CHARTERED
PROFESSIONAL
ACCOUNTANTS
CANADA

CPA Common Final Examination

BOARD OF EXAMINERS' REPORT

PART A — The Day 2 and Day 3 Report

May 2022 Examination

CPA EVALUATIONS

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Part B, which contains the Day 1 BOE report, will only be issued after Version 2 of CTI is written in May 2023. Therefore, there is no Part B associated with the May 2022 CFE.

THE BOARD OF EXAMINERS' REPORT ON THE MAY 2022 COMMON FINAL EXAMINATION

OBJECTIVES OF THE REPORT

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

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

The May 2022 CFE Report has only one part: Part A, which is the Day 2 and Day 3 Report. There is no Part B report (Day 1) associated with the May 2022 CFE.

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

RESPONSIBILITIES OF THE BOARD OF EXAMINERS

The Board of Examiners (BOE or the board) comprises a chair, two vice-chairs, 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 *CPA 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, made up of nine members of the board, is actively involved in the preparation of the CFE simulations, the preliminary marking guides, and the setting of the initial passing profile. The members of that subcommittee participate in the Preliminary Evaluation Centre where the marking guides are tested against candidate responses and finalized, and in the start-up of the marking centre. The BOE chair and vice-chair provide oversight throughout the entire marking process, consulting with subcommittee members as required. The full board is responsible for equating the difficulty of the examination to prior years' examinations and establishing the passing standard.

THE CFE

Preparation and Structure of the CFE

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

The full board provides guidance as to the content and nature of simulations to be included on the examination. The CFE subcommittee reviews and refines these simulations that 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' readiness to enter the profession:

Day 1 – The first paper is a four-hour examination consisting of a single simulation that is linked to the Capstone 1 group case. There are two versions of the linked cases. Version 1 is linked to the most current Capstone case and is written by first time writers and by repeat writers who chose to attempt the new case rather than Version 2 of the previous Capstone case. Version 2 is written by repeat writers and candidates who deferred and are writing Version 2 as their first attempt. The two versions of the exams are calibrated to ensure the difficulty of both is comparable. For the May 2022 CFE, only Version 1 was offered.

As a result of Covid-19, there have been adjustments made, that have resulted in a version 3 of some Capstone cases.

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, is a four-hour paper, consisting of three multi-competency area simulations.

Assessment Opportunities

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

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

Appendix A contains a comprehensive description of the evaluation process.

Marking Guides

Marking centre leaders and assistant leaders provide valuable input during the testing and setting of the marking guides, before live marking begins. The vice-chair, selected member(s) of the CFE subcommittee 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 that appeared on the May 2022 CFE and **Appendix C and D** for the Day 2 and Day 3 simulations and marking guides. The marking results for Day 2 and Day 3, by Assessment Opportunity, appear in the statistical reports found in **Appendix E** of this report.

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

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

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

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

Setting the Passing Standard

The board chair and vice-chair in charge of the examination monitor the 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 candidate is judged in relation to the board's pre-established expectations of an entry-level chartered professional accountant. Any changes to the initial profile that were made throughout guide-setting and the marking centre 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 (set using a scale: Easy, Easy to Average, Average, Average to Hard, or Hard)
- The level of difficulty of each Assessment Opportunity (set using a scale: Easy, Easy to Average, Average, Average to Hard, or Hard)
- The design and application of the marking guides
- Comments from leaders and assistant leaders regarding any marking difficulties encountered or any time constraints noted
- Possible ambiguity of wording or of translation
- Input on critical decision factors from an independent board (i.e., those BOE members not on the CFE subcommittee and therefore not directly involved) who review the fair pass package

The Decision Model

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

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

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

- Day 3 supplements the **depth** test in the common core areas of Financial Reporting 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. Those seeking licensure must obtain depth in Financial Reporting and in the Assurance Role.

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).

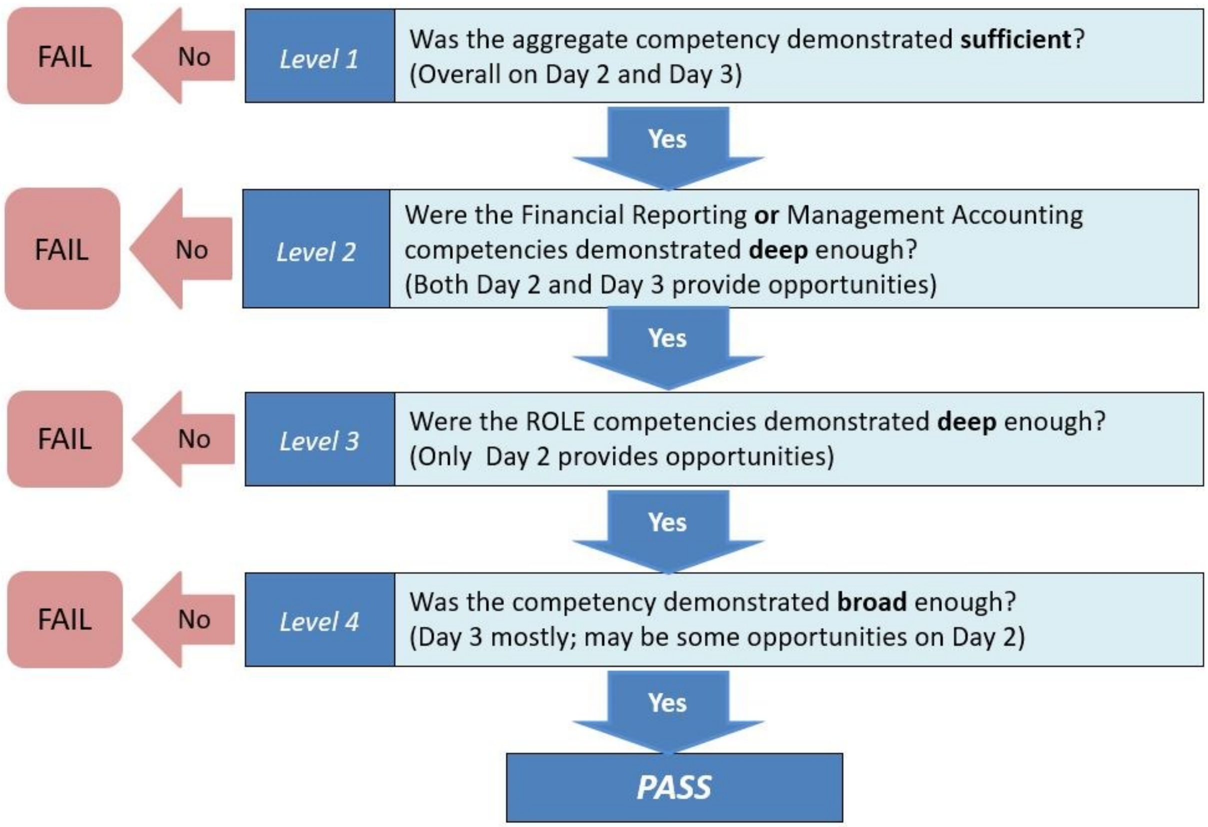
2. The response must demonstrate **depth** in the common core area of Financial Reporting or Management Accounting (Level 2).

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).

The BOE is responsible for equating the results from one examination to another to ensure that candidates have an equal chance of passing whichever examination they write. The BOE uses the factors listed above under setting the passing standard, in order to equate the examinations.

EXHIBIT I
DAY 2 AND 3 PASS/FAIL ASSESSMENT MODEL



Approving the Results

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

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

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

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

Reporting

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

The board reports the following information by candidate number:

- Overall pass/fail standing and pass/fail standing for each of Day 1 and of Day 2 and Day 3 combined.
- A pass/fail standing for Day 1.
- A pass/fail standing for Level 1, Sufficiency. A decile ranking is provided for failing candidates.
- A pass/fail standing for Level 2, Depth in Financial Reporting 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 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.

Jordan Oakley, CPA, CA
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 standards.

Introduction

The May 2022 CFE Report contains a Part A only, which presents detailed information on all candidates' performance for the Day 2 and Day 3 examination cases. There is no Part B report for the May 2022 CFE because the CFE reports for the Day 1 linked cases will only be available after CTI Version 2 is written in May 2023. The simulations, marking guides, marking results, and Board of Examiners' (BOE) comments on the Day 2/Day 3 portion of the examination, as well as the Day 1 simulation, are provided in this document.

The intent of this message from the BOE is to help candidates improve their performance on future CFEs by drawing their attention to the most common detracting characteristics observed in candidate responses to the May 2022 CFE. The BOE's comments are based on the feedback of the marking teams, who see the entire candidate population, and reflect the broad themes noted by the markers that apply to all candidates who wrote this sitting of the CFE. More detailed AO-by-AO commentary on candidates' performance can be found in the BOE's comments in Appendix F of Part A of the CFE Report.

Nature of the CFE

The design of the CFE is such that each day of the examination allows candidates to demonstrate a different skill set. Day 1 allows candidates to demonstrate their high-level professional skills, such as analysis that is relevant and critical to strategic decision-making, professional judgment, and ability to synthesize. Day 2 allows candidates to demonstrate their technical competence in the common Financial Reporting and Management Accounting competencies and in their chosen role, which is tied to one of the four elective areas. Day 2 typically, but not always, 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 Financial Reporting and Management Accounting competencies, and provides multiple opportunities to demonstrate breadth in all the core technical competency areas. Day 3 is typically time constrained, requiring candidates to prioritize the issues and manage the amount of time spent on each issue. Both Day 2 and Day 3 require candidates to integrate the information found in the simulation in order to demonstrate competence. All three days require candidates to clearly communicate their thought process.

Strengths and Weaknesses

<u>Time management</u>

The Day 1 simulation was not time constrained in any way, and generally, the amount of time that candidates devoted to their situational analysis and their issue analysis was appropriate. Most candidates were able to address all the strategic alternatives presented, spending more time on the alternatives that required more analysis and discussion.

The Day 2 simulation was also not time constrained, and most candidates managed their time appropriately on Day 2. However, some candidates did not attempt all the AOs, often skipping the harder ones. For example, Day 2 Finance role, AO#11 (Working capital), rated Hard at Competent by the BOE, Day 2 Finance role, AO#12 (Children's book intellectual property), rated Average to Hard at Competent by the BOE, and Day 2 Performance Management role, AO#13 (External factors impacting strategy), rated Average to Hard at Competent by the BOE all had a higher percentage of candidates not attempt the AO.

On Day 3, there was evidence of some candidates spending too much time on Simulation 2, to the detriment of Simulation 3, which had AOs with a higher-than-normal percentage of candidates in "Not Addressed" than a typical Day 3 simulation. Day 3, Simulation 2 was the longest of the three simulations and had seven AOs to address within the allotted 85 minutes, requiring strong time management skills. If candidates went over the suggested time on Simulation 2, they would have had difficulty making that time up.

Candidates are reminded that the CFE has a minimum sufficiency score that must be obtained, separate from the requirements that are set for the depth and breadth tests. The BOE continues to encourage candidates to take time to identify the relevant issues and attempt a discussion of all the requireds, since their sufficiency score is affected by AOs they do not attempt. The BOE also encourages candidates to continue to use the suggested times on each simulation as a guide, to help manage the time spent per AO.

<u>Unrelated discussions</u>

Although not a pervasive issue, some candidates inserted discussions that were not relevant, because of either misinterpreting or misreading the requireds or neglecting to consider the specifics presented in the simulation. This often appeared to be the result of applying a templated approach and failing to consider the differences in the facts presented compared to similar issues tested on past exams. These candidates appeared to be trying to fit the answers from their practice exams into the current year's exam, rather than addressing the case facts as presented. The following are some examples of where candidates either misinterpreted the requireds or provided irrelevant discussions.

On the Day 2 Assurance role, some candidates provided financial reporting discussions on the newly constructed warehouse, discussing whether the warehouse should be capitalized, as well as accounts receivable, discussing whether the valuation was appropriate from an accounting perspective. The required related to the Financial Reporting issues specifically directed candidates to discuss inventory, the Kingston contract, and the joint arrangement with AppsWiz only. Therefore, discussions of other accounting issues were not rewarded.

On the Day 2 Performance Management role, some candidates provided a pro-and-con analysis for AO#7 (CVP analysis for pricing discount), AO#8 (Video creation costs), AO#9 (ProofONE editing program), and AO#10 (AERU pilot project). There were specific requireds for each of these AOs, and in all cases, there was no requirement to provide a comprehensive qualitative analysis of the proposed initiative. For example, AO#8 asked candidates to determine the incremental cost of producing the videos and to recommend whether the project should be pursued, considering the targeted cost. Given the clear direction to consider cost, a qualitative analysis was not required.

On the Day 2 Taxation role, AO#7 (QSBC share sale), despite the clear wording in the required to calculate taxes payable only on the sale of Rodney’s shares to Jefferson, some candidates provided a full income tax payable calculation for Rodney.

On Day 3, Simulation 1, AO#2 (Other accounting issues), many candidates discussed irrelevant issues, such as whether the house and land were appropriately capitalized, and appeared to have spent a significant amount of time on these irrelevant discussions.

The BOE reminds candidates that, while it is good to practise writing cases and know different approaches to use, they should not automatically assume that the task is the same as in previous years. The facts presented are unique to each case, and require integration of the pertinent case facts, to fully understand what the relevant issues are for a particular case and to decide what form of analysis is appropriate. Rarely is an issue identical to a prior one. Before beginning their response, candidates are encouraged to pause and take the time necessary to ensure that they have clearly identified what issues and analyses are most relevant, based on the set of circumstances presented.

