets of the corporation are used principally in an active business carried on primarily in Canada – based on the segmented information provided, the assets for the health operations (all active business assets except for the \$100,000 investment) are \$10,038,694 and the leasing operations (not an active business, as discussed previously) are \$5,421,257. Most assets appear to be at or near fair market value. Without considering goodwill, the active business assets are only about 64%  $((\$10,038,694 - \$100,000) \div \$15,459,951)$  of the total value of K-Med's assets. We should also consider goodwill, most of which would likely be attributable to the health operations.

The shares are to be sold for \$9 each, for a total of \$8.1 million (900,000 × \$9). Adding liabilities of \$13,798,722, total fair value of all the assets including goodwill is \$21,898,722. Subtracting the fair value of the identifiable assets (\$15,459,951), goodwill is, therefore, \$6,438,771. With goodwill, the active business assets are still only about 75% (((\$10,038,694 – \$100,000 + \$6,438,771) ÷ \$21,898,722) of the total value of K-Med's assets. To ensure that this criterion is met, we should ensure that the sale of the leasing operations to K-Lease takes place *before* the company goes public and that steps are taken to purify the corporation (by paying off debt or using some of the proceeds to pay dividends to the shareholders). That is currently the plan, but we should pay very close attention to the timing when structuring the sale.

- Throughout the 24 months preceding the (deemed) disposition, the shares were not held by anyone other than you or a person related to you – this is the case because you and your father are the only people ever to have owned these shares.
- Throughout the same 24-month period, 50% of the fair market value of the assets of the corporation were used in an active business in Canada – as discussed in a previous point, this percentage is currently 64%, but we should confirm the 50% requirement was met on an ongoing basis for the last two years.

Using this election, I have calculated an estimate of the after-tax cash proceeds:

### Calculation of After-Tax Proceeds Using Section 48.1 Election

Upon IPO date (election to dispose of all Class A shares in K-Med):

Key Facts at IPO Date	December 1, 2015	Comments
Adjusted cost base	\$1,500,000	\$3,000,000 (deemed ACB = FMV at time of inheritance) × 50%
Fair market value	1,800,000	200,000 shares × \$9 per share (Appendix IV)
Deemed proceeds	1,800,000	ACB plus LCGE of \$813,600, limited to FMV
Adjusted cost base	(1,500,000)	
Capital gain	300,000	
Taxable capital gain	150,000	50%
Capital gains exemption*	(150,000)	
2015 tax	\$ 0	

\*Least of four amounts: annual gains limit, cumulative gains limit, unused lifetime exemption, net TCG

Upon sale of all public company shares after escrow in 2016:

Proceeds	\$3,600,000	\$1,800,000 FMV at IPO × 2 (Appendix IV)
Adjusted cost base	1,800,000	
Capital gain	1,800,000	
Taxable capital gain	900,000	
2016 tax	351,000	Using high rate of 29% + 10% provincial

2016 after-tax cash proceeds:

Proceeds	3,600,000
Less: Tax	(351,000)
Cash available for investment in K-Lease	\$3,249,000

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

**Reaching Competence** – The candidate attempts a calculation of the estimated after-tax cash proceeds resulting from the planned sale of K-Med public company shares OR recommends a way to minimize taxes on the sale.

**Competent** – The candidate prepares a reasonable calculation of the estimated after-tax cash proceeds resulting from the planned sale of K-Med public company shares and recommends a way to minimize taxes on the sale.

**Competent with Distinction** – The candidate prepares an in-depth calculation of the estimated after-tax cash proceeds resulting from the planned sale of K-Med public company shares and recommends a way to minimize taxes on the sale.

**APPENDIX D****SEPTEMBER 18, 2015 – DAY 3 SIMULATIONS,  
SOLUTIONS AND MARKING GUIDES**



**Day 3-1 Case****(Suggested time 80 minutes)**

Bamboo Bike Inc. (BBI), a privately-owned toy manufacturer with annual revenues of approximately \$300 million, produces toys for children between two and five years of age. In 2008, BBI started out with a single product — the B-Bike — a pedal-free bike that helps preschoolers transition to a traditional bicycle without the need for training wheels. Manufactured primarily from bamboo, the B-Bike is designed to be passed down from child to child. Although BBI quickly leveraged B-Bike's success with additional product offerings, the B-Bike has continued to be its top-selling toy. According to a recent consumer survey, the B-Bike is the toy that attracts new customers, who often purchase additional products.

Survey results have indicated that BBI's target market values the following attributes most with respect to toys: (1) safety; (2) quality; and (3) sustainability. Based on this, BBI revised its mission statement to be *"BBI is committed to manufacturing high-quality children's toys that exceed safety standards while using environmentally-friendly products and ethical business practices."* BBI's vision is *"to be a leader in sustainable toy manufacturing."* BBI's CEO recently gave an impassioned speech to the employees and Board of Directors of BBI. Mentioning the increased competition in the industry, he emphasized the need for BBI to stay true to its mission, to retain its current customers and to attract new customers.

BBI has a reputation for using environmentally-friendly materials and having sustainable business practices. Over 50% of BBI's electricity usage is solar- and wind-powered, and the company uses sustainable materials such as bamboo. BBI is also an industry leader in terms of its labour practices, offering above-average compensation to employees and providing a healthy and safe working environment. For the past five years, BBI has been included on "Canada's Top Employers" list, and in 2015, BBI was honoured with the highly selective, national "Excellence in Ethics" award.

It is late in fiscal 2015. You, CPA, work for BBI as an internal accountant, reporting directly to the CFO, who outlined BBI's current challenge: demand for products has been exceeding supply because direct labour hours available are constrained by the size of BBI's production facility. The CFO asks you for your advice on production volumes (Appendix I), explaining that, for Q1 and Q2 of 2016, BBI's board has agreed not to make changes to address the labour hour shortage in order to meet demand. The board wants to evaluate the options thoroughly before committing to a plan. To be able to satisfy production needs by Q3 of fiscal 2016, BBI is considering three options (Appendix II). The CFO asks you to provide a quantitative and qualitative analysis of the three options.

Feel free to address any additional issues that you note.

**APPENDIX I**  
**INFORMATION ABOUT PRODUCTS AND LABOUR REQUIREMENTS**

All products manufactured by BBI fall under one of five broad categories, listed below. Individual products within each of the five categories are similar, and use essentially the same direct labour and direct materials in production.

Information on the five product categories is as follows:

<b>Product</b>	<b>Estimated combined demand for Q1 and Q2 of 2016 (in units)</b>	<b>Average selling price (per unit)</b>	<b>Direct labour cost (per unit)</b>	<b>Direct materials cost (per unit)</b>
1. Puzzles	1,000,000	\$14.00	\$3.75	\$4.00
2. Calendars	650,000	\$15.00	\$3.75	\$3.00
3. Toy vehicles	950,000	\$31.50	\$7.50	\$8.00
4. Bike accessories	1,250,000	\$22.00	\$7.50	\$9.00
5. B-Bikes	1,350,000	\$53.00	\$15.00	\$29.00

Based on BBI's current plant size, direct labour hours available for production in Q1 and Q2 of fiscal 2016 total 2.5 million combined. Direct labourers at BBI work in two shifts, from 0600h to 1400h and from 1400h to 2200h. The plant is operating at full capacity during these shifts; there is no room for workers to be added. BBI's board once explored the idea of adding an overnight shift to boost production volumes. The idea was met with resistance from the employees, and a board member who is a physician cited research suggesting that night shifts are linked to health issues and an increase in workplace accidents.

The average wage paid to BBI's direct labourers is \$15 per hour, which includes the cost of benefits. Variable overhead cost is \$6 per direct labour hour. Fixed overhead is \$20 million annually.

## **APPENDIX II**

### **OPTIONS TO ADDRESS DIRECT LABOUR CONSTRAINT**

#### **Option 1: Outsource production**

BBI can outsource production to Eeeze Inc. (EI). In operation for seven years, EI specializes in performing manufacturing and processing activities for companies experiencing capacity issues. For the first 250,000 direct labour hours, EI would charge BBI \$30 per hour. For hours in excess of 250,000 but less than 750,000, the rate would be \$26 per hour. BBI must provide the direct materials to be used in production and must train the EI employees assigned to BBI's contract. As the equipment used to manufacture BBI products is not specialized, EI would use its own equipment; the hourly rates quoted to BBI reflect this.

BBI would need to decide which products to outsource to EI.

#### **Option 2: Add a shift at BBI's facility**

On an as-needed basis, BBI could add a shift to the production schedule, from 2200h to 0600h. Ideally, rather than hire additional employees, BBI would entice current direct labourers to work overtime, and would offer other non-production employees the opportunity to work overtime shifts in production. With some basic training, it is believed that non-production employees would be able to perform this role, temporarily.

To ensure that employees are fairly compensated for their extra efforts, BBI would pay approximately \$22.50 per direct labour hour for overtime shifts. BBI management believes that, in addition to the overtime paid, special, ideally non-taxable, benefits would have to be offered to employees who participate in a specified number of overtime shifts.

The following benefits have been mentioned as possibilities:

- Memberships to fitness and recreation facilities. BBI management reasons that this will help reduce stress associated with working night shifts. The sales director also noted that, depending on the type of facility chosen, BBI's sales staff could use the memberships to entertain clients.
- Tuition costs for employees wishing to take a course/class in their free time. The type of course would not be restricted; employees could enroll in anything from carpentry to music to general business courses.
- Gift certificates to a favourite store or restaurant. Amounts would range from \$100 to \$500.

Regardless of whether Option #2 is selected, BBI management believes that the benefits described above should be considered as options to reward its employee group. If they are taxable as proposed, BBI is open to making changes to these benefits to ensure they are non-taxable.

**APPENDIX II (continued)**  
**OPTIONS TO ADDRESS DIRECT LABOUR CONSTRAINT**

If a night shift was added, BBI would incur an increase in fixed overhead costs of an estimated \$150,000 per year, consisting primarily of salaries for supervisory staff.

**Option 3: Change production process for B-Bikes**

As it is a labour-intensive process to craft the bamboo bicycles, the B-Bike is significantly more challenging to produce than the other product offerings. As well, there tends to be more waste inherent in the process than desired. For these reasons, the foreman has suggested eliminating the use of bamboo in the production of B-Bikes, substituting recycled plastic or recycled steel. Depending on the material used, the direct materials cost of the B-Bike would decrease by \$8 to \$12 per unit. The plastic would result in the greatest cost reduction, but the steel is a sturdier material. As well, direct labour hours required to manufacture the B-Bike would decrease by approximately 40%, regardless of the material selected. Fixed costs would remain unchanged.

**MARKING GUIDE 3-1  
BAMBOO BIKE INC. (BBI)  
ASSESSMENT OPPORTUNITIES**

**Report to CFO Addressing Labour Shortage**

You have asked me to provide advice on the labour shortage facing BBI in fiscal 2016 (it is now late fiscal 2015). The shortage of labour hours means that BBI will not be able to produce sufficient quantities to meet market demand for fiscal 2016. I have analyzed this problem using quantitative analysis and have considered non-quantitative factors as well. My recommendation is included in this report.

Since BBI wishes to take action to address the labour shortage by the third quarter of fiscal 2016, I have performed some analysis of the options presented to me and recommended a course of action that I believe to be consistent with the mission and vision of BBI.

Regards,

CPA

**Assessment Opportunity #1 (Depth Opportunity)**

The candidate addresses the labour shortage facing Bamboo Bike Inc. using quantitative analysis.

*The candidate demonstrates competence in Management Accounting.*

**CPA Map Competencies:**

*3.5.2 – Evaluates sustainable profit maximization and capacity management performance (Level A at Core)*

*Competent candidates will calculate a product mix that maximizes the profits and will summarize what the calculations suggest (that B-Bike production should be reduced).*

**Allocation of Direct Labour Hours in Q1 and Q2**

BBI is not planning to take action to address the direct labour shortage until the third quarter of fiscal 2016, to ensure that available options are carefully evaluated before proceeding. Therefore, BBI will not be able to meet estimated market demand in the first or second quarter of fiscal 2016. There are only 2.5 million direct labour hours (DLHs) available. In order to maximize profits in the first half of 2016, BBI could allocate the direct labour hours in a manner that maximizes contribution margin (CM).

These calculations have been performed and are presented in the following table.

**Calculation of Contribution Margin per DLH per Product Line**

	<u>Puzzles</u>	<u>Calendars</u>	<u>Toy Vehicles</u>	<u>Bike Accessories</u>	<u>B-Bikes</u>	
Selling price	\$14	\$15	\$31.5	\$22	\$53	
DL cost/unit	\$3.75	\$3.75	\$7.50	\$7.50	\$15	
DL hours/unit	0.25	0.25	0.5	0.5	1	Note 1
DM cost	\$4	\$3	\$8	\$9	\$29	
VOH cost	\$1.5	\$1.5	\$3	\$3	\$6	
CM per unit	\$4.75	\$6.75	\$13.00	\$2.50	\$3.00	
CM per DLH	\$19.00	\$27.00	\$26.00	\$5.00	\$3.00	

Note 1 – Average per-hour earnings of BBI direct labourers is \$15. (The direct labour cost provided was translated into direct labour hours per product.)

Conclusion: The products are ranked as follows in terms of CM generated per direct labour hour:

- Highest: Calendars
- 2<sup>nd</sup>: Toy vehicles
- 3<sup>rd</sup>: Puzzles
- 4<sup>th</sup>: Bike accessories
- Lowest: B-Bikes

B-Bikes generate the worst contribution margin per unit of direct labour.

<u>Product</u>	<u>Unit Demand</u>	<u>DL Hours/Unit</u>	<u>Total DLH</u>	
Puzzles	1,000,000	0.25	250,000	
Calendars	650,000	0.25	162,500	
Toy vehicles	950,000	0.5	475,000	
Bike accessories	1,250,000	0.5	625,000	
Bikes	1,350,000	1	1,350,000	
			2,862,500	REQUIRED to meet demand
			<u>2,500,000</u>	AVAILABLE (per simulation)
			362,500	

Therefore, there is a shortfall of 362,500 direct labour hours. To maximize contribution margin, 362,500 fewer B-Bikes should be manufactured. However, there are qualitative factors to consider as well, as discussed in this report.

Clearly, the B-Bike is the product line with the lowest contribution margin per direct hour, with a CM/DLH of only \$3. This is significantly less than the toy vehicles product line and the calendars product line, which have the highest CM/DLH of \$26 and \$27, respectively.

If BBI were to allocate direct labour hours to product lines with the highest CM/DLH first, then all product lines except the B-Bike line would meet market demand for those quarters. Due to the direct labour hour shortage, 362,500 fewer B-Bikes would be produced than would have to be produced to meet estimated demand, which would result in lost contribution margin of approximately \$1,087,500 (362,500 bikes × \$3 contribution margin per bike). This course of action would maximize profits in the first and second quarters of 2016.

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

**Not Addressed** – The candidate does not address this indicator.

**Nominal Competence** – The candidate does not meet the standards of reaching competence.

**Reaching Competence** – The candidate makes a reasonable attempt at some calculations. The candidate may only calculate contribution margin per product line and not take the constrained resource into account in the calculations.

**Competent** – The candidate makes a reasonable attempt at the calculations, and interprets them. The candidate calculates contribution margin per product line and takes the constrained resource into account in the calculations.

**Competent with Distinction** – The candidate makes a reasonable attempt at the calculations, and interprets them. The candidate calculates contribution margin per product line and takes the constrained resource into account in the calculations. The candidate also calculates the total impact of the production shortfall on financial results.

### Assessment Opportunity #2 (Depth Opportunity)

The candidate discusses the qualitative decision factors that need to be considered beyond the quantitative analysis (which suggests reducing B-Bike production to maximize profit).

*The candidate demonstrates competence in Management Accounting.*

### CPA Map Competencies:

3.5.1 Performs sensitivity analysis (Level A at Core)

Outcome: b) Performs and communicates the significance of a CVP (e.g., break-even analysis or contribution margin analysis)

*Competent candidates consider other qualitative factors, beyond what the calculations from AO#1 suggest, and make an appropriate recommendation on the overall product mix for the short-term decision facing BBI.*

We must consider whether it is prudent to limit production of the B-Bikes in order to maximize contribution margin in the short term. The 362,500 units represent 27% of total demand for B-Bikes in the first and second quarters, which is a significant shortfall. The B-Bike is the most popular product and has been proven to be instrumental in attracting new customers to BBI. A lost B-Bike sale in 2016 could translate into losing the opportunity to “hook” a customer for the longer term once they have purchased their child’s bike from a competitor. Reducing B-Bike sales could also have an impact on sales of bike accessories.

With the significance of the B-Bike product in mind, the direct labour shortage could be addressed by limiting production to the product line with the second-lowest contribution margin per direct labour hour. Although it is not ideal to fall short of customer demand, if BBI has a temporary shortage of bike accessories versus B-Bikes, it will likely have less of an impact in the long term. The difference is \$2 per direct labour hour, since bike accessories have a CM/DLH of \$5 and B-Bikes of \$3. This translates into additional lost contribution margin of \$725,000, for total lost contribution margin of \$1,812,500 in the first and second quarters.

### **Recommendation for Q1 and Q2 of 2016**

Although the B-Bike is the product line with the lowest contribution margin per unit of constrained resource (i.e., direct labour hour), it is not advisable to limit production of B-Bikes. This is because B-Bikes are critical to BBI’s reputation and success, as discussed earlier in the report. Customers who buy a different bike because of a B-Bike shortage are less likely to buy BBI products in the future. Therefore, even though short-term profits are negatively affected by this decision, I advise reducing production of bike accessories, which is the item that has the second-lowest contribution margin per direct labour hour.

*Candidates could make other reasonable recommendations but should appropriately support their recommendations. For example, they could suggest reducing the production of B-Bikes by 50,000 units (4%), which may reduce the demand for bike accessories and make the shortage of bike accessories less consequential. Instead of reducing production of accessories by 725,000 units (58%) to make up for the 362,500 DLH shortage, BBI could, therefore, make up for the shortfall by either reducing B-Bike production by 50,000 units = 50,000 DLH or reducing accessory production by 625,000 units (50%) = 312,500 DLH.*



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

**Not Addressed** – The candidate does not address this indicator.

**Nominal Competence** – The candidate does not meet the standards of reaching competence.

**Reaching Competence** – The candidate identifies the fact that the B-Bike is critical to the success of BBI and questions reducing the production of this product line.

**Competent** – The candidate discusses the fact that the B-Bike is critical to the success of BBI, questions reducing the production of this product line, and makes a recommendation that is consistent with quantitative analysis.

**Competent with Distinction** – The candidate discusses the fact that the B-Bike is critical to the success of BBI, questions reducing the production of this product line, and makes a recommendation that is consistent with quantitative analysis. The candidate also quantifies the effect of their recommendation (assuming they recommend something other than reducing production of the B-Bike).

### Evaluation of Long-Term Alternatives

Three options are being considered to address the direct labour shortage at BBI for the third quarter of 2016 and beyond. Although further data will have to be collected to make a final conclusion, preliminary quantitative analysis has been performed and the results of this analysis are explained below.

#### Assessment Opportunity #3 (Depth Opportunity)

The candidate evaluates the outsourcing option available to BBI for Q3 and beyond, using qualitative and quantitative analysis.

*The candidate demonstrates competence in Management Accounting.*

#### CPA Map Competencies:

*3.5.2 – Evaluates sustainable profit maximization and capacity management performance (Level B at Core)*

#### Option #1: Outsource Production

Outsourcing would result in higher variable production costs for BBI. Currently, direct labourers are paid \$15 per hour and variable overhead costs are \$6 per hour, for a total variable cost (exclusive of materials) of \$21 per hour. Eeeze Inc. (EI) charges \$30 per hour for the first 250,000 hours and \$26 per hour for hours in excess of 250,000 up to 750,000. Assuming that 362,500 hours would be outsourced, the costs would total \$10,425,000  $((250,000 \times \$30) + (112,500 \times \$26))$ .

**Calculation of Contribution Margin per DLH per Product Line under Outsourcing**

	<u>Puzzles</u>	<u>Calendars</u>	<u>Toy Vehicles</u>	<u>Accessories</u>	<u>B-Bikes</u>	<u>Note</u>
Selling price	\$14	\$15	\$31.5	\$22	\$53	
DL cost/unit	\$7.19	\$7.19	\$14.38	\$14.38	\$28.76	1
DL hours/unit	0.25	0.25	0.5	0.5	1	2
DM cost	\$4	\$3	\$8	\$9	\$29	
VOH cost	\$0	\$0	\$0	\$0	\$0	
CM per unit	\$2.81	\$4.81	\$9.12	\$(1.38)	\$(4.76)	

**Notes:**

1. Calculated using a weighted average rate, assuming that 362,500 hours of outsourcing would be required on an on-going basis:

$$= (250,000 \div 362,500) \times \$30/\text{hour} +$$

$$= (112,500 \div 362,500) \times \$26/\text{hour}$$

$$\text{weighted average rate} = \$28.76$$

2. Assuming that direct labour hours required per unit will be the same under the outsourcing agreement.

Calculations in Table above demonstrate that, not surprisingly, the contribution margin per unit for each product line would decrease for the outsourced units. In fact, the contribution margins per unit for the accessories and B-Bikes become negative for the units produced by EI. BBI must consider whether it makes sense to outsource production when the incremental profit earned from doing so could be negative.

Since, from a quantitative perspective, this option is not financially feasible as presented, BBI could consider a price increase to make up for the increased costs.

*Candidates ranked as competent with distinction would discuss the fact that price is not one of the three most important factors for BBI's target market, based on the research data that has been collected. Customers would likely accept a price increase. Given that the B-Bike in particular seems underpriced, BBI should explore this option.*

**Additional Costs**

There will be a cost to ship materials and finished product between BBI and EI. This ongoing cost must be factored into the decision to outsource. As well, upfront costs must be considered. For example, BBI would be required to provide training to the EI employees. Depending on the turnover at EI, training may have to be done on a semi-regular basis as new employees are hired at EI. Other upfront costs include the legal and administrative costs of getting a contract in place.

### Quality Control

BBI's target market listed quality as a primary attribute in terms of toys for their children. By having an outside manufacturer produce for BBI, quality control may become more difficult. BBI would have to research EI's reputation carefully and stipulate clearly in the contract what its requirements are for quality. If outsourcing is undertaken, it may make sense to have EI manufacture the "easiest" product in an effort to maintain quality overall.

### Sustainability Issues

BBI has a reputation for employing ethical and "green" business practices and must determine whether EI has similar values and practices. For example, BBI uses solar and wind power for 50% of its electricity needs. This is unlikely to be the case at EI. The target market may view an inconsistency between the values and practices of EI and BBI as "not walking the talk" in terms of sustainable practices.

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

**Not Addressed** – The candidate does not address this indicator.

**Nominal Competence** – The candidate does not meet the standards of reaching competence.

**Reaching Competence** – The candidate performs basic calculations or discusses the general qualitative impact of the outsourcing production option.

**Competent** – The candidate performs an analysis that is sufficient to make a decision (re: quantitative impact on costs for BBI and qualitative discussion).

**Competent with Distinction** – The candidate performs adequate calculations on the outsourcing option, discusses the general quantitative and qualitative impact on costs for BBI, and provides a recommendation.

### Assessment Opportunity #4 (Depth Opportunity)

The candidate evaluates the additional shift option available to BBI for Q3 and beyond using quantitative and qualitative analysis.

The candidate demonstrates competence in Management Accounting.

### CPA Map Competencies:

*3.5.2 – Evaluates sustainable profit maximization and capacity management performance (Level B at Core)*

**Option #2: Add an Overtime Shift at BBI's Facility**

BBI has not run overtime shifts in the past. Overtime rates of \$22.50 per hour would be paid to the direct labourers. Variable overhead costs would also increase in proportion with the direct labour hours. As well, there is a known increase in fixed overhead costs with this option. Assuming that 362,500 hours would be incurred during the overtime shift, the costs would total \$10,481,250  $((362,500 \times \$22.50) + (362,500 \times \$6.00) + \$150,000)$ .

**Calculation of Contribution Margin per DLH per Product Line with Added Shift**

	<b>Puzzles</b>	<b>Calendars</b>	<b>Toy Vehicles</b>	<b>Bike Accessories</b>	<b>B-Bikes</b>	<b>Notes</b>
Selling price	\$14	\$15	\$31.5	\$22	\$53	
DL cost/unit	\$5.63	\$5.63	\$11.25	\$11.25	\$22.50	1
DL hours/unit	0.25	0.25	0.5	0.5	1	2
DM cost	\$4	\$3	\$8	\$9	\$29	
VOH cost	\$1.5	\$1.5	\$3	\$3	\$6	
CM per unit	\$2.88	\$4.88	\$9.25	\$(1.25)	\$(4.50)	

**Notes:**

1. \$22.50 per hour

Assuming that direct labour hours required per unit would be the same on overtime shifts.

Calculations in Table above demonstrate that, not surprisingly, contribution margin per unit for each product line would decrease for the units produced on overtime shifts and, for some products, would result in costs exceeding prices. BBI must consider whether it makes sense to add overtime shifts when the incremental profit earned from doing so could be negative.

This option costs more than Option #1 when the cost of the “perks” and fixed costs are factored into the decision. Tax consequences of perks are discussed later in this report.

***Impact on Health of Employees***

BBI's revised mission statement states its commitment to ethical business practices. A decision had been made to avoid employing overtime and night shifts at BBI due to resistance from the employee group and evidence that such shifts increase incidents of health and safety issues. To now add overtime shifts could harm the reputation of BBI and its standing as one of Canada's top employers.

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

**Not Addressed** – The candidate does not address this indicator.

**Nominal Competence** – The candidate does not meet the standards of reaching competence.

**Reaching Competence** – The candidate performs basic calculations or discusses the general qualitative impact of the additional shift option.

**Competent** – The candidate performs an analysis that is sufficient for making a decision (re: quantitative impact on costs for BBI and qualitative discussion).

**Competent with Distinction** – The candidate performs detailed calculations on the additional shift option, discusses the general quantitative and qualitative impact on costs for BBI, and provides a recommendation.

#### **Assessment Opportunity #5 (Depth Opportunity)**

The candidate evaluates the option to change the production process for the B-Bike, which is available to BBI for Q3 and beyond, using quantitative and qualitative analysis.

*The candidate demonstrates competence in Management Accounting.*

#### **CPA Map Competencies:**

*3.5.2 – Evaluates sustainable profit maximization and capacity management performance (Level B at Core)*

#### Option #3: Change Production Process for the B-Bike

Since it is expensive to manufacture a B-Bike, a change in the production process has been suggested. Using recycled steel or recycled plastic instead of bamboo would decrease direct labour costs by 40% (and variable overhead costs by the same percentage), as well as direct material costs by \$8 to \$12 per unit. Assuming the full 1.35 million demand of the B-Bike, BBI can realize savings between \$22,140,000 and \$27,540,000, depending on which material it decides to use ( $1,350,000 \times ((40\% \times \$15) + (40\% \times \$6) + (\$8 \text{ or } \$12))$ ).

**Calculation of Direct Labour Hours with Change in Production**

<b>Product</b>	<b>Unit Demand</b>	<b>DL Hours/Unit</b>	<b>Total DLH</b>	
Puzzles	1,000,000	0.25	250,000	
Calendars	650,000	0.25	162,500	
Toy Vehicles	950,000	0.5	475,000	
Accessories	1,250,000	0.5	625,000	
Bikes	1,350,000	0.6	810,000	
			2,322,500	REQUIRED to meet demand
			2,500,000	AVAILABLE (per simulation)
		EXCESS:	(177,500)	

Conclusion: Assuming demand does not increase at BBI, a change in production process for the B-Bike could address the direct labour shortage.

**Calculation of Contribution Margin per Unit for the B-Bike**

	<b>Currently</b>	<b>If process changed: Steel</b>	<b>Plastic</b>
Selling price	\$53	\$53	\$53
DL cost/unit	\$15	\$9 (60% of \$15)	\$9
DL hours/unit	1	0.6	0.6
DM cost	\$29	\$21 (\$8 lower, assuming steel is used)	\$17
VOH cost	\$6	\$3.60 (60% of \$6)	\$3.60
CM per unit	\$3.00	\$19.40	\$23.40

Conclusion: The contribution margin increases significantly with a change in production.

If direct labour time is reduced by 40% for the B-Bike, BBI would be able to meet market demand without the need to outsource or add overtime shifts. This is explained in the calculation of direct labour hours above, which shows an excess in direct labour hours of 177,500 hours.

As well, contribution margin per unit would increase for the B-Bike, as calculated in the table above. Factoring in a reduction in direct materials cost of \$8 (assuming the low end), direct labour cost of 40%, and the associated variable overhead cost, the contribution margin per bike increases from \$3.00 to \$19.40 using steel. Using plastic, the CM increases to \$23.40.

**Quality**

Since BBI's customers place a high value on quality and BBI's mission statement emphasizes quality, it is important to maintain the quality of the B-Bike. Therefore, the substitute material must be steel, even though this costs more than the plastic option. BBI must evaluate whether the quality of the B-Bike will remain as high as it was when bamboo was the primary material. If a noticeable drop in quality is possible, it would not be prudent to make this change.

Plastic may be a feasible replacement for bamboo if B-Bike can test it and find it to be of equal quality. Using recycled plastic would align with the mission of using environmentally friendly products.

### *Public Perception*

Even if quality is maintained, the public could still perceive this change as negative. The product and, in fact, the company is named after the main material, bamboo. BBI would have to manage the message and resulting public response when making this change public.

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

**Not Addressed** – The candidate does not address this indicator.

**Nominal Competence** – The candidate does not meet the standards of reaching competence.

**Reaching Competence** – The candidate performs basic calculations or discusses the general qualitative impact of the option to change the production process of the B-Bike.

**Competent** – The candidate performs an analysis sufficient to make a decision (re: quantitative impact on costs for BBI and qualitative discussion).

**Competent with Distinction** – The candidate performs detailed calculations on the option to change the production process of the B-Bike, discusses the general quantitative and qualitative impact on costs for BBI, and provides a recommendation.

### **Assessment Opportunity #6 (Breadth Opportunity)**

The candidate evaluates short-term and long-term effects of different strategic alternatives and concludes on the best alternative that aligns with the company's mission, vision, and values.

*The candidate demonstrates competence in Strategy and Governance.*

### **CPA Map Competencies:**

#### **2.3.3 – Evaluates strategic alternatives (Level B at Core)**

### **Recommendation for Q3 and Beyond (Short Term)**

Taking into account the qualitative and quantitative analysis performed on the options, the best option presented is option #3: modify the production process of the B-Bike. This option has been selected because it best fits the mission, vision, and values of BBI. Outsourcing (option #1) poses too great of a risk regarding quality and reputation, while adding overtime shifts (option #2) is contrary to the ethics and values of BBI. Furthermore, options 1 and 2 are less financially supported than option #3.

Proceeding with option #3 will have to be managed properly. We do not want customers to perceive this move as contrary to BBI's values of sustainable business practices. We will emphasize that the steel used in production is recycled, which is consistent with the sustainability aspect of our mission and values. Further, we must ensure that steel will not reduce the quality of the B-Bike before proceeding.

### Recommendation for the Long Term

Given the vision of BBI, it is not reasonable to think that simply changing production of the B-Bike is a long-term strategy. If demand increases as expected and BBI is to become the international leader in sustainable toy manufacturing, an expansion will be required to procure additional production capacity. This should be factored into BBI's long-term strategic planning process.

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

**Not Addressed** – The candidate does not address this indicator.

**Nominal Competence** – The candidate does not meet the standards of reaching competence.

**Reaching Competence** – The candidate considers some strategic elements in the comparison of the options for the third quarter (short term).

**Competent** – The candidate considers strategic elements of all three options and makes a recommendation for the third quarter that considers both quantitative analysis and strategic discussions (short term).

**Competent with Distinction** – The candidate considers strategic elements of all three options, makes a recommendation for the third quarter that considers both quantitative analysis and strategic discussions (short term), and goes beyond the 2016 issues to discuss long-term strategic concerns (lack of capacity to meet BBI's vision).

### Assessment Opportunity #7 (Breadth Opportunity)

The candidate discusses the tax implications of the proposed employee benefits.

*The candidate demonstrates competence in Taxation.*

### CPA Map Competencies:

6.1.2 Determines taxes payable for a corporation in routine situations (Level B at Core)

6.2.2 Determines taxes payable for an individual in routine situations (Level B at Core)

The benefits under consideration have tax implications for the employees. These implications must be considered when deciding which benefits to provide to employees.

### Memberships to Fitness and Recreation Facilities

Implications for employees – BBI's sales director noted that, depending on the type of facility the membership is with, BBI's sales staff could use the memberships to entertain clients. This is incorrect. The only way a membership is non-taxable is if it's offered to all employees.

*Candidates ranked as competent with distinction may discuss the implications for BBI; specifically, that club dues are a non-deductible expense, which reduces the attractiveness of this option.*



### Tuition Fees (Employees Choose Course)

Implications for employees – Depending on the type of course taken, this may or may not give rise to a taxable benefit for the BBI employee. Courses that are related (either specifically or generally) to the employment duties of an employee are not a taxable benefit when the employer pays for tuition. However, in order for an employee to see this as a benefit, they would likely prefer to take a course that is not work related, in which case a taxable benefit would arise.

*Candidates ranked as competent with distinction may discuss the implications for BBI; specifically, that this would be deductible for BBI.*

### Gift Certificates (to Store or Restaurant)

Implications for employees – The deductibility of such gifts depends on various factors, which are as follows:

- (a) Whether the gift is related to performance. All performance-related gifts are taxable, regardless of the gift and value. Gifts that are granted as a reward for working extra shifts would be considered related to performance.
- (b) Whether the gift is cash or not. Cash gifts (or near cash, such as gift cards) are always taxable, regardless of the amount.
- (c) The total value of gifts for each employee. An employee can only receive up to \$500 in gifts tax-free each year. (They must be non-cash and not related to performance, as discussed above.) Amounts above \$500 are taxable.

The taxability of the benefits must be considered when deciding which benefits to offer. A benefit that is not taxable is generally more desirable than a gift of an equivalent value that is taxable.

*Candidates ranked as competent with distinction may discuss the implications for BBI; specifically, that gifts are deductible for the company.*

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

**Not Addressed** – The candidate does not address this indicator.

**Nominal Competence** – The candidate does not meet the standards of reaching competence.

**Reaching Competence** – The candidate identifies the fact that tax implications will arise from the benefits and attempts a discussion.

**Competent** – The candidate discusses the tax implications that will arise from the benefits in reasonable depth and discusses ways to make the benefits non-taxable.

**Competent with Distinction** – The candidate discusses tax implications that will arise from the various benefits in depth, discusses ways to make the benefits non-taxable, and considers the implications for the employer.

**Day 3-2 Case****(Suggested time 80 minutes)**

Chang ESL Academy Inc. (the Academy) is a private company that reports under accounting standards for private enterprises (ASPE). Located in downtown Toronto, the Academy offers English as a second language (ESL) programs and courses to students who wish to improve their English for personal or professional purposes.

The Academy has been an audit client of the accounting firm, Aderman LLP (Aderman), for many years, and has been audited annually to reassure Michael Chang, the president and sole shareholder of the Academy. It is now January 29, 2016, and you, CPA, have been called into the office of the audit partner, Evelyn Aderman. She informs you that you will be leading the audit engagement for the Academy for the year ended December 31, 2015.

Evelyn tells you the following: “The Academy has had an eventful year. In October, it started offering courses online, which is a significant change from its traditional classroom setting. Here is a summary of my discussion with Michael Chang, which provides information on the new online courses (see Appendix I). Please prepare a memo that includes an analysis of any financial reporting issues resulting from this change. You should consider the impact of this change on the risk assessment, materiality level and approach to this year’s audit.

“After a number of years of profitability, Michael is considering opportunities to further grow the business. He is unsure whether it should offer additional online courses or more of its traditional classroom courses. Michael has asked for a quantitative and qualitative assessment of the two opportunities (see Appendix II). I will use the information as a basis for my discussion with Michael next week. You should also consider any strategic and governance implications.”

## **APPENDIX I**

### **NOTES FROM DISCUSSION WITH MICHAEL CHANG, ACADEMY PRESIDENT**

#### **Annual results**

The Academy's preliminary results for the year ended December 31, 2015, include revenues of \$3.7 million and income before taxes of \$750,000.

#### **New online courses**

In October 2015, the Academy launched four online courses. Students access the courses online via the Academy's learning website, which then redirects them to an external website. Online courses use a combination of video, audio and written material. Each online course is comprised of eight modules, with a short quiz at the end of every module. Each quiz must be completed successfully before students can proceed to the next module. After completing all eight modules, students are granted a certificate of completion.

The content of these online courses is similar to the Academy's introductory classroom courses. Classroom courses typically run for eight weeks, delivering one module each week. The online format, however, allows students to complete each module at their own pace. Students are given a username and password for each course, which is valid for 90 days. While taking the course, students can view all the course materials for their current module and from all previously completed modules. To assist students when needed, online tutor support is available throughout the course. After 90 days or the completion of the course, whichever is sooner, students no longer have access to the material, as the course is deemed to have "expired."

The registration process for the online courses is the same as for the classroom courses, and students pay for each course, in advance, via the Academy's website.

Students can register for an online course at any time, and receive their course username and password upon registration. Tuition for each online course is \$150. All payments are non-refundable once a student accesses the online course for the first time.

**APPENDIX I (continued)**  
**NOTES FROM DISCUSSION WITH MICHAEL CHANG, ACADEMY PRESIDENT**

**Registration and completion statistics**

From October to December 2015, there were a total of 500 online course registrations, distributed evenly within the month: 100 in October; 150 in November; and 250 in December. As of December 31, all registered online courses had been accessed, and 5 students did not complete the courses before the expiry date. By December 31, 2015, students had completed 80% of unexpired October registrations, 30% of November registrations and 20% of December registrations.

The Academy's financial statements include \$75,000 in revenue from online courses.

Michael was surprised to learn that many of the students registered for online courses have Toronto mailing addresses.

**Cost of online course and platform development**

In January 2015, Michael commissioned a market research study into the demand for online ESL courses. The study cost \$30,000, and indicated that there is a significant demand for online learning, which would allow the Academy to expand its customer base outside of Toronto. With tuition of \$150 per online course, the study projected that annual online registration would start at 400 registrants per course and would increase by 40% in each of years two and three, and then stabilize.

Based on the results of the study, the Academy developed a detailed plan and budget for a fall launch of online courses. The Academy's projections on the profitability of the online courses were based on the market research, which supported recovering development costs within one year. The Academy contracted a programmer to work with its instructional designer and teachers in order to develop the course content and related IT platform for delivery of four online courses.

**APPENDIX I (continued)**  
**NOTES FROM DISCUSSION WITH MICHAEL CHANG, ACADEMY PRESIDENT**

The costs incurred are as follows:

Market research study	\$ 30,000
Programming for IT platform development	75,000
Allocation of salaries of designer and teachers for development of content	105,000
Production costs of online course content	35,000
Marketing costs	10,000
Web hosting and IT support*	<u>3,000</u>
	<u>\$ 258,000</u>

\*Web hosting and IT support for the online courses are outsourced at a cost of \$6 per course registration. These costs will continue to be incurred based on the number of total registrants.

At December 31, 2015, the Academy recognized an asset of \$258,000 on its balance sheet with respect to the online courses and related IT platform. Michael is pleased to have the value of the courses reflected on the Academy's balance sheet, as he believes they represent a significant and valuable asset.

Michael has already confirmed with Canada Revenue Agency that the cost does not qualify for scientific research and experimental development (SR&ED) treatment. However, he is wondering whether any of the online course and IT platform development costs can be deducted or if capital cost allowance can be claimed on the income tax return.

## **APPENDIX II GROWTH OPPORTUNITIES**

Michael has indicated that the Academy has budgeted \$300,000 for growth, and that he is considering two possibilities.

### **Additional online courses**

Michael is extremely pleased with the revenues from the four online courses, which have slightly exceeded the market research projections in the first quarter.

Although not all courses are suitable for online delivery, he believes that an additional six of the Academy's classroom courses could be converted and delivered online, in addition to being offered at the Academy. Development costs on a per-course basis would be similar to those incurred for the courses developed in 2015. Michael hopes courses will only need to be updated every five years.

Tuition would remain at \$150 per online course, and Michael believes that the registration and growth rate projected by the market research study would apply to these new courses.

### **Additional classroom courses**

In 2015, the Academy offered 40 different classroom courses over 12 different sessions for a total of 480 offerings. Each classroom offering runs for eight weeks and costs \$400 in tuition. Each classroom can hold a maximum of 20 students.

Historically, most classroom offerings have operated at 100% capacity. For the first time in years, however, registration levels of entry-level classroom offerings averaged only 80% in November and December; to date, January registrations levels are similar. Michael wonders what triggered this drop in registrants and whether it will continue. At current tuition rates, Michael believes that there is market demand to support up to 80 additional offerings annually, and he believes these offerings would be full.

Additional offerings would require the rental of an additional classroom. The only lease opportunity within the Academy's current location is for a three-year period, at \$8,500 per month. This additional classroom would provide space for up to 160 offerings annually, but Michael does not believe that there is sufficient demand for this many offerings at this time. Additional instructor time would cost approximately \$2,400 per offering.

**MARKING GUIDE 3-2**  
**CHANG ESL ACADEMY INC.**  
**ASSESSMENT OPPORTUNITIES**

To: Evelyn Aderman, Partner  
From: CPA, Senior Accountant  
Subject: Chang ESL Academy Inc. (the Academy)

Please find attached my memo outlining my analysis of the financial reporting issues for 2015, as well as their impact on the year-end audit planning for the Academy.

I have also included my analysis of the two expansion opportunities for the Academy.

Regards,  
CPA

**Assessment Opportunity #1 (Depth Opportunity)**

The candidate analyzes the revenue recognition issues.

*The candidate demonstrates competence in Financial Reporting.*

**CPA Map Competencies:**

*1.2.2 – Evaluates treatment for routine transactions (Core – Level A)*

The Academy reports under accounting standards for private enterprises (ASPE). There appear to have been some errors in the Academy's accounting for the new online courses offered in 2015, which are discussed below.

**Revenue Recognition**

New Online Courses

The Academy has recognized all revenue for online course registrations from October to December of 2015, totalling \$75,000 (500 × \$150). The issue is whether or not performance has been achieved by the Academy with respect to online course revenue, which will affect whether it should be recognized at December 31.

Online course revenue should be recognized in accordance with *CPA Canada Handbook* Section 3400.04: "Revenue from sales and service transactions shall be recognized when the requirements as to performance set out in paragraphs 3400.05-.06 are satisfied, provided that at the time of performance ultimate collection is reasonably assured."

The *Handbook* goes on to state:

*3400.06 In the case of rendering services and long-term contracts, performance shall be determined using either the percentage of completion method, or the completed contract method, whichever relates the revenue to the work accomplished. Such performance shall be regarded as having been achieved when reasonable assurance exists regarding the measurement of the consideration that will be derived from rendering the service or performing the long-term contract.*

*3400.07 Performance would be regarded as achieved under paragraphs 3400.05 -.06 when all of the following criteria have been met:*

- a. Persuasive evidence of an arrangement exists;*
- b. Delivery has occurred or services have been rendered; and*
- c. The seller's price to the buyer is fixed and determinable.*

Since the Academy has recognized revenue for all registrations, management likely believes that performance has been achieved, even though the courses have not all been completed.

It could be argued that performance has been achieved, since the measurement of the consideration from providing the online courses over a maximum of 90 days is reasonably assured, meeting the requirements of 3400.06. Specifically, the Academy could argue that the cost of offering the courses is essentially developing the course and making it available to students, which it has already done for all registrants who have accessed the course.

To analyze this fully, we must consider the criteria for achieving performance in ASPE 3400.07:

- a. Persuasive evidence of an arrangement exists* — This appears to have been met upon student registration. Because the arrangement is proven through the online registration documents, persuasive evidence exists.
- c. The seller's price to the buyer is fixed and determinable* — This also appears to have been met because the price is set at \$150 per course and fees are not refundable after students access the course.

It is criteria b, *Delivery has occurred or services have been rendered*, that is open to interpretation and must be considered more carefully.

The Academy is obliged to ensure that the course continues to be available for students to access up until the earlier of course completion or 90 days. The Academy also offers an online tutor service that is available throughout the course. The Academy is obligated to provide the online tutor service as long as the course is running. There are additional costs associated with this, which include online tutor services as well as costs of hosting and supporting the course externally. In addition, there may be additional acts required, including dealing with any administrative issues and student queries and issuing a course completion certificate.

Based on these obligations, it would be difficult to support that the service has been rendered fully until either the course is completed by the student or the 90 days is up.



Use of the percentage of completion method, in accordance with ASPE 3400.06, is a better way to relate the revenue recognized to the work accomplished or the duty outstanding by the Academy. As a result, revenue should instead be deferred upon receipt at registration and recognized evenly over the 90 days the course is available to the students. However, if students complete the course early, as many do, the full amount of revenue deferred should then be recognized, since no further obligation would remain on behalf of the Academy.

As a result, an adjustment is required to revenue recognized by the Academy as follows:

	<b>October</b>	<b>November</b>	<b>December</b>	<b>Total</b>
# registrations	100	150	250	500
# expired courses	(5)	0	0	(5)
# unexpired courses	95	150	250	495
# courses completed (80%, 30%, 20%)	(76)	(45)	(50)	(171)
# courses ongoing	<b>19</b>	<b>105</b>	<b>200</b>	<b>324</b>

Given that registrations occur evenly over a month and that each month has approximately 30 days, the 15<sup>th</sup> of the month has been used as an estimate of the registration date. (Note: The Academy should determine the registration date more accurately.)

The amount of revenue that should remain deferred at December 31, 2015, is calculated as follows:

	<b>October</b>	<b>November</b>	<b>December</b>	<b>Total</b>
# courses ongoing	19	105	200	324
Estimated days remaining	15 of 90 (16.67%)	45 of 90 (50%)	75 of 90 (83.33%)	
Cost per course	\$150	\$150	\$150	
Remaining deferral	$(19 \times 15/90 \times \$150)$ <b>= \$475</b>	$(105 \times 45/90 \times \$150)$ <b>= \$7,875</b>	$(200 \times 75/90 \times \$150)$ <b>= \$25,000</b>	<b>\$33,350</b>

As a result, \$33,350 of the revenue for online courses should be deferred, with the remaining \$41,650 (\$75,000 – \$33,350) recognized as revenue at December 31.

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

**Not Addressed** – The candidate does not address this indicator.

**Nominal Competence** – The candidate does not meet the standards of reaching competence.

**Reaching Competence** – The candidate attempts to analyze revenue recognition issues by attempting to apply the revenue recognition criteria.

**Competent** – The candidate analyzes the revenue recognition issues and attempts a calculation of the adjustments required.

**Competent with Distinction** – The candidate analyzes the revenue recognition issues and accurately calculates the adjustment required.

*A competent candidate would recognize that the entire \$75,000 should not be recognized as revenue, since performance has not been achieved for the online courses. They would perform a reasonable and supported analysis using the criteria of ASPE 3400.06-.07, attempting to quantify the amount to be “derecognized.” Stronger candidates would correctly calculate the amount that should be deferred.*

### Assessment Opportunity #2 (Depth Opportunity)

The candidate identifies and analyzes the intangible asset issues.

*The candidate demonstrates competence in Financial Reporting.*

### CPA Map Competencies:

*1.2.2 – Evaluates treatment for routine transactions (Core – Level A)*

### Accounting for the Online Courses as Intangible Assets

At December 31, the Academy has recognized \$258,000 in its balance sheet with respect to the online courses. This represents the following:

Market research (study)	\$ 30,000
Programming of IT platform	75,000
Allocation of salaries	105,000
Production costs	35,000
Marketing costs	10,000
Monthly support costs (500 × \$6)	3,000
	<u>\$258,000</u>

It is clear that the online courses provide some future benefit to the Academy. The issue, however, is how these costs should be recognized and measured in the Academy's financial statements. At the present time, Michael has indicated that these costs have been recorded as an asset. However, we haven't identified what type of asset they might represent.

These online courses do not meet the definition of inventory in ASPE 3031 *Inventories* because they are not held for sale "in the normal course of business," are not in the process of production of such sale, and are not materials that would be consumed in the rendering of services.

Instead, they should be considered as intangible assets on the balance sheet of the Academy because they are identifiable (since they are separable — courses could likely be sold to another school) and are non-monetary assets lacking physical substance (the courses are intellectual, not physical, property), as defined in ASPE 3064 *Goodwill and Intangible Assets*. As a result, the recognition and measurement criteria of Section 3064 must be applied.

According to ASPE 3064.21, "*an intangible asset shall be recognized if and only if:*

- a. It is probable that the expected future economic benefits that are attributable to the asset will flow to the entity, and*
- b. The cost of the asset can be measured reliably."*

Prior to commencing course development, the Academy commissioned a market research study on the demand for and pricing of online courses. The results of this external information supported the Academy's belief that the courses would be profitable, which also supports its recognition as an intangible asset on the balance sheet. Further, the Academy developed a budget for the development of the courses and tracked costs for it separately.

Since the courses are internally generated, rather than purchased, additional criteria for recognition must be considered. ASPE 3064.35 requires that the Academy classify the generation of these assets into both research and development phases.

### Research Phase

By their nature, it is clear that the market research costs of \$30,000 with respect to the online courses represent research. As a result, the market research costs of \$30,000 must be expensed, per ASPE 3400.37. The Academy has recorded this incorrectly, so it must be adjusted.

### Development Phase

The Academy, however, has the option of either expensing expenditures incurred in the development phase or capitalizing them as an intangible asset. Although Michael has indicated that he would prefer to capitalize the online courses and the related IT platform, these costs can only be capitalized if the Academy demonstrates the requirements of ASPE 3064.41, as follows:

- a. The technical feasibility of completing the intangible asset so that it will be available for use or sale* — The completion of the course is technically feasible because the Academy has an instructional designer and ESL teacher on staff with the expertise to convert the content for online delivery. Although it does not have a programmer on staff, there are likely many such programmers available in Toronto on a contract basis.

- b. Its intention to complete the intangible and use or sell it* — The Academy's intent has always been to offer the course online, as proven by its commission of a market research study and development of a detailed plan and budget.
- c. Its ability to use or sell the intangible asset* — The Academy has existed for many years, and it had previously established a plan for launching the online courses and the related IT platform, giving it the ability to sell the online courses.
- d. The availability of adequate technical, financial and other resources to complete the development and to use or sell the intangible assets* — The Academy has technical resources, in terms of an instructional designer and teacher, in-house, and it was able to hire an external programmer to develop the IT platform and convert the course content for online delivery. Financial resources are available in the form of previous retained earnings.
- e. Its ability to measure reliably the expenditure attributable to the intangible asset during its development* — The Academy has tracked all expenditures attributable to the conversion of the course and the development of the IT platform, including the allocation of internal time and the contract of external costs.
- f. How the intangible asset will generate probable future economic benefits* — The generation of future economic benefits has been demonstrated by projections provided from the external market research study, indicating the number of registrants per course at specified price points. This is combined with the Academy's profitability projections, which indicated that the online courses would cover development costs within one year of launching.

Overall, the Academy should be able to demonstrate the required criteria to recognize costs incurred in the development phase of the online courses and the related IT platform. However, the elements included in these costs must be examined more closely.

Of the \$258,000, the only eligible costs are those directly attributable to creating the online courses and the related IT platform, per ASPE 3064.50. The programming costs of \$75,000 and production costs of \$35,000 can likely be directly attributed to the online courses. As long as the \$105,000 allocation of salaries of the instructional designer and teachers can be attributed to time spent developing the online content, including written material, quizzes, and videos, these would also be eligible for recognition.

The monthly costs of \$3,000 to host and support the online courses, recognized to keep the site live, and the \$10,000 marketing costs for online courses, however, cannot be attributed to preparing the courses for use. These are ongoing operating costs, and, as a result, these amounts must be expensed.

Overall, the Academy should be able to recognize only \$215,000 with respect to the online courses on its balance sheet. The remaining \$43,000 (\$258,000 – \$215,000) must be expensed.

The Academy also has to determine the useful life of the courses, including whether it is definite or indefinite. If the useful life of the courses is definite, the intangible asset would be amortized over its useful life. Assuming Michael's estimate of courses being refreshed every five years is accurate, these costs could be amortized over five years. However, further analysis should be performed to determine this.

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

**Not Addressed** – The candidate does not address this indicator.

**Nominal Competence** – The candidate does not meet the standards of reaching competence.

**Reaching Competence** – The candidate considers the ASPE standard for the recognition of intangible assets or determines the amount to be recognized as intangible assets.

**Competent** – The candidate analyzes and applies the ASPE standard for the recognition of intangible assets and determines a reasonable and supported amount to be recognized based on the application of HB 3064.35–.41.