Technical ability

Generally, there were fewer unusual and complex AOs for candidates to contend with on Day 2 and Day 3 than on the September 2021 and May 2021 CFEs. However, the pattern the BOE has seen for the past few CFEs has continued, with candidates generally avoiding the more complex topics.

Candidates seemed to be more comfortable with quantitative analysis on this exam, demonstrating good technical knowledge in this area. For example, candidates performed well on Day 2 Common, AO#1 (Budget revision), Day 2 Finance role, AO#7 (Chantal Summer NPV), Day 2 Performance Management role, AO#7 (CVP analysis for pricing discount), Day 2 Taxation role, AO#11 (Taxable income for SPH), and Day 3, Simulation 2, AO#3 (Business valuation). They also seemed comfortable with the Governance competency, performing well on Day 3, Simulation 1, AO#5 (KPIs and strategic issues), and Day 3, Simulation 2, AO#2 (SWOT).

The BOE noted a significant weakness in Financial Reporting knowledge, this was particularly evident on Day 3. Candidates struggled with Day 3, Simulation 1, AO#1 (Revenue recognition), often not providing sufficient depth or using more general revenue recognition criteria, although more specific guidance could have been used. Performance on Day 3, Simulation 1, AO#2 (Other accounting issues) was also poor. Although the AO is less directed, as the issues to be discussed were not specifically identified, there were clear problems with some of the accounting treatments in the simulation, and candidates were expected to have sufficient technical knowledge to identify these issues. Candidates also struggled with Day 3, Simulation 3, AO#1 (Lease). Although this is the first time a lease transaction has been tested under IFRS, as they have previously only been tested under ASPE, the required analysis was fairly straightforward, and the poor performance on this AO was surprising. Finally, candidates performed below expectations on Day 3, Simulation 3, AO#2 (Agency agreement). The BOE recognizes that an interest-free loan constituting a government grant is a more difficult issue; however, candidates are expected to be able to handle unusual transactions, and the BOE was disappointed by the number of candidates that did not address this AO. When candidates did attempt this AO, very few identified the correct issue. There was also evidence of weak technical knowledge in Financial Reporting on Day 2 Common, AO#5 (Inventory), where many candidates discussed subsequent events, revenue recognition, and contingent liabilities, instead of discussing the actual issue that was present in inventory. Some candidates also chose to only discuss the simpler issues within this AO, such as the write-down of the damaged books, avoiding the more complex inventory issues.

Another area of technical weakness seemed to be in the Assurance area. For example, on Day 3, Simulation 2, AO#6 (Materiality and approach), some candidates based their choice of materiality percentage on the overall financial statement risk instead of basing it on the sensitivity of the users. Candidates also struggled on Day 3, Simulation 3, AO#3 (Procedures on lease and agency agreement), where a high percentage of candidates did not address this issue, and most of those who did were unable to provide a sufficient number of complete audit procedures for the specific areas identified.

Candidates should expect to see a variety of issues of varying difficulty. The BOE encourages candidates to be balanced in studying, and ensure that they have a sufficient level of technical knowledge in all competency areas.

Failure to consider the specific context of the simulations and integrate the information provided

Candidates on the May 2022 exam seemed to struggle with applying the specific context of the simulation to their response. For example, on Day 2 Common, AO#3 (Pricing options – quantitative), many candidates attempted to calculate a break-even price under the demand-based pricing option, despite the fact that the selling price and number of books for this option were already provided in Appendix V (Common). On Day 2 Common, AO#4 (Pricing options – qualitative), some candidates simply repeated the definition of each pricing method, instead of discussing the specific pros and cons of each method as it applied to SPH, such as discussing that cost estimates may be less reliable than previous titles due to the printing of the book being more challenging. On Day 2 Performance Management role, AO#11 (AERU incentive program), the topic tested was fairly typical, that of incentive plans. However, candidates seemed thrown off by the context of having small teams that included many types of employees, and instead discussed it in the context of SPH's departments instead of the AERUs specifically. On Day 3, Simulation 3, AO#2 (Agency agreement), candidates struggled with the unique nature of an interest-free loan from a government agency, and instead defaulted to analyzing a standard government grant or discussing the definition of a liability.

Candidates also sometimes struggled with integrating the information provided or incorporating relevant case facts into their analysis. At times, they skipped the analysis altogether and jumped straight to conclusions. For example, on Day 2 Assurance role, AO#11 (Sales cycle – risks and procedures), candidates struggled with the scenario they were presented with, which required them to integrate information from various parts of the case, to determine the sales cycle risks and provide relevant procedures. On Day 2 Taxation role, AO#7 (QSBC share sale), candidates often simply assumed that Brian's and Rodney's shares qualified as QSBC shares, even though Rodney's did not, and when candidates did discuss the QSBC share criteria, many struggled to identify the relevant case facts, which were found in the Common section of Day 2 rather than in Appendix IV (Taxation). On Day 3, Simulation 2, AO#5 (BOD practices), many candidates identified the strengths and weaknesses of the company's governance practices, but did not go on to explain the impact of these strengths and weaknesses. These candidates jumped straight to recommendations without any further discussion.

The BOE emphasizes that the ability to adapt to unique scenarios and integrate information from various parts of the case are important skills for an entry-level CPA. In addition, the role of the CPA is often to advise clients, either on the application of standards and tax rules or on why, and how, to proceed with certain business decisions. Without a clear explanation, a client would have incomplete information. In the case of responses to CFE simulations, the BOE is interested in understanding the logic used and is looking for evidence of the analysis and professional judgment that was applied in reaching a conclusion. Therefore, it is important for candidates to answer the questions "Why?" or "So what?" when making any point using case facts, and to include the answer in the response. Jumping to the conclusion without first presenting the analysis supporting that conclusion is insufficient. The BOE is looking for a clearly articulated response.

For more detailed commentary, see Appendix F of Part A of the CFE Report.

Additional Comments Specific to Day 1 CTI (Version 1)

Most candidates dedicated the first section of their response to a relevant situational analysis. Most used this information later in their response, making relevant links back to the company's situation when analyzing the specific strategic issues that were presented, and within their conclusions. However, the links that weak candidates made were typically to the more obvious case facts that related to CTI's key success factors, mission, and vision, rather than being tied to the more important factors, which generally varied for each strategic issue.

Beyond CTI's board's main objectives, there were two prominent issues relevant to CTI's internal environment that candidates were expected to highlight as part of their situational analysis: the fact that CTI had limited investment capital; and the misalignment between CTI's new successful video game, KILO, and the company's mission, vision, values, and new CSR policy. Candidates were expected to integrate the crucial elements of the company's broader situation, including CTI's limited investment capital, within their qualitative and quantitative analyses of each strategic alternative. They were also expected to explain how each available alternative aligned with the company's overall strategic direction.

For each of the strategic alternatives available to CTI, candidates were expected to conclude on, and recommend, a course of action that was consistent with their analyses. There were four strategic alternatives to be analyzed in this case: 1) whether CTI should acquire Sengames from Irene Brownstone; 2) whether CTI should pursue the endorsement deal with chess prodigy Marly Hopkins; 3) whether CTI should upgrade or downgrade KILO; and 4) whether CTI should proceed with the development of the BATNIX mobile video game.

Within the analysis of these strategic alternatives, three main factors differentiated strong responses from weak responses. First, a strong response identified and provided an in-depth discussion of the most important decision factors for each issue. Weak candidates tended to list case facts, often failing to explain why those elements were important and how they affected the decision-making process. Second, strong candidates provided valuable quantitative analyses to help support their recommendations. On the other hand, weak candidates' quantitative analyses were often unstructured and unclear, and therefore challenging to follow. Many failed to perform the correct calculation to assess the decision. These candidates often struggled to explain how the results of their quantitative analyses affected the decision at hand. Third, strong candidates routinely linked their analysis of each alternative to the two prevalent entity-level issues presented in the case: the limited investment capital and the overall strategic direction that CTI should take. Strong candidates incorporated these aspects into their discussion of each strategic alternative whereas weak candidates either missed making these links altogether or provided a superficial discussion by listing pros or cons, sometimes in contradictory ways from option to option, and failed to adequately highlight the importance of these aspects to the decision. Strong candidates typically incorporated both entity-level issues to some extent and usually prioritized their strategic recommendations, explaining why one alternative should be pursued over another, drawing on the entity-level decision factors. Overall, there were more weak analyses of the strategic alternatives compared to usual, with many candidates' analyses lacking the key differentiators noted above.

Weak candidates tended to only perform an issue-by-issue analysis without stepping back to consider the broader perspective, and without integrating the key entity-level issues into their conclusions. Their conclusions were often internally inconsistent or would have been impossible for CTI to act on, such as proposing that the endorsement deal be pursued with Marly while also upgrading KILO. Other weak candidates mentioned the limited investment capital in their situational analysis or in their analysis of the strategic alternatives, but then lost sight of the constraint and recommended spending more capital than was available.

In addition, candidates were directed to comment on whether to focus the company's investment capital on video games such as KILO or to remain focused on CTI's traditional products, which emphasized education and creativity. Some strong candidates both recognized the misalignment of KILO and CTI's values, and tried to mitigate the issue through various recommendations. Other strong candidates provided a separate and fulsome discussion that compared the merits of the two paths. Weak candidates often ignored this discussion altogether. When it was discussed, it was often simply one or two points within their analysis of the strategic alternatives. Overall, candidates seemed to struggle with this step-back issue more than usual, as more candidates ignored the discussion of this issue more frequently compared to previous exams.

Most candidates approached their response in a coherent and organized fashion. Only a few candidates struggled to effectively communicate their ideas. These candidates tended to use poor sentence structure, confusing syntax, and an unorganized approach to their response.

APPENDIX A

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

CFE Design

Day 1 is one four-hour case that is linked to the Capstone 1 case, which is worked 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 target a "board room and senior management" level of discussion, with high-level analytics and a strategic focus. There are two versions of the Day 1 case. Candidates pre-select the version they will write.

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

Day 3 is a four-hour examination containing a mix of small cases (75 to 85 minutes each[1]) that evaluate the common core competencies only. The Day 3 cases provide additional opportunities for **depth** in Financial Reporting and Management Accounting and all the **breadth** opportunities for all the technical competency areas. Cases are time constrained, and they are designed to cover different competency areas within each case. A higher level of integration and judgment is required on Day 3 of the CFE than in the core modules, although the technical competencies are tested at the common core level of expectation.

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

The Development of Marking Guides and the Provincial Review Centre

Prior to the Common Final Examination booklets being published, provincial reviewers, appointed by each region, meet to examine the simulations and the preliminary marking guides. The provincial reviewers' comments are then considered by the board when it finalizes the examination set and again when the senior markers review the marking guides in the context of actual responses at the Preliminary Evaluation Centre.

[1] The CFE Blueprint allows anywhere between 45 to 90 minutes. The May 2022 CFE ranged from 75 to 85 minutes.

The May 2022 CFE Marking Centre

The May 2022 Evaluation Centre was run 100% remotely. From the marker applications received, approximately 120 individuals were chosen to participate in the May 2022 CFE marking centre. The criteria for selection included marking experience, motivation, academic achievement, work experience, personal references, and regional representation. The marking was supervised by the CPA Canada CFE full-time board staff.

The Day 1 Version 1 linked case (CTI V1) was marked by a team of ten people from June 13 to 25, 2022.

The Day 2 Common assessment opportunities were marked separate from the role assessment opportunities by a team of 21 people from June 12 to 23, 2022. Day 2 Assurance was marked by a team of 14 people from June 12 to 25, 2022. Day 2 Performance Management was marked by a team of 14 people from June 13 to 24, 2022. Day 2 Finance was marked by a team of four people from June 3 to 7, 2022. Day 2 Taxation was marked by a team of two people from June 5 to 8, 2022. All three Day 3 cases were marked from June 14 to 28, 2022. The Day 3 simulations were marked by a total of 54 people.

In advance of the marking centre, the members of the CFE subcommittee, staff, leaders, and assistant leaders participated in a three- to six-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, taking into account the comments on the marking guides received from provincial reviewers.

The larger teams followed a set marking centre schedule, which included a start-up phase to train the markers. During the start-up phase, the leaders and assistant leaders presented the marking guides to their teams, while staff, and the BOE vice-chair monitored the discussions. 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 consisted of an expanded test marking of several responses to establish marker congruence.

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

For smaller teams, all markers attended PEC, and moved directly from PEC to live marking. These teams had a leader, and three to four experienced senior markers, of which two were bilingual and marked all the French papers. These bilingual markers started in English and switched to marking in French once their marking was assessed as being consistent with the team. The bilingual markers arbitrated the French papers by discussing where there were differences in their markings.

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. Control papers were fed into the system daily to check marker consistency. 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. Additional audits were performed at the end of marking on any of the larger differences between markers.

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, an assistant team leader or a senior marker. Clear pass results were also audited to ensure accuracy of marking.

Double Marking (Day 2)

Each candidate's Day 2 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 assessment.

As an added measure to ensure that markers were consistently applying the marking guide, a two-day rule exists, which 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 marking guides due to marker interpretations during the first two days of live marking are stabilized before the second marking and arbitration process begin.

Borderline Marking (Day 3)

Day 3 was marked using a borderline model. All Day 3 responses were marked once and then the Day 2 and Day 3 results were combined. All failing candidates who passed the Day 2 role test, had their Day 3 response marked a second time by an independent marker, and any differences between the first and second markings were arbitrated by a leader or senior marker.

Subsequent Request for Remark of Results and Request for Performance Analysis

Failing candidates may request a remark of their examination results and/or a detailed personalized performance analysis for either Day 1, or Day 2 and Day 3, or for all three days for a fee.