**Competent with Distinction** – The candidate analyzes and applies the ASPE standard for the recognition of intangible assets and determines a reasonable and supported amount to be recognized based on 3064.35–.41. The candidate also considers the useful life of the intangible asset or considers that the online courses do not meet inventory criteria.

*A competent candidate would recognize that the online courses should be recognized as an intangible asset, per ASPE 3064, and that this must be divided between the research phase costs (which are expensed) and development phase costs (which are either capitalized or expensed, depending on the policy chosen). Stronger candidates would calculate a reasonable and supported amount to be recognized, including amortization, based on 3064.35–.41 or would discuss the fact that the asset does not meet inventory criteria.*

### Assessment Opportunity #3 (Breadth Opportunity)

The candidate identifies the impact of the accounting issues on the planning of the audit.

*The candidate demonstrates competence in Assurance.*

### CPA Map Competencies:

**4.3.1 – Assesses issues related to the undertaking of the engagement or project (Core – Level B)**

### Risk Assessment

As part of the audit planning, we need to assess the risk that the Academy's financial statements will be materially misstated. CAS 200 A34–41 and CAS 315 establish the requirements and provide guidance on identifying and assessing the risks of material misstatement at the financial statement and assertion levels.

Although the Academy is an existing client with which we are familiar, a number of new factors may affect the operating and control environment. The following risks of material misstatement at the overall financial statement level have been identified:

- New online courses — Since the online courses were introduced in 2015, it is likely that the revenue recognition policy and the capitalization policy for intangibles have not been fully considered. As a result, there is an increase in the risk of errors.

- **Potential for errors** — The fact that we have already identified some adjustments with regards to the accounting for the revenue and development costs of the online courses indicates that errors exist in the application of accounting policies and that there is the potential for more errors. This increases the risk of error.
- **Untested system** — The revenue stream of online courses is heavily reliant on the registration for courses, including completion dates and expiration dates. Although the registration system may have been tested in the past (with respect to classroom course registrations), there is no indication that the additional details that become important (including dates) have been tested by the Academy. We also do not have information on if or how the intellectual property (course content) is being protected. This increases the risk of error and will need to be considered when developing audit procedures. Controls around the dates and intellectual property protection should be tested (e.g., access to material, etc.). There may be no issues with accepting online payments, since classroom registrations in previous years may have already used these aspects of the system.
- **Privacy of information** — Likewise, there is a risk that ESL could be non-compliant with privacy statutes by holding private information at a third party (since the students are redirected to an external website after accessing the course online). We will need to assess further the risk of this possibility once we obtain additional information on how this “redirection” functions and the controls in place at the third-party provider.

Based on these factors, the risk of material misstatement at the overall financial statement level has increased from the previous year.

In addition, it should be noted that our firm has a potential independence conflict by performing consulting work for an assurance client. However, the services have all been requested by the same user (Michael) and there is no external user reliance. We should ensure our engagement letter documents this issue and that Michael agrees to it.

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

**Not Addressed** – The candidate does not address this indicator.

**Nominal Competence** – The candidate does not meet the standards of reaching competence.

**Reaching Competence** – The candidate discusses an issue related to the undertaking of the engagement or project.

**Competent** – The candidate discusses the significant issues related to the undertaking of the engagement or project and attempts to assess the risk of material misstatement.

**Competent with Distinction** – The candidate discusses the significant issues related to the undertaking of the engagement or project and assesses the risk of material misstatement.

*A competent candidate would recognize that the risk of material misstatement of the overall financial statement has increased, supported by specific risks being identified and explained.*

#### **Assessment Opportunity #4 (Breadth Opportunity)**

The candidate assesses the materiality level and the audit approach for the planning of the audit.

*The candidate demonstrates competence in Audit and Assurance.*

#### **CPA Map Competencies:**

*4.3.4 – Assesses materiality for the assurance engagement or project (Core – Level B)*

#### **Materiality**

CAS 320 serves as a guideline in setting overall financial statement and performance materiality. This materiality level should be based on the users of the financial statements, which include Michael Chang and any potential future lenders or investors. There is no indication of any new users this year.

A preliminary calculation of materiality using 5% of net income before tax (or some other well-supported amount) would need to be adjusted based on the adjustments that I have identified.

Unadjusted net income before tax:	\$750,000
Adjustments identified:	
To defer revenue for online courses	(33,350)
To expense research and other costs	<u>(43,000)</u>
	<u>\$673,650</u>

At 5%, suggested overall materiality would be \$33,000. Performance materiality may be set at 75% of overall materiality (\$25,000), but may also be reduced when looking at revenue related to the online courses.

#### **Approach**

With respect to the online course revenue, we will need to assess how this is recorded in the general ledger, and also the entire system for registration. Because this same registration system is used for classroom courses, the same approach may be used, and we should consider whether any system changes have occurred since last year. We may need to look more carefully at the dates used in the system (e.g., registration, access to courses, dates for completion of various modules, etc.), since this will be relied on more heavily in terms of recognizing revenue.

Similarly, we will need to test the costs and assumptions used in determining the amount of intangibles that have been capitalized, as well as their useful life.

We will also need to assess the system in terms of how revenue is recorded (i.e., whether it interfaces with the registration system or is a manual entry).

It would be beneficial for the audit approach to be controls-based, given the high number of routine transactions processed with respect to online registrations; however, this may not be possible. In particular, since it is now January, we may not be able to rely on certain controls related to the registration aspects for online courses because we did not test them during the year in which we want to rely on them.

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

**Not Addressed** – The candidate does not address this indicator.

**Nominal Competence** – The candidate does not meet the standards of reaching competence.

**Reaching Competence** – The candidate attempts to calculate the materiality based on preliminary figures, provided with little or no explanation or support, and touches on the general audit approach.

**Competent** – The candidate calculates the materiality based on preliminary figures provided and attempts to adjust the preliminary figures for any accounting errors identified (which ties to the accounting analysis). The candidate attempts to explain the audit approach for revenue that would be affected by the new online revenue or further testing on the registration system.

**Competent with Distinction** – The candidate calculates the materiality based on preliminary figures provided, adjusts the preliminary figures for any accounting errors identified (that ties to accounting analysis). The materiality basis used is explained or supported. The candidate also explains the audit approach for revenue that would be affected by the new online revenue and further testing on the registration system.

*A competent candidate would recognize that*

- *materiality must be calculated based on preliminary figures provided, adjusted for any accounting errors identified (which ties to the accounting analysis); and*
- *the audit approach for revenue would be affected by the new online revenue and the registration system.*

*Strong candidates would also explain or support the materiality basis used and discuss testing on the registration aspects of the system for online courses.*

#### **Assessment Opportunity #5 (Depth Opportunity)**

The candidate analyzes the two expansion opportunities from a quantitative perspective.

*The candidate demonstrates competence in Management Accounting.*





EXPANDED ONLINE COURSES				
Annual cash inflows		Year 1	Year 2	Year 3
# registrations/course	C	400	560	784
# of courses	x	6	6	6
# of registrations		2,400	3,360	4,704
Tuition per registration	x	\$ 150	\$ 150	\$ 150
Total annual revenues		\$ 360,000	\$ 504,000	\$ 705,600
Annual expenditures				
Support (\$6 x # of registrations)	D	14,400	20,160	28,224
Marketing costs	E	10,000	10,000	10,000
		24,400	30,160	38,224
Cash inflow from operations		\$ 335,600	\$ 473,840	\$ 667,376
Content development	F	\$ 322,500	-	-
Net cash inflows		\$ 13,100	\$ 473,840	\$ 667,376
	C	Based on market research study of 400 (incr 40% annually)		
	D	\$6 x number of registrations, given		
	E	Assumes additional marketing costs are required (but may not be linear)		
	F	Estimated at \$215,000/4 courses X 6		

The preceding quantitative analysis is based on a number of assumptions, including estimates from both the market research study and from Michael Chang.

### Net Cash Flows

The net pre-tax cash inflows that could be generated from expanding the number of classrooms ranges from \$218,000 to \$346,000, assuming 80% to 100% capacity of the additional 80 classroom offerings (over existing 480). Assuming that the same number of classroom offerings is provided over the next three years, this annual pre-tax cash flow contribution would be constant.

In contrast, the pre-tax cash inflow from operations associated with expanding the online curriculum by six courses ranges from \$335,600 in Year 1 to \$667,376 in Year 3 (and onwards), assuming that registration projections are accurate. The net cash flows in Year 1, however, would be only \$13,100 (\$335,600 net of \$322,500 development) due to development costs for the six new courses.

Overall, by Year 2, the online courses generate more cash inflows than traditional classroom offerings.

### Significant Up-Front Outlay Needed

The most significant cost of providing online courses, from a quantitative perspective, is clearly the amount of initial cash outflow that is required to invest in the online courses. Not including the market research costs, development of the four online courses costs \$215,000. Assuming similar costs on a per course basis, an investment of an additional \$322,500 ( $\$215,000 \div 4 \times 6$ ) will be required for the Academy to generate these cash inflows.

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

**Not Addressed** – The candidate does not address this indicator.

**Nominal Competence** – The candidate does not meet the standards of reaching competence.

**Reaching Competence** – The candidate attempts to provide a quantitative analysis of both opportunities. There may be some errors in the calculations.

**Competent** – The candidate considers the quantitative factors associated with both opportunities, including an appropriate analysis of the annual cash flows OR the income associated with each.

**Competent with Distinction** – The candidate considers the quantitative factors associated with both opportunities, including an appropriate analysis of the annual cash flows OR the income associated with each. The candidate recognizes that the opportunity to expand online courses has a significant up-front cash outflow.

*A competent candidate would consider the quantitative factors associated with both the opportunities, including an appropriate analysis of the annual cash flows or income associated with each. Strong candidates would also recognize that the opportunity to expand online courses has a significant up-front cash outflow.*

### Assessment Opportunity #6 (Depth Opportunity)

The candidate analyzes the two expansion opportunities from a qualitative perspective.

*The candidate demonstrates competence in Management Accounting.*

### CPA Map Competencies:

3.5.2 – Evaluates sustainable profit maximization and capacity management performance  
(Core – Level A)

### **Qualitative Analysis**

An important consideration is that both the quantitative calculations include a number of estimates. Actual results could vary greatly for each if those estimates are not reasonable. Given that the Academy has more experience in classroom courses, there is greater history to support those estimates. However, to date, actual results have exceeded market research study expectations for the online courses. The uncertainty associated with each should be considered.

Further, without the original cash outflow required for the online courses, Michael should consider how the \$300,000 could be otherwise invested and what return would be obtained.

There are also a number of factors to consider with respect to the two expansion opportunities:

- Revenue estimates for classroom courses may not be realized, since Michael noted that classrooms have not been operating at capacity for several months due to declining registrations.
- Renting the additional classrooms (of which only half the space would be used with current projections) will provide for additional capacity to grow beyond the original projection of 80 course offerings (up to 160). In addition, other options could be considered, such as subleasing the space (if allowed), etc., to offset the additional cost of rent expense for space that would otherwise be unused.
- The additional classroom option involves a major fixed cost related to the annual rent of \$102,000, for which the Academy would be bound to a three-year lease agreement, whereas the online course option involves a significant one-time, up-front cash outflow in the year that the courses are developed. This timing should be considered when making a decision.
- The traditional approach of classroom delivery of courses may be more favourable since the Academy has experience with this method and has enjoyed success with this model.
- The online courses allow for a much broader increase in the market base (meaning students could be from across the country or further). Although the revenue and participation estimates are based on market research, this could potentially increase dramatically and may be dependent on other measures, such as marketing costs. However, Michael should also be aware that not all classroom course content may lend itself to an online format, which could lower estimates for growth.
- The online courses may involve additional time or resources for management (i.e., handling questions or calls from students) that have not been reflected in the quantitative analysis.
- The planned investment of \$322,500 to develop six additional online courses is higher than the \$300,000 that Michael mentioned is available to invest. However, this investment could be reduced by simply offering a lower number of online courses this year.
- Online courses may need to be updated or developed more frequently than every five years as initially estimated by Michael, resulting in larger cash outflows in a shorter timeframe than initially anticipated.
- ESL's own computer system may need to be updated if online courses continue to grow in popularity, since the increased web traffic from registrations, module completions, etc., could be too demanding for the existing system hardware to handle.

## Overall

Michael should carefully consider both the quantitative and qualitative factors of each opportunity. I recommend that each be brought to Michael's attention, in addition to the importance of their reliance on key assumptions, to allow him to make a more informed decision.

Each of the two expansion opportunities presented by Michael has specific advantages and disadvantages. Given that a significant initial cash outflow is required for the expansion of online courses only, the Academy could also consider expanding both online courses (up to his original \$300,000 investment) and classroom courses.

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

**Not Addressed** – The candidate does not address this indicator.

**Nominal Competence** – The candidate does not meet the standards of reaching competence.

**Reaching Competence** – The candidate considers one qualitative factor associated with the opportunities.

**Competent** – The candidate considers at least two qualitative factors associated with the opportunities.

**Competent with Distinction** – The candidate considers more than two qualitative factors associated with the opportunities and provides a recommendation.

*A competent candidate would consider at least two qualitative factors associated with the opportunities.*

### Assessment Opportunity #7 (Breadth Opportunity)

The candidate recognizes that revenue from the online courses may reduce revenue from classroom sessions.

*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)*

It is possible that the new online courses are cannibalizing revenue from the classroom courses. This means that students who would have otherwise registered for the classroom sessions in Toronto are now registering for the online courses. This theory is supported by the unexplained decline in classroom enrolment that occurred shortly after the introduction of online courses. Further, many of the students in these online courses reside in Toronto and could otherwise have attended the courses as classroom sessions.

If current revenue from only four online courses available for only one month is already cannibalizing classroom course revenue, this cannibalization could increase as the current online courses become more popular (as predicted in the market research). Further, if additional new online courses are offered, the cannibalization could theoretically increase even more dramatically.

However, before making this conclusion, the Academy must consider the factors that support this theory. The decline in November registrations to only 80% capacity of classroom sessions must be investigated further. Specifically, are the same entry-level courses that are offered online the ones that have seen dramatic declines in classroom registrants? Or are there separate reasons for the decline, such as other new classroom course competitors, a change in the economy, a change in marketing strategy, or the industry trending more towards online courses in general? Regardless, the Academy should investigate further whether this is a temporary or permanent shift. Future registrations of both online courses and classroom sessions should be considered carefully.

The number of online course registrants located in Toronto should also be considered. Specifically, the Academy may wish to analyze its marketing efforts (whether they have been in Toronto or elsewhere) and how they have affected the registration numbers. Finally, consideration should be given to equalizing or adjusting the tuition rates for online versus classroom courses. If the course content is similar, students may prefer the \$150 lower price for online courses rather than the \$400 registration cost of attending a course in class.

Overall, further analysis is required, the results of which the Academy should consider in relation to its long-term mission and strategy. The Academy should perform this analysis and carefully consider the impact of the findings before it undertakes any further expansion opportunities.

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

**Not Addressed** – The candidate does not address this indicator.

**Nominal Competence** – The candidate does not meet the standards of reaching competence.

**Reaching Competence** – The candidate recognizes that the revenue from online courses may be cannibalizing classroom revenue.

**Competent** – The candidate recognizes that the revenue from online courses may be cannibalizing classroom revenue and that this should affect the Academy's decision on future expansion opportunities.

**Competent with Distinction** – The candidate recognizes that the revenue from online courses may be cannibalizing classroom revenue and that this should affect the Academy's decision on future expansion opportunities, and recommends further analysis in relation to its long-term mission and strategy.

*This is an undirected required. A competent candidate would recognize that the revenue from online courses may be cannibalizing classroom revenue and that this should affect the Academy's decision on future expansion opportunities.*

#### **Assessment Opportunity #8 (Breadth Opportunity)**

The candidate evaluates the tax consequences of the development cost.

*The candidate demonstrates competence in Taxation.*

#### **CPA Map Competencies:**

*6.1.2 – Determines taxes payable for a corporation in routine situations (Core – Level B)*

It is incorrect for Michael to believe that the Academy could deduct capital cost allowance (CCA) on the capitalized online course development cost on its tax return just like other capital assets. The tax treatment for the online course development cost is different than the accounting treatment. Michael has already confirmed that these costs do not qualify for SR&ED treatment.

For financial reporting purposes, it is acceptable to capitalize development costs and amortize them over a period of years to reflect the cost of the asset in generating revenue and net income for the specified time period.

For tax purposes, CCA could only be claimed on depreciable capital assets. This would apply, for example, to the acquisition or development of software, such as the online course IT platform. Similar to accounting, the costs added to the CCA pool would include costs incurred to bring the asset into use, so this would include the programming costs (\$75,000) and any salaries allocated that were directly attributable to the production of the software component of the system. Application software such as this is included in Class 12, and the half-year rule is applicable in the year of addition.

While the production cost (\$35,000) and the salaries of the designer and teachers (\$105,000) used towards developing the new course content are incurred in the development of intangible assets for accounting purposes, it could also be argued that they are currently deductible for income tax purposes because they were incurred for producing income, similar to the other items expensed for accounting purposes — the development of course materials is a regular part of the business.

The only argument for capitalizing these costs for tax purposes is if a legal asset is created by registering a trademark or copyright. In this case, they may qualify as eligible capital expenditures. However, even if the Academy registers a trademark or copyright on the materials, IT-143R3 (*Meaning of Eligible Capital Expenditure*) specifies, “*The costs of obtaining a trademark registration to protect a[n internally developed] trade name, design or product are allowable as deductions in computing income. This includes the designing, legal and registration costs, and also any payment made to some other person to refrain from contesting the registration.*” Therefore, I recommend expensing these costs regardless.

All research expenditures of a current nature (i.e., not a capital asset) may be deducted in the year incurred. These costs pass the general test of deductibility as per Income Tax Act section 18(1)(a) because they are expenses “*made or incurred by the taxpayer for the purpose of gaining or producing income from the business or property*” (in this case, the business). These costs were incurred to help ESL obtain income from the online courses, so they should be considered deductible in the current year.

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

**Not Addressed** – The candidate does not address this indicator.

**Nominal Competence** – The candidate does not meet the standards of reaching competence.

**Reaching Competence** – The candidate recognizes the tax treatment of the online IT platform or online course content development costs by explaining the treatment of either the capital or income portion OR recognizing that there are two portions, but does not explain the treatment clearly.

**Competent** – The candidate explains the tax treatment of the online IT platform and online course content development costs, recognizing the different treatments for the capital and income portions.

**Competent with Distinction** – The candidate explains in depth the tax treatment of the online IT platform and online course content development costs, both the capital and income portions.

*A competent candidate would recognize the tax treatment for online course development costs and the related IT platform development costs.*



**Day 3-3 Case****(Suggested time 80 minutes)**

Katwill Lodge Inc. (Katwill) is a 220-bed retirement home located in Ottawa, Ontario. It was founded in January 2005 by Katwill's sole owner, Carrie, whose vision was to create a retirement community that would allow residents to live a calm, quiet lifestyle in a comfortable environment. Carrie is no longer involved in the day-to-day operations of Katwill.

Historically, Katwill has operated at approximately 85% capacity. However, the closing of a company that owned several retirement homes in Ottawa caused a sudden shortage of such facilities. As a result, Katwill was at 100% capacity by July 2015 and now has a long waiting list. No additional administrative staff have been hired and the existing staff have been working hard to keep up with the growth and added volume.

Today is September 1, 2015. You, CPA, have just been hired for the newly-created position of controller of Katwill. You meet with Kurt, the general manager.

Kurt: Hi, CPA. Welcome!

CPA: Thank you. Can you tell me what has been going on?

Kurt: For starters, we have been struggling to make ends meet lately. Our operating licence, since we started, has limited the amount we can charge each resident to \$25,000 per year. The City of Ottawa funds us an additional \$5,000 per resident per year, which has seemed reasonable until now. Now that we have reached full occupancy, we should be doing financially better than previously, but we are still struggling. Can you look at our budgeted financial information (Appendix I) and help me figure out if we are covering our costs for each resident knowing the occupancy rate changed from 85% to 100% on July 1, 2015? Can you also suggest some improvements we might make to improve our profitability?

Also, I have been talking to the general managers at other retirement homes. A few of them have been assessed penalties from the Canada Revenue Agency for not making payroll remittances for their dietitians. This worries me because that would be one more expense, and we are tight on cash. I don't understand the need for remittances if the dietitians are considered self-employed contractors. Can you enlighten me? I have provided our particular information in Appendix II.

CPA: I can look into those issues for you.

Kurt: I am contemplating building a new wing, which would increase our capacity by 40 beds. This wing will be very different from the rest of the lodge, as it will cater to seniors who are more physically and socially active. There will be rooms for exercise classes and late night dancing, among other things. Because no nursing services will be offered in that wing, the \$25,000 restriction on charging residents won't apply. The city has agreed to continue to provide us with \$5,000 per resident per year. There are two options available to finance the expansion (Appendix III). I haven't shared my expansion idea with Carrie, as I want to propose the financing at the same time. However, I don't see any reason why she would not accept my proposal, as it will make us more money. I'm just not sure if it is consistent with her vision.

In order to start moving residents in by the beginning of 2017, construction would have to start by early 2016. Can you let me know your thoughts on the two available financing options, from both a quantitative and qualitative perspective?

Finally, if you see any improvements that can be made to our financial processes, please let me know (Appendix IV). It has been crazy lately with all the extra residents, so things are a bit chaotic. Feel free to comment on any additional issues that you note.

## APPENDIX I

### SELECTED 2015 BUDGETED FINANCIAL INFORMATION

Historically, the actuals are quite close to budgets. Excerpts from the 2015 budget (created January 1, 2015, based on 85% occupancy) are as follows. The 2015 budget reflects a 2% increase in costs over the 2014 actuals in line with inflation.

#### Health professional staff

Health professionals are full-time and are paid the following average annual salaries (including any benefits):

Nurses	\$ 75,000
Dietitians	\$ 60,000
Therapists	\$ 85,000

To provide adequate care, we require three nurses, one dietitian and one therapist for every 20 residents.

#### Other staff

The estimated total salaries expense for other staff is as follows:

Cleaning and maintenance	\$ 514,000
Chefs	\$ 165,000
Administrative	\$ 248,000

All cleaning and maintenance staff, and all chefs, are part-time employees. All administrative staff are full-time employees.

#### Other costs

Non-salary costs are budgeted as follows:

Cleaning, laundry and linen	\$ 108,000
Food and beverages	\$ 348,000
Office expenses	\$ 71,000
Recreational activities	\$ 199,000
Utilities	\$ 375,000

## **APPENDIX II INFORMATION ON DIETITIANS**

Katwill has contracts with dietitians that guarantee them 40 hours of work per week. Each week, dietitians provide Katwill with their preferred 40-hour working schedule. Katwill staff then schedule the residents' dietitian visits, to ensure that the dietitians have as full a schedule as possible. Even if it is not a full week, however, the dietitians are paid for 40 hours, as they have to show up and the scheduling is not within their control. If they work extra hours, dietitians are not paid extra.

Most dietitians provide their own pamphlets and bring their own computer to log the residents' information and progress. Katwill asks that the dietitians provide a monthly progress report on the residents. Depending on the dietitian who prepares it, the reports can look quite different.

Some dietitians bring young assistants with them to help with the documentation or to be trained. If the assistants are paid, it is by the dietitians themselves, and not by Katwill.

### **APPENDIX III**

#### **FINANCING OPTIONS FOR EXPANSION**

To proceed with the expansion, Katwill requires \$1.5 million in financing.

##### **Option 1**

The bank will provide the financing, with repayment of \$10,000 per month over 25 years. The bank requires that Katwill's building be used as collateral for the loan and that Carrie provide a personal guarantee. Ten percent principal prepayment per year (above the normal repayment schedule) is allowed without penalty.

The bank requires that unaudited financial statements, prepared following accounting standards for private enterprises (ASPE), be submitted on a yearly basis.

##### **Option 2**

A private investor is willing to provide the financing. Repayment terms are payments equal to 25% of operating cash flows per year for 30 years, after which no more payments are required. Katwill has forecasted its 2016 operating cash flow to be \$266,000. Kurt thinks this is a great deal because if the cash flow remains the same in the future, the total payment will be a lot less. At the end of the 20<sup>th</sup> year, the private investor has the option to convert the remaining principal amount to 15% of the total number of shares of Katwill.

## **APPENDIX IV FINANCIAL PROCESSES AT KATWILL**

### **Accounting records**

There is only one accounting clerk, Susan, who manages all aspects of the accounting system, from processing invoices from suppliers to generating invoices for residents. To prevent other staff from changing the accounting records, no one else has access to the accounting system.

### **Revenues**

When a new resident joins Katwill, they are required to provide post-dated cheques for their fees for the first three months. After that time, cheques can be received on a monthly basis. Susan spends much of her time chasing after residents for cheques, as they tend to forget to pay. Susan deposits cheques on a monthly basis.

### **Purchases**

To purchase goods or services, staff members submit a request to Susan. Everyone knows exactly what they need, so Susan knows that she can just go ahead and order the items. To keep track of items ordered, Susan gets the person who made the request to sign a requisition form. Once a staff member lets her know that the item has arrived, Susan throws the requisition form away.

Fortunately, all cheques require only one signature. Kurt and Susan both have signing authority but, because Kurt is so busy, Susan signs most of the cheques that go out. However, Kurt signs cheques over \$500,000.

**MARKING GUIDE 3-3**  
**KATWILL LODGE**  
**ASSESSMENT OPPORTUNITIES**

To: Kurt  
 From: CPA  
 Subject: Katwill Lodge financial analysis

Please find attached my analysis of the items you have requested.

Regards,  
 CPA

**Assessment Opportunity #1 (Depth Opportunity)**

The candidate provides quantitative analysis of Katwill's financial situation.