In an effort to provide failing candidates with more timely feedback, the Board of Examiners is providing an automated feedback report for Day 1 of the CFE. The report is automatically generated using the marking data collected for each response rather than being based on a personalized review of the response. It is therefore being provided at no cost to all failing candidates. This new report is intended to allow for the identification of the key deficiencies in the candidate's Day 1 response, which then allows the candidate to decide whether to request the more detailed, and personalized performance analysis report noted above, for a fee.

<u>Review and Remarking Approach</u>

Great care is exercised in the original marking and tabulating of the papers and results. The following review and marking 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 CFE 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 tabulated, and a decision made regarding whether any candidates have been treated unfairly and should be granted a pass on the examination.

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

APPENDIX B

MAY 25, 2022 – DAY 1 SIMULATION

COMMON FINAL EXAMINATION
MAY 25, 2022 – DAY 1

<u>Case</u> (CTI-Version 1) **(Suggested time: 240 minutes)**

It is August 8, 2024, and Martin Ferringer, your boss at Hilton Consulting Group LLP (HCG), tells you that the firm has another consulting engagement with Creative Toys Incorporated (CTI).

Martin recently met with CTI's Board of Directors, all of whom have been directors since 2022. After recalling the defective dolls, CTI sold the doll division in 2022. CTI turned down the Discount Pete's Inc. (DPI) contract offer and did not proceed with the character licensing arrangement.

In June 2022, Thomas invested $4 million for 500,000 common shares, with the same terms as first proposed, and now owns 32% of CTI's outstanding shares. Thomas sold his chain of retail stores last year and is devoting more of his efforts to increasing the profits of CTI.

Also in June 2022, an electronics division was established, and Chloe Wong was hired as the vice-president of the division. Chloe originally planned to hire full-time employees but was unable to attract many good candidates. Instead, the division has relied on consultants for new game development and for the maintenance work required to keep the software functioning properly and up to date.

The electronics division's first video game, *Know It Live Online* (*KILO*), was released in December 2022. When first released, *KILO* was similar to the *Know It or Lose It* board game; however, because initial sales were low, the game was redesigned to increase player engagement. Sales quickly increased and, to date, *KILO*'s performance has surpassed CTI's expectations. Most crucial to *KILO*'s success was the introduction of treasure boxes, which players can both purchase and earn. The contents of a treasure box are unknown until it is opened. Most boxes contain an assortment of items of different value, such as free plays, unlocked levels, hint cards, and the chance to win more treasure boxes. In addition, whereas the initial video game targeted female gamers aged 34 to 64, the redesigned version targets a wider audience of all genders, from age 18 to 64. Even though most of the educational aspects were removed in the redesign, resulting in the current format having little resemblance to the original board game, *KILO* is still marketed as being educational. Apart from one prototype video game, *BATNIX – Back to Nature* (*BATNIX*), the electronics division currently has no new video games in development.

In August 2022, Nina Petrov was hired to replace Andrew Wang as the vice-president of the research and development (R&D) department for the game/puzzle division. Nina spends significant time analyzing trends in the market, which has resulted in the design of more innovative board games. Nina hired experienced and innovative developers, and there has been a considerable improvement in productivity and morale within the R&D department.

In 2023, CTI's game/puzzle division released a new board game targeting teens from 13 to 16 years of age, which was well received, and its sales are increasing. In addition, the team is excited about the creation of a brand-new board game targeted at the adult market, which, based on initial reviews, could win board game of the year in 2024. In addition, the *Know It or Lose It* traditional board game continues to be a best seller. CTI's reputation for providing quality board games and puzzles remains strong, allowing the company to continue to sell its products at premium prices.

In 2022, CTI's board updated its vision and mission statements as follows:

Vision statement: *To make exceptional games and puzzles for all ages that are enduring, fun, and educational and that encourage critical thinking.*

Mission statement: *We create innovative educational games and puzzles that encourage creativity and critical thinking and that can be enjoyed by all ages. We strive to develop award-winning products made from sustainable materials.*

A corporate social responsibility code of conduct was adopted and a core value was added: *To have an ethical regard for our stakeholders (such as customers, employees, and the community), as well as for the environment, in all our actions and business decisions.*

CTI's board is committed to expanding its targeted age segments and to growing its sales and profits. To help in determining CTI's future direction, each division was asked to make a presentation to the board outlining proposals for investment. HCG has been hired by CTI to review the proposals, assess their strategic fit, and raise any significant issues related to the proposals. Martin attended these presentations. He shared his notes with you and asks you to prepare a report for CTI's board that considers each investment option, as well as the company's overall strategic direction.

INDEX OF APPENDICES

APPENDIX I
EXCERPTS FROM THE INTERNAL MANAGEMENT REPORT

Creative Toys Incorporated
For the six-month period from January 1 to June 30, 2024
(in thousands of Canadian dollars)

	Game/Puzzle Division	Electronics Division	Total
Net sales (Note 1)	$ 11,770	$ 4,120	$ 15,890
Cost of goods sold (Note 2)	6,792	0	6,792
Gross margin	4,978	4,120	9,098
Gross margin percentage	*42%*	*100%*	*57%*
Expenses			
Marketing and advertising	230	620	850
Research and development	560	0	560
Consultant fees (programmers) (Note 2)	0	1,510	1,510
Depreciation and amortization	590	420	1,010
Distribution costs	306	40	346
Occupancy costs	435	200	635
Administrative and general expenses	1,430	510	1,940
Total expenses	3,551	3,300	6,851
Net profit margin	$ 1,427	$ 820	$ 2,247
Net profit margin percentage	*12%*	*20%*	*14%*

Notes:

1. Net sales of the electronics division are solely from *KILO*: $2,380,000 from product sales and $1,740,000 from the sale of treasure boxes.

2. There is no cost of goods sold in the electronics division. Instead, there are programming costs. Once a video game is developed, its only ongoing costs relate to maintenance, updates, and any upgrades that are made.

Additional information

- Sales from *KILO,* in its current form, are expected to increase by 5% a year in each of the next four years.
- The prime rate has continued to increase and is currently 4.25%.

APPENDIX II
INTERNAL MEMO – INDUSTRY UPDATE

The toy industry, which includes board games, is expected to grow at 3% over each of the next three years. Given a resurgence of popularity, board games are seeing an even higher growth rate. A significant part of this growth is due to growing public awareness of the potentially harmful effects of screen time. Another growing market segment is board games that are specifically designed for seniors, to improve mental dexterity and slow down memory loss.

In 2023, the toy of the year was a board game based on a new popular TV series for children aged 7 to 10 years old. In addition to character licensing arrangements, manufacturers are paying influencers and celebrities to endorse, promote, and differentiate their products. Currently, about 2% of toys have a celebrity or influencer endorsement. This trend is expected to increase to 10% by 2029.

Like board games, video games have also outpaced the overall growth rate of the toy industry and are gaining momentum in all age categories. Even video games directed specifically towards seniors have seen growth in recent periods. Given this shift, more and more competitors continue to enter the video game market. A growing trend among toy companies is to purchase video game companies in order to take advantage of the growth. Consequently, and as predicted, there is an increasing shortage of game developers, which has caused their average wages to increase by 9% annually over each of the last two years, with similar increases expected for 2024 and potentially beyond. Staff turnover is also becoming an issue for many video game companies, as developers tend to quit once their company's games lose popularity. Since gamers are attracted to the newest releases, many video games gain and lose popularity quickly.

Experts still contend that children and teenagers should spend more time with educational products that help to develop creative and critical thinking. In late 2022, an important research study concluded that the more time young people spend on computers, the slower their mental abilities develop. This has sparked a growing trend among parents to have their children play with traditional, non-electronic games. Also, in January 2024, another research study indicated that screen time had even greater negative impacts than were found in the 2022 study. The 2024 study specifically mentioned that the treasure boxes in CTI's video game, *KILO*, resembled casino games.

APPENDIX III
GAME/PUZZLE DIVISION – PRESENTATION AND DISCUSSION
(Presented by Nina Petrov)

Agenda

1. R&D Department
2. Purchase of Sengames Inc.
3. Chess Prodigy Endorsement

– 1 –
R&D Department

- CTI's R&D team is performing above expectations.
- The lead time from conception to market is 30 months, which is now in line with our strongest competitors.
- The team is completing the development of a new board game targeted at adults; production will start in September 2024.
- Three other new board games are in various phases of development; each game has an educational component.

– 2 –
Purchase of Sengames Inc.

- Owned by Irene Brownstone, Sengames Inc. (Sengames) develops and manufactures non-electronic brain training games and puzzles for the over-60-years-old market.
- Games are developed with input from doctors and are designed to increase brain activity in order to slow down memory loss and dementia.
- Reviews have been positive and assert that these games are innovative and unique when compared to competitors' products.
- Sengames sells mainly through bookstores.
- The asking price for Sengames is $4,450,000.
- Sengames currently contracts 100% of its manufacturing to a single supplier.
- In the past two years, similar companies have sold for 4 times EBITDA. Irene provided an income statement (Appendix IV).

APPENDIX III (continued)
GAME/PUZZLE DIVISION – PRESENTATION AND DISCUSSION

– 3 –
Chess Prodigy Endorsement

- Marly Hopkins is a chess prodigy who has won chess championships worldwide and, at 14 years of age, is the youngest Canadian grandmaster ever.
- She is attracting international attention and is a great role model for young people.
- Marly grew up playing *Know It or Lose It* and developed a love of board games before moving to chess.
- Marly publicly advocates for limited screen time for children and will not allow her name to be associated with addictive video games. CTI has proposed an endorsement deal to Marly for existing and future products. The proposal is for Marly to endorse CTI's games and puzzles designed for 8- to 13-year-old children. We estimate that this represents approximately 70% of the division's customers.
- The endorsement will cost $3 million upfront for an initial five-year contract and should result in a 30% increase in sales on endorsed products. A gross margin percentage of 44% and distribution costs of 2.6% of sales are expected on the increased sales.

Discussion

Lorraine: I like the idea of purchasing Sengames. It gets us into the seniors' market, which is growing.

Krystal: I have known Irene for a long time, and she is committed to helping seniors as they age. She believes that CTI can improve the performance of Sengames in two ways: first, by bringing production in-house and thereby lowering production costs, and second, through a more effective marketing campaign.

Thomas: We should only invest if the returns are similar to the electronics division; otherwise, we are wasting our limited investment dollars. Although the seniors' market is growing, we know nothing about it.

Lorraine: Thomas, you used to say just the opposite. I do not think it is wise to reject this opportunity so quickly. Expanding into a new market would be a great way to diversify and grow CTI.

Steven: I agree, Lorraine. I have seen Sengame's puzzles and games and they are impressive. If we choose to produce them in-house, $500,000 would be required to modify our existing machines. With this upgrade, I think we may be able to reduce the cost of goods sold and, therefore, increase Sengames' current gross margin.

APPENDIX III (continued)
GAME/PUZZLE DIVISION – PRESENTATION AND DISCUSSION

Krystal: There are probably additional synergies.

Steven: Sengames has patents that may also provide CTI with some unique and interesting features that could be used to improve some of our existing games and, therefore, increase sales. Sengames has valued these patents at $4 million. They may be quite valuable to us.

Thomas: All of this sounds very time-consuming and expensive. The products look interesting, but it is an unproven market. CTI would be far better off focusing on a proven winner, *KILO*.

Lorraine: You could be right, Thomas, but we cannot ignore the game and puzzle division simply because *KILO* is doing extremely well. We need to explore all available opportunities.

Krystal: You are right, Lorraine. Irene has agreed to work for CTI if we purchase Sengames. She has a good sense of the seniors' market and would be a great asset to our R&D department. We would be lucky to have her.

Thomas: Sengames appears to have a completely different business model than ours, and we do not know how well Irene will fit in. It does not make sense to pursue this acquisition given all that we currently have going on. It would just be a distraction, and a costly one!

Lorraine: Perhaps. Let's move on to the Marly endorsement. I am excited because this gives us a unique marketing opportunity. With her endorsement, I would expect enthusiasm for our products and the reputation of our brand to increase significantly.

Krystal: I agree, but Marly has not yet agreed to the endorsement deal. She and her agent have expressed concern over *KILO* and the recent mention of its negative impacts in news reports. Before Marly will agree to the deal, we would have to return *KILO* to its original version and agree to reinvest 80% of the profits made through her endorsements into CTI's traditional games and puzzles, and not video games.

APPENDIX III (continued)
GAME/PUZZLE DIVISION – PRESENTATION AND DISCUSSION

Thomas: This sounds completely unacceptable. First, *KILO* is a major success—we would be crazy to downgrade it to the old version. Remember, *KILO* did not sell well in its original format. And second, a forced 80% reinvestment away from video games? We cannot let an outsider dictate our strategy. We need to drastically renegotiate the terms if we are seriously considering this deal.

Steven: Thomas might be right. Based on my research, the amount being asked for is at the high end of recent endorsements for children's games.

Krystal: Maybe, but Marly fits perfectly with the image we are trying to portray and can help strengthen our brand. Also, an association with her will help counter the negative news reports concerning *KILO*.

Thomas: I think you are all making too much of the negative publicity. Sales of *KILO* have never been stronger!

Krystal: But Thomas, this could impact the rest of our business and our reputation.

Thomas: I agree, but we should do what is best for CTI. *KILO* is the obvious choice in that respect. In fact, given the explosive growth in the video game market, we should focus our investment dollars solely on that area of development.