*The candidate demonstrates competence in Management Accounting.*

**CPA Map Competencies:**

3.2.1 – *Develops or evaluates information inputs for operational plans, budgets, and forecasts (Core – Level A)*

3.2.2 – *Prepares, analyzes, or evaluates operational plans, budgets, and forecasts (Core – Level A)*

Katwill has been struggling to make ends meet lately. In order to assess the current situation, I have prepared a cost per resident analysis. I have used the budgeted figures as the basis for the calculation for the first six months of 2015, given that the budget was created at the beginning of the year, thus for approximately 85% capacity, and our budgets tend to be close to actuals. For the last six months of 2015, I have adjusted the budgeted costs based on whether the costs are likely to fluctuate with an increased number of residents. My calculation is as follows:

	<b>First 6 Months of 2015</b>	<b>Last 6 Months of 2015</b>	<b>Note</b>
# of residents	187	220	1
Salaries and benefits:			
Nurses, dietitians, and therapists	\$1,850,000	\$2,035,000	2
Cleaning and maintenance staff	257,000	302,353	3
Chefs	82,500	97,059	4
Administrative	124,000	124,000	5
Cleaning, laundry, and linen	54,000	63,529	6
Food and beverages	174,000	204,706	7
Office expenses	35,500	35,500	8
Recreational activities	99,500	117,059	9
Utilities	187,500	187,500	10
Total cost	2,864,000	3,166,706	
Cost per resident for 6 months	15,315.51	14,394.12	
Cost per resident for 12 months	30,631.02	28,788.24	

**Notes:**

- First six months of 2015:  $85\% \text{ capacity} \times 220 \text{ beds} = 187$   
Last six months of 2015:  $100\% \text{ capacity} \times 220 \text{ beds} = 220$
- First six months of 2015:  
 $187 \text{ residents} \div 20 \text{ residents} = 10 \text{ groups of medical professionals needed (rounded up)}$   
 $10 \text{ groups} \times (3 \text{ nurses @ } \$75,000 + 1 \text{ dietitian @ } \$60,000 + 1 \text{ therapist @ } \$80,000) \times \frac{1}{2} \text{ year} = \$1,850,000$   
  
Last six months of 2015:  
 $220 \text{ residents} \div 20 \text{ residents} = 11 \text{ groups of medical professionals needed}$   
 $11 \text{ groups} \times (3 \text{ nurses @ } \$75,000 + 1 \text{ dietitian @ } \$60,000 + 1 \text{ therapist @ } \$80,000) \times \frac{1}{2} \text{ year} = \$2,035,000$
- Cleaning and maintenance staff are part-time and, therefore, can be hired for more hours based on need:  
First six months of 2015:  $\$514,000 \times \frac{1}{2} \text{ year} = \$257,000$   
Last six months of 2015:  $\$257,000 \div 187 \times 220 = \$302,353$
- Chefs are part-time and, therefore, can be hired for more hours based on need:  
First six months of 2015:  $\$165,000 \times \frac{1}{2} \text{ year} = \$82,500$   
Last six months of 2015:  $\$82,500 \div 187 \times 220 = \$97,059$
- Administrative staff are full-time, so even with additional work due to an increase in residents, their salaries would not increase:  
First six months of 2015:  $\$248,000 \times \frac{1}{2} \text{ year} = \$124,000$   
Last six months of 2015:  $\$248,000 \times \frac{1}{2} \text{ year} = \$124,000$



6. Assume cleaning, laundry, and linen costs are proportional to the number of residents:  
First six months of 2015:  $\$108,000 \times \frac{1}{2} \text{ year} = \$54,000$   
Last six months of 2015:  $\$54,000 \div 187 \times 220 = \$63,529$
7. Assume the cost of food and beverages is proportional to the number of residents:  
First six months of 2015:  $\$348,000 \times \frac{1}{2} \text{ year} = \$174,000$   
Last six months of 2015:  $\$174,000 \div 187 \times 220 = \$204,706$
8. Office expenses would be unlikely to increase significantly due to an increase in residents:  
First six months of 2015:  $\$71,000 \times \frac{1}{2} \text{ year} = \$35,500$   
Last six months of 2015:  $\$71,000 \times \frac{1}{2} \text{ year} = \$35,500$
9. Assume the cost of recreational activities is proportional to the number of residents:  
First six months of 2015:  $\$199,000 \times \frac{1}{2} \text{ year} = \$99,500$   
Last six months of 2015:  $\$99,500 \div 187 \times 220 = \$117,059$
10. Utilities would be unlikely to increase significantly due to an increase in residents since the square footage of the lodge has not increased:  
First six months of 2015:  $\$375,000 \times \frac{1}{2} \text{ year} = \$187,500$   
Last six months of 2015:  $\$375,000 \times \frac{1}{2} \text{ year} = \$187,500$

As can be seen from this calculation, the cost per resident for the current year is \$30,631 when Katwill is at 85% capacity and \$28,788 when Katwill is at 100% capacity.

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

**Not Addressed** – The candidate does not address this indicator.

**Nominal Competence** – The candidate does not meet the standards of reaching competence.

**Reaching Competence** – The candidate attempts to calculate cost with the budgeted information provided.

**Competent** – The candidate calculates a reasonable cost with the budgeted information provided, adjusting the calculation for the increase in occupancy rate.

**Competent with Distinction** – The candidate calculates in accurate detail the cost with the budgeted information provided, adjusting the calculation for the increase in occupancy rate.

*A competent candidate would perform a calculation to determine the costs per resident at 100% occupancy (220 beds), recognizing that the costs for health professionals would vary with the number of beds (i.e., a variable cost). A stronger candidate would also evaluate each of the other costs provided in the case and discuss whether they are fixed or variable costs.*

**Assessment Opportunity #2 (Depth Opportunity)**

The candidate discusses the cost relative to the revenue amounts.

*The candidate demonstrates competence in Management Accounting.*

**CPA Map Competencies:**

3.2.1 – Develops or evaluates information inputs for operational plans, budgets, and forecasts (Core – Level A)

3.2.2 – Prepares, analyzes, or evaluates operational plans, budgets, and forecasts (Core – Level A)

The revenue per resident is \$30,000 per year (\$25,000 resident fee + \$5,000 subsidy from the city). Therefore, Katwill is incurring more costs than revenue this year, per resident, at its 85% occupancy. The situation improves a bit when it is at 100% occupancy. This is due to the fact that the fixed costs of the retirement home are spread across a larger number of residents, thus decreasing the cost per resident. The issue appears to be the fact that revenue has not grown and yet inflation, the increase in the cost of living, would have resulted in increased costs. This year appears to be the breaking point, moving Katniss from small profits or break-even to a loss position at 85% occupancy.

We have not accounted for any capital expenditures in the analysis, so Katwill is likely incurring a loss per resident, even at 100% occupancy, when taking those into account.

**Possible Solutions**

To address the issue, Katwill will need to either increase its revenue per resident or decrease its cost per resident. We should consider approaching the city to see if they will increase the limit we are allowed to charge our residents or increase their subsidy. The \$30,000 maximum total revenue per resident has not changed since Katwill opened in 2005. Assuming a 2% inflation rate, it can be argued that the limit should be increased to approximately \$36,570 ( $PV = \$25,000$ ,  $rate = 2\%$ ,  $periods = 10$ ). It would be very reasonable to ask for an increase in revenue (either the ability to charge residents more or a higher subsidy) to account for inflation.

Another option is to attempt to decrease expenses. A benchmarking exercise could be performed with other retirement homes in the city to see whether our expenses are comparable. This may allow us to highlight in which areas we are spending more money than required and attempt to cut back on those expenditures.

You might also consider renegotiating the agreements with the dietitians so that either their workloads or schedules are modified to generate some cost savings, since they, from time to time, are paid for hours during which they do not meet with residents.

As well, further in this report we recommend improvements to controls. Some of these might generate economies as a result of tighter controls on certain expenses.

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

**Not Addressed** – The candidate does not address this indicator.

**Nominal Competence** – The candidate does not meet the standards of reaching competence.

**Reaching Competence** – The candidate compares the cost with the revenue and attempts to explain the analysis OR provide recommendations on how to address the issue.

**Competent** – The candidate compares the cost with the revenue and appropriately explains the analysis OR provides recommendations on how to address the issue.

**Competent with Distinction** – The candidate compares the cost with the revenue, appropriately explains the analysis, and provides recommendations on how to address the issue.

*Since Kurt specifically wondered why the increase in occupancy was not helping the situation, the competent candidate should compare the cost figure to revenue and recognize that revenue is not covering the costs, ideally on a per-resident basis. Alternatively, candidates may make suggestions to improve the situation rather than analyze the reason for the shortfall. Stronger candidates would explain why the situation has not improved much in spite of reaching 100% occupancy and would suggest ways to address the issue.*

### **Assessment Opportunity #3 (Breadth Opportunity)**

The candidate addresses the question of whether the dietitians hired by Katwill are contractors or employees.

*The candidate demonstrates competence in Taxation.*

### **CPA Map Competencies:**

**6.2.1 – Assesses general tax issues for an individual (Core – Level B)**

You have asked why the other retirement homes in the city have been assessed by Canada Revenue Agency (CRA) for penalties associated with payroll remittances for their dietitians. It is likely that the retirement homes considered these individuals self-employed contractors but that the CRA assessed them as employees instead.

In assessing the employment status of an individual, the CRA generally considers the following factors:

- Control – CRA considers the degree of control held by the payer. Control is the ability, authority, or right of a payer to exercise control over a worker concerning the manner in which the work is done and what work will be done. The dietitians have some degree of control. They are the ones who determine what hours they are available to work within the week, and Katwill then schedules residents according to the dietitians' available hours. On the other hand, the dietitians do not have control over which residents they see. Katwill dictates what needs to be delivered (i.e., a monthly progress report), although the format and content of the report can be controlled by the dietitian. Conclusion: There are arguments in favour of both an employee relationship and a contractor relationship.
- Tools and equipment – CRA considers whether the worker owns and provides tools and equipment to accomplish the work. In this case, dietitians provide all necessary tools, including their own computers and pamphlets. Conclusion: This item supports the dietitians being independent contractors.
- Subcontracting work or hiring assistants – CRA considers whether the worker can subcontract work or hire assistants. Dietitians are able to hire assistants whenever they want, as required. Conclusion: This item supports the dietitians being independent contractors.
- Financial risk – CRA considers the degree that financial risk is taken by the worker. Dietitians have some degree of financial risk, since they are the ones who pay their assistants. However, on the whole, it appears the financial risk lies with Katwill, since the dietitians are guaranteed a 40-hour work schedule per week, regardless of the amount of work they actually provide and despite the fact that sometimes dietitians work overtime and are not paid for it. Conclusion: This item supports the dietitians being employees of Katwill.
- Responsibility for investment and management – CRA considers the degree of responsibility for investment and management held by the worker. Dietitians do not have to provide any initial investment to provide their service. Conclusion: This item supports the dietitians being employees of Katwill.
- Opportunity for profit – CRA considers whether the worker can realize a profit or incur a loss. Typically, workers bear the risk of profit or loss if they accept a flat rate for services provided. This does not appear to be the case because Katwill guarantees a certain number of hours but does not reduce a dietitian's payment if the dietitian works less due to scheduling. Thus, Katwill bears the majority of the risk for profit and loss. Conclusion: This item supports the dietitians being employees of Katwill.

The factors to be considered in determining whether the dietitians are considered self-employed contractors or employees are not conclusive. The arguments support either position. The intention of both parties when entering the contract may also be taken into consideration. I would recommend that you reach out to the general managers of the other retirement homes to see whether the arrangements with their dietitians are similar to Katwill's. If so, we may be at risk of being assessed penalties for not remitting payroll remittances to the CRA. We may want to consider starting to pay the remittances on behalf of the dietitians to avoid further penalties. Conversely, we may want to consider consulting a professional accounting firm, should the CRA begin an assessment, or ask for a preliminary ruling from the CRA.

It is also possible that, as the new controller, CPA could adjust some of the contract terms noted here to ensure that the dietitians meet the definition of either employee or contractor, as deemed most advantageous for Katwill.

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

**Not Addressed** – The candidate does not address this indicator.

**Nominal Competence** – The candidate does not meet the standards of reaching competence.

**Reaching Competence** – The candidate discusses some of the factors that would be considered by the CRA in assessing whether the dietitians are self-employed contractors or employees.

**Competent** – The candidate discusses several of the factors that would be considered by the CRA in assessing whether the dietitians are self-employed contractors or employees, and attempts to conclude based on analysis.

**Competent with Distinction** – The candidate discusses most of the factors that would be considered by the CRA in assessing whether the dietitians are self-employed contractors or employees, concludes based on analysis, and provides recommendations for next steps.

*A competent candidate is expected to consider several of the factors CRA would use in determining whether a worker is a self-employed contractor or an employee. They should also recognize that there are arguments supporting both positions and conclude on which they believe is supported the strongest by the case facts (candidates may conclude either way). Stronger candidates would conclude in a manner that is consistent with their analysis and provide some suggestions for next steps (e.g., contact CRA or ensure certain steps are taken to support the employee position).*

#### **Assessment Opportunity #4 (Breadth Opportunity)**

The candidate analyzes the quantitative aspects of the financing options for the expansion.

*The candidate demonstrates competence in Finance.*

#### **CPA Map Competencies:**

5.2.1 – Evaluates the entity's cash flow and working capital (Core – Level A)

5.2.3 – Evaluates sources of financing (Core – Level B)

We have been offered two options for financing the expansion. We should consider both the quantitative and qualitative factors before choosing the financing option that will best fit our needs.

## Quantitative Analysis

The best way to assess the cost of a loan to Katwill is to calculate the implied interest rate of the loan.

With Option 1, the implied interest rate of the loan is 6.36% yearly, considering the loan of \$1.5 million, monthly payments of \$10,000, and repayment period of 25 years.

With Option 2, the implied interest rate of the loan is 1.96% yearly, considering the loan of \$1.5 million, yearly payments of \$66,500 ( $\$266,000 \times 25\%$ ), and repayment period of 30 years. However, this calculation is based on the projected cash flows for 2016 only. Given that a new expansion is planned and additional profit is expected starting in 2017, the cost of the loan increases significantly if the expansion is considered. For example, assuming yearly operating cash flow is proportional to the increase in the number of residents (i.e.,  $\$266,000 \div 220 \text{ residents} \times 260 \text{ residents} = \$314,363$  operating cash flow in 2017), then yearly payments against the loan would be \$78,591 ( $\$314,363 \times 25\%$ ). This causes the implied interest rate of the loan to be 3.21%.

As can be seen from these calculations, even considering the expansion, the implied interest rate on Option 2 is significantly less than on Option 1. Thus, from a strictly financial perspective, Option 2 is more attractive.

However, we should be aware that the calculation assumes all residents are charged the \$25,000 rate. If we can convince the city to allow us to charge more per resident, or if we choose to charge more to the residents who will live in the expanded wing, it will make Option 2 more costly. This is also the case if we are able to reduce operating expenses for Katwill in the coming years or plan on expanding further.

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

**Not Addressed** – The candidate does not address this indicator.

**Nominal Competence** – The candidate does not meet the standards of reaching competence.

**Reaching Competence** – The candidate attempts a reasonable quantitative analysis of the financing options.

**Competent** – The candidate provides a reasonable quantitative analysis of the financing options.

**Competent with Distinction** – The candidate provides a thorough quantitative analysis of the financing options.

*A competent candidate is expected to calculate the “cost” (i.e., implied interest rate or some other method) of each loan option. At a minimum, candidates must demonstrate some understanding of the time value of money when comparing the two options. Stronger candidates would do a correct calculation for each option and ideally recognize that the cost of Option 2 would change based on the potential expansion or other factors (e.g., increase in city revenue limit or decrease in costs).*

**Assessment Opportunity #5 (Breadth Opportunity)**

The candidate analyzes the qualitative aspects of the financing options for the expansion.

*The candidate demonstrates competence in Finance.*

**CPA Map Competencies:**

5.2.1 – Evaluates the entity's cash flow and working capital (Core – Level A)

5.2.3 – Evaluates sources of financing (Core – Level B)

**Qualitative Analysis**

Option 1 is a standard bank loan, but it has some restrictive terms as part of the offer. While having the building as collateral for the loan is fairly standard, the bank also requires a personal guarantee from Carrie. This is risky because it also puts Carrie's personal assets at risk if Katwill is unable to make its loan payments. In addition, the bank requires that, on a yearly basis, financial statements be submitted that are compliant with accounting standards for private enterprises. This imposes an additional administrative cost on Katwill that may not have existed before. However, there is also a positive term in the loan offer, since Katwill is able to prepay 10% of the loan per year without penalty. If Katwill has excess cash throughout the duration of the loan, it can exercise this option to prepay, which can result in significant interest savings.

On the other hand, Option 2 offers some interesting terms. The loan is considered repaid after 30 years, regardless of what the actual payments are during that period. Therefore, it could be advantageous to Katwill if cash flow from operations were less than anticipated. However, that is unlikely, given that Katwill appears to have had steady capacity and is looking to expand. In addition, the private investor is able to convert its loan after 20 years into 15% of Katwill's shares. Although Carrie will still have control of the company if this happens, 15% is a fairly significant portion of the company. The value of the business at that time may be significantly more than what the loan is worth at that point, which increases risk for Katwill.

Furthermore, Option 2 is inherently more risky than Option 1. While there is significant advantage to Katwill if it performs worse than expected over the next 30 years, there will be a significant cost to Katwill if it performs better than expected, due to payments being dependent on cash flow from operations.

**Recommendation**

Based on this analysis, I recommend that Katwill take Option 1, despite it having a higher implied interest rate. The terms of Option 2 are too risky for Katwill and Carrie personally to take on. This will also ensure that if Katwill's expansion performs better than expected, the gains go to Katwill and not to repaying the loan.

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

**Not Addressed** – The candidate does not address this indicator.

**Nominal Competence** – The candidate does not meet the standards of reaching competence.

**Reaching Competence** – The candidate attempts a reasonable qualitative analysis of the financing options.

**Competent** – The candidate provides a reasonable qualitative analysis of the financing options and makes a recommendation.

**Competent with Distinction** – The candidate provides a thorough qualitative analysis of the financing options and makes a recommendation.

*A competent candidate is expected to discuss some of the qualitative considerations of each option. The candidate is also expected to recommend one of the options to Kurt (the recommendation must be consistent with the analysis). The analysis should take into account some of the key differences that affect risk. Stronger candidates would analyze more qualitative factors or may go deeper in their analysis (e.g., recognizing that 2016 and 2017 represent very different years for Katwill and, therefore, different payments for Option 2).*

#### **Assessment Opportunity #6 (Breadth Opportunity)**

The candidate discusses the internal control weaknesses related to Katwill's financial processes.

*The candidate demonstrates competence in Audit and Assurance.*

#### **CPA Map Competencies:**

**4.1.1 – Assesses the entity's risk assessment processes (Core – Level A)**

You have asked me to assess whether any improvements can be made to the financial processes at Katwill. I have noted several areas of internal control weaknesses, as follows:

#### **1. Lack of segregation of duties**

**Weakness:** Tasks are not currently appropriately segregated. Susan has access to the physical asset (blank cheques and cheques received from residents), record-keeping (the accounting system), and reconciliation (she creates the financial reports).

**Implication:** This provides an opportunity for Susan to perpetrate fraud. Susan can write a cheque to herself (or deposit a cheque from a resident to her own account) and cover up her tracks by manipulating the accounting system or the financial reports.

**Recommendation:** The access to assets, record-keeping, and reconciliation functions should be segregated. For example, Kurt could receive all the cheques from the residents and only provide Susan with a listing of cheques to be recorded.



## 2. Cheque signatories

**Weakness:** All cheques require only one signature, and only cheques over \$500,000 are required to be signed by Kurt.

**Implication:** Anyone who gains access to blank cheques is able to write themselves a cheque without someone else seeing it. This creates an environment in which cash can easily be stolen. In addition, the threshold for which Kurt needs to see a cheque seems high. Aside from salaries, all expenditures are under \$500,000 for the entire year. Cheque-signing limits are intended for the cheque signer to ensure significant expenditures are appropriate. A limit that is set too high is not useful in achieving that purpose.

**Recommendation:** All cheques should require two signatures. In addition, if a limit is to be set whereby all cheques over a certain amount should be seen by someone else (e.g., Carrie), the limit should be lowered to a more reasonable amount, perhaps \$50,000.

## 3. Resident payments and deposits

**Weakness:** Susan spends a significant amount of time chasing residents for cheques, and she deposits them only once a month.

**Implication:** Timely receipt of revenue and frequent deposits are essential to ensure adequate cash flow in a company. It is also not a good use of Susan's time to constantly chase residents for their payments.

**Recommendation:** Katwill should consider the use of automatic payments, via either residents' bank accounts or their credit cards. This will ensure that payments are timely. At a minimum, post-dated cheques should be collected for the entire year, not just the first three months. In addition, deposits of cheques that are received should be done more frequently, such as twice a week. This will ensure that Katwill has access to any payments on a regular basis. It will also likely have the added benefit of reducing bad debt.

## 4. Approval of purchases

**Weakness:** No approval appears to be required before items are purchased. Staff members are free to order any supplies they wish.

**Implication:** Employees may order items that are not required or at prices that are higher than acceptable.

**Recommendation:** All purchases should be initiated by an employee and approved by another employee (typically a manager) in Katwill before the order can be made.

## 5. Matching of invoices to purchase requisitions and delivery slips

**Weakness:** Susan obtains purchase requisition forms from the original purchaser but throws them out once she gets confirmation the goods have been delivered.

**Implication:** Susan may end up paying an invoice for items she has not received or ordered, since there is no tracking subsequent to receipt of the goods.

**Recommendation:** Susan should ensure that, for each invoice she pays, she matches it to the purchase requisition and, if available, the delivery slip or confirmation of good having been received. This will ensure all expenses paid are legitimate.

## 6. Backup of staff

**Weakness:** Susan is the only person who appears to be involved in the main financial processes at Katwill.

**Implication:** If Susan were to take a vacation or a sick day, there is no one available who is aware of the tasks she is performing.

**Recommendation:** One of the other administrative staff should be trained to be Susan's backup. This will also allow for better segregation of duties as discussed above.

The lack of internal controls could be a contributing factor in the poor financial condition of Katwill. There is also the risk of fraud due to the poor internal controls.

It should be noted that, as the new controller, I could and should assist with rectifying all of these weaknesses. For example, I could help with the segregation of duties issues I've noted here because I could perform some of the duties I've listed to enhance the segregation.

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

**Not Addressed** – The candidate does not address this indicator.

**Nominal Competence** – The candidate does not meet the standards of reaching competence.

**Reaching Competence** – The candidate discusses some of the internal control weaknesses related to Katwill's financial processes and provides valid recommendations to address them.

**Competent** – The candidate discusses several of the internal control weaknesses related to Katwill's financial processes and provides valid recommendations to address them.

**Competent with Distinction** – The candidate discusses most of the internal control weaknesses related to Katwill's financial processes and provides valid recommendations to address them.

*A competent candidate is expected to discuss several of the internal control weaknesses related to Katwill's financial processes and provide valid recommendations to address them. It is important that the recommended control actually address the weakness identified (i.e., be an appropriate control). Stronger candidates may go into more depth on the internal control discussions or address more of the internal control weaknesses.*

### Assessment Opportunity #7 (Breadth Opportunity)

The candidate recognizes that the planned expansion is not necessarily in line with Carrie's vision and that the timing may need to be revisited, given Katwill is struggling with operating in the current environment.

*The candidate demonstrates competence in Strategy and Governance.*

**CPA Map Competencies:**

*2.2.1 – Assesses whether management decisions align with the entity’s mission, vision, and values (Level B)*

*2.3.2 – Evaluates the entity’s internal and external environment and its impact on strategy development (Level B)*

*2.3.3 – Evaluates strategic alternatives (Level B)*

**Potential Expansion**

Kurt’s proposed expansion of the lodge is not necessarily in line with Carrie’s vision of creating a retirement community that allows residents to live a calm, quiet lifestyle. There are elements in the proposed expansion that may not fit with this vision, such as the inclusion of a room for late-night dancing. In addition, Kurt commented that the expansion “will be very different than the rest of the lodge,” which again is an indication that it may not be a good fit with Katwill.

**Current Situation**

In addition, Katwill appears to be struggling with operating in the current environment. Katwill is currently struggling with several items:

- The increase in number of residents – This has had a pervasive impact on the operations. Many of the activities at Katwill will require additional staffing resources proportionate to the increase in number of residents. Currently, it does not appear that any additional staff have been hired to deal with the increase in volume (with the exception of me). This has led to staff having to work harder and may result in reduced quality of service being offered.
- Insufficient revenue to cover expenses – Katwill will not be able to sustain its current operations for much longer, given the fact that its current revenue likely does not cover its expenditures (operating and capital). The financial situation needs to be rectified in the near future in order to ensure the future success of Katwill.
- Lack of internal controls within the financial processes – There are currently many internal control weaknesses surrounding Katwill’s financial processes. Not only should these be corrected, this is an indication that perhaps there are other operational internal control weaknesses that have not yet been identified. A general lack of internal controls provides the opportunity for fraud and may create inefficiencies that lead to increased costs to the company.

**Recommendation on Potential Expansion**

A discussion should be had with Carrie to determine whether the proposed expansion fits in with her vision of the lodge before proceeding any further. While Carrie’s vision of the lodge may have changed since she started the company 10 years ago, it is important for us to understand if this is the case.

If Carrie is okay with the potential expansion, given the items I’ve noted in this report that should be addressed in the near future, Katwill should reconsider the timing of the potential expansion. On the one hand, the expansion is not slated to be completed until 2017, and by that time many of the issues discussed should have been addressed. On the other hand, an expansion requires a significant amount of resources that Katwill may not be able to commit to. In addition, it will put Katwill in a position in which it is highly leveraged and this at a time that might not be the appropriate for it to take on additional debt. I recommend that Katwill delay the expansion project, even if it is only for several months, until the company is more stable.

### Other Recommendations

Katwill should focus its efforts on addressing the noted issues. As discussed previously, Katwill should start negotiations immediately with the city to determine whether revenue (the grant or the fee limit) can be increased. Should this be possible, it will provide resources to Katwill to address some of the other issues that are present.

Katwill should consider adding more staff. If the budget does not allow for the hiring of more employees, Katwill should consider soliciting volunteers for some of the activities, such as running the recreational aspects of the lodge or simpler kitchen activities such as dishwashing.

In addition, I can spend some time assessing the other business processes we have at Katwill to determine whether there are other significant internal control weaknesses that need to be addressed.

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

**Not Addressed** – The candidate does not address this indicator.

**Nominal Competence** – The candidate does not meet the standards of reaching competence.

**Reaching Competence** – The candidate identifies the fact that the proposed expansion is not in line with Carrie's vision.

**Competent** – The candidate discusses the fact that the proposed expansion is not in line with Carrie's vision OR recognizes that the timing may need to be revisited, given Katwill is struggling with operating in the current environment.

**Competent with Distinction** – The candidate discusses the fact that the proposed expansion is not in line with Carrie's vision, recognizes that the timing may need to be revisited given Katwill is struggling with operating in the current environment, and provides some valid recommendations to address the current situation.