Krystal: CTI was built on educational board games and puzzles. It seems like a short-sighted decision to abandon that foundation. It is what drove us to start CTI.

Steven: Let us get back on track. What else will Marly give us, beyond the use of her name? Would she also be willing to test and endorse future products?

Lorraine: Yes, we discussed that. She would be willing to comment on new games and puzzles and to be part of our marketing materials. She may even be willing to consider endorsing various video games, as long as they are socially responsible. Of course, she first wants to test and approve the products that she will endorse. Her feedback could help us improve our products.

APPENDIX IV
FINANCIAL INFORMATION FOR SENGAMES INC.
(Prepared by Irene Brownstone)

Sengames Inc.
Income Statement
For the year ended December 31, 2023

Sales	$	3,700,000
Cost of goods sold – Note 1		(2,594,000)
Gross profit		1,106,000
Gross profit percentage		*30%*
Other costs		
Distribution		75,000
Marketing		120,000
Administration		420,000
		615,000
Earnings before interest, taxes, depreciation and amortization (EBITDA)	$	491,000
EBITDA margin percentage		*13%*

Note 1 – Sengames contracts out all manufacturing of its products.

APPENDIX V
ELECTRONICS DIVISION – PRESENTATION AND DISCUSSION
(Presented by Chloe Wong)

Agenda

1. Upgrade of *KILO*
2. *BATNIX*

– 1 –
Upgrade of *KILO*

- *KILO*'s popularity continues to increase, and there is a further opportunity for the game's expansion.
- The upgrade will allow players to play together in large, international games via the internet.
- Treasure boxes and cash prizes will be awarded to the winners.
- The initial upgrade is expected to cost $5 million, with the following projections:

Year	Sales	Net Profit	Net Profit Margin
2024	$8,240,000	$1,812,800	22%
2025	$12,360,000	$3,708,000	30%
2026	$12,978,000	$4,023,180	31%
2027	$13,626,900	$4,769,415	35%
2028	$14,308,245	$4,721,721	33%

– 2 –
BATNIX

- *BATNIX* is a prototype for a children's mobile video game that promotes less sedentary screen time and more outdoor activities.
- Targeted to children aged 10 to 14, *BATNIX* can be played individually or as a group.
- The game requires creative thinking, and children learn about climate and local nature.
- There is currently a small but growing niche market with an estimated yearly market size, in Canada and the U.S., of about 8 million families who want mobile video games that increase the activity of children.
- *BATNIX* is expected to capture approximately 10% of the overall market.
- The game will be subscription based and will cost $4.75 per year.
- Annually, variable costs are expected to be $0.85 per game, and fixed costs for salaries, occupancy, and administration are estimated at $2,150,000.
- The initial investment for *BATNIX*'s development is estimated at $4 million.

APPENDIX V (continued)
ELECTRONICS DIVISION – PRESENTATION AND DISCUSSION

Discussion

Krystal: Thanks, Chloe—that is a lot to consider. However, you failed to mention *KILO*'s negative publicity and the issues that recent research has uncovered. When we redeveloped *KILO*, we did not intend the game to have any harmful consequences. I feel we need to question whether it is responsible to continue offering *KILO* in its current form.

Thomas: Krystal, be reasonable. *KILO* generated a profit of over $800,000 in the last six months, and there is plenty of room for growth. Besides, *KILO*'s customers do not seem bothered by the research, and it is up to parents to limit screen time, not us. We should build on the success of *KILO* and expand it, like Chloe suggested. We have a true winner here, and we must capitalize on it!

Lorraine: Thomas, I understand your viewpoint. But aren't you concerned about the other areas of our business?

Thomas: Since *KILO* is becoming more popular by the day, we will more than make up for any decline in sales that our other products sustain, especially once the upgrade has been completed. Also, we can afford to lose some sales in the game and puzzle division. In fact, we should move away from old-fashioned board games in order to allocate our investment dollars towards video games like *KILO*.

Steven: A shift in our focus would reduce CTI's reliance on retailers, which is a consideration. Krystal, I know this is a challenge for you, but Thomas is right—the industry is trending towards video games, and *KILO* has the potential to truly take off. If we change CTI's strategic focus, there is an opportunity for CTI to develop additional games with similar growth potential to *KILO*.

Krystal: First, CTI may make a fortune with the *KILO* upgrade, but it does not feel right. And second, a shift in our focus from traditional games and puzzles to video games sounds dangerous—we built our business on board games like *Know It or Lose It*.

Thomas: Krystal, I appreciate your viewpoint, but, in business, it ultimately comes down to what is best for the company financially. Not only is *KILO* a true winner, but a shift in strategic focus is likely to further increase the profits of CTI.

APPENDIX V (continued)
ELECTRONICS DIVISION – PRESENTATION AND DISCUSSION

Lorraine: I am not convinced, Thomas. How long will *KILO*'s success last? And have you considered the long-term implications of this change in direction?

Thomas: Yes, I have. With the profits from *KILO*, we could invest in all sorts of other opportunities.

Steven: Indeed, the profits from *KILO* could be used to fund the development of additional video games.

Krystal: I believe that we should downgrade *KILO* back to its original form and grow its sales in a more responsible way. I also do not agree that a change in CTI's direction away from educational board games and puzzles and towards video games is appropriate.

Lorraine: I truly do not know which direction to take.

I asked Chloe to estimate how much it would cost to downgrade *KILO* and what impact that would have on its current sales. She estimates the downgrade would only cost about $50,000. However, *KILO* sales would likely fall by an initial 50%, and revenue from treasure boxes would disappear completely, since that feature was reported to be the most harmful.

Krystal: Let us discuss *BATNIX*. This game is perfect for tapping into the socially responsible technology market, which could grow quickly. Combining a video game with outdoor activities seems like a perfect way to access this growing market.

Steven: *BATNIX* does look promising. There would be less competition compared to what *KILO* currently must contend with. Honestly, I do not know what is best at this point.

Lorraine: I am also undecided. And we still need to determine how to finance all of these proposals. New Haven Bank (NHB) has offered us a new $5 million loan. I have also summarized how much funding is available (Appendix VI).

Thomas: The market for *BATNIX* might be an attractive one in the future, but we have limited investment dollars. I have $8 million to invest in preferred shares of CTI. However, given its almost guaranteed success, I will only provide more financing to CTI if we continue to upgrade *KILO*.

APPENDIX VI
FINANCING PROPOSALS AND AVAILABLE CASH

Financing Options

Preferred shares

Preferred shares, for up to $8 million, would be issued to Thomas. The non-cumulative dividend is 4%. There is a mandatory redemption of $500,000 per year, beginning in 2028; because of the redemption, this will be recognized as debt on the financial statements.

New bank loan

Due to increases in the market value of CTI's land and buildings, NHB is willing to offer a variable-rate loan of up to $5 million, secured on the land and buildings, that ranks lower than the mortgage payable. Annual interest is prime plus 2.75% and is payable monthly. The principal is due in 2031.

Board decision: Total new debt is not to exceed $8 million.

Current Sources of Cash

The maximum amount of the line of credit with NHB is $5 million, of which $2 million has been drawn.

Total cash available is as follows:

Cash on hand	$ 800,000
NHB line of credit – amount available	$3,000,000

APPENDIX C

MAY 26, 2022 – DAY 2
SIMULATION AND MARKING GUIDES

COMMON FINAL EXAMINATION
MAY 26, 2022 – 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 shared by all roles is presented in the "Common Information" section. Additional information, customized to each role, is presented in the "Specific Information" section.

INDEX

BACKGROUND INFORMATION
COMMON INFORMATION FOR ALL ROLES

Solitary Publishing House Limited (SPH) is a book publisher whose revenues represent 5% of the Canadian book publishing industry. SPH's customers include schools, universities, bookstores, and online retailers. SPH does not sell directly to end consumers.

SPH is a mid-sized private company incorporated by Brian McGregor in 1990. It has a December 31 fiscal year end. SPH follows IFRS to allow for comparison with its competitors. All operations are in Toronto, Ontario.

On December 30, 2020, the vice presidents bought shares in the company. The entire executive team lives in Toronto. As of today, February 2, 2022, their roles and share ownership are as follows:

Name	Role at SPH	Percentage Ownership
Brian McGregor	CEO	40%
Doris Simmons	VP Finance	25%
Jonathan Fleming	VP Production	15%
Rodney Chan	VP Editorial	15%
Maria Olejnik	VP Marketing	5%

Brian is 68 years old and wants to sell his SPH shares to finance his retirement. In 2021, SPH issued bonds to a private investor, Jefferson Investments Inc. (Jefferson), a Canadian-controlled private corporation. Jefferson has expressed interest in purchasing shares in SPH and will use SPH's 2021 statements to determine an offer price.

In October 2021, Suzanne Pietrobon, the controller, resigned for personal reasons. Her role has not yet been filled, and the accounting department is currently short-staffed.

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 a manager with Franklin & Elliot Chartered Professional Accountants (FE), SPH's auditor. Kaylee Verra is the audit engagement partner.

Jonathan asked for assistance with some tasks related to SPH's budget, costs, and prices. Kaylee advises you that the work you perform on these tasks will ultimately be reviewed and approved by management, and she has handled the independence and conflict-of-interest considerations. She also asks you to discuss the accounting treatment for the inventory, for the Kingston University contract, and for the joint arrangement with AppsWiz.

Kaylee asks you to prepare the audit plan for the December 31, 2021, year end, and to recommend audit procedures for the accounting issues you discuss, as well as for the newly constructed warehouse. She also wants you to explain any risks that you identify in the sales cycle, provide audit procedures for each of these risks, and describe any additional information required. Walkthroughs of the sales, purchases, and payroll cycles were completed as part of interim fieldwork. The internal controls were found to be operating effectively and were consistent with those relied upon during prior audits, except in the children's books division.

Kaylee would like you to discuss whether it would be appropriate to use the work of SPH's internal audit department and describe any procedures that will need to be performed to be able to use their work. The department was established in July 2020 and is led by chief audit executive Belvin Alexander, who is a CPA and a certified internal auditor (CIA). Belvin was an audit senior manager of an accounting firm before he joined SPH. Belvin reports functionally to the audit committee and administratively to the CEO.

As FE will provide a management letter to SPH, Kaylee asks you to discuss any weaknesses in internal controls that you identify in the children's books division and make recommendations for improvements.

In addition to the common appendices (I to VIII), information provided in Appendix IX (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 at Manchester Consultants LLP (MC) and report directly to Michel Hebert, CPA, a partner with the firm. Michel recently met with Doris and Jonathan to discuss some issues relating to the 2021 year-end financial statements, as well as other matters.

Jonathan asked for assistance with some tasks related to SPH's budget, costs, and prices. Michel asks you to perform these tasks and to discuss the accounting treatment for the inventory and for the Kingston University contract.

MC is being asked to determine whether SPH should accept Chantal Summer as a new author, using SPH's new author selection methodology. Michel also asks you to assess the sales data provided, the assumptions that SPH's editors made as part of this methodology, and their impact on the Chantal Summer decision.

In anticipation of future share transactions, Michel asks for a valuation of SPH's common shares. He tells you to use SPH's financial statements as presented, without adjusting for changes related to any accounting issues.

Recently, Jefferson proposed replacing its outstanding bonds with a convertible bond. Michel would like you to discuss Jefferson's likely motivation and whether SPH should accept the proposal, based on the risks and benefits to SPH.

A major supplier, W.B. Limited (WBL), is offering SPH a 5% discount for invoices paid within 10 days. Michel asks you to assess the impact of the discount on SPH's bank covenant and cash flow if SPH pays WBL's invoices within 10 days, as well as make a recommendation.

Michel asks you to recommend whether to acquire the intellectual property rights for a collection of children's books, based on an analysis of the proposed purchase price and the qualitative decision factors related to the acquisition.

SPH is considering investing its existing cash surplus and any cash surplus generated in the coming year. Its investment objectives are to generate capital growth and maintain liquidity. Michel wants you to assess the following investment options against SPH's investment objectives and to recommend one or more:

- HHI Series 2020 bonds
- an exchange-traded fund that reproduces the investment mix of the Toronto Stock Exchange (which has generated strong historical returns)
- money market investments
- bank term deposit
- bank savings account

In addition to the common appendices (I to VIII), information provided in Appendix IX (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 at Manchester Consultants LLP (MC) and report directly to Michel Hebert, CPA, a partner with the firm. Michel recently met with Doris and Jonathan to discuss some issues relating to the 2021 year-end financial statements, as well as other matters.

Jonathan asked for assistance with some tasks related to SPH's budget, costs, and prices. Michel asks you to perform these tasks and to discuss the accounting treatment for the inventory and for the Kingston University contract.

Next, Michel asks you to review a proposal to produce e-books and determine which percentage price reduction would produce the highest profitability based on the estimated sales volumes.

In an effort to strengthen SPH's competitive position, Rodney proposes creating video lectures to accompany certain textbooks. Michel asks you to determine the incremental cost of producing videos for each course and to recommend whether the project should be pursued, considering the targeted cost.

Michel also asks you to assess the effectiveness of the ProofONE editing program recently tested on six books. Based on your findings, he also wants you to suggest key performance indicators (KPIs) that would enable SPH to assess the program's effectiveness if the program is adopted.

Michel also wants you to assess the performance of the autonomous editorial resource unit (AERU) pilot project compared to the levels of production and profitability under SPH's current structure.

Brian noted that the current incentive plan may not be well suited to the employees in the AERU. He asks MC to identify the concerns related to the current incentive plan for those in the AERU project and to suggest changes that would make it better suited to them. He wants to know what risks are associated with implementing this newly suggested plan.

Given SPH's success outsourcing its delivery function, Jonathan suggests outsourcing SPH's sales function. Michel asks you to provide a qualitative assessment of the benefits and risks of this outsourcing proposal.

Finally, Michel asks you to perform an overall assessment of the external risk factors affecting SPH's strategic direction and to explain the impact of these factors on each proposed initiative.

In addition to the common appendices (I to VIII), information provided in Appendix IX (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 at Manchester Consultants LLP (MC) and report directly to Michel Hebert, CPA, a partner with the firm. Michel recently met with Doris and Jonathan to discuss some issues relating to the 2021 year-end financial statements, as well as other matters.

Jonathan asked for assistance with some tasks related to SPH's budget, costs, and prices. Michel asks you to perform these tasks and to discuss the accounting treatment for the inventory and for the Kingston University contract.

MC provides tax planning to SPH's employees and shareholders. Brian has asked MC to analyze the tax consequences to him of selling his shares in SPH to Jefferson. Rodney is also considering selling his shares to Jefferson and wants to know his taxes payable if he does so.

Michel would also like you to outline the tax consequences to SPH of Jefferson acquiring all of Brian's and Rodney's shares.

Brian and his wife, Sarah, plan to retire on June 30, 2022. They would like an estimate of their taxes payable for 2022, which they want to minimize.

As demand has shifted from print to e-books, SPH is considering selling its Tilly Avenue warehouse and moving to a smaller one. SPH would like to know the tax consequences, for 2022 and subsequent taxation years, of the sale of the Tilly Avenue warehouse and the purchase of the Foster Avenue warehouse.

Michel asks you to calculate net income for tax purposes, taxable income, and federal taxes payable for SPH for its 2021 taxation year. The shareholders know that earning passive income in a CCPC can have tax implications and want you to explain what the implications would be if SPH earns $150,000 in dividend income from an investment in Canadian public companies. To help illustrate this, Michel asks you to recalculate taxes payable for 2021, as though SPH had earned that additional income.

Since Suzanne left, Doris asked Rhea, the accounting clerk, to ensure that SPH is up to date with its GST/HST obligations. The November return was filed on time by MC. Michel asks you to review what Rhea completed for December and perform any incomplete work. Doris is worried that there may be penalties to pay.

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

APPENDIX I – COMMON INDUSTRY BACKGROUND

Publishers typically edit, design, print, digitally format (for e-books), and market a book before its distribution to wholesalers, to retailers, or directly to end consumers.

Publishers purchase the rights to the authors' works and agree to pay royalty fees on the books' sales. Up to one-third of projected royalties for the first print batch may be paid in advance.

Competition

The industry is consolidating and includes four large, well-established publishers who, combined, hold a high percentage of the market share. They have the resources to aggressively market their products and control the distribution channels.

Competition is based on price, brand recognition, and marketing. Some publishers have reduced costs and increased revenues by outsourcing their sales function. Some of the firms performing this sales function represent multiple publishers and have considerable bargaining power with retailers. However, some retailers have refused to work with these firms, citing aggressive sales tactics and declining service.

Profit Margins

A key success factor is the ability to predict which topics or authors will be top sellers. For both print and e-books, publishers aim for net profit margins of around 10%. Because e-books have lower selling prices, the weighted average selling price for a specific title decreases as the proportion of sales of e-books to printed books increases.

All books can be published as print-only, digital-only, or both. Historically, children's picture books and books for very young children have been predominantly sold as print copies due to parents' preferences.

Textbooks

Textbook sales volumes are expected to increase, with a growing percentage being sold as e-books. At the same time, publishers are bundling textbooks with a variety of online learning resources (OLRs) to differentiate their offerings. The OLRs, which include smart books (where pop-up explanations are available to students), exercises, and quizzes, are costly to produce and must be continuously updated.

Barriers to entry are high for textbooks due to the large upfront investment required (such as preparation of OLRs).

APPENDIX II – COMMON
SPH'S OPERATIONS

Divisions

SPH has three divisions, each operating in one of the publishing industry's major segments:

- *Children's books* – This division is profitable because it has well-known authors' works. It primarily publishes books for early readers, as well as board books for very young children.
- *Textbooks* – In 2021, this division experienced a higher proportion of e-book sales compared to printed textbooks. Some of SPH's textbooks do not include OLRs, and only those with OLRs have remained competitive in price and sales volume.
- *Adult non-fiction* – This division produces only Canadian-authored books, including large coffee table books with photographs. Although certain products remain profitable, profits in this division have been declining.

Cost Structure and Sales

SPH pays its authors royalties ranging from 10% to 15% of the book's revenues. SPH has its own sales and marketing staff. Sales representatives are dedicated to specific customers and are paid a salary plus a 5% commission on sales.

SPH has some titles (representing about 45% of sales) that are widely used and for which there is little competition, ensuring stable sales year over year.

APPENDIX III – COMMON
EXCERPTS FROM DRAFT FINANCIAL STATEMENTS

Solitary Publishing House Limited
Statement of Net Income and Comprehensive Income
For the years ended December 31
(in thousands of Canadian dollars)

	2021 Draft	2020 Audited
Revenues		
Children's books	$ 22,520	$ 20,874
Textbooks	37,590	42,810
Adult non-fiction books	15,060	16,220
	75,170	79,904
Cost of goods sold		
Production and royalty costs	34,639	35,343
Amortization of pre-production costs	972	1,720
Depreciation and amortization related to production	850	875
	36,461	37,938
Gross profit	38,709	41,966
Operating Expenses		
Depreciation	2,203	2,315
Sales and marketing	12,401	12,136
General and administration	16,459	15,984
Total operating expenses	31,063	30,435
Operating income	7,646	11,531
Interest income – HHI bonds	23	0
Interest expense – Jefferson bonds	(354)	0
Interest expense – term loan	(598)	(643)
Income before taxes	6,717	10,888
Income taxes	(1,814)	(2,940)
Net income and comprehensive income	$ 4,903	$ 7,948

APPENDIX III – COMMON (continued)
EXCERPTS FROM DRAFT FINANCIAL STATEMENTS

Solitary Publishing House Limited
Statement of Financial Position
As at December 31
(in thousands of Canadian dollars)

	2021 Draft	2020 Audited
Assets		
Cash and cash equivalents	$ 1,529	$ 250
Accounts receivable (net of allowance 2021 – $256; 2020 – $236)	8,268	7,632
Inventories	6,450	6,514
Prepaid expenses	2,980	2,460
	19,227	16,856
Investment – HHI bonds	924	0
Property, plant and equipment, net	33,387	24,850
Pre-production costs	2,560	2,790
Royalty advances	2,040	1,910
Intangible assets	3,590	3,740
Total assets	$ 61,728	$ 50,146
Liabilities		
Accounts payable	$ 7,520	$ 7,490
Accrued liabilities	9,800	10,480
Contract liability – unearned revenue	1,109	1,350
Income taxes payable	140	240
Current portion of term loan	750	750
	19,319	20,310
Bonds payable – Jefferson	8,500	0
Term loan	9,090	9,840
Deferred tax liability	980	1,060
Total liabilities	37,889	31,210
Shareholders' equity		
Share capital – common shares	5,640	5,640
Retained earnings	18,199	13,296
Total shareholders' equity	23,839	18,936
Total liabilities and shareholders' equity	$ 61,728	$ 50,146

APPENDIX IV – COMMON
BUDGET EMAIL FROM JONATHAN

From: Jonathan Fleming, VP Production
To: CPA
Date: February 1, 2022
Subject: Fiscal 2022 budget

We finished our 2022 budget for the adult non-fiction division in November 2021. It was based on our normal operating capacity:

Volume of sales	180,000	
Average selling price	$ 85	
Total revenues		$ 15,300,000
Variable costs		
Direct materials and direct labour	$ 4,536,000	
Royalty fees	1,836,000	
Commission	765,000	
Shipping and fulfillment costs	306,000	
Other production costs	432,000	
Selling and marketing costs	413,100	
Total variable costs		8,288,100
Total fixed costs		5,717,000
Operating income		$ 1,294,900

Assumptions:

1. Variable selling and marketing costs are generally based on revenue dollars.
2. The fixed costs are relevant for up to 200,000 books. For each additional print batch of 50,000 books or less, there is an additional fixed cost of $75,000.
3. The fixed costs include other fixed production costs, the fixed portion of selling and marketing costs, occupancy costs, as well as $440,000 of depreciation expense.

After the budget was prepared, marketing revised its strategy for our adult non-fiction division:

We have some brand-new titles this year. We plan to spend $300,000 more on advertising, and to sell an additional 30,000 of these new books at a price of $75 each. We also want the books published using the highest quality paper to differentiate them in the market. Because these are new, unknown authors, we have negotiated royalties of only 9% on sales. We will need one more salesperson to market these books.

Please revise the initial budget to reflect these changes.

APPENDIX V – COMMON
OTHER REQUESTS FROM JONATHAN

From: Jonathan Fleming, VP Production
To: CPA
Date: February 2, 2022
Subject: 2021 fiscal year

We sell a three-book box set, as well as single books, of our "Hot Shot" children's series. Here is a sales summary for 2021:

Sales Option	Actual Volume	Standard Volume	Actual Selling Price	Standard Selling Price	Actual Variable Cost per Unit	Standard Variable Cost per Unit
Three-book box set	25,000	20,000	$13.90	$15.10	$7.48	$7.39
Single books	11,000	15,000	$7.65	$6.85	$3.55	$3.64

At the beginning of 2021, because Maria's research indicated an increase in sales of box sets for children, she suggested we spend more on marketing box sets and reduce our price on them to drive demand. However, it looks like this trend reversed for 2022, with customers preferring to purchase a single book so they don't have to spend so much at once. Maria recommends changing our promotions for the coming months to reflect this. Please perform a sales price variance and sales volume variance analysis for each product to help me understand whether the strategy adopted in 2021 was effective in increasing profit.

APPENDIX V – COMMON (continued)
OTHER REQUESTS FROM JONATHAN

Next, I need your assistance in setting a selling price for a new book in the adult non-fiction division to be released in 2023, *Forgotten Landscapes*. We'll select the best of two methods to price the book: 1) full absorption cost-based pricing, marking up total unit production costs by 50% (consistent across all books); or 2) demand-based pricing, looking at expected sales volumes at different price points based on market analysis. Please calculate a target price using these two methods and recommend a selling price for this book.

Please also qualitatively compare the benefits and drawbacks of each of the two methods.

We anticipate high demand for this book; however, given the printing costs for the high-quality photos, we expect the margin to be lower. Demand and pricing tend to increase over time for these books as the photographers become better known.

Our commitment is an initial print batch of 10,000 books, with the capacity to print additional batches.

A competitor's book showcasing a more famous photographer is priced at $70.

Fixed costs for volumes between 8,000 and 14,000 books will be $150,000 for production overhead and $130,000 for selling, general, and administration.

Per-book costs are as follows:

Direct materials	$ 24.30
Direct labour	$ 4.00
Variable production overhead	$ 3.00
Variable selling, general, and administration	$ 2.50

The marketing department estimated the number of books that could be sold at different prices:

Selling price	$ 60.00	$ 65.00	$ 70.00	$ 75.00
Number of books	14,000	12,500	9,500	8,500

APPENDIX VI – COMMON INVENTORY INFORMATION

Doris provided an excerpt from the finished goods inventory listing at December 31, 2021:

Inventory List – Warehouse – December 31, 2021			
Inventory Item	**Inventory on Hand (books)**	**Cost per Book**	**Inventory Value**
Introduction to Ecology	10,000	$57.20	$572,000
Law: Ethics	15,000	$25.60	$384,000
Total			$6,450,000

Doris also provided a list of returned books that were in transit from customers to SPH as at December 31, 2021. SPH takes ownership of returns when the books leave the customer's premises. All books in transit were recorded in SPH's inventory at year end.

							Page 1 of 1 **December 31, 2021**
Inventory List – Books in Transit							
Inventory Item	**Books in Warehouse December 31**	**Shipped from**	**Date Shipped**	**Quantity in Transit (books)**	**Cost per Book**	**Inventory Value**	**Note**
Introductory Physics	0	Sheldon High School	Dec 28	3,200	$15.78	$50,496	1
Biochemistry – Advanced, Fifth Edition	0	Brookston University	Dec 22	4,700	$32.90	$154,630	2
Total						$205,126	
Note 1 – Received January 3, 2022 – 2,000 units were damaged and not saleable. Note 2 – Received January 2, 2022 – all were in good condition.							

APPENDIX VII – COMMON
EMAIL FROM MARIA

From: Maria Olejnik, VP Marketing
To: Doris Simmons, VP Finance, and Jonathan Fleming, VP Production
Date: January 9, 2022
Subject: Price list

The prices of the following books were amended to reflect changes in demand:

Inventory Item	Sales Price Dec 2021	Note
Introduction to Ecology	$ 55.00	1
Introductory Physics	$ 25.30	
Biochemistry – Advanced, Fifth Edition	$ 28.60	2

Notes:

1. A contract commits the customer to purchase 20,000 books at a price of $75.00 each during the nine-month period ending April 30, 2022. By December 31, 2021, we had sold and shipped 13,000 units under this contract.
2. In February 2022, the fifth edition will be replaced by a sixth edition; we usually stop selling the old editions during the two months prior to a new edition being released.

We estimate that our variable costs to ship textbooks to retailers will average $1.50 per book.

APPENDIX VIII – COMMON
KINGSTON UNIVERSITY CONTRACT

SPH signed a contract with Kingston University (Kingston) under terms that differ from SPH's typical contracts.