*A competent candidate should recognize that the proposed expansion is not in line with Carrie's vision and explain why. Stronger candidates would suggest that the operational issues require attention before expanding or that the expansion would worsen the cash flow situation. Stronger candidates may also provide additional recommendations to address the current situation (e.g., hire more staff).*

**APPENDIX E**

**CPA COMMON FINAL EXAMINATION REFERENCE SCHEDULE**

**REFERENCE SCHEDULE****1. PRESENT VALUE OF TAX SHIELD FOR AMORTIZABLE ASSETS**

Present Value of Total Tax Shield from CCA for a New Asset

$$= \frac{CTd}{(d+k)} \left( \frac{2+k}{2(1+k)} \right) = \frac{CdT}{(d+k)} \left( \frac{1+0.5k}{1+k} \right)$$

**Notation for above formula:**

C = net initial investment

T = corporate tax rate

k = discount rate or time value of money

d = maximum rate of capital cost allowance

**2. SELECTED PRESCRIBED AUTOMOBILE AMOUNTS**

	<b>2014</b>	<b>2015</b>
Maximum depreciable cost — Class 10.1	\$30,000 + sales tax	\$30,000 + sales tax
Maximum monthly deductible lease cost	\$800 + sales tax	\$800 + sales tax
Maximum monthly deductible interest cost	\$300	\$300
Operating cost benefit — employee	27¢ per km of personal use	27¢ per km of personal use
Non-taxable automobile allowance rates		
— first 5,000 kilometres	54¢ per km	55¢ per km
— balance	48¢ per km	49¢ per km

**3. INDIVIDUAL FEDERAL INCOME TAX RATES****For 2014**

<u>If taxable income is between</u>	<u>Tax on base amount</u>	<u>Tax on excess</u>
\$0 and \$43,953	\$0	15%
\$43,954 and \$87,907	\$6,593	22%
\$87,908 and \$136,270	\$16,263	26%
\$136,271 and any amount	\$28,837	29%

**For 2015**

<u>If taxable income is between</u>	<u>Tax on base amount</u>	<u>Tax on excess</u>
\$0 and \$44,701	\$0	15%
\$44,702 and \$89,401	\$6,705	22%
\$89,402 and \$138,586	\$16,539	26%
\$138,587 and any amount	\$29,327	29%

**4. SELECTED INDEXED AMOUNTS FOR PURPOSES OF COMPUTING INCOME TAX**

Personal tax credits are a maximum of 15% of the following amounts:

	<b>2014</b>	<b>2015</b>
Basic personal amount	\$11,138	\$11,327
Spouse, common-law partner, or eligible dependant amount	11,138	11,327
Amount for children under 18	2,255	N/A
Age amount if 65 or over in the year	6,916	7,033
Net income threshold for age amount	34,873	35,466
Canada employment amount	1,127	1,146
Disability amount	7,766	7,899
Infirm dependants 18 & over	6,589	6,700
Net income threshold for infirm dependants 18 & over	6,607	6,720
Adoption expense credit	15,000	15,255

Other indexed amounts are as follows:

	<b>2014</b>	<b>2015</b>
Medical expense tax credit — 3% of net income ceiling	\$2,171	\$2,208
Annual TFSA dollar limit	5,500	5,500
RRSP dollar limit	24,270	24,930
Lifetime capital gains exemption	800,000	813,600

**5. PRESCRIBED INTEREST RATES (base rates)**

<u>Year</u>	<u>Jan. 1 – Mar. 31</u>	<u>Apr. 1 – June 30</u>	<u>July 1 – Sep. 30</u>	<u>Oct. 1 – Dec. 31</u>
2015	1	1	1	
2014	1	1	1	1
2013	1	1	1	2

This is the rate used for taxable benefits for employees and shareholders, low-interest loans, and other related-party transactions. The rate is 4 percentage points higher for late or deficient income tax payments and unremitted withholdings. The rate is 2 percentage points higher for tax refunds to taxpayers, with the exception of corporations, for which the base rate is used.

**6. MAXIMUM CAPITAL COST ALLOWANCE RATES FOR SELECTED CLASSES**

Class 1.....	4% for all buildings, except those below
Class 1.....	6% for new, non-residential buildings acquired after March 18, 2007
Class 1.....	10% for new, manufacturing and processing buildings acquired after March 18, 2007
Class 8.....	20%
Class 10.....	30%
Class 10.1.....	30%
Class 12.....	100%
Class 13.....	Original lease period plus one renewal period (minimum 5 years and maximum 40 years)
Class 14.....	Length of life of property
Class 17.....	8%
Class 29.....	50% straight-line
Class 43.....	30%
Class 44.....	25%
Class 45.....	45%
Class 50.....	55%



**PRESENT VALUE OF \$1 RECEIVED AT THE END OF THE PERIOD**

$$P = \frac{1}{(1+i)^n}$$

<i>Periods Hence</i>	2%	3%	4%	5%	6%	7%	8%	9%	10%	11%	12%	13%	14%	15%	16%	17%	18%	19%	20%
1	0.98	0.97	0.96	0.95	0.94	0.93	0.93	0.92	0.91	0.90	0.89	0.88	0.88	0.87	0.86	0.85	0.85	0.84	0.83
2	0.96	0.94	0.92	0.91	0.89	0.87	0.86	0.84	0.83	0.81	0.80	0.78	0.77	0.76	0.74	0.73	0.72	0.71	0.69
3	0.94	0.92	0.89	0.86	0.84	0.82	0.79	0.77	0.75	0.73	0.71	0.69	0.67	0.66	0.64	0.62	0.61	0.59	0.58
4	0.92	0.89	0.85	0.82	0.79	0.76	0.74	0.71	0.68	0.66	0.64	0.61	0.59	0.57	0.55	0.53	0.52	0.50	0.48
5	0.91	0.86	0.82	0.78	0.75	0.71	0.68	0.65	0.62	0.59	0.57	0.54	0.52	0.50	0.48	0.46	0.44	0.42	0.40
6	0.89	0.84	0.79	0.75	0.70	0.67	0.63	0.60	0.56	0.53	0.51	0.48	0.46	0.43	0.41	0.39	0.37	0.35	0.33
7	0.87	0.81	0.76	0.71	0.67	0.62	0.58	0.55	0.51	0.48	0.45	0.43	0.40	0.38	0.35	0.33	0.31	0.30	0.28
8	0.85	0.79	0.73	0.68	0.63	0.58	0.54	0.50	0.47	0.43	0.40	0.38	0.35	0.33	0.31	0.28	0.27	0.25	0.23
9	0.84	0.77	0.70	0.64	0.59	0.54	0.50	0.46	0.42	0.39	0.36	0.33	0.31	0.28	0.26	0.24	0.23	0.21	0.19
10	0.82	0.74	0.68	0.61	0.56	0.51	0.46	0.42	0.39	0.35	0.32	0.29	0.27	0.25	0.23	0.21	0.19	0.18	0.16
11	0.80	0.72	0.65	0.58	0.53	0.48	0.43	0.39	0.35	0.32	0.29	0.26	0.24	0.21	0.20	0.18	0.16	0.15	0.13
12	0.79	0.70	0.62	0.56	0.50	0.44	0.40	0.36	0.32	0.29	0.26	0.23	0.21	0.19	0.17	0.15	0.14	0.12	0.11
13	0.77	0.68	0.60	0.53	0.47	0.41	0.37	0.33	0.29	0.26	0.23	0.20	0.18	0.16	0.15	0.13	0.12	0.10	0.09
14	0.76	0.66	0.58	0.51	0.44	0.39	0.34	0.30	0.26	0.23	0.20	0.18	0.16	0.14	0.13	0.11	0.10	0.09	0.08
15	0.74	0.64	0.56	0.48	0.42	0.36	0.32	0.27	0.24	0.21	0.18	0.16	0.14	0.12	0.11	0.09	0.08	0.07	0.06
16	0.73	0.62	0.53	0.46	0.39	0.34	0.29	0.25	0.22	0.19	0.16	0.14	0.12	0.11	0.09	0.08	0.07	0.06	0.05
17	0.71	0.61	0.51	0.44	0.37	0.32	0.27	0.23	0.20	0.17	0.15	0.13	0.11	0.09	0.08	0.07	0.06	0.05	0.05
18	0.70	0.59	0.49	0.42	0.35	0.30	0.25	0.21	0.18	0.15	0.13	0.11	0.09	0.08	0.07	0.06	0.05	0.04	0.04
19	0.69	0.57	0.47	0.40	0.33	0.28	0.23	0.19	0.16	0.14	0.12	0.10	0.08	0.07	0.06	0.05	0.04	0.04	0.03
20	0.67	0.55	0.46	0.38	0.31	0.26	0.21	0.18	0.15	0.12	0.10	0.09	0.07	0.06	0.05	0.04	0.04	0.03	0.03
21	0.66	0.54	0.44	0.36	0.29	0.24	0.20	0.16	0.14	0.11	0.09	0.08	0.06	0.05	0.04	0.04	0.03	0.03	0.02
22	0.65	0.52	0.42	0.34	0.28	0.23	0.18	0.15	0.12	0.10	0.08	0.07	0.06	0.05	0.04	0.03	0.03	0.02	0.02
23	0.63	0.51	0.41	0.33	0.26	0.21	0.17	0.14	0.11	0.09	0.07	0.06	0.05	0.04	0.03	0.03	0.02	0.02	0.02
24	0.62	0.49	0.39	0.31	0.25	0.20	0.16	0.13	0.10	0.08	0.07	0.05	0.04	0.03	0.03	0.02	0.02	0.02	0.01
25	0.61	0.48	0.38	0.30	0.23	0.18	0.15	0.12	0.09	0.07	0.06	0.05	0.04	0.03	0.02	0.02	0.02	0.01	0.01

**TABLE I**

**PRESENT VALUE OF AN ANNUITY OF \$1 RECEIVED AT THE END OF EACH PERIOD**

$$P_n = \frac{1 - \left( \frac{1}{(1+i)^n} \right)}{i}$$

No. of Periods Received	2%	3%	4%	5%	6%	7%	8%	9%	10%	11%	12%	13%	14%	15%	16%	17%	18%	19%	20%
1	0.98	0.97	0.96	0.95	0.94	0.93	0.93	0.92	0.91	0.90	0.89	0.88	0.88	0.87	0.86	0.85	0.85	0.84	0.83
2	1.94	1.91	1.89	1.86	1.83	1.81	1.78	1.76	1.74	1.71	1.69	1.67	1.65	1.63	1.61	1.59	1.57	1.55	1.53
3	2.88	2.83	2.78	2.72	2.67	2.62	2.58	2.53	2.49	2.44	2.40	2.36	2.32	2.28	2.25	2.21	2.17	2.14	2.11
4	3.81	3.72	3.63	3.55	3.47	3.39	3.31	3.24	3.17	3.10	3.04	2.97	2.91	2.85	2.80	2.74	2.69	2.64	2.59
5	4.71	4.58	4.45	4.33	4.21	4.10	3.99	3.89	3.79	3.70	3.60	3.52	3.43	3.35	3.27	3.20	3.13	3.06	2.99
6	5.60	5.42	5.24	5.08	4.92	4.77	4.62	4.49	4.36	4.23	4.11	4.00	3.89	3.78	3.68	3.59	3.50	3.41	3.33
7	6.47	6.23	6.00	5.79	5.58	5.39	5.21	5.03	4.87	4.71	4.56	4.42	4.29	4.16	4.04	3.92	3.81	3.71	3.60
8	7.33	7.02	6.73	6.46	6.21	5.97	5.75	5.53	5.33	5.15	4.97	4.80	4.64	4.49	4.34	4.21	4.08	3.95	3.84
9	8.16	7.79	7.44	7.11	6.80	6.52	6.25	6.00	5.76	5.54	5.33	5.13	4.95	4.77	4.61	4.45	4.30	4.16	4.03
10	8.98	8.53	8.11	7.72	7.36	7.02	6.71	6.42	6.14	5.89	5.65	5.43	5.22	5.02	4.83	4.66	4.49	4.34	4.19
11	9.79	9.25	8.76	8.31	7.89	7.50	7.14	6.81	6.50	6.21	5.94	5.69	5.45	5.23	5.03	4.84	4.66	4.49	4.33
12	10.58	9.95	9.39	8.86	8.38	7.94	7.54	7.16	6.81	6.49	6.19	5.92	5.66	5.42	5.20	4.99	4.79	4.61	4.44
13	11.35	10.63	9.99	9.39	8.85	8.36	7.90	7.49	7.10	6.75	6.42	6.12	5.84	5.58	5.34	5.12	4.91	4.71	4.53
14	12.11	11.30	10.56	9.90	9.29	8.75	8.24	7.79	7.37	6.98	6.63	6.30	6.00	5.72	5.47	5.23	5.01	4.80	4.61
15	12.85	11.94	11.12	10.38	9.71	9.11	8.56	8.06	7.61	7.19	6.81	6.46	6.14	5.85	5.58	5.32	5.09	4.88	4.68
16	13.58	12.56	11.65	10.84	10.11	9.45	8.85	8.31	7.82	7.38	6.97	6.60	6.27	5.95	5.67	5.41	5.16	4.94	4.73
17	14.29	13.17	12.17	11.27	10.48	9.76	9.12	8.54	8.02	7.55	7.12	6.73	6.37	6.05	5.75	5.47	5.22	4.99	4.77
18	14.99	13.75	12.66	11.69	10.83	10.06	9.37	8.76	8.20	7.70	7.25	6.84	6.47	6.13	5.82	5.53	5.27	5.03	4.81
19	15.68	14.32	13.13	12.09	11.16	10.34	9.60	8.95	8.36	7.84	7.37	6.94	6.55	6.20	5.88	5.58	5.32	5.07	4.84
20	16.35	14.88	13.59	12.46	11.47	10.59	9.82	9.13	8.51	7.96	7.47	7.02	6.62	6.26	5.93	5.63	5.35	5.10	4.87
21	17.01	15.42	14.03	12.82	11.76	10.84	10.02	9.29	8.65	8.08	7.56	7.10	6.69	6.31	5.97	5.67	5.38	5.13	4.89
22	17.66	15.94	14.45	13.16	12.04	11.06	10.20	9.44	8.77	8.18	7.65	7.17	6.74	6.36	6.01	5.70	5.41	5.15	4.91
23	18.29	16.44	14.86	13.49	12.30	11.27	10.37	9.58	8.88	8.27	7.72	7.23	6.79	6.40	6.04	5.72	5.43	5.17	4.93
24	18.91	16.94	15.25	13.80	12.55	11.47	10.53	9.71	8.99	8.35	7.78	7.28	6.84	6.43	6.07	5.75	5.45	5.18	4.94
25	19.52	17.41	15.62	14.09	12.78	11.65	10.68	9.82	9.08	8.42	7.84	7.33	6.87	6.46	6.10	5.77	5.47	5.20	4.95

**TABLE II**

## **APPENDIX F**

### **RESULTS BY ASSESSMENT OPPORTUNITIES FOR DAY 2 AND DAY 3**

**THE LEVEL 2 DEPTH TEST (FR/MA)****FINANCIAL REPORTING:**

<b>Day 2 Common</b>		<b>NA</b>	<b>NC</b>	<b>RC</b>	<b>C</b>	<b>CD</b>	<b>C+CD</b>
<b>AO1</b>	<b>Inventory</b>	3.6%	3.8%	16.1%	59.8%	16.6%	<b>76.4%</b>
<b>AO2</b>	<b>Revenue Recognition</b>	9.0%	10.2%	16.4%	53.1%	11.2%	<b>64.3%</b>
<b>AO3</b>	<b>Research &amp; Development</b>	2.2%	11.4%	46.3%	36.8%	3.3%	<b>40.1%</b>
<b>AO4</b>	<b>Discontinued Operations</b>	1.7%	14.1%	48.7%	33.9%	1.6%	<b>35.5%</b>
<b>AO5</b>	<b>Adjusted F/S</b>	2.6%	14.5%	53.4%	28.3%	1.2%	<b>29.5%</b>
<b>Day 3 – Q2 ESL</b>							
<b>AO1</b>	<b>Revenue Recognition</b>	0.7%	2.8%	18.4%	76.2%	1.9%	<b>78.1%</b>
<b>AO2</b>	<b>Intangible</b>	1.0%	3.8%	29.5%	60.0%	5.7%	<b>65.7%</b>

**MANAGEMENT ACCOUNTING:**

		<b>NA</b>	<b>NC</b>	<b>RC</b>	<b>C</b>	<b>CD</b>	<b>C+CD</b>
<b>Day 3 – Q1 Bamboo</b>							
<b>AO1</b>	<b>Labor Shortage – quantitative</b>	1.6%	14.0%	41.1%	42.8%	0.6%	<b>43.4%</b>
<b>AO2</b>	<b>Labor Shortage – qualitative</b>	54.1%	4.4%	11.6%	29.6%	0.8%	<b>30.4%</b>
<b>AO3</b>	<b>Outsourcing</b>	0.2%	1.3%	31.9%	63.0%	3.7%	<b>66.7%</b>
<b>AO4</b>	<b>Added shift</b>	0.3%	2.5%	44.3%	51.7%	1.2%	<b>52.9%</b>
<b>AO5</b>	<b>Change of material</b>	0.5%	3.1%	47.9%	45.4%	3.1%	<b>48.5%</b>
<b>Day 3 – Q2 ESL</b>							
<b>AO5</b>	<b>Expansion- quantitative</b>	2.0%	7.1%	31.2%	44.9%	14.7%	<b>59.6%</b>
<b>AO6</b>	<b>Expansion – qualitative</b>	0.9%	4.3%	15.9%	48.7%	30.2%	<b>78.9%</b>
<b>Day 3 – Q3 Katwill</b>							
<b>AO1</b>	<b>Cost per resident – quantitative</b>	1.0%	3.2%	20.0%	73.1%	2.7%	<b>75.8%</b>
<b>AO2</b>	<b>Covering costs – qualitative</b>	1.0%	12.1%	30.7%	55.7%	0.5%	<b>56.2%</b>

**THE LEVEL 3 DEPTH TEST ROLES (DAY 2)**

<b>Audit and Assurance</b>			<b>NA</b>	<b>NC</b>	<b>RC</b>	<b>C</b>	<b>CD</b>	<b>C+CD</b>
<b>AO6</b>	<b>I/S Analysis</b>		2.2%	36.4%	21.7%	33.3%	6.6%	<b>39.9%</b>
<b>AO7</b>	<b>Ratios</b>		0.4%	6.5%	30.5%	58.8%	3.9%	<b>62.7%</b>
<b>AO8</b>	<b>Risk</b>		0.4%	2.8%	15.1%	73.4%	8.3%	<b>81.7%</b>
<b>AO9</b>	<b>Materiality &amp; Approach</b>		0.4%	1.8%	38.5%	56.3%	2.9%	<b>59.2%</b>
<b>AO10</b>	<b>Procedures</b>		0.3%	2.5%	26.9%	66.8%	3.5%	<b>70.3%</b>
<b>AO11</b>	<b>Errors</b>		3.1%	11.2%	44.9%	39.2%	1.6%	<b>40.8%</b>
<b>AO12</b>	<b>IPO</b>		1.1%	27.4%	23.1%	39.8%	8.7%	<b>48.5%</b>

<b>Finance</b>			<b>NA</b>	<b>NC</b>	<b>RC</b>	<b>C</b>	<b>CD</b>	<b>C+CD</b>
<b>AO6</b>	<b>IPO/Financing</b>		2.0%	14.3%	44.9%	38.8%	0.0%	<b>38.8%</b>
<b>AO7</b>	<b>Valuation of K-Lease</b>		2.0%	6.1%	28.6%	61.2%	2.0%	<b>63.3%</b>
<b>AO8</b>	<b>K-Med Financial State</b>		4.1%	26.5%	22.5%	40.8%	6.1%	<b>46.9%</b>
<b>AO9</b>	<b>Production Capacity</b>		0.0%	14.3%	26.5%	51.0%	8.2%	<b>59.2%</b>
<b>AO10</b>	<b>Operational Cash Flow</b>		0.0%	12.2%	32.7%	55.1%	0.0%	<b>55.1%</b>
<b>AO11</b>	<b>Free Cash Flows</b>		4.1%	4.1%	12.2%	77.6%	2.0%	<b>79.6%</b>
<b>AO12</b>	<b>WACC Calculations</b>		4.1%	22.5%	22.5%	44.9%	6.1%	<b>51.0%</b>
<b>AO13</b>	<b>K-Lease Repayment</b>		2.0%	20.4%	18.4%	59.2%	0.0%	<b>59.2%</b>

**THE LEVEL 3 DEPTH TEST ROLES (DAY 2)**

<b>Performance Management</b>			<b>NA</b>	<b>NC</b>	<b>RC</b>	<b>C</b>	<b>CD</b>	<b>C+CD</b>
<b>AO6</b>	<b>Flexible budget &amp; variance calculations</b>		3.0%	19.5%	52.1%	20.7%	4.7%	<b>25.4%</b>
<b>AO7</b>	<b>Variance discussions</b>		2.4%	13.6%	27.8%	47.9%	8.3%	<b>56.2%</b>
<b>AO8</b>	<b>Sit. Analysis – qualitative</b>		4.1%	8.3%	21.3%	54.4%	11.8%	<b>66.2%</b>
<b>AO9</b>	<b>Sit. Analysis – quantitative</b>		8.3%	26.6%	27.8%	32.0%	5.3%	<b>37.3%</b>
<b>AO10</b>	<b>Operational Issues &amp; Recommendations</b>		3.0%	11.2%	21.3%	42.6%	21.9%	<b>64.5%</b>
<b>AO11</b>	<b>Bulk oil analysis</b>		0.6%	8.9%	23.1%	57.4%	10.1%	<b>67.5%</b>
<b>AO12</b>	<b>Pricing analysis</b>		5.3%	17.2%	30.2%	44.4%	3.0%	<b>47.4%</b>
<b>AO13</b>	<b>Conclusion</b>		5.9%	19.5%	30.8%	37.9%	5.9%	<b>43.8%</b>

<b>Taxation</b>			<b>NA</b>	<b>NC</b>	<b>RC</b>	<b>C</b>	<b>CD</b>	<b>C+CD</b>
<b>AO6</b>	<b>Liability</b>		0.0%	3.8%	30.2%	62.3%	3.8%	<b>66.1%</b>
<b>AO7</b>	<b>SR&amp;ED/TCG</b>		1.9%	17.0%	35.9%	45.3%	0.0%	<b>45.3%</b>
<b>AO8</b>	<b>CCA &amp; CECA</b>		3.8%	7.6%	32.1%	52.8%	3.8%	<b>56.6%</b>
<b>AO9</b>	<b>Tax implications of IPO</b>		0.0%	13.2%	11.3%	47.2%	28.3%	<b>75.5%</b>
<b>AO10</b>	<b>ABI vs. All, salary vs. dividend</b>		0.0%	13.2%	47.2%	26.4%	13.2%	<b>39.6%</b>
<b>AO11</b>	<b>Transfer of assets</b>		7.6%	22.6%	22.6%	43.4%	3.8%	<b>47.2%</b>
<b>AO12</b>	<b>Future share sale</b>		0.0%	20.8%	49.1%	24.5%	5.7%	<b>30.2%</b>

**THE LEVEL 4 BREADTH TEST (BY COMPETENCY AREA)**

<b>Financial Reporting</b>		<b>NA</b>	<b>NC</b>	<b>RC</b>	<b>C</b>	<b>CD</b>	<b>RC+C+CD</b>
<b>Day 2– Common</b>							
<b>AO1</b>	<b>Inventory</b>	3.6%	3.8%	16.1%	59.8%	16.6%	<b>92.5%</b>
<b>AO2</b>	<b>Revenue Recognition</b>	9.0%	10.2%	16.4%	53.1%	11.2%	<b>80.7%</b>
<b>AO3</b>	<b>Research &amp; Development</b>	2.2%	11.4%	46.3%	36.8%	3.3%	<b>86.4%</b>
<b>AO4</b>	<b>Discontinued Operations</b>	1.7%	14.1%	48.7%	33.9%	1.6%	<b>84.2%</b>
<b>AO5</b>	<b>Adjusted F/S</b>	2.6%	14.5%	53.4%	28.3%	1.2%	<b>82.9%</b>
<b>Day 3 – Q2 ESL</b>							
<b>AO1</b>	<b>Revenue Recognition</b>	0.7%	2.8%	18.4%	76.2%	1.9%	<b>96.5%</b>
<b>AO2</b>	<b>Intangible</b>	1.0%	3.8%	29.5%	60.0%	5.7%	<b>95.2%</b>

<b>Management Accounting</b>		<b>NA</b>	<b>NC</b>	<b>RC</b>	<b>C</b>	<b>CD</b>	<b>RC+C+CD</b>
<b>Day 3 – Q1 Bamboo</b>							
<b>AO1</b>	<b>Labor Shortage – quantitative</b>	1.6%	14.0%	41.1%	42.8%	0.6%	<b>84.5%</b>
<b>AO2</b>	<b>Labor Shortage – qualitative</b>	54.1%	4.4%	11.6%	29.6%	0.8%	<b>42.0%</b>
<b>AO3</b>	<b>Outsourcing</b>	0.2%	1.3%	31.9%	63.0%	3.7%	<b>98.6%</b>
<b>AO4</b>	<b>Added shift</b>	0.3%	2.5%	44.3%	51.7%	1.2%	<b>97.2%</b>
<b>AO5</b>	<b>Change of material</b>	0.5%	3.1%	47.9%	45.4%	3.1%	<b>96.4%</b>
<b>Day 3 – Q2 ESL</b>							
<b>AO5</b>	<b>Expansion – quantitative</b>	2.0%	7.1%	31.2%	44.9%	14.7%	<b>90.8%</b>
<b>AO6</b>	<b>Expansion –qualitative</b>	0.9%	4.3%	15.9%	48.7%	30.2%	<b>94.8%</b>
<b>Day3 – Q3 Katwill</b>							
<b>AO1</b>	<b>Cost per resident – quantitative</b>	1.0%	3.2%	20.0%	73.1%	2.7%	<b>95.8%</b>
<b>AO2</b>	<b>Covering costs – qualitative</b>	1.0%	12.1%	30.7%	55.7%	0.5%	<b>86.9%</b>

**THE LEVEL 4 BREADTH TEST (BY COMPETENCY AREA)**

<b>Strategy and Governance</b>		<b>NA</b>	<b>NC</b>	<b>RC</b>	<b>C</b>	<b>CD</b>	<b>RC+C+CD</b>
<b>Day 3–Q1 AO6</b>	<b>Mission/vision alignment</b>	0.3%	2.0%	18.9%	76.0%	2.8%	<b>97.7%</b>
<b>Day 3–Q2 AO7</b>	<b>Cannibalization</b>	25.8%	16.3%	26.0%	16.6%	15.3%	<b>57.9%</b>
<b>Day 3–Q3 AO7</b>	<b>Vision alignment</b>	39.4%	6.4%	10.6%	42.6%	1.0%	<b>54.2%</b>

<b>Audit and assurance</b>		<b>NA</b>	<b>NC</b>	<b>RC</b>	<b>C</b>	<b>CD</b>	<b>RC+C+CD</b>
<b>Day 3–Q2 AO3</b>	<b>Planning</b>	0.7%	9.3%	49.8%	37.7%	2.5%	<b>90.0%</b>
<b>Day 3–Q2 AO4</b>	<b>Materiality &amp; approach</b>	0.6%	10.6%	43.3%	42.6%	3.0%	<b>88.9%</b>
<b>Day 3–Q3 AO6</b>	<b>Controls</b>	1.2%	1.8%	25.0%	69.9%	2.2%	<b>97.1%</b>

<b>Finance</b>		<b>NA</b>	<b>NC</b>	<b>RC</b>	<b>C</b>	<b>CD</b>	<b>RC+C+CD</b>
<b>Day3–Q3 AO4</b>	<b>Evaluate options – quantitative</b>	3.0%	40.4%	19.9%	36.4%	0.3%	<b>56.6%</b>
<b>Day 3–Q3 AO5</b>	<b>Evaluate options – qualitative</b>	0.5%	2.7%	30.2%	65.4%	1.2%	<b>96.8%</b>

<b>Taxation</b>		<b>NA</b>	<b>NC</b>	<b>RC</b>	<b>C</b>	<b>CD</b>	<b>RC+C+CD</b>
<b>Day 3–Q1 AO7</b>	<b>Perks</b>	3.4%	10.2%	12.7%	50.3%	23.5%	<b>86.5%</b>
<b>Day 3–Q2 AO8</b>	<b>Consequences of accounting issues</b>	11.3%	31.8%	35.9%	17.1%	3.9%	<b>56.9%</b>
<b>Day 3–Q3 AO3</b>	<b>Employee vs contractor</b>	0.2%	1.0%	9.3%	86.8%	2.7%	<b>98.8%</b>



## **APPENDIX G**

### **BOARD OF EXAMINERS' COMMENTS ON DAY 2 AND DAY 3 SIMULATIONS**

**Paper/Simulation:** Day 2 (K-Med) – Role Case COMMON REQUIRED

**Estimated time to complete:** 300 minutes

**Simulation difficulty:** Average

**Competency Map coverage:** Financial Reporting (5 Assessment Opportunities)

**Evaluators' comments by COMMON Assessment Opportunity (AO), for all roles**

**AO#1 (Inventory Valuation)**

Candidates were asked to prepare a memo discussing the financial reporting issues. In Appendix III of the case, candidates were provided with financial statement excerpts that included a note on inventory. The note said that K-Med measures its inventory at the lower of cost and net realizable value. It also stated that the company was able to lower the cost of its production during April to \$2.50 per bottle from the previous \$3.00 per bottle, but that it had continued to value its finished goods inventory at \$3.00 per bottle. The note also specified that the cost is being assigned using the first-in, first-out (FIFO) method and that inventory is expected to turn over every four months. To demonstrate competence on this assessment opportunity, candidates had to determine, using case facts and guidance from the Handbook (IFRS), whether finished goods were properly valued, and they had to calculate the adjustment to be made to the financial statements. This was the easiest of the accounting issues.