Excerpts from the contract and related information are provided below.

Customer:	Kingston
Re:	Contract #KU47-5
Date:	April 27, 2021
Subscription period:	Kingston's academic year, from September 1, 2021, to April 30, 2022

Kingston agrees to purchase 3,000 units of *Architecture 101* (first edition) at a total price of $360,000 ($120 per unit). Each unit consists of a printed textbook and OLRs. The course runs for eight months, and the OLRs will be accessible to the students for the entire subscription period. To complete the course, students must use the textbook to complete assignments in the OLRs. Kingston is prohibited from selling the textbook or OLRs separately.

Kingston agrees to pay in full within 40 days of receipt of the textbooks. SPH commits to ship the books by August 15, 2021.

We shipped on August 12. Kingston signed for receipt of all textbooks on August 14; revenue of $360,000 was recognized. Full payment was received on September 16.

SPH paid sales commissions of 5% on this contract and incurred travel costs of $4,800 to present the proposal to Kingston. There is sufficient profit from this contract to cover these costs, which have all been recognized as sales expenses.

ASSURANCE ROLE
ADDITIONAL INFORMATION

APPENDIX IX – ASSURANCE
ADDITIONAL INFORMATION

Joint Arrangement

On August 1, 2021, SPH entered into a joint arrangement with AppsWiz Inc. (AppsWiz), a company that specializes in creating mobile applications. Each company invested $500,000 in return for 50% of the shares in SmartKids, a newly created legal entity. SPH will provide its expertise for the design and printing of the books, and AppsWiz will provide the mobile application expertise.

SmartKids will produce and sell a new line of interactive books, featuring traditional fairy tales, such as *The Three Little Pigs*. When a mobile device is held over the printed page and the words on the page are read out loud, the application will animate the printed characters on the screen.

A contractual agreement specifying the rights and responsibilities of each party was signed by SPH and AppsWiz. It contains the following terms:

- If SmartKids requires additional funds, both parties will contribute equally to it by purchasing additional common shares.
- All assets purchased and liabilities incurred by SmartKids must be approved by both SPH and AppsWiz and will belong to SmartKids.
- SmartKids will be responsible for payroll and any other administrative functions.

At the end of 2021, no sales had been made yet by SmartKids, although there are many interested parties. Doris recorded the $500,000 as production expense for the year.

At December 31, 2021, SmartKids had the following balances:

Total assets	$ 850,000
Total liabilities	$ 50,000
Total equity	$ 800,000

In addition, SmartKids incurred a net loss of $200,000 in 2021.

APPENDIX IX – ASSURANCE (continued)
ADDITIONAL INFORMATION

Additional Information on Fiscal 2021

SPH's information technology (IT) department delayed a planned upgrade of the accounting software until early 2022. For the last few weeks of 2021, the program would freeze up unexpectedly, but a reboot always resolved the issue. However, Doris wonders whether the accounting subledgers were impacted in any way by these incidents.

During the year, SPH hired Connor Smith, director of data analytics. Connor is responsible for the weekly dashboards provided to management. His team has performed extensive testing on the dashboards to ensure data integrity.

An audit junior attended the December 31, 2021, inventory count at SPH and was satisfied with the count procedures and accuracy.

In September 2021, SPH purchased land for $1 million and hired a company that started constructing an additional warehouse. As at December 31, 2021, the construction was complete and $2 million of construction costs were incurred.

Information Related to the Sales Cycle

- The trend in SPH's monthly sales as a percentage of annual sales is generally consistent throughout the year with those of other publishing houses.
- The allowance for doubtful accounts for 2021 was calculated as 3% of gross accounts receivable, consistent with prior years.
- The Canadian economy is struggling to recover from the recent recession; SPH has seen increases in accounts outstanding for longer than 60 days, plus related write-offs.
- SPH would not normally have any accounts in the "Over 90 days" category. The entire balance in this category relates to accounts with We Love Books.
- FE's estimates of uncollectible accounts range from 3% to 5% of gross accounts receivable.

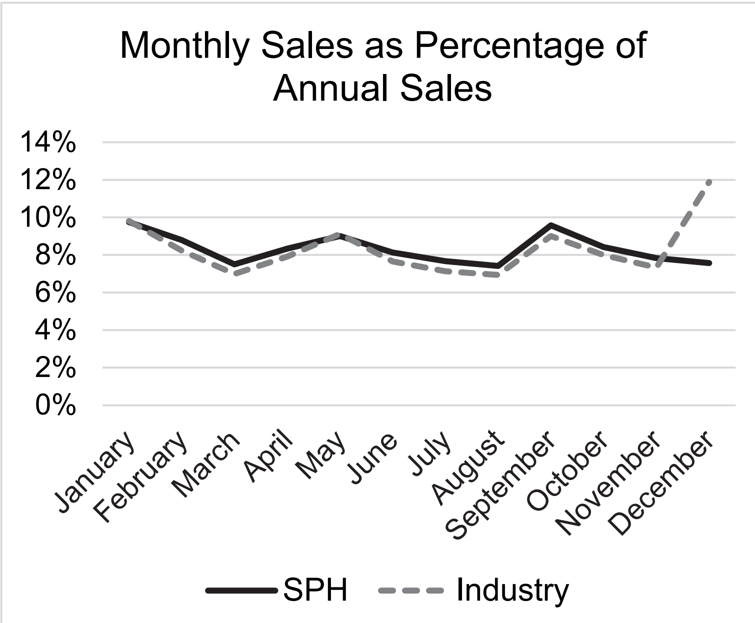
A/R Subledger
As at December 31, 2021
(in thousands of Canadian dollars)

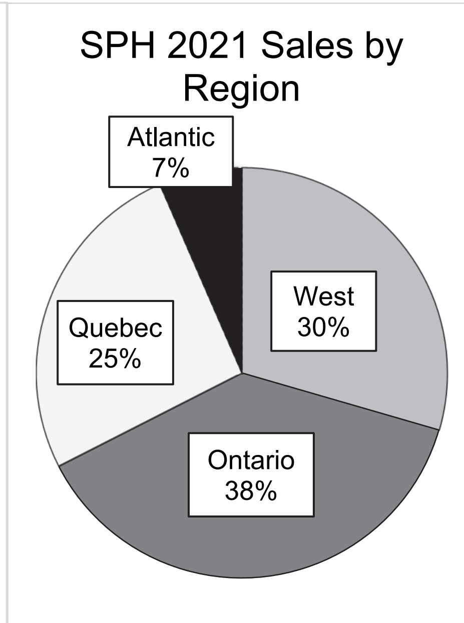
	0 to 30 Days	31 to 60 Days	61 to 90 Days	Over 90 Days	Total
Total	$6,320	$1,170	$213	$840	$8,543

APPENDIX IX – ASSURANCE (continued)
ADDITIONAL INFORMATION

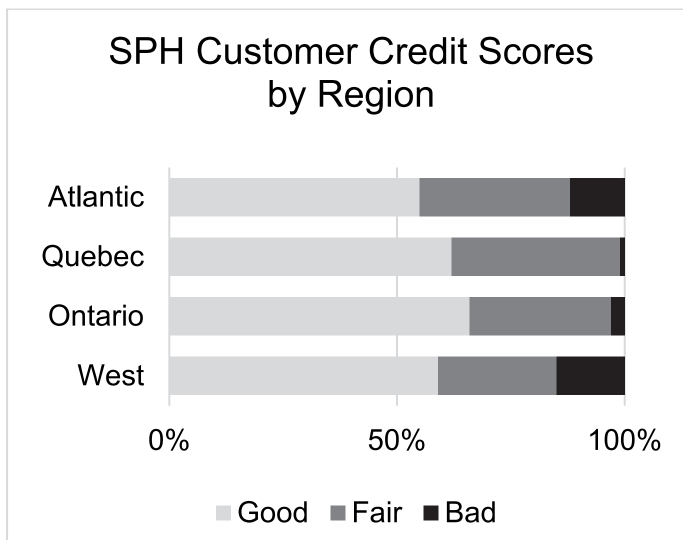
Information Related to the Sales Cycle (continued)

Weekly Management Dashboard
For the week of January 3, 2022





Latest Customer Updates
We Love Books filed for bankruptcy.



APPENDIX IX – ASSURANCE (continued)
ADDITIONAL INFORMATION

Internal Audit Department

Internal audit loaned Louise Swanson, CPA, to the accounting department, starting December 15, 2021. Despite this, the accounting department is still understaffed, and Louise has struggled to review the staff's work in a timely manner.

Per the internal audit charter, Belvin's responsibilities include:
- confirming the independence of internal audit to the audit committee at least annually;
- submitting an annual risk-based internal audit plan for approval;
- ensuring that planned engagements are executed, work programs and testing are documented, and results are communicated; and
- following up on recommendations, and reporting to the audit committee any corrective measures not implemented.

Audit managers in internal audit are required to have both a CPA designation and either a CIA or certified information systems auditor (CISA) designation, plus a minimum of two years of internal audit experience. Each auditor is required to have a commerce degree and to complete the CIA or CISA program within two years of their start date. From January 1 to December 15, 2021, internal audit was fully staffed.

The audit managers are responsible for planning internal audits, which are then performed by the auditors. Audit managers review the work performed by the auditors and draft an audit report. Belvin also performs a review of all audit files and the audit reports prior to their issuance.

Internal audit performed numerous internal audits during the year ended December 31, 2021, including audits of sales, general and administrative costs, payroll, and sales and marketing costs. Some audit reports issued included findings. For example, internal audit determined that, although the costs incurred were reasonable, some sales representatives had stayed in unapproved hotels. However, no material weaknesses or significant deficiencies in internal controls were reported. By December 31, 2021, all recommendations made by internal audit had been implemented.

APPENDIX IX – ASSURANCE (continued)
ADDITIONAL INFORMATION

Children's Books Division Changes

On August 31, 2021, internal audit issued a report regarding the children's books division's internal controls, noting no material weaknesses or significant deficiencies. On September 15, the sales manager responsible for the children's books division left. Brian was able to recruit Yolanda Vallis to replace him. She started with SPH on November 1, 2021.

When she started, Yolanda reviewed the monthly budget-to-actual sales reports of the division for 2021. Because she noted no significant issues, the sales representatives have been authorized since November 2021 to set up new customers and determine their credit limits.

Upgrades were made to the sales system in November, where certain information is now pre-populated in the system. For example, when sales representatives enter an order in the system, the system automatically populates certain fields such as the shipping address, telephone number, and email address once a customer is selected. In addition, when sales representatives select the items to be ordered from a drop-down list, the price related to the item is also automatically populated. If any pre-populated items are incorrect, the sales representatives change the information in the field before submitting the order in the system.

Discounts were rarely authorized before Yolanda joined, but she understands how important it is to give the sales representatives flexibility. Since Yolanda joined, sales representatives have therefore been authorized to offer a 10% volume discount to customers of the children's books division if they believe the customers are purchasing more than usual. Volume discounts of more than 10% must be approved by Yolanda.

When customers are delinquent in paying their invoices, the accounts receivable department asks the sales representatives to follow-up. If the sales representative thinks that collection is unlikely, they let the accounts receivable department know, and the amount is written off.

When Yolanda joined, she decided all sales representatives should have tablets, to stay connected. The tablets arrived in early December. When IT indicated that it would require five business days to set the tablets up with virtual private network access, encryption, and antivirus software, Yolanda decided not to delay their issuance. She instructed the sales staff to return the tablets between Christmas and New Year's so that IT could work on them.

FINANCE ROLE
ADDITIONAL INFORMATION

APPENDIX IX – FINANCE
ADDITIONAL INFORMATION

New Author Selection Methodology

SPH decides whether to accept a new author based on a net present value analysis, using a discount rate of 9%.

SPH incurs upfront editorial and design costs of $50,000 per title.

SPH applies the following assumptions for children's book sales:

	Hardcover	Paperback	E-book
Percentage of total sales volume	30%	60%	10%
Price per book	$9.50	$5.50	$4.10
Production and fulfillment costs as a percentage of revenue	35%	30%	5%

Each new book is assumed to have a five-year life. Regardless of the format, the total sales volume is expected to occur as follows:

Year	Sales Volume
1	40%
2	20%
3	15%
4	15%
5	10%

SPH pays a commission equal to 5% of revenues.

SPH incurs upfront fixed marketing costs of $275,000. In subsequent years, marketing costs represent 13% of sales.

Where it is considered relevant to the decision, SPH includes in its analysis a portion of its annual corporate overhead costs i.e., $5,000 in rent and $6,000 in technology costs. SPH also allocates printing machine amortization at $0.30 per hardcover and $0.20 per paperback.

SPH's tax rate is 27%.

APPENDIX IX – FINANCE (continued)
ADDITIONAL INFORMATION

Information about Chantal Summer

Chantal Summer is an environmental activist in Canada and Latin America, where her evening talk show is extremely popular. Chantal has approached SPH to publish a children's book she wrote. Given her significant social media presence (598,200 Instagram followers), Chantal believes that a large percentage of the book's sales will be in e-book format.

SPH's editors met Chantal at a conference; they frequently attend these conferences because the guest speakers are often interested in becoming authors. SPH's editors incurred travel costs of $25,000 for this conference.

SPH's editors would launch Chantal's book in English on January 1, 2023. They expect to sell 400,000 books over a five-year period. This amount includes a Spanish version, which will require translation costs of $15,000 in 2024. SPH has sufficient printing capacity to publish Chantal's book without any upgrades to its facilities.