Candidates performed very well on this assessment opportunity. Most candidates used case facts and Handbook guidance to support their conclusion that the ending inventory should be recorded at the new cost of \$2.50 per bottle. They were also able to perform a calculation of the adjustment that was required to the year-end financial statements.

Strong candidates supported their conclusion that the remaining finished goods inventory at year end should be valued at the new cost of \$2.50 (since all the inventory valued at \$3.00 per bottle would have been sold already) by integrating all of the following case facts: that K-Med used FIFO, that the expected inventory turnover was four months, and that the cost change occurred in April.

Weak candidates did not use the data provided in the case to perform a reasonable calculation of the adjustment that should be made to correctly state the finished goods inventory.

**AO#2 (Revenue Recognition)**

Candidates were asked to prepare a memo discussing the financial reporting issues. In Appendix III, candidates were provided with financial statement excerpts that included a note on revenue. The note said that revenue is recognized upon receipt of the products by the distributor. It also mentioned that in January 2014, K-Med started selling inventory on consignment, which represented 10% of the current year's and previous year's sales. Sales on consignment were made to two of the 12 distributors, which had an inventory turnover similar to K-Med. To demonstrate competence, candidates had to discuss, using the criteria provided in the *Handbook* as well as case facts, whether the revenue related to the consignment sales was properly recognized, and conclude on the appropriate accounting treatment. Candidates also had to calculate the adjustment to be made to the financial statements to correct the situation.

Candidates performed well on this assessment opportunity. Most candidates used the case facts provided to realize that the current accounting treatment was not appropriate, and they used *Handbook* guidance to support why this treatment was incorrect. Most candidates were also able to calculate an adjustment to revenue.

Strong candidates provided a better calculation, adjusting the cost of goods sold in addition to revenue and taking into account the inventory turnover rate in their calculation.

Some weak candidates jumped right to a conclusion and calculation without first analyzing the situation and using relevant *Handbook* criteria to explain why the accounting treatment was wrong. Other weak candidates struggled to provide a reasonable calculation of the adjustment required.

**AO#3 (Research and Development)**

Candidates were asked to prepare a memo discussing the financial reporting issues. In Appendix III, candidates were provided with financial statement excerpts that included a note on research and development. The note provided candidates with a list of costs that had been capitalized for K-Krill Protein. To demonstrate competence, candidates had to provide a reasonable analysis of the intangible asset criteria, using case facts to support their discussion of whether the costs related to the development of K-Krill Protein could be capitalized. They also needed to discuss the nature of the individual costs capitalized and whether they should have been expensed instead. Candidates also had to calculate the adjustment required to the financial statements.

Candidates performed relatively well on this assessment opportunity. Most candidates used the *Handbook* criteria related to intangible assets to analyze whether the costs could be capitalized. They also applied guidance to the specific costs to determine whether they should be capitalized.

Strong candidates provided a well-rounded discussion of the criteria, using specific and relevant case facts to support their conclusion on whether each criterion was met. Strong candidates also analyzed each of the specific costs capitalized and concluded on whether they should have been expensed, explaining why using *Handbook* guidance.

Weak candidates generally provided an incomplete analysis of the issue. They either jumped to an analysis of the specific costs without first analyzing whether the criteria related to internally generated intangible assets were met, or they analyzed the criteria for internally generated intangible assets but did not discuss the specific costs that had been capitalized.

#### **AO#4 (Discontinued Operations)**

Candidates were specifically asked for their thoughts on whether the real estate leasing operations that were being disposed of qualified as a discontinued operation. They were asked to analyze the criteria but not to make any adjustments. In the common background section of the case, candidates were provided with information on the upcoming sale of the real estate leasing business to the newly created K-Lease for a \$200,000 cash down payment, with the remainder of the purchase price, which was yet to be determined, due in June 2017. To demonstrate competence, candidates were expected to conclude on whether they thought the leasing operations qualified as a discontinued operation by discussing whether the leasing operations represented a component of K-Med and whether they met the criteria to be classified as a held-for-sale asset. This was considered one of the more challenging financial reporting issues.

Candidates struggled with this assessment opportunity since most were not able to provide a complete analysis of the disposal of the leasing operations. Most candidates addressed either the component criteria or the held-for-sale criteria in sufficient depth, but not both.

Strong candidates approached the issue in a methodical manner by first going through the component criteria and then the held-for-sale criteria, using case facts that were relevant to each criterion discussed, and providing a conclusion that flowed from their analysis. Some strong candidates also went on to discuss the presentation requirements, given their conclusion that the leasing operations should be classified as a discontinued operation.

Many weak candidates either copied and pasted *Handbook* guidance into their response, without analyzing the criteria using case facts, or used the same case fact repeatedly to analyze each criterion, even though that fact didn't always apply. Other weak candidates confused the component criteria with the criteria used for disclosure purposes for segmented information.

#### **AO#5 (Financial Statement Adjustment)**

Candidates were asked to provide revised financial statements that took into account any necessary accounting adjustments that they noted. To demonstrate competence, candidates were expected to prepare a full set of revised financial statements that included any adjustments they had suggested as a result of their discussion of the accounting issues. Candidates were provided with the financial statements in their Excel worksheets to work with.

Candidates did not perform well on this assessment opportunity. Most candidates attempted to carry through all of their adjustments to the financial statements, but they either failed to provide reasonable journal entries or provided incomplete financial statements.

Strong candidates carried through the adjustments suggested in their accounting discussions to a complete set of revised financial statements, with minimal errors. Strong candidates also clearly documented and explained all of their adjustments, which made each journal entry easy to follow.

Many weak candidates provided only partial financial statements, either by adjusting only the income statement or the balance sheet, or by only providing an adjusted net income figure. Many errors were found in the journal entries they provided. Candidates often provided one-sided journal entries or unbalanced journal entries, or they adjusted inappropriate accounts. Some candidates also forgot to carry through some of the adjustments they had concluded should be made in their accounting discussions to the revised financial statements.

<b>Paper/Simulation:</b>	<b>Day 2 (K-Med) – Role Case ASSURANCE</b>
<b>Estimated time to complete:</b>	300 minutes
<b>Simulation difficulty:</b>	Average
<b>Competency Map coverage:</b>	Audit and Assurance role (7 Assessment Opportunities)

**Evaluators' comments by Assessment Opportunity (AO) for the ASSURANCE ROLE****AO#6 (Income Statement Analysis)**

Candidates were asked to begin the year-end audit plan and were told they should start with an overall look at the financial situation of the company. To accomplish this, the engagement partner suggested that CPA prepare a detailed analytical review of the income statement items. To demonstrate competence on this assessment opportunity, candidates were expected to compare the December 31, 2014, income statement balances to the September 30, 2015, income statement balances and provide a reasonable explanation for some of the variances.

Candidates did not perform well on this assessment opportunity. Most candidates calculated the variances on the income statement balances, but then either did not provide explanations for those variances or provided very brief explanations.

Strong candidates adjusted either the 2014 statements to pro-rate them to 9 months or the 2015 statements to estimate 12 months and make the two statements comparable before calculating the variances. These candidates also addressed a greater number of income statement balances than other candidates and provided reasonable explanations for the variances using relevant case facts.

Weak candidates either did not comment on the variances at all or had a difficult time explaining the variances. Many candidates simply said that the variance needed to be investigated, without further discussion. Some candidates also attempted to analyze the balance sheet variances, despite the clear requirement in the case to perform a detailed analytical review of the income statement items. In addition, some candidates did not realize that they were comparing 12-month figures for 2014 to 9-month figures for 2015 and did not take that fact into consideration in their explanations or adjust the numbers to make them comparable.

**AO#7 (Ratios)**

Candidates were asked to begin the year-end audit plan and told they should start with an overall look at the financial situation of the company. To accomplish this, the engagement partner suggested that CPA prepare an analysis of the key financial ratios compared to the prior year. To demonstrate competence, candidates were expected to calculate some of the key financial ratios and provide an interpretation of the ratios.

Candidates performed adequately on this assessment opportunity. Most candidates were able to calculate some of the key financial ratios and interpret them in a meaningful way. Most candidates did not have an issue identifying the ratios that were appropriate to calculate in this situation, such as the current ratio, debt-to-equity ratio, inventory turnover, and accounts receivable turnover. Candidates did a good job of calculating the current ratio, comparing it to the bank covenant, and concluding that K-Med was offside. Most candidates were also able to calculate other relevant ratios and comment on the results of their calculations. However, where some candidates struggled was in their explanation of what the ratio meant for K-Med in particular.

Strong candidates provided a greater coverage of the key ratios. They also provided a more meaningful interpretation of the ratios, and many also linked what the ratio was telling them to an impact on the audit, especially when it came to the current ratio.

Weak candidates had a very difficult time interpreting what the ratios meant for K-Med. Many stated only whether the ratio had improved or worsened since the prior year. Weak candidates also struggled with the actual calculation of the ratios, often using incorrect formulas. Some candidates only calculated the current ratio and did not discuss or calculate any other ratios. In addition, some candidates calculated the 2015 ratios but did not calculate the prior year ratios and, therefore, had no point of reference to compare the ratios to.

#### **AO#8 (Risk)**

Candidates were asked by the engagement partner for 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 very well on this assessment opportunity. Most provided many risk factors and explained, using facts from the case, what impact they had on the financial statement risk. They also provided a conclusion that was in line with their analysis.

Strong candidates provided a more complete list of factors and explained how each would increase risk. They also provided a good overall conclusion on the financial statement risk. Many strong candidates also discussed mitigating factors that would help to decrease the risk.

Weak candidates generally did not provide a sufficient number of relevant risk factors. Some candidates did not conclude on the overall risk, most of them simply listing the factors without commenting on their impact on the engagement risk. Some candidates also provided business risk factors instead of focusing on financial statement risk factors, and as a result had a hard time providing a useful analysis.

**AO#9 (Materiality and Approach)**

Candidates were asked by the engagement partner for a discussion of the approach and materiality for the upcoming audit engagement. To demonstrate competence, candidates had to provide a reasonable discussion of the approach that should be followed for the engagement and support their discussion with case facts. Candidates also had to calculate the materiality to be used for the audit engagement, in light of the users, and support the basis chosen with case facts.

Candidates performed adequately on this assessment opportunity. Most candidates provided a reasonable discussion of both the approach and the materiality. However, when candidates struggled, it was generally with regards to their approach discussion. Most candidates recognized that income was negative and, therefore, chose a different acceptable basis on which to calculate materiality.

Strong candidates provided more depth of discussion in their analysis of the approach by using several case facts about K-Med's control environment to support their conclusion. They also clearly linked the basis they chose on which 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. Some candidates provided a generic statement of how controls should be tested before CPA could rely on them, without discussing the actual control weaknesses outlined in the case and how these would affect the audit approach. Some candidates assumed that because Q&A had been the auditor of the company for the last few years, CPA could automatically rely on controls. These candidates did not consider the new control weaknesses that had arisen over the past year. Some candidates also used an inappropriate basis to calculate materiality or did not link their materiality discussion to the users.

**AO#10 (Procedures)**

Candidates were asked by the engagement partner to provide procedures to address any financial reporting issues they had identified and any other significant risks related to the financial statement items. To demonstrate competence, candidates had to provide a reasonable number of procedures that were specific to the accounting issues or K-Med.

Candidates performed well on this assessment opportunity. Most candidates attempted to provide several procedures and were able to provide a sufficient number of procedures that would successfully address the risks related to either the specific accounting issues or other relevant financial statement risks.

Strong candidates provided precise and well-described procedures that were clearly tied to the significant risks identified. Strong candidates also provided more procedures, covering 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 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, were of limited value.

### **AO#11 (Errors)**

Candidates were asked by the engagement partner to discuss the impact on the audit report of finding accounting errors. In order to demonstrate competence, candidates had to discuss the errors found and how these would affect the audit report.

Candidates did not perform well on this assessment opportunity. Most candidates had some knowledge of what to do in the event accounting errors were found during an audit but had difficulty explaining to K-Med what the specific impact would be on its audit report, given the errors they had found. To be considered competent, candidates had to in some way link their discussion to case facts. This was considered to be one of the more challenging assessment opportunities.

Strong candidates compared the errors found to date to materiality. They concluded that management would need to adjust the financial statements or the audit report would need to be qualified by Q&A if not adjusted. Some candidates also discussed the going concern issue and explained the impact that could have on the audit report.

Weak candidates struggled to apply the theory to the errors found in K-Med. Many candidates copied and pasted excerpts from the *Handbook (Assurance)* but did not use case facts to explain what would likely apply to K-Med. As a result, their discussion was purely theoretical. Some candidates only discussed the impact on the audit, such as the fact that materiality should be recalculated, instead of considering the impact on the audit report, as requested.

### **AO#12 (IPO)**

Candidates were asked by the engagement partner to prepare a memo describing the auditor's responsibilities related to the IPO and the related prospectus. This was a relatively technical assessment opportunity on a topic that would be less familiar than others to candidates. As a result, this was a different type of assessment opportunity — instead of requiring a high level of application to case facts, the Board was looking for a more theoretical discussion of the topic. In order to demonstrate competence, candidates had to discuss some of the auditor's responsibilities in relation to the upcoming IPO. This was considered to be one of the more challenging assessment opportunities.

Candidates struggled with this assessment opportunity. This was a technical assessment opportunity for which candidates' access to the *Handbook* could have been of great help to them. Unfortunately, most candidates did not seem to know which *Handbook* section was appropriate to refer to in this situation.

Strong candidates went straight to the heart of the request and discussed the relevant *Handbook* section and the responsibilities listed within the standard. They provided a very precise and thorough discussion of what the auditor needed to do in relation to the IPO.

Weak candidates had trouble identifying the most appropriate *Handbook* standard to refer to. In addition, weak candidates seemed to focus on other aspects of the IPO. Many candidates gave K-Med's management advice on whether or not they should be going public or what they should do following the IPO, instead of discussing the IPO itself and the related prospectus.

Paper/Simulation:	<b>Day 2 (K-Med) – Role Case FINANCE</b>
<b>Estimated time to complete:</b>	300 minutes
<b>Simulation difficulty:</b>	Average
<b>Competency Map coverage:</b>	Finance Role (8 Assessment Opportunities)

### **Evaluators' comments by Assessment Opportunity (AO) for the FINANCE ROLE**

#### **AO#6 (IPO/Financing)**

The case states, "Tracey would like your comments on any issues that you see with respect to the IPO, and would like to know what other viable alternatives are available to K-Med in order to raise funds." To demonstrate competence on this assessment opportunity, candidates were expected to discuss some of the issues that they identified with respect to the IPO (for example, control, clinical studies, K-Med's financial situation, and the initial and ongoing costs of an IPO). As well, candidates were expected to suggest other financing vehicles that might be available to K-Med as an alternative to the IPO, such as venture capital, convertible debentures, and preferred shares.

Candidates did not perform well on this assessment opportunity. Many candidates provided a laundry list of the pros and cons of going public instead of a specific analysis of whether K-Med should go public given its current situation. As well, the financing alternatives many candidates provided were limited to a generic list of options, not taking into account that K-Med was in the early "growth" stage of its development.

Strong candidates analyzed the requirements using the case scenario presented. They recognized that, given K-Med's weak financial position and historical losses, the IPO may not be successful. They also noted potential alternative sources of financing, recognizing that K-Med was in the early stages of development of its products. Strong candidates suggested alternative financing sources, such as convertible debentures or preferred shares from venture capitalists, sources that were consistent with the company's current situation.

Weak candidates provided a more generic or superficial analysis, often listing only the advantages and disadvantages of an IPO that could be found in any finance textbook. As well, they did not link the financing alternatives to any case facts. Weak candidates also recommended bank financing without analyzing K-Med's current financial situation, which was already highly leveraged.

#### **AO#7 (Valuation of K-Lease)**

Tracey asked CPA to provide a valuation of K-Lease so that the board would have the information it needed to price the sale. To demonstrate competence, candidates were expected to provide a reasonable valuation of the leasing operations of K-Med in anticipation of the sale to K-Lease.

Overall, candidates performed adequately on this assessment opportunity. Most candidates performed an appropriate valuation of the leasing operations. They also recognized that the net assets of the leasing operations were the underlying real estate, that they had been already valued at fair value in the K-Lease segmented information provided within the simulation, and that, as a result, this provided a good basis to value the leasing operations.

Strong candidates realized that the leasing operations had already been assessed and valued at fair value by a third-party appraiser. Given the nature of the underlying assets (real property), this valuation was the most accurate in this case scenario. Many strong candidates also supported their valuation with a second option, usually based on a capitalized earnings approach, to “check” the net assets valuation. When concluding, these candidates explicitly stated that the net asset approach was the most appropriate given the circumstances.

Weak candidates did not appear to understand that the leasing operations were tangible real property and proceeded straight to a discounted cash flow or capitalized earnings approach to valuing the net assets. This type of valuation was rewarded as well, but was considerably more difficult to perform correctly. Many candidates made significant errors within their valuation when proceeding down this path, reducing the usefulness of their response. When concluding on the value of the leasing operations, these candidates ignored the net asset approach entirely.

#### **AO#8 (K-Med Financial State)**

Tracey asked CPA to analyze K-Med's resulting financial state and key ratios under the assumption that the IPO was successful and the leasing operations were spun out to K-Lease. To demonstrate competence, candidates needed to restate K-Med's financial statements, taking into account the IPO and the sale of K-Lease. Candidates were essentially asked to “forecast” the accounting for the IPO and the sale of the leasing operations to determine the effect on K-Med's resulting financial state (usually by recalculating ratios such as the current ratio and the debt-to-equity ratio). This was considered to be one of the more difficult assessment opportunities.

Candidates did not perform well on this assessment opportunity. Many candidates did not recognize the need to incorporate the two transactions into their analysis and simply provided an overview of the financial state of K-Med in its current form.

Strong candidates understood that spinning out the leasing operations to K-Lease would result in a large receivable owing to K-Med. As well, strong candidates recognized that the IPO would result in additional significant cash resources and equity for K-Med, strengthening its financial position and providing it with important liquidity that it would need to support its growth plans. Many of these candidates restated K-Med's balance sheet for these two transactions and recalculated appropriate ratios (such as the current ratio and the debt-to-equity ratio) from their revised statements. They understood that K-Med would be in a much better financial position after the transactions and would, essentially, buy some time while it developed its K-Krill and K-Protein products.

Weak candidates did not prepare a revised or forecasted balance sheet for K-Med and did not appear to understand how the two transactions would be accounted for in K-Med's financial statements. Some weak candidates attempted to remove the leasing operations from K-Med's balance sheet but did not understand that a receivable from K-Lease would be required (in other words, they essentially had an entry that did not balance). As a result, they did not properly understand K-Med's resulting financial state.

### **AO#9 (Production Capacity)**

Candidates were asked to assess K-Med's production capacity and determine whether capacity would be an issue going forward, given the demand assumptions provided. To demonstrate competence, candidates were expected to perform a reasonable production capacity analysis and to conclude that the capacity was not sufficient to meet projected sales.

Candidates performed well on this assessment opportunity. Most recognized and were able to calculate the significant increase in demand over the next two years. They also recognized that K-Med would exceed its capacity within that time frame. Candidates generally understood the significant effects of compounding demand by 4% each month.

Strong candidates performed the calculations that were required using the assumptions stated in the case. As well, these candidates provided short-term solutions to the capacity constraint, such as stockpiling inventory or increasing prices to curb demand. Many strong candidates also questioned the reasonableness of the sales assumptions, recognizing that increasing demand by 4% per month was likely not sustainable.

Weak candidates performed poor calculations when estimating the demand or were not able to convert the quantity of bottles of demand into the quantity of kilograms of capacity (or vice versa). As well, many weak candidates did not understand the significant effects of compounding demand by 4% per month. Due to erroneous calculations, these candidates did not recognize the significant capacity constraints that K-Med would face in the near future.

### **AO#10 (Operational Cash Flow)**

The case stated, "Tracey believes that K-Med will begin generating significant cash flows from its operations over the next two years (2016 and 2017), and would like you to confirm her beliefs." To demonstrate competence, candidates were expected to prepare a reasonable analysis of the operational cash flows for K-Med for two years using the sales assumptions and operating cost data supplied in the case.

Candidates performed adequately on this assessment opportunity. Most candidates produced a relatively complete operational cash flow incorporating reasonable sales; direct costs; selling, general and administration; and research and development amounts. Most excluded non-cash items.

Strong candidates incorporated all of the assumptions and elements from the case. They also incorporated the production capacity constraints that they had calculated in their previous analysis (AO#9).

Many weak candidates did not use case facts to support their quantitative analysis or neglected significant costs when completing their analysis. Often, weak candidates simply added an inflation factor to the actual costs for 2015 when they completed the cost estimates for 2016 and 2017, without adjusting for the significant increase in volume. There were two components to the direct cost estimates: cost increases and volume increases. Weak candidates completed only a portion of this calculation.

### **AO#11 (Free Cash Flows)**

Tracey wanted to know if the IPO proceeds and the cash flow from operations would be enough to fund the capital expenditure and K-Med's other cash requirements in 2016 and 2017. To demonstrate competence, candidates were expected to extend their operational cash flow analysis (AO#10) to incorporate the effects of the IPO and the capital expenditures that would be required to expand the production capacity over the next two years.

Candidates performed well on this assessment opportunity. Most candidates incorporated the significant cash inflows associated with the IPO and the significant cash outflows associated with the capital expenditures required for the plant expansion into their operational cash flow analysis.

Strong candidates also incorporated the cash flow effects associated with the debt repayments in their analysis. These included both significant interest and principal payments on the existing debt.

Weak candidates did not incorporate the case facts presented within their quantitative analysis. Many did not compare the operational cash flows calculated (AO#10) with K-Med's capital expenditure requirements over the next two years. As well, some candidates did not handle the timing of the various cash flows, particularly the IPO proceeds, appropriately.

### **AO#12 (WACC Calculations)**

Candidates were asked to estimate a weighted average cost of capital (WACC) for both K-Med and K-Lease after the IPO spin-out of the leasing operations and to discuss any relevant factors that they used in their calculations. To demonstrate competence candidates were expected to calculate reasonable WACCs for both K-Med and K-Lease under the assumption that the IPO was successful and the leasing operations was spun out, and to discuss the relevant factors used in determining each WACC.

Candidates performed adequately on this technical requirement. Candidates generally understood the conceptual underpinnings of the WACC calculation, including using the capital asset pricing model (CAPM) for the cost of equity, calculating a cost of debt, and applying weights to each of the costs.

Strong candidates understood that the weightings for the debt and equity components of the WACC calculations should be based on market values as opposed to book values. They also understood that various risk premiums might be relevant for each calculation. They were able to articulate that the WACC for K-Med was significantly higher than the WACC for K-Lease due to the risk profiles of each operation.

Weak candidates had difficulty quantifying a reasonable WACC due to technical weaknesses. Many weak candidates did not demonstrate a conceptual understanding of the CAPM and, as a result, were not able to calculate a reasonable WACC for either K-Med or K-Lease.

### **AO#13 (K-Lease Repayment)**

Tracey was concerned about K-Lease's ability to pay K-Med for the purchase of the leasing operation. She wanted to know what cash K-Lease would have available from its operations each year to repay K-Med, and what alternatives K-Lease might have for raising the funds necessary to repay K-Med. The case stated that the sooner K-Lease could repay the amount owing to K-Med, the better K-Med's financial situation would be. To demonstrate competence, candidates were expected to estimate the amount of operational cash flow that K-Lease would have available on an annual basis to repay K-Med. They were also expected to discuss what additional financing options might be available to K-Lease so that it could repay K-Med sooner for the leasing operations.

Candidates performed adequately on this assessment opportunity. Most candidates were able to quickly estimate the amount of cash that K-Lease would generate on an annual basis from the leasing operations (based on the segmented information provided) and understood that it would take many years for K-Lease to repay K-Med solely from its operational cash flows.

Strong candidates understood that K-Lease would have some debt capacity available after it purchased K-Med's leasing operations due to the relatively low amount of debt. They also understood that the real estate assets could then be used to secure additional financing.

Weak candidates provided a very generic assessment of the financing alternatives available to K-Lease after the transaction and described typical venture capital financing or government assistance without incorporating the case facts presented.

**Paper/Simulation:** Day 2 (K-Krill) – Role Case **PERFORMANCE MANAGEMENT**

**Estimated time to complete:** 300 minutes

**Simulation difficulty:** Average

**Competency Map coverage:** Performance Management Role (8 Assessment Opportunities)

**Evaluators' comments by Assessment Opportunity (AO) for the PERFORMANCE MANAGEMENT ROLE**

**AO#6 (Flexible Budget and Variance Calculations)**

Candidates were asked to analyze the significant variances between the year-to-date actuals for the first nine months and the annual flexible budget of the health operations. To demonstrate competence on this assessment opportunity, candidates were first expected to adjust the 12-month budget using budgeted units and unit costs to compare it with the 9-month actuals (to flex the budget). Candidates should then have calculated sales price, direct labour (DL), and variable overhead (VOH) variances. The case provided a table with actual direct labour hours and machine hours for both extraction and encapsulation, which was the hint that candidates should calculate DL and VOH variances.

Candidates did not perform well on this assessment opportunity. They struggled with how to flex the budget. The average candidate simply multiplied the 9-month actuals by 12/9ths rather than using units to flex the 12-month budget to compare it to the 9-month actuals. They then compared the differences on the four key line items (sales; cost of goods sold; selling, general and administration; and research and development).

Strong candidates made reasonable attempts at comparing 9-month actuals with the annual budget as well as calculating several variances, including DL and VOH. Some of the strong candidates correctly used budgeted unit costs to compare actual results with budget.

Weak candidates only adjusted the 9-month actuals by 12/9ths to compare them with the budget and briefly commented on the differences.

**AO#7 (Variance Discussions)**

Candidates were expected to discuss the variances calculated in AO#6 by interpreting the differences, possible reasons for the variances and how the variances impacted K-Med and future decisions. To demonstrate competence, candidates needed to discuss a few variances.

Candidates performed adequately on this assessment opportunity. However, because most candidates only calculated the income statement differences between the 9-month actuals and the 12-month budget in AO#6, they were limited to a discussion of the variances in sales, cost of goods sold, selling, general and administration and research and development.



Strong candidates attributed the favourable cost of goods sold to their favourable DL and VOH variances. Strong candidates also used case facts to explain the variances, for example the financial statement notes included a note about the price increase of K-Krill and strong candidates noted this as the likely reason for the favourable sale variance.

Weak candidates provided only a superficial level of discussion (for example, sales are higher; cost of goods is lower), which offered little value. Or, they only discussed one of the variances, often the sales variance.

#### **AO#8 (Situational Analysis – Qualitative)**

Tracey asked CPA to prepare a qualitative and quantitative analysis of the health operations business segment. To demonstrate competence, candidates were expected to complete a qualitative situational analysis, identifying some of the relevant factors in terms of the strategic decisions. Candidates were expected to address both sides (strengths and weaknesses).

Candidates performed well on this assessment opportunity. Most candidates provided a reasonable discussion of strengths and weaknesses compared to the industry and discussed factors that were relevant to K-Med in its strategic decision-making.

Strong candidates discussed many relevant strengths and weaknesses, clearly explaining each point. Strong candidates also presented a balance of internal and external points.

Weak candidates typically provided an unbalanced discussion, discussing either strengths or weaknesses only. Some weak candidates failed to provide sufficient support to explain why an item was relevant or did not clearly explain why it was a strength or weakness.

#### **AO#9 (Situational Analysis – Quantitative)**

Tracey asked CPA to prepare a qualitative and quantitative analysis of the health operations business segment. To demonstrate competence, candidates were expected to complete a quantitative situational analysis; in particular, a ratio analysis to determine K-Med's financial state. By doing this, candidates would have identified a possible going concern problem.

Candidates did not perform well on this assessment opportunity. Even though the case explicitly asked for a "qualitative and quantitative analysis," most candidates did not attempt a quantitative analysis.

Strong candidates completed a reasonable ratio analysis, along with an appropriate interpretation. A strong response included a ratio in each category (liquidity, profitability, operation, and solvency). Candidates that performed a ratio analysis were able to identify the possible going concern issue.

Weak candidates tended to provide a more general discussion of the current financial situation, which was usually a brief discussion of the differences between the financial results for the current 9-month period and 2014. Many candidates did not do any quantitative analysis at all.

**AO#10 (Operational Issues and Recommendations)**

Based on their evaluation in AO#9, candidates were asked to discuss any operational issues related to the 2016 strategic plan, as well as possible budget implications. To demonstrate competence, candidates were expected to discuss some of the operational issues and suggest appropriate recommendations to address these issues.

Candidates performed well on this assessment opportunity. Most candidates suggested reasonable solutions to the operational issues in the case. Most had little trouble identifying and discussing the impact of many operational issues, most often addressing IT systems, governance, expansion into the U.S., and human resources issues.

Strong candidates made appropriate recommendations to address most of the issues. These responses also integrated other analysis, for example, expansion into the U.S. would be difficult given the weak cash situation and limited production capacity.

Weak candidates identified only a few of the issues and discussed the possible impact on K-Med. They tended to focus on the least important issues such as IT improvements and the need for additional board committees.

**AO#11 (Bulk Oil Analysis)**

Tracey asked CPA to prepare an analysis to determine whether K-Med should begin selling bulk krill oil to other manufacturers or continue increasing production of the K-Krill Oil capsules. Candidates were expected to do a qualitative and quantitative analysis of the option to sell bulk krill oil and use that analysis to support their recommendation. To demonstrate competence, candidates were expected to determine which product, bulk oil or bottled capsules, had the higher contribution margin in order to address whether the excess capacity should be used to produce bulk oil or increase capsule production. Both a quantitative analysis and a qualitative analysis were expected.

Candidates performed well on this assessment opportunity. Candidates performed some quantitative analysis (typically a contribution margin analysis) and provided some qualitative points to support a recommendation on whether or not to sell bulk krill oil.

Strong candidates provided a recommendation that was supported with a thorough qualitative discussion (usually presented as pros and cons) and a reasonable quantitative analysis. Strong candidates concluded that excess capacity should be used to produce bulk oil and K-Med should consider reallocating some of its capsule production to bulk oil.

Weak candidates typically supported their recommendation with only quantitative analysis, missing the qualitative aspects of the decision. Frequently these weak candidates would also conclude that K-Med should change its business and focus all production on bulk oil instead of capsules because the contribution margin was higher.

**AO#12 (Pricing Analysis)**

Tracey wanted to know what price K-Med should sell the bulk krill oil for, noting that a consultant suggested the market will bear a price of \$165 per kilogram for the bulk krill oil. To demonstrate competence, candidates were expected to recommend a price point for the bulk oil with sufficient qualitative and quantitative support. Candidates could have conducted a quantitative analysis in a variety of ways: contribution margin, break-even, or gross margin analysis.

Candidates performed adequately on this assessment opportunity, with the typical candidate using a target contribution margin to recommend a price, keeping in mind the market price of \$165. These candidates also discussed the excess capacity to produce the bulk oil and that it would have no impact on fixed costs.

Strong candidates provided a well-supported recommendation, including a price range between the market price and cost as well as a thorough qualitative discussion including risks to consider in entering this new market. Some risks included cannibalization of capsule sales and market uncertainty.

Weak candidates supported their recommendation with either a quantitative analysis or a qualitative analysis, but not both.

**AO#13 (Conclusion)**

Kaylee was excited to have complete control of K-Med and expected the company would take off. Tracey wanted CPA's thoughts on whether Kaylee was being too optimistic about K-Med's future after the proposed transactions. Candidates were expected to take a step back and comment on Kaylee's optimism about the future of K-Med. To demonstrate competence, candidates should have identified some of K-Med's significant problems and concluded that Kaylee should proceed with caution. The problems included lack of cash, ongoing losses, loss of control with the IPO, and a possible going concern issue.

Candidates performed adequately on this assessment opportunity. Most candidates were able to conclude that caution should be taken since there were significant problems at K-Med and that Kaylee should be concerned.

Strong candidates presented many reasons for concern, drawing on various parts of their response. They identified the big-picture issues (lack of cash, continued losses, loss of control with IPO, going concern problem).

Weak candidates tended to focus on operational concerns (for example, independent board members needed; information systems needing to be upgraded; accounting adjustments required). They concluded that everything was okay with K-Med and that Kaylee should be optimistic about the future.

**Paper/Simulation:** Day 2 (K-Med) – Role Case TAXATION

**Estimated time to complete:** 300 minutes

**Simulation difficulty:** Average

**Competency Map coverage:** Taxation role (7 Assessment Opportunities)

**Evaluators' comments by Assessment Opportunity (AO) for the TAXATION ROLE**

**AO#6 (Liability)**

Candidates were asked to estimate the income for tax purposes for the 2015 taxation year(s), using the third-quarter, year-to-date financial statement results as a base and including the planned sale of leasing assets in the calculation. Candidates were asked to calculate the estimated tax liability, the loss available for carry forward, or both, with respect to the current fiscal year end. To demonstrate competence on this assessment opportunity, candidates were expected to calculate taxable income, along with the subsequent loss carryover or tax payable amount.

Candidates performed well on this assessment opportunity. Most candidates recalculated net income or loss for tax purposes (or taxable income) by starting with financial statement income and incorporating several adjustments. Most candidates included adjustments for amortization and capital cost allowance (CCA), as well as two or three other adjustments.

Strong candidates performed a calculation that included several more adjustments, often incorporating the impact of scientific research and experimental development (SR&ED) or financing fees. These candidates also took their calculation further to determine a final loss carry forward or tax payable balance, or they considered the tax planning opportunities associated with CCA or SR&ED pools.

Weak candidates attempted to calculate taxable income with only minimal adjustments or with a number of very inappropriate or incorrectly determined adjustments. Many of these candidates demonstrated technical weakness and an inability to calculate taxable income through a significant number of errors in their calculation.

**AO#7 (SR&ED and Taxable Capital Gain)**

This assessment opportunity captured some of the in-depth issues that fed into the required calculations involved for AO#6. Specifically, candidates were asked to determine the tax impact of a disposition of assets and the effects of SR&ED on the corporation's tax return. For the purposes of the calculation requested in AO#6, candidates were told to assume that K-Med would sell the assets to K-Lease at fair value. To demonstrate competence, candidates were expected to either calculate the taxable capital gains and determine part of the impact of the SR&ED, or perform a thorough calculation of taxable capital gains or of the impact of the SR&ED.

Candidates performed adequately on this assessment opportunity. Most candidates correctly calculated the taxable capital gain on the disposition of the building. Many also attempted other issues (identifying SR&ED or dealing with some of the complexities of the disposition), but often candidates were weak in these analyses.

Strong candidates performed a calculation of the taxable capital gain on the disposition of the leasing properties and understood the fundamentals of the SR&ED system to determine the Investment Tax Credit (ITC) or the deduction and add-back.

Most weak candidates did not attempt to address the SR&ED at all, even though it was referred to in the case. Some attempted the taxable capital gain calculation but made errors.

### **AO#8 (CCA and CECA)**

This assessment opportunity captured the detailed calculations of the CCA and the cumulative eligible capital account (CECA) that fed into the required calculations involved for AO#6. While CPA was not explicitly asked for calculations of CCA and CECA, it was clear from the information provided that this was necessary. To demonstrate competence, candidates were expected to determine CCA or CECA deductions or both for the corporation, integrating current year additions and dispositions from the financial information provided.

Candidates performed adequately on this assessment opportunity. Virtually all candidates attempted to calculate CCA or CECA or both, incorporating some of the additions or dispositions from the financial statements in the common section. Many responses contained misclassifications of assets, but in most cases the misclassifications were not pervasive throughout the candidate's response.

Strong candidates calculated both the CCA and the CECA for the year, integrating several of the additions and dispositions from the common appendices.

Weak candidates did not integrate the additions or dispositions from the common appendices, and many just applied a CCA rate to the opening balances without any adjustment.

### **AO#9 (Tax Implications of IPO)**

Candidates were asked to draft a memo for the owners to advise them of any relevant general corporate and personal tax effects that would result from the IPO and the resulting public company status. To demonstrate competence, candidates were expected to discuss the implications of going public and of the change in status from Canadian-controlled private corporation (CCPC) to non-CCPC.

Candidates performed well on this assessment opportunity. Most candidates first identified that the primary difference at the point of going public would be that K-Med would no longer be a CCPC. They then proceeded to describe several major differences between public and private companies, such as the loss of the small business deduction, refundable dividend tax on hand (RDTOH), and the capital dividend account (CDA).

Strong candidates identified that the change in status was the change from CCPC to non-CCPC and then explained a wide variety of implications for K-Med of being no longer a CCPC. These candidates also recognized a significant impact of going public – namely, a deemed year-end – and considered some planning opportunities, such as payment of a dividend to clear the CDA and RDTOH balances.

Weak candidates did not understand that the IPO would cause K-Med to lose its CCPC status, or they identified this effect but provided a superficial or technically incorrect explanation of what would happen as a result.

#### **AO#10 (Active Business Income versus All; Salary versus Dividend)**

The case stated, “Since Kevin expects K-Lease to be profitable, he is wondering how the income from the rental operations will be taxed. Because of the losses it has incurred, K-Med has not paid tax for years. Kevin is also considering how to personally withdraw cash from K-Lease on an ongoing basis.” To demonstrate competence, candidates were expected to discuss the implications of earning investment income through a private corporation from both a corporate (higher tax on investment income) and personal (forms of remuneration – salary versus dividend) perspective.

Candidates did not perform well on this assessment opportunity. The average candidate attempted to discuss whether K-Lease would earn business or investment income. Many candidates who did attempt this discussion included technical errors in their analysis, such as assuming the income would be business income or thinking that investment income was taxed at a lower rate than business income. Most described the difference between salary and dividend at a theoretical level.

Strong candidates recognized that the leasing operations constituted investment income and that K-Lease would not meet the exception from this rule because it would have fewer than five employees. Strong candidates also went on to explain the tax treatment of salaries compared to dividends in some depth, considering the impact on both the individual and the corporation.

Weak candidates erroneously assumed that because K-Lease’s primary activities were the leasing operations, the leasing operations would be considered active business income. Many weaker candidates included several technical errors in their salary-versus-dividend discussion.

#### **AO#11 (Transfer of Assets)**

The case stated, “Tracey informs you that Kevin would also like further guidance on how to structure the transaction to separate K-Lease from K-Med. He would like the most tax-effective option available, but would like you to identify some alternatives so that he can discuss them with Kaylee.” To demonstrate competence, candidates were expected to explain how to transfer the leasing operations from K-Med to K-Lease. They were also expected to provide alternatives that could improve the tax impacts of such a transaction. The Board considered this a difficult assessment opportunity.

Candidates performed adequately on this assessment opportunity. Most candidates attempted a discussion of how to transfer the leasing assets from K-Med to K-Lease. Many candidates remained stuck at a discussion of the direct sale option and struggled to identify a second alternative. However, a number were also able to identify the option to use a section 85 rollover, although often without much depth to their discussion.

Strong candidates explained the consequences of a direct sale, integrating some planning concepts into the explanation (for example, considering the fact that a higher UCC would result from a direct sale), and identified and provided at least a brief discussion of another planning opportunity, usually the use of section 85.

Many weak candidates did not identify the option to transfer the assets at fair value, and few attempted additional analysis. Alternatively, some weak candidates performed an analysis that was not logical given the case facts presented. Many of these candidates suggested gifting the assets, which did not match the needs of the client or make sense from a tax perspective.

### **AO#12 (Future Share Sale)**

Kevin told Tracey that he plans to dispose of all his K-Med shares after the escrow period, to allow him to exit the company and provide cash for further investment in K-Lease. Tracey asked CPA to draft a separate memo to Kevin advising him of any tax deferral planning opportunities specific to the sale of his shares, and also to provide him with an estimate of the after-tax cash he will receive from his future K-Med share disposition. To demonstrate competence, candidates were expected to identify the tax implications of an eventual disposition of K-Med shares by Kevin (taxable capital gain), as well as any planning that could be done to minimize taxes. Planning opportunities primarily included ways to counteract the loss of qualified small business corporation (QSBC) share status at the time of the IPO or ways to ensure that K-Med would meet the QSBC share criteria before the IPO, given that the leasing assets threatened this status. The Board considered this a difficult assessment opportunity.

Candidates did not perform well on this assessment opportunity. Most candidates performed a calculation of the capital gain on the future sale of the K-Med shares by Kevin. They then attempted to analyze the QSBC criteria, and some attempted to discuss some planning opportunities. However, most had difficulty coming up with ways to use the lifetime capital gains deduction.

Strong candidates recognized that if K-Med went public, its shares would lose their QSBC status, and most explained whether the status was otherwise met. They then went on to identify a planning opportunity for taking advantage of this. These candidates most commonly suggested performing a holding company freeze, which, while inefficient, would achieve the goal.

Weak candidates attempted a calculation of the income associated with a future sale of K-Med shares by Kevin and made technical errors (such as treating the sale of shares as a redemption). Few of these candidates provided any planning options to reduce or defer taxes.

<b>Paper/Simulation:</b>	<b>Day 3, Case 1 (Bamboo Bikes)</b>
<b>Estimated time to complete:</b>	80 minutes
<b>Simulation difficulty:</b>	Average
<b>Competency Map coverage:</b>	Management Accounting (5 Assessment Opportunities), Strategy and Governance (1 Assessment Opportunity), Taxation (1 Assessment Opportunity)

### **Evaluators' comments by Assessment Opportunity (AO)**

#### **AO#1 (Labour Shortage – Quantitative)**

Candidates were asked to address the labour shortage facing BBI using quantitative analysis. To demonstrate competence on this depth assessment opportunity, candidates were expected to calculate the contribution margin per product line, taking the constrained resource (direct labour hours) into account. They were also expected to provide an interpretation of the calculation. There were several case facts that needed to be integrated into the calculation, including selling price, direct labour cost (per hour and per unit), direct materials cost, and variable overhead cost per direct labour hour.

Most candidates performed adequately on this assessment opportunity. Candidates were able to calculate the contribution margin per direct labour hour and to recommend which product (or products) to limit production of, given the calculation results.

Strong candidates calculated a contribution margin per direct labour hour for all products and concluded that B-Bikes and accessories had the lowest contribution margins. Their contribution margin calculation accurately included all components: the direct labour, direct material, and variable overhead costs.

Weak candidates did not identify the constrained resource and instead calculated a contribution margin per unit before concluding on which products had the highest and lower contribution margins. As a result, they did not identify B-Bikes as having the lowest contribution margin per direct labour hour. In other instances, weak candidates attempted the contribution margin per unit calculation but excluded the variable overhead cost and did not provide an interpretation of the calculation results. Other weak candidates did not address the current contribution margin calculation and instead went straight into the analysis of the three options.

#### **AO#2 (Labour Shortage – Qualitative)**

This assessment opportunity is related to AO#1. Candidates were asked to discuss the qualitative decision factors that needed to be considered beyond the quantitative analysis they performed (which, if done accurately, would have suggested reducing B-Bike production to maximize profit). To demonstrate competence on this depth opportunity, candidates were expected to discuss the facts provided in the case and provide a recommendation that was consistent with their quantitative analysis and qualitative discussion. Several case facts could have been incorporated in the discussion, including the fact that B-Bikes were the toy that attracted new customers and that customers who purchased B-Bikes often purchased additional products as well.



Candidates did not perform well on this assessment opportunity. Most candidates failed to discuss the fact that B-Bike was critical to the success of BBI. Many did not provide a recommendation that was consistent with their analysis.

Strong candidates discussed B-Bikes being a key product for BBI, one that attracted new customers or had an impact on sales of other products, and that, as a result, production of B-Bikes should not be limited. This was easier for candidates to address if they performed the contribution margin per direct labour hour calculation correctly in AO#1.

Weak candidates simply did not identify the need to qualitatively discuss the results of the contribution margin calculation, accepting the quantitative results at face value. Other weak candidates calculated the contribution margin per unit, which limited their qualitative discussion (using this approach results in accessories being identified as the lowest contribution margin amongst the products).

### **AO#3 (Outsourcing)**

Candidates were asked to evaluate the outsourcing option available to BBI for Q3 and beyond using qualitative and quantitative analysis. To demonstrate competence on this depth opportunity, candidates were expected to calculate the financial impact and qualitatively discuss the option in order to be able to make a decision. Several case facts could have been incorporated in the analysis, including the tiered labour rates; the fact that BBI would provide its own direct materials, train the Eeeze Inc. (EI) employees, and decide which products to outsource; and BBI's commitment to manufacturing high-quality toys. Candidates could take different approaches to quantifying the costs.

Candidates performed well on this indicator. Most candidates calculated the financial impact and discussed the qualitative factors of the outsourcing option sufficiently to be able to make a decision.

Strong candidates correctly identified the shortfall of labour hours (362,500 hours) and calculated the incremental cost of addressing this shortfall by applying the tiered labour costs (\$30 and \$26) to those labour hours. They correctly excluded any variable overhead costs in the calculation. They also discussed various qualitative factors, typically regarding the quality risk of outsourcing and unknown additional costs related to training the EI employees.

Most weak candidates attempted an invalid approach that would include outsourcing all hours, even though it was clear that it would cost more to outsource and that enough hours were available in-house to produce most of the products. Weak candidates also attempted to discuss some qualitative factors, but they restated case facts (the fact that EI had been in operation for seven years) without discussing how this could mitigate the quality risk of outsourcing. Some failed to provide a conclusion – that it would cost more to outsource than produce in-house – on the quantitative results.

**AO#4 (Addition of a Shift)**

Candidates were asked to evaluate the additional shift option available to BBI for Q3 and beyond using qualitative and quantitative analysis. To demonstrate competence on this depth opportunity, candidates were expected to calculate the financial impact and qualitatively discuss the option to be able to make a decision. There were several case facts that could be incorporated in the analysis, including the increase in direct labour costs, the potential usage of non-production employees, the potential provision of additional benefits, and the fact that BBI is an industry leader in providing a healthy and safe working environment.

Candidates performed adequately on this indicator. Most candidates calculated the financial impact and discussed the qualitative factors of the overtime shift option sufficiently to make a decision.

Strong candidates correctly identified the shortfall of labour hours (362,500 hours) and calculated the incremental cost of addressing this shortfall by applying the increase in labour costs (\$22.50) to those labour hours. They also correctly included the increase in fixed overhead costs (\$150,000), and some correctly included the increase in variable overhead costs as well. They also discussed distinct qualitative factors related to the overtime shift, typically regarding the risk of negative employee morale related to working overtime, the quality risk of using non-production employees, and the negative impact on employee health and safety as suggested by research cited by a board member who is a physician.

Many weak candidates attempted an invalid approach by calculating the cost on all products using the overtime labour costs, even though it was clear that overtime would only be required for the labour that could not be fulfilled using the shifts currently available. Most weak candidates failed to take into account the increase in fixed overhead costs or the increase in variable overhead costs that were directly tied to the increase in labour hours. They also attempted to discuss some qualitative factors, but these factors were the opposite of the points discussed for the other options and, therefore, added little value. A common discussion included keeping the production in-house to allow BBI to better manage the quality of the products. This was a risk related to the outsourcing option, but it was not a distinct qualitative factor when compared with the status quo.

**AO#5 (Change to Material)**

Candidates were asked to evaluate the production change option available to BBI for Q3 and beyond using qualitative and quantitative analysis. To demonstrate competence on this depth opportunity, candidates were expected to calculate the financial impact and qualitatively discuss the option in order to make a decision. Several case facts could be incorporated in the analysis, including the savings in direct material costs and direct labour hours, the waste inherent in the current process, the suggested use of recycled plastic or recycled steel, and the fact that BBI is committed to using environmentally friendly products.

Candidates performed adequately on this indicator. Most candidates calculated the financial impact and discussed the qualitative factors of the production change option sufficiently in order to make a decision.

Strong candidates correctly identified the incremental savings related to changing the materials of the B-Bike. This included the 40% savings in labour hours and the reduction in material costs (by \$8 to \$12). Some also applied the 40% savings to the variable overhead costs. These figures were then applied to the full demand of 1.35 million to arrive at the cost savings. Strong candidates also discussed distinct qualitative factors, typically regarding the quality risk of changing the materials, the sustainability risk of moving from natural (bamboo) to non-natural products (plastic and steel), and using recycled materials to align with environmentally friendly values, as well as the potential reputation risk of moving away from its main competitive advantage.

Weak candidates attempted an invalid approach. Many included errors in their calculation by using the shortfall hours rather than the full bike demand or applying the labour and material cost savings across all products, when it was clear in the case that this would apply only to the B-Bikes. They also attempted to discuss some qualitative factors, but these factors were the exact opposite of the points discussed for the other options and, therefore, added little value. Common discussions included keeping the production in-house to allow BBI to better manage the quality of the products and keeping employee morale high by not forcing them to work overtime. These were risks related to the outsourcing and overtime shift options, but they were not distinct qualitative factors affecting the production change option.

#### **AO#6 (Mission/Vision)**

Candidates were asked to evaluate the short-term and long-term impacts of different strategic alternatives and to conclude on the best alternative that aligned with the company's mission, vision, and values. To demonstrate competence on this breadth opportunity, candidates were expected to make a sound evaluation of all three options, one that considered the quantitative analysis and strategic discussions, when providing a recommendation for Q3. Several case facts could have been incorporated in the analysis, including the values regarding safety, quality, and sustainability; the mission statement committing BBI to manufacturing high-quality toys that exceed safety standards while using environmentally friendly products and ethical business practices; and BBI's status as an industry leader for labour practices, providing a healthy and safe working environment.

Candidates performed very well on this assessment opportunity. They provided a sound evaluation of all three options that considered their quantitative analysis and strategic discussions before providing a recommendation for Q3.

Strong candidates discussed mission-related qualitative factors in their analysis of the three options. They also performed quantitative analysis of the three options. Most stepped back and provided an overall recommendation to pursue one of the options, taking into account both their qualitative and quantitative analysis. Most strong candidates wrapped up the discussion by linking the recommendation to the mission and strategy of BBI.