Chantal has asked for a royalty of 15% on book sales and an advance of $450,000. Royalty payments start once the royalties earned are greater than the advance. Royalties are only deductible for income tax purposes when SPH has incurred the cost and expensed it for accounting purposes.

APPENDIX IX – FINANCE (continued)
ADDITIONAL INFORMATION

Sales Data

SPH management provided estimated first-book sales volumes for the 10 new authors that they most recently selected:

Launch Date	Genre	Additional Languages (beyond English)	Royalty Rate	Instagram Followers (prior to launch)	Total Sales Volume (Note 1)		Format (Note 2)		
					Years 1 to 5	Years 6+	Hard-cover	Paper-back	E-book
5-Oct-21	Children		9.25%	233,000	210,000	117,000	30%	30%	40%
15-Jan-21	Children	French	10.00%	1,089,000	403,000	298,000	20%	20%	60%
30-Aug-20	Children		11.00%	N/A	120,000	27,000	40%	50%	10%
5-Feb-20	Non-fiction		11.50%	11,000	95,000	9,000	30%	50%	20%
2-Dec-19	Children	Spanish	10.75%	175,000	230,000	65,000	20%	40%	40%
2-Jun-19	Textbook		14.00%	N/A	5,000	0	100%	0%	0%
10-Dec-18	Children	French	10.25%	N/A	168,000	71,000	30%	50%	20%
30-Aug-18	Non-fiction		11.50%	N/A	201,000	38,000	20%	70%	10%
10-Nov-17	Children		10.00%	N/A	108,000	10,000	50%	45%	5%
2-Aug-17	Non-fiction		10.50%	N/A	174,000	26,000	20%	80%	0%

Note 1 – Represents total sales estimated for the period. Sales volumes for recent releases are estimated based on retailer orders and feedback from current customers.

Note 2 – Sales formats are based on actual sales volume to date.

APPENDIX IX – FINANCE (continued)
ADDITIONAL INFORMATION

Valuation of SPH

Management believes that SPH's financial results in the last two years are reflective of future earnings. Management further notes:

- Brian McGregor was paid $250,000 in 2020 and $350,000 in 2021. A replacement CEO could be hired for $200,000 per year.
- SPH uses office space owned by Jonathan Fleming. Until August 2021, SPH paid rent of $2,500 a month, which was below the market rate. In September 2021, rent increased to $3,500 a month, in line with the current market rate.
- In 2020, a new textbook edition was released ahead of schedule, which increased revenues by $980,000. This reduced 2021 sales by the same amount. The gross profit margin on these textbooks is 45%.
- As a token of goodwill to a long-time children's author, Brian agreed to pay a one-time bonus of $50,000 and a royalty of 20% (typically 10%) for books sold during 2021. In 2021, this author generated sales revenue of $600,000.
- At December 31, 2021, SPH owned a vacant warehouse that was appraised at $400,000.

MC's internal research group indicated that three privately owned publishing businesses sold in the last year at enterprise value to EBITDA multiples of 5.75 to 6.75 times.

At December 31, 2021, SPH's outstanding debt and equity was comprised of the following:

- A $2 million line of credit (currently unutilized). The annual interest rate is 3%.
- An outstanding term loan of $9.84 million. It has a covenant requiring a current ratio of at least 1.0.
- The Jefferson bonds payable for $8.5 million, issued on March 1, 2021. The annual interest rate is 5%; interest is payable annually, with the principal due on February 28, 2026.
- Two million common shares. Ownership of at least 100,000 shares entitles the holder to a seat on SPH's Board of Directors.

APPENDIX IX – FINANCE (continued)
ADDITIONAL INFORMATION

Jefferson Proposal – Convertible Bond

Jefferson has proposed replacing its outstanding bonds with a convertible bond for $8.5 million, with a coupon rate of 2.5%; payment terms are otherwise the same as the existing bonds. The holder has until December 31, 2023 to exercise their right to convert the principal amount into 220,000 common shares.

Jefferson acquired two publishing businesses in the past and merged them, on the premise that the industry needs to consolidate to become more efficient.

APPENDIX IX – FINANCE (continued)
ADDITIONAL INFORMATION

Working Capital

SPH has provided its quarterly net working capital forecast *(in thousands of Canadian dollars)*:

	31-Mar-22	30-Jun-22	30-Sep-22	31-Dec-22
Cash	$ 1,350	$ 1,150	$ 740	$ 1,480
Accounts receivable	6,308	3,964	10,665	8,968
Inventories	6,372	8,940	7,180	7,002
Prepaid expenses	3,156	2,950	2,644	3,120
	17,186	17,004	21,229	20,570
Accounts payable (Note 1)	7,373	9,153	9,452	8,130
Accrued liabilities	6,820	5,850	7,330	8,950
Contract liability – unearned revenue	1,360	1,075	1,265	1,210
Income taxes payable	140	140	140	240
Current portion of term loan	750	750	750	750
	$16,443	$16,968	$18,937	$19,280

Note 1 – SPH has forecast its quarterly accounts payable:

	31-Mar-22	30-Jun-22	30-Sep-22	31-Dec-22
Accounts payable – opening	$ 7,520	$ 7,373	$ 9,153	$ 9,452
Purchases:				
WBL	1,200	1,600	1,700	1,350
Other suppliers	7,648	9,384	9,643	8,406
	8,848	10,984	11,343	9,756
Payments:				
WBL	(1,400)	(1,200)	(1,600)	(1,700)
Other suppliers	(7,595)	(8,004)	(9,444)	(9,378)
	(8,995)	(9,204)	(11,044)	(11,078)
Accounts payable – closing	$ 7,373	$ 9,153	$ 9,452	$ 8,130

SPH currently pays WBL in the quarter after the purchases are made. If it commits to paying within 10 days, SPH will have to pay WBL in the quarter in which the purchases are made.

APPENDIX IX – FINANCE (continued)
ADDITIONAL INFORMATION

Content Library Acquisition

Brian was approached by Don Garcia, the CEO of Legacy Publishing House (Legacy), which is in the process of winding up its operations. Legacy is offering SPH the intellectual property rights for its children's books (the Legacy Library) for $5 million.

The Legacy Library consists of copyrights on 1,374 children's book titles, most of which were first published 20 years ago. These copyrights give the holder the right to produce books, media, or other products based on the intellectual property.

The Legacy Library could be further monetized by licensing the media rights to content creators and collecting licensing fees from video streaming. However, Legacy never pursued this option. SPH could also consider licensing the content to another publisher and collect annual licensing income of $500,000.

SPH's management believes the content library could improve profitability since it avoids the upfront investment and risk of failure of a new book launch.

The MC research team has provided an analysis of recent sales of content libraries on the market:

Date	Content Library	Annual Licensing Income	Purchase Price	Licensing Income/ Purchase Price	Description
13-Nov-21	Mystery Novels Library	$2,020,000	$23,000,000	8.8%	Income derived from licensing current works and reprints of mystery novels from the past 30 years.
30-May-21	Vintage Comics	$2,350,000	$15,235,294	15.4%	Income derived from licensing for reprints, collections, and video streaming of classic comic books.
16-Jan-21	Classic Management Theory	$1,700,000	$23,333,333	7.3%	Income derived from licensing for reprints of well-known management literature.
24-Aug-20	Artwork Portfolio	$215,000	$23,125,000	0.9%	Income derived from licensing for printed materials such as physical paintings.
23-Feb-20	Modern Children's Stories IV	$1,100,000	$12,666,667	8.7%	Income derived from the 30-year fixed term copyrights for modern children's books.

PERFORMANCE MANAGEMENT ROLE ADDITIONAL INFORMATION

APPENDIX IX – PERFORMANCE MANAGEMENT ADDITIONAL INFORMATION

E-book Proposal

Maria noted that SPH's market share is being eroded in the e-book segment because SPH only publishes e-books in its textbook division. However, SPH's competition contains small publishers with little overhead that can churn out low-cost e-books and deliver a greater number of titles because they publish adult fiction e-books. In general, consumers who prefer e-books are less likely to purchase higher-priced items, like the textbooks currently produced by SPH, which contain denser content and require greater costs and lead times to produce.

This is the reason Maria is proposing a high-volume, low-cost strategy for selling adult fiction e-books directly to consumers. Since this would be a new market for SPH, Maria is confident these books will not cannibalize sales from SPH's other offerings. The projected average number of sales, per e-book, is 1,775. The average selling price for this type of e-book is $20. For every 10% reduction in price, the sales volume should increase by 30%. Maria suggests taking 20%, 30%, or anywhere up to 60% off this price. There would be no equivalent printed versions.

<u>Costs</u>

SPH's average costs for producing an e-book (i.e., one title) in the textbook division are as follows:

Royalty fees – as a percentage of the selling price	12%
Variable selling costs – as a percentage of the selling price	5%
Variable general and administration costs – per unit (i.e., each copy)	$ 2.50
Total editing costs	$ 6,000
Total design costs	$ 5,000
Total e-book formatting costs	$ 4,500
Total sales and marketing costs	$ 13,000

By reducing the editorial oversight and streamlining the design and production process for the projected adult fiction e-books, Maria believes the fixed costs will be reduced by 20%. Unit variable costs should remain the same.

APPENDIX IX – PERFORMANCE MANAGEMENT (continued)
ADDITIONAL INFORMATION

Video Lecture Proposal

Several universities have expressed interest in purchasing pre-recorded online lectures of course material so their lecturers can focus on more value-added student engagement. Rodney has developed a proposal to produce high-quality videos to accompany SPH's undergraduate science textbooks.

SPH is willing to incur a maximum additional cost of $125 per student to create videos for each course. Each course reaches an average of 1,200 students.

Costs related to producing the videos are as follows:

Recording equipment	The videos need to be produced in high definition (HD). SPH has an existing HD camera that can be used but will need to purchase an additional camera. HD cameras cost $50,000 each, and have a useful life of 2,000 hours of film time. SPH currently owns approximately $70,000 of other recording equipment. An additional $150,000 of recording equipment will need to be purchased. This equipment will have the same useful life as the cameras. Each course will require approximately 200 hours of recording time.
Technical experts	Technical experts will be required for the entire recording time and will provide a total of 50 hours of preparation per course. The experts will be paid $200 per hour.
Web hosting	As each video is about 10 gigabytes (GB) in size, they will need to be hosted on a server with sufficient storage capacity. SPH currently has 15 GB of additional storage capacity. The server has a total storage capacity of 500 GB, which costs $40,000 per year. The current market rate for web-hosting large files is $150 per GB.
Labour	Labour costs for the film crew will be $80,000 per course. Approximately 20% of the crew's tasks will be performed by existing SPH staff; the other 80% of the work will need to be performed by an external crew.
Edition	The portion of SPH's editor's salary, for the time spent, is estimated to be $2,000 per course.
Rent – studio	Rental of a studio for editing the videos is $11,000 per course.
Rent – SPH boardroom	Rental of the boardroom, where the videos will be filmed, is estimated to be $10,000. This amount is based on the size of the boardroom, its share of the building costs, and the number of days used for each course.

APPENDIX IX – PERFORMANCE MANAGEMENT (continued)
ADDITIONAL INFORMATION

ProofONE Test Results

SPH is known in the university sector for its accuracy when producing textbooks. SPH is experimenting with an artificial intelligence (AI) program, called ProofONE, to perform copyediting of textbooks. The program targets three key elements of the process:

1. The reduction of publication lead time, which is the time from the author handing over the manuscript to publishing the book. The current average lead time is 10 months.
2. The reduction of the editing time.
3. The increased accuracy of the editing. This is measured by the number of errors missed by the editor, as well as by the number of “false positives”; i.e., errors detected that are not actual errors.

ProofONE’s main functions include fixing grammatical and formatting errors and cross-checking citations and references. This work currently takes SPH’s editors an average of 60 seconds per page. The main purpose of using ProofONE would be to reduce this review time. Even if ProofONE is used, editors must still review the program edits to finalize the editing process.

Several algorithms, based on punctuation and other grammatical rules, were inputted into the program. These algorithms were tested on a sample of six textbook manuscripts. The program was updated after each book was completed, based on refinements to the algorithms that the editors suggested.

APPENDIX IX – PERFORMANCE MANAGEMENT (continued)
ADDITIONAL INFORMATION

Editorial review by ProofONE test dataset:

Book	A	B	C	D	E	F
Number of pages	350	273	392	432	120	249
Time spent (in minutes)	14.1	17.7	27.3	67.8	14.5	39
Grammatical or formatting errors fixed	1,025	543	235	5,321	753	3,434
Citation errors fixed	131	71	31	1,943	54	532
Potential errors identified for further review	181	137	79	56	37	13

Additional work performed by the editors after the test run, plus other relevant information:

Book	A	B	C	D	E	F
Editor time to review and clear errors identified (in minutes)	131	97	93	128	28	36
Errors not found by ProofONE	61	58	27	70	34	19
False positives	23	12	48	41	21	17
Publication lead-time (in months)	8.32	7.9	6.21	11.32	3.6	8.5

The editors also noted the following:

- The program was fairly accurate detecting simple errors, but less accurate with the more complex decisions that contained technical language.
- Considerable time was spent refining the algorithms to ensure the program was not identifying and correcting false positives.
- Some editors found the process of teaching the program the algorithms and clearing the false positives tedious, and said it affected their job satisfaction. Others found that diverting their attention from routine mistakes to the more value-added edits empowered them.

APPENDIX IX – PERFORMANCE MANAGEMENT (continued)
ADDITIONAL INFORMATION

AERU Pilot Project

The initiative is intended to give small teams the autonomy to develop a book from conception to publication. The AERU was piloted in the adult non-fiction division. The pilot project team included two lead editors, four support staff, and two publicists, who are all among the best in their field.