Weak candidates performed the analysis on the three options, but many did not include strategic considerations in their qualitative discussion. Instead, they focused the discussion on cost factors alone, rather than considering BBI's mission and values. In other instances, weak candidates did not step back after the analysis of the three options to conclude on which option to pursue. Some weak candidates did not perform calculations on the three options, which made it difficult to step back and recommend a path to pursue (it was hard to do without taking into account both the strategic considerations and the financial impact of all options).

### **AO#7 (Perks)**

Candidates were asked to discuss the tax implications of the special perks being proposed to employees. To achieve competence on this breadth opportunity, candidates were expected to discuss in reasonable depth the tax implications arising from the benefits, as well as ways to make the benefits non-taxable. Several case facts could have been incorporated into the analysis, including the offers to pay for fitness memberships for the sales staff, cover tuition costs for courses without restricting the type, and provide gift certificates ranging from \$100 to \$500.

Candidates performed very well on this assessment opportunity. They discussed in reasonable depth the tax implications that would arise from the benefits, as well as ways to make the benefits non-taxable.

Strong candidates addressed all three tax issues and clearly provided the tax criteria before concluding on the tax impact for employees. For memberships, this typically included a discussion of how a membership would be a taxable benefit to employees unless it was provided for all employees or it could be proven it was for business purposes (rather than personal). For tuition, this typically included a discussion of how tuition costs would be a taxable benefit to employees if the courses were of a personal nature and not related to developing business skills. For gift certificates, this typically included a discussion of how gift certificates would be a taxable benefit to employees regardless of the amount because they are considered cash-like gifts. Strong candidates also discussed a combination of proposed alternatives to make these benefits non-taxable to employees and a discussion of the implications of these benefits to BBI. These responses tended to include offering memberships to all employees, restricting the courses to job-related courses, and offering non-cash-like gifts under \$500. They also stated that memberships would not be deductible for BBI, while tuition costs and gift certificates would be deductible for BBI.

Weak candidates concluded on the taxable impact for the employees without providing the relevant tax criteria. Some answers like this simply stated, "memberships are taxable benefits, tuitions are non-taxable benefits, and gift certificates are taxable benefits." Without any discussion of the tax criteria, it was not clear whether these candidates understood the tax concepts or were "guessing" the tax treatment. Other weak candidates did not identify the need to discuss the tax impact from the employees' perspective and focused their discussion on the implications for BBI.

**Paper/Simulation: Day 3, Case 2 (ESL)****Estimated time to complete:** 80 minutes**Simulation difficulty:** Average

**Competency Map coverage:** Financial Reporting (2 Assessment Opportunities);  
 Audit and Assurance (2 Assessment Opportunities);  
 Management Accounting (2 Assessment Opportunities);  
 Strategy and Governance (1 Assessment Opportunity);  
 Taxation (1 Assessment Opportunity)

**Evaluators' comments by Assessment Opportunity (AO)****AO#1 (Revenue Recognition)**

Candidates were asked to prepare a memo that included an analysis of any financial reporting issues resulting from offering courses online, and were provided with information regarding the new online courses in Appendix I of the simulation. Candidates were informed that ESL reports under ASPE. Appendix I provided information on recognition of revenue for online courses and an asset recorded for the online courses and related IT platform. AO#1 relates to the issue of revenue recognition for the new online courses. To demonstrate competence on this depth assessment opportunity, candidates were expected to provide a reasonable analysis of the revenue recognition issues and attempt a calculation of the adjustments required.

Candidates performed well on this assessment opportunity. Many candidates were able to identify that the criterion for performance had not been met and applied sufficient case facts to support their discussion. Candidates frequently performed a calculation of the amount of revenue that should be derecognized and recorded as deferred revenue in the balance sheet. Some candidates recognized that the percentage of completion method of recognizing the online course revenue was more appropriate than the completed contract method. However, the calculation that most candidates performed to determine the amount of revenue that should be deferred was not entirely consistent with their analysis. Candidates merely included completed courses in their calculation, rather than also incorporating courses that remained in progress.

Strong candidates provided responses that were well organized and more complete than those of weaker candidates. Their responses were stronger from both a technical and an application perspective because they provided the relevant ASPE guidance and integrated simulation facts appropriately into their responses. They considered whether performance had been achieved, as well as incorporated more complete calculations to support their discussion, contemplating both courses that had been completed and courses that remained in progress as of December 31. Most of those candidates addressed the need to use the percentage of completion approach and demonstrated their understanding of the circumstances by performing a reasonable calculation to support their conclusion.

Many weak candidates came to an incorrect conclusion that the \$75,000 had been properly recognized in revenue, either because they did not apply the ASPE criteria to the specifics of this simulation or because they applied them incorrectly. Other weak candidates merely stated the ASPE criteria and jumped to a conclusion on whether revenue had been appropriately recognized.

### **AO#2 (Intangible)**

Candidates were asked to discuss in their memo the asset recognized by Michael on the balance sheet that related to the new online courses. To demonstrate competence on this depth opportunity, candidates were expected to provide a reasonable analysis of intangible asset recognition and to determine a reasonable and supported amount that should be recognized.

Candidates performed well on this assessment opportunity. Most were able to discuss some components of the total amount capitalized and support why capitalization was or was not appropriate. In addition, many candidates summarized their discussion by providing the amount that should be removed from the capitalized asset. For example, most candidates identified that research costs of \$30,000 must be expensed under ASPE and attempted to explain why either marketing or support costs should also have been expensed. Some candidates considered either some of the general intangible asset criteria in their discussion or some of the criteria for capitalizing developments costs for an internally generated intangible asset, and appropriately applied case facts to them to support their discussion. However, other candidates repeatedly used the same statement for the different criteria when providing their analysis, which did not demonstrate sufficient depth of discussion or application of case facts.

Strong candidates provided responses that were well organized and more complete than those of weaker candidates. Their responses were stronger from both a technical and an application perspective because they provided the relevant ASPE guidance and integrated simulation facts appropriately into their responses. They considered first whether the asset satisfied general criteria for intangible assets before continuing with specific analysis related to the capitalized research and developments costs. Strong candidates also applied appropriate case facts and provided useful comments when assessing the various criteria for development costs. In addition, those candidates recognized that the intangible asset should be amortized over its estimated useful life, preliminarily set at five years as per Michael's comment on when the courses would need to be updated.

Many weak candidates addressed only research, marketing, or support costs and calculated the amount that should have been expensed, but they did not explain why expensing these costs was considered appropriate, nor did they address the remaining capitalized costs. Other candidates merely excerpted the ASPE criteria and did not apply any case facts to those criteria in their response, or they provided an overall conclusion at the end of their technical excerpts stating that all criteria had been satisfied because online courses were already offered, without considering whether it was appropriate to capitalize individual components of the online course costs.

**AO#3 (Planning)**

Candidates were asked to consider the impact of the online course change on the risk assessment for this year's audit. Candidates were clearly directed to this breadth assessment opportunity by Evelyn's specific request and were provided with information regarding new online courses in Appendix I of the simulation. To demonstrate competence, candidates were expected to discuss the significant issues related to the undertaking of the engagement or project and attempt to assess the risk of material misstatement.

Candidates performed adequately on this assessment opportunity. Most were able to recognize and explain that the online courses represented a new revenue stream for ESL. They also recognized the implications upon the current year's audit (for example, untested aspects of the system being used by online courses, or existing errors giving rise to concerns that more errors would occur) and saw that the risk of the engagement would be higher than in the previous year.

Strong candidates demonstrated a better understanding of the new business stream, recognizing that more errors may have occurred and that the existing system had not changed because of online courses, but rather that ESL was now using different aspects of that system. Those candidates also considered how these factors affected the risk assessment as compared to prior years.

Many weak candidates provided no explanation for their statement on the level of risk, simply concluding that risk was high because of the new online courses. Other weak candidates did not address risk considerations at all, focusing instead on users of the financial statements or on Michael's perceived management bias.

**AO#4 (Materiality and Approach)**

Candidates were asked to consider the impact of the online course change on the materiality level and approach to this year's audit. Candidates were clearly directed to this required by Evelyn's specific request and were provided with information regarding new online courses in Appendix I of the simulation. To demonstrate competence on this breadth opportunity, candidates were expected to calculate preliminary materiality and to consider the impact of accounting errors identified on that materiality, as well as explain that the audit approach for revenue would be affected by the changes (new online revenue would need to be tested and further testing would be required on the registration system).

Candidates performed adequately on this assessment opportunity. Most attempted a calculation of preliminary materiality, and some recognized that the accounting errors would have an impact on that calculation, demonstrating so either by performing a calculation incorporating those adjustments to the basis used for materiality or by stating that materiality would be lowered because of those adjustments. Candidates struggled more with the impact on the audit approach, and some did not contemplate the impact of changes because of the new online course offerings. Many candidates provided a brief statement regarding the approach that should be used for the audit (such as a combined approach), with limited consideration of how the online course offerings would change that approach, or they automatically concluded that a substantive-based approach was needed because of the accounting errors identified.

Strong candidates calculated both a preliminary and an adjusted materiality, as well as considered other factors related to materiality (for example, they considered specific users, provided support for the basis used for their materiality calculation, or explained why performance materiality should be used for specific areas). Those candidates demonstrated a better understanding of the impact of the online courses on the audit approach (for example, they saw the need to test those controls which could allow the firm to use a combined approach) and demonstrated that they understood the impact of the system on the approach, rather than automatically concluding that a substantive-based approach should be used.

Weak candidates provided a brief comment related to materiality, such as a general statement relating to the users of the financial statements, or performed only a calculation of preliminary materiality and provided a brief statement on the audit approach. For example, many of these candidates stated that a 100% substantive-based approach should be used, and some tried to support that by stating that, since ESL was a small, privately held company, it would not have any controls that could be relied upon. These candidates failed to demonstrate an understanding of the nature of the change on the audit approach caused by the introduction of online courses and recognize that small or privately held companies could have a reliable system of internal controls.

#### **AO#5 (Expansion – Quantitative)**

Candidates were informed that Michael was considering opportunities to further grow the business and was unsure whether to offer additional online courses or more of the traditional classroom courses. Information relating to the two opportunities was provided in Appendix II of the simulation, and candidates also had to refer to information in Appendix I for the online courses. Candidates were clearly directed to this depth assessment opportunity because Evelyn specifically stated that Michael had asked for a quantitative assessment of the two opportunities. To demonstrate competence, candidates were required to consider the quantitative factors associated with both opportunities, performing either an appropriate analysis of the annual cash flows or an appropriate analysis of the income associated with each.

In general, candidates performed adequately on this assessment opportunity. Many candidates attempted a calculation for both the online courses and the classroom offerings. However, many candidates' calculations included errors or omissions. In general, the calculations related to the classroom were done well, since candidates considered revenue and expense components and incorporated several key case facts into their calculations. The quantitative information related to classroom offerings was all contained within Appendix II. The most common errors made by candidates included omitting the maximum number of students (20) in each class from the classroom revenue calculation, not adjusting the monthly lease payment of \$8,500 to an annual basis, and not adjusting the \$2,400 cost of the instructors to a class offering basis. Candidates seemed to make more errors in calculations for online courses, perhaps because they had to integrate both Appendix I and Appendix II to obtain information on revenue and variable and fixed costs. Common errors or omissions made by candidates in online calculations included forgetting to account for the planned six-course expansion, omitting or miscalculating variable costs related to web hosting and IT support (on a \$6 per registrant basis, as per Appendix I), and omitting or miscalculating fixed costs related to marketing (\$10,000 for the four courses already offered, as per Appendix I). Candidates generally prepared their quantitative analysis on a comparable basis, considering only the incremental revenues and costs associated with each expansion opportunity.



Strong candidates prepared a complete and accurate quantitative analysis of both opportunities, with few calculation errors. For the classroom side, strong candidates considered revenue and both the annual lease expense and the expense for instructor costs. Some considered capacity and demonstrated to Michael how a drop in capacity from 100% would affect the quantitative assessment. On the online course side, some otherwise-strong candidates made a small calculation error or omission but considered both revenues and expenses in their analysis. In addition, many strong candidates recognized that there was an upfront cost for content development for the six planned online courses and incorporated that outlay into their analysis.

Weak candidates attempted a quantitative analysis of one or both options but made numerous calculation errors and omissions. As a result, the calculations they provided were not very useful. Some of these candidates also prepared an analysis where the basis was not comparable (for example, the online course expansion was compared to current and existing classroom offerings) because it was not done on an incremental basis. These candidates also generally did not consider the upfront outlay for content development costs related to the six planned online courses.

#### **AO#6 (Expansion – Qualitative)**

As well as a quantitative assessment, candidates were asked by Evelyn to perform a qualitative assessment of the two opportunities. To demonstrate competence on this depth opportunity, candidates were required to consider more than one qualitative factor.

Candidates performed well on this assessment opportunity. They addressed qualitative factors, providing some considerations for each of the options, and came to a reasonable conclusion based on the results of their analysis. Most candidates were able to provide an overall recommendation as to which expansion option should be pursued, and they supported the recommendation with some discussion, frequently about the growth assumptions for online courses and classroom offerings. However, many candidates repeated the same concern (such as concern about growth estimates) in several different ways, not realizing that they were addressing the same factor each time. In addition, many candidates provided a discussion of one item as an advantage of one option while also stating it as a disadvantage of the other option. Despite the repeated statements, the underlying factor remained the same and candidates were assessed as addressing only one issue in those comments.

Strong candidates generally provided qualitative considerations that were balanced between pros and cons, and they used relevant case facts in their analysis, discussing both online courses and classroom offerings. Those candidates seemed to have taken time to plan and think about what they wrote because their comments were insightful and not merely a repetition of case facts. They generally understood the planned expansions and contemplated the information presented in the case. Strong candidates always wrapped up the results of their analysis by providing an overall recommendation on what Michael should do.

Many weak candidates restated case facts under pro and con headings without providing any additional comments or interpretation of those facts. These candidates also provided few pros and cons of the growth opportunities, addressed qualitative factors for either online courses or classroom offerings (but not both), or merely restated the results of their quantitative analysis in their discussion instead of discussing other factors that could influence the expansion decision.

**AO#7 (Cannibalization)**

Candidates were expected to recognize that revenue from the online courses may have been reducing revenue from classroom sessions. While candidates were directed to this issue when they were asked by Evelyn to consider any strategic and governance implications for the growth opportunities, they were not specifically directed to the issue of concern. In Appendix II of the simulation, candidates were provided with information that classroom offerings, which had historically been at 100% capacity, had averaged only 80% in November and December. On this breadth opportunity, candidates needed to recognize that this timing and reduction in capacity coincided with the introduction of four online courses in October 2015. To demonstrate competence, candidates were expected to discuss the fact that online course revenue may have been cannibalizing classroom revenue and how that could affect ESL's decision on future expansion opportunities.

Candidates did not perform well on this assessment opportunity. Some were able to identify and explain that the trend between online courses gaining in popularity and registration was linked to the decline in classroom capacity. However, many candidates did not go beyond that initial recognition to consider the future impact. Some candidates wrote about the need for Michael to update the company's mission statement to incorporate the move to providing online courses, or they provided general discussions on the need to improve governance and oversight of the company. Those candidates did not consider the specifics of this case and defaulted to a discussion of general strategy and governance matters.

Strong candidates clearly saw that the trend was cannibalistic and made specific suggestions to Michael for the future to alleviate the bite of the cannibal. For example, some candidates suggested reconfiguring the pricing of online and classroom courses so that they were more comparable, since presently online courses offered at \$150 were significantly cheaper than classroom offerings at \$400 each. Others suggested focusing online course marketing efforts outside of the Toronto area so as not to capture registrations from participants who would otherwise attend in class offerings. Those candidates remained focused on cannibalization throughout their discussions, made useful suggestions for expansion opportunities, and rarely addressed general governance and strategy areas.

Weak candidates did not see the link between increasing online course participation (particularly from the Toronto area) and the decline in classroom capacity from historical levels. Those candidates tended to focus on generic governance issues, such as the fact that Michael wouldn't be able to run his company if it kept growing, ESL needed to have a board of directors with various committees, or Michael needed to reword his mission statement to include online courses since he had only been offering classroom courses to date. As a result, they did not appropriately consider the scenario, recent business changes, or the size of ESL in their comments.

**AO#8 (Tax Consequences of Accounting)**

Candidates were not specifically directed to this breadth assessment opportunity. However, there was a comment in Appendix I of the simulation about Michael wondering whether any of the online course and IT platform development costs could be deducted or if capital cost allowance could be claimed on the income tax return. In order to demonstrate competence, candidates were expected to explain the tax treatment for online IT platform and online course development costs, recognizing the different treatments for the capital and income portions.

Candidates did not perform well on this assessment opportunity. Many addressed either the capital or the income portion of the online course costs, and some were able to demonstrate correct tax knowledge in their discussions. However, many candidates made only conclusive statements (for example, the intangible asset must be included as an eligible capital expenditure (ECE), or the expense is deductible for tax) without elaborating on the nature of the asset or income item or its components from a tax perspective and without explaining why it would be considered a tax asset (such as consideration as an ECE). Few candidates recognized that individual components of the intangible asset that were capitalized for accounting purposes might in fact be fully deductible for income tax purposes.

Strong candidates considered both the capital and income portions of the online course costs and provided statements that were generally complete, supported, and technically correct from a tax perspective. They demonstrated further tax knowledge in the area of capital expenditures by discussing the nature of the asset and considering the classification of the expenditure for tax purposes. Many strong candidates were able to demonstrate understanding of the tax impact of including assets in a particular class (for example, Class 12 software with a 100% capital cost allowance rate and the half-year rule applicable in the year of addition) and explained why the asset would be eligible for inclusion in a particular class.

Weak candidates either did not address this assessment opportunity at all or, when they did address it, made brief and incomplete statements from a tax perspective. For example, some candidates stated that a particular item would be deductible for tax purposes but provided no further explanation or support for their deductibility conclusion. In other cases, candidates applied the estimated useful life for accounting purposes on the asset (Michael hoped courses would have to be updated every five years) to the treatment for tax purposes, not recognizing that the two were not the same. Candidates also seemed unfamiliar with the underlying knowledge of what types of assets are eligible for inclusion in various tax classifications, either for capital cost allowance purposes or for eligible capital expenditures.

<b>Paper/Simulation:</b>	<b>Day 3, Case 3 (Katwill Lodge)</b>
<b>Estimated time to complete:</b>	80 minutes
<b>Simulation difficulty:</b>	Average
<b>Competency Map coverage:</b>	Management Accounting (2 Assessment Opportunities), Taxation (1 Assessment Opportunity), Finance (2 Assessment Opportunities), Audit and Assurance (1 Assessment Opportunity), Strategy and Governance (1 Assessment Opportunity)

### **Evaluators' comments by Assessment Opportunity (AO)**

#### **AO#1 (Cost per Resident – Quantitative)**

Candidates were asked by the general manager whether the entity was recovering its costs for each resident, considering that the occupancy rate changed from 85% to 100%. This was a direct request from the general manager to the newly hired controller. To demonstrate competence on this depth assessment opportunity, candidates were expected to demonstrate an understanding of fixed versus variable costs and to calculate a reasonable cost per resident, considering the increase in occupancy.

Candidates performed well on this assessment opportunity. Most performed a calculation to determine the total revenues and total costs at 100% occupancy (220 beds), recognizing that the costs for health professionals varied with the number of beds. Some candidates made a calculation error on the number of nurses, using one instead of three. The average candidate recognized that the administrative costs were fixed and all other costs were considered variable, and they adjusted those for the increase in occupancy from 85% to 100%.

Strong candidates calculated the costs per resident at 100% occupancy and considered whether each type of cost (such as food, office expenses, recreation, and utilities) was fixed or variable.

Weak candidates attempted a calculation to determine the total revenues and total costs at 100% occupancy but made significant errors in calculating the cost of health professional staff by either applying a 100/85 factor or ignoring the specifics regarding the required number of staff. For example, some candidates included only one employee for each of the three types of staff in the staff costs. Others treated other costs as either all fixed or all variable.

#### **AO#2 (Covering Costs – Qualitative)**

Candidates were asked to provide "improvements [Katwill] might make to improve [its] profitability." To demonstrate competence on this depth opportunity, candidates were expected to compare the revenues to the costs, ideally on a per-resident basis, to try to explain why Katwill was not covering all of its costs in spite of the higher occupancy. Candidates were then expected to suggest ways to increase revenue or to decrease costs. This required some creativity on the part of candidates.

Candidates performed adequately on this assessment opportunity. Most compared the costs to the revenues, but not on a per-resident basis, and commented on some of the reasons why the costs might not be covered. However, many candidates did not provide recommendations on how Katwill could improve its profitability.

Strong candidates compared the costs to the revenues, most on a per-resident basis, and adequately described two to three improvements that could be made to increase profitability (for example, as a result of inflation, the city could consider increasing the grant, or Katwill could consider paying the dietitians for actual hours worked). Strong candidates also tended to provide insightful discussions about which revenues or costs would be difficult to change in this particular environment and why this was the case (for example, Katwill couldn't really cut all the recreational costs, even though they appear to be discretionary costs).

Weak candidates only attempted to compare the costs to the revenues on a total basis, and often the comparison contradicted the related calculations they performed. As well, many weak candidates provided one or two very general or impractical recommendations to improve profitability, such as cutting all recreational activities.

### **AO#3 (Employee vs contractor)**

Candidates were directed towards this breadth assessment opportunity when the general manager questioned why Katwill should make remittances if certain employees, the dietitians, were considered self-employed contractors. To demonstrate competence, candidates were expected to identify and discuss some of the factors used by CRA to determine if a person is an employee or a contractor and to apply those criteria to the case facts presented in Appendix II of the simulation to draw a conclusion.

Most candidates performed well on this assessment opportunity and were able to provide a well-supported analysis by comparing the case facts to the criteria applied by CRA to draw a conclusion. Candidates seemed quite familiar with the criteria.

Strong candidates identified at least four criteria that applied and discussed most of them in sufficient depth, concluding as to the status in accordance with their analysis. Strong candidates recognized that there were factors going both ways and went further to provide Katwill with an action plan, such as contacting CRA to obtain a ruling or suggesting ways to help protect the contractor status.

Weak candidates identified two or three relevant criteria and discussed only the relevant case facts for one or two of these criteria very briefly. Some did not provide a supported conclusion. In addition, some weak candidates misstated case facts or interpreted them inaccurately.

**AO#4 (Loan options – Quantitative)**

Candidates were directed to this requirement because the general manager provided a description of two financing options for the new expansion project and asked, “Can you let me know your thoughts on the two available financing options, from both a quantitative and qualitative perspective?” To demonstrate competence, candidates were expected to calculate the cost (using implied interest rate or some other method) of each loan option, recognizing the time value of money in the analysis. This was considered a difficult assessment opportunity because the loan options were very different from each other, making the quantitative comparison more challenging.

Candidates did not perform well on this assessment opportunity because most of them were not able to determine the effective interest rate for each option and compare them. Most candidates performed a net present value calculation of the annual and monthly payments, applying the same discount rate to both calculations and thereby demonstrating some understanding of the time value of money.

Strong candidates determined the annual and monthly interest cost of each financing option, often performing an internal rate of return calculation, thereby demonstrating a more thorough understanding of the time value of money.

Weak candidates simply computed the total payments under each option and compared the absolute numbers, not displaying any knowledge of the time value of money.

**AO#5 (Loan options – Qualitative)**

Candidates were directed to this requirement when the general manager asked, “Can you let me know your thoughts on the two available financing options, from both a quantitative and qualitative perspective?” To demonstrate competence on this breadth opportunity, candidates were expected to discuss some of the qualitative considerations of each option (cash flow timing, conversion risk, personal guarantee, etc.) and recommend one of the options to Kurt.

Candidates did not perform well on this indicator. Most candidates identified two or three qualitative factors for the bank option, one or two of which were discussed [guarantee, collateral and ASPE financial statement requirement]. They provided less analysis of the private investment option, with some identifying the conversion feature and the cash flow uncertainty in the private investment option as concerns, but had difficulty expressing why. They generally provided a recommended course of action, but it was not always consistent with their analysis.

Strong candidates discussed several qualitative factors for both options. They discussed two or three relevant case facts for Option 1 and provided a good level of insight for both the conversion option and cash flow uncertainty for Option 2. They also provided a supported recommendation based on their analysis.

Weak candidates repeated the case facts without describing the impact for either Carrie, the sole shareholder, or Katwill. Often their analysis was presented as a pro and con list, but with little explanation to support why each item was a pro or con.

**AO#6 (Controls)**

Candidates were directed to this issue because they were provided with a schedule describing the financial processes and were asked by the general manager to let him know if there were “any improvements that can be made.” To demonstrate competence on this breadth opportunity, candidates were expected to identify and discuss several of the control weaknesses, explain why they were weaknesses, and recommend improvements.

Candidates performed well on this assessment opportunity. They were able to identify a reasonable number of control weaknesses, describe their implications, and provide practical recommendations to mitigate the underlying risks.

Strong candidates identified four or five weaknesses and their implications, and they provided relevant recommendations for most of them.

Weak candidates often identified several weaknesses but were confused about the implications. They attempted recommendations but were not able to suggest appropriate recommendations for specific weaknesses. In addition, weak candidates demonstrated that they were not familiar with basic control processes by providing discussions that did not pertain to this company’s environment or providing recommendations that were not consistent with the case facts presented. For example, some recommended Carrie sign every cheque, even though the case clearly stated that Carrie was not involved in the day-to-day operations.

**AO#7 (Vision Alignment)**

Candidates were not directed to this issue. However, there was a hint from Kurt when he said, “I’m just not sure if it is consistent with her vision.” To demonstrate competence on this breadth opportunity, candidates were expected to recognize that the proposed expansion was not in line with Carrie’s vision, that Katwill was struggling in its current operating environment, and that the expansion timing needed to be reconsidered.

Candidates did not perform well on this undirected assessment opportunity. Many did not address the issue. Those who did address it did not consider the overall situation at Katwill or simply stated that the expansion project might not have been in line with Carrie’s vision. They did not go further to support this comment with any case facts or explain why the project might have been inconsistent with her vision.

Strong candidates identified that the expansion plan might not have been in line with Katwill’s vision, supporting this statement with relevant case facts, recommending a discussion with Carrie in advance of implementing any changes, and addressing how the expansion might either harm or improve Katwill’s overall financial situation.

Weak candidates either identified the inconsistency between the vision and the project and suggested not proceeding or simply did not address the issue.

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