The expectation is that, due to their lean size, AERUs will react to market trends faster. SPH hopes this structure results in a 20% increase in the number of new book titles published per employee, and a 30% reduction in publication lead time. The average number of sales per book title should also increase by 15%. With more autonomy, the AERU employees should see their level of satisfaction increase.

Current adult non-fiction division information (excluding the pilot project)

Non-fiction sales for new books during the six months ending December 2021 were 52,200 books, from 54 new book titles. There are currently 78 employees in the division. The average lead time is currently 10.32 months, calculated as new titles published over a 12-month span. There were no reprints, which are generally required due to significant typographical errors.

AERU pilot project results

The pilot began in July 2020 and concluded at the end of June 2021.

Number of new book titles published	16
Average selling price	$74
Average lead time	9 months
Total sales (Note 1)	$1,294,704
Number of reprints	1

Note 1 – Sales figures are based on the six months following the end of the pilot project.

APPENDIX IX – PERFORMANCE MANAGEMENT (continued)
ADDITIONAL INFORMATION

Current Performance Incentives

Editorial and support staff

For editors, a bonus pool is created, and it ranges from 5% to 10% of each division's net profit. The pool is allocated to the editors based on seniority within the organization.

All support staff get the same bonus at the end of the year, based on the net profit of their division.

Sales and marketing staff

Sales staff are incentivized on an individual basis using a commission of 5% of sales.

Publicists and other members of the marketing staff are incentivized using a bonus pool that is based on multiple targets, such as sales volumes and average selling price of books published.

AERU employees

The publicists in the AERU pilot did not receive a bonus for the year because the rest of the marketing staff in the adult non-fiction division did not meet their targets.

Brian stated that properly incentivizing the AERU members is a priority, as they are some of SPH's best and most highly regarded employees.

APPENDIX IX – PERFORMANCE MANAGEMENT (continued)
ADDITIONAL INFORMATION

Outsourcing Sales Function

Email, forwarded from Jonathan to Michel (MC)

From: Roger Mahovlich, Big M Marketing Inc.
To: Jonathan Fleming, VP Production, SPH

Hi Jonathan!

Thanks for reaching out.

Big M Marketing Inc. is a team of professionals that specializes in the publishing business. Our clients include some of the “Big Four” publishers.

We would replace your sales process with our own Direct Marketing approach, which has proven to be highly effective for our clients. We combine your company data with our growing database to reach a broader market than any single publisher can achieve on its own!

With our approach, our clients can almost entirely eliminate their marketing costs. As our staff are paid 100% by commission, they are highly motivated to serve your needs. All our clients have experienced at least 20% sales growth year over year (adjusted for elements that are out of our control), which is why we guarantee that you will experience the same growth in the first year. We charge no upfront fee and require no fixed-length commitments or contracts.

TAXATION ROLE
ADDITIONAL INFORMATION

APPENDIX IX – TAXATION
ADDITIONAL INFORMATION

Opening Balances

At January 1, 2021, SPH has $100,000 of net capital losses carrying forward.

Undepreciated capital cost (UCC) balances (*in thousands of Canadian dollars*) were as follows:

Class	UCC
Class 1	$ 12,000
Class 8	$ 3,500
Class 10	$ 600
Class 50	$ 400

SPH has not placed its buildings into separate Class 1 pools; all are in a pooled 4% category.

2021 Activity

The following is cumulative information from the beginning of the fiscal year to the last quarter of 2021 from SPH's accounting system.

Asset purchases *(in thousands of Canadian dollars)*:

	January - September	October	November	December	Total 2021
Class 8 equipment	$ 8,312	$ 0	$ 588	$ 0	$ 8,900
Class 50 equipment	$ 2,421	$ 0	$ 0	$ 269	$ 2,690
Total additions	$ 10,733	$ 0	$ 588	$ 269	$ 11,590

APPENDIX IX – TAXATION (continued)
ADDITIONAL INFORMATION

2021 Activity (continued)

Excerpts from the detailed income statement (*in thousands of Canadian dollars*):

	January - September	October	November	December	Total 2021
Revenues	$ 55,420	$ 6,350	$ 6,250	$ 7,150	$ 75,170
Cost of goods sold					
Production and royalty costs (Note 1)	25,988	3,155	2,846	2,650	34,639
Amortization of pre-production costs	729	81	81	81	972
Depreciation and amortization related to production	637	71	71	71	850
Gross profit	$ 28,066	$ 3,043	$ 3,252	$ 4,348	$ 38,709
Expenses					
Depreciation	$ 1,652	$ 184	$ 184	$ 183	$ 2,203
Sales and marketing	9,401	1,200	1,000	800	12,401
General and administration					
Meals and entertainment	1,450	50	50	50	1,600
Golf membership fees	520	0	0	100	620
Bad debt expense	0	0	0	1,000	1,000
Bank charges	800	50	75	75	1,000
Professional fees	1,250	150	250	50	1,700
Rent expense	4,800	533	533	534	6,400
Utilities	1,825	208	208	209	2,450
Office supplies	1,050	30	59	50	1,189
Telephone and internet	375	41	42	42	500
Total operating expenses	$ 23,123	$ 2,446	$ 2,401	$ 3,093	$ 31,063

Note 1 – Production and royalty costs approximates inventory purchases for the period.

APPENDIX IX – TAXATION (continued)
ADDITIONAL INFORMATION

Brian and Sarah – Tax Information

Sarah is 66 years old and a retired teacher. She will have the following income in 2022:

Canada Pension Plan	$ 14,110
Pension income	40,000
RRIF income	15,000
	$ 69,110

Brian will have the following income in 2022:

Canada Pension Plan	$ 7,055
RRIF income	75,000
Employment income (January – June)	80,000
	$ 162,055

Brian and Sarah intend to sell their home in Toronto for $7 million. It is their main dwelling, which they acquired in 2010 for $2.5 million. They also own a cottage that they purchased in 2015 for $250,000, and that currently has a fair market value (FMV) of $1 million. Since they go there often for vacations during the summer, they have never rented it out.

Share Sale Information

Brian has used $175,000 of his lifetime capital gains deduction (LCGD) in the past on other investments. Brian paid $100 for his SPH shares at the time it was incorporated.

Rodney's adjusted cost base of his shares in SPH is $1.4 million. He has not used any of his LCGD. Rodney currently earns over $250,000 in annual salary from SPH and does not have any other income.

Jefferson has valued the equity of SPH at $60 million and has proposed to purchase Brian's and Rodney's respective shares on March 31, 2022, although the terms allow for flexibility, should any tax planning need to be performed. Jefferson's taxable capital is $12 million.

SPH's financial position on March 31, 2022, is expected to be similar to its financial position on December 31, 2021. The equipment in Class 8 has a total FMV of only $7.5 million. All other depreciable assets have FMVs higher than their UCC balances, and all of SPH's land has appreciated since it was acquired.

APPENDIX IX – TAXATION (continued)
ADDITIONAL INFORMATION

Warehouse Move

The warehouse at 360 Tilly Avenue was purchased in 2014. A buyer is willing to purchase it on May 31, 2022, for $1.5 million, being $1.05 million for the land and $450,000 for the building. The land has an adjusted cost base (ACB) of $700,000, while the ACB of the building is $300,000.

SPH would purchase a warehouse located at 350 Foster Avenue for $1.6 million, of which $1.1 million is allocated to the land and $500,000 to the building. Construction of the warehouse started in 2019, and it was ready for use in 2021. The purchase of this warehouse is tentatively scheduled for June 30, 2022.

GST/HST Information

Rhea had never filed a GST/HST return before but realized that the December GST/HST needed to be paid.

Rather than prepare or file a GST/HST return for December, she reviewed what was remitted for November and simply paid the same amount ($146,000) for December by the filing deadlines.

In December, SPH's sales were divided evenly between sales to customers in Ontario (where there is 13% HST) and British Columbia (where there is only GST). All expenses and asset purchases take place in Ontario. New pre-production cost purchases were $100,000 in December.

DAY 2 – MARKING GUIDE – COMMON
SOLITARY PUBLISHING HOUSE LIMITED (SPH)
ASSESSMENT OPPORTUNITIES

To: Doris and Jonathan
From: CPA
Subject: Your requests

Assessment Opportunity #1 (Common) (Depth and Breadth Opportunity) The candidate revises the initial budget, based on changes proposed by the marketing department. *The candidate demonstrates competence in Management Accounting.*

CPA Map Technical Competencies:		**Core**
3.2.2	Prepares, analyzes, or evaluates operational plans, budgets, and forecasts	**A**

CPA Map Enabling Competencies: *6.1.2 Uses qualitative and quantitative techniques to clarify the nature of problems* *6.2.1 Maintains an objective and questioning mindset to avoid biased analyses* *6.2.3 Questions the relevance and tests the quality of information and assumptions in own analyses* *6.3.2 Articulates limitations to recommendations*

Adult Non-Fiction Division Budget

To reflect the changes proposed by the marketing department for the 2022 adult non-fiction division, the following budget adjustments are required:

	Initial Budget	Revised Budget	Note
Total revenues	$15,300,000	$17,550,000	1
Variable costs:			
Direct materials and direct labour	4,536,000	5,292,000	2
Royalty fees	1,836,000	2,038,500	3
Commission	765,000	877,500	4
Shipping and fulfillment costs	306,000	357,000	5
Other production costs	432,000	504,000	6
Selling and marketing costs	413,100	473,850	7
Total variable costs	8,288,100	9,542,850	
Total fixed costs:	5,717,000	6,092,000	8, 9, 10
Operating income	$1,294,900	$1,915,150	

Notes:

1. (180,000 books × $85) + (30,000 books × $75) = $17,550,000

2. (180,000 + 30,000 books) × $25.20 = $5,292,000

   The marketing department wants these books printed on the highest-quality paper, which will likely increase the variable costs for the direct materials. We would need to know the cost of the highest-quality paper and any other added costs for direct materials and direct labour (e.g., if more ink was needed for higher quality paper) for these new books. For now, we will use the original estimated cost of $25.20 per book ($4,536,000/ 180,000 books).

3. (12% royalty × $15,300,000) + (9% royalty × $2,250,000) = $2,038,500

4. 5% commission × $17,550,000 = $877,500 [The 5% is based on $765,000/$15,300,000]

5. (180,000 + 30,000 books) × $1.70 = $357,000 [$306,000/ 180,000 books = $1.70 per book]

6. (180,000 + 30,000 books) × $2.40 = $504,000 [$432,000/ 180,000 books = $2.40 per book]

7. 2.7% × ($15,300,000 + 2,250,000) = $473,850 [413,100/$15,300,000 = 2.7%]

8. The adjusted production volume of 210,000 (180,000 + 30,000 books) is now above the relevant range of 200,000 books; therefore, fixed costs increase by $75,000.

9. At a minimum, the plan is to spend an additional $300,000 on advertising.

   However, the marketing department stated that they need one more salesperson. We know that salespeople are paid a mix of salary and commissions; therefore, the additional salary for this new person will need to be included in the sales and marketing expense.

10. Depreciation is a fixed cost that would not be expected to change with volume.

In addition to the above, the original budget was prepared based on normal operating capacity. If 30,000 units are added, production volumes will be over normal capacity. $75,000 was added to production costs to compensate for the fact that the original fixed cost was for a relevant range of up to 200,000 books; however, we are not sure for what this cost compensates. It is questionable whether SPH is able to produce more than its normal capacity, or whether doing so will require reduced production of products from other divisions. If so, the budgets for the remaining two divisions will be impacted.

If SPH can produce at a higher capacity, there may be an impact on the variable production costs and allocation of the fixed portion of production costs. If the fixed production costs are allocated based on volume of books printed, this amount would have to be adjusted. We would need this additional information in order to calculate the revised costs.

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

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

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

Reaching competence – The candidate attempts to revise the initial budget, based on changes proposed by the marketing department.

Competent – The candidate revises the initial budget, based on changes proposed by the marketing department.

Competent with distinction – The candidate thoroughly revises the initial budget, based on changes proposed by the marketing department.

Assessment Opportunity #2 (Common) (Depth and Breadth Opportunity) The candidate analyzes the sales price variance and sales volume variance for the box-set and single book products in order to assess the effectiveness of the marketing strategy in increasing profit. *The candidate demonstrates competence in Management Accounting.*

CPA Map Technical Competencies:		**Core**
3.2.3	Computes, analyzes, or assesses implications of variances	**A**

CPA Map Enabling Competencies:
5.1.1 Applies general business knowledge to enhance work performed
6.1.2 Uses qualitative and quantitative techniques to clarify the nature of problems
6.2.1 Maintains an objective and questioning mindset to avoid biased analyses
6.2.2 Identifies patterns from data analysis
6.3.1 Uses evidence and judgment to recommend and justify solutions or conclusions

Variance Analysis

Based on the information provided, the calculations of the sales price variance and the sales volume variance for the box-set product and the single book product for the Hot Shot series of children's books are as follows:

		Actual Results		**Flexible Results**		**Standard Results**
Box set						
Revenue	(25,000 × $13.90)	347,500	(25,000 × $15.10)	377,500	(20,000 × $15.10)	302,000
Variable costs	(25,000 × $7.48)	(187,000)	(25,000 × $7.39)	(184,750)	(20,000 × $7.39)	(147,800)
Contribution margin		160,500		192,750		154,200
Sales price variance [25,000 × ($15.10 - $13.90), or $377,500 - $347,500]		30,000	Unfavourable			
Sales volume variance based on contribution margin [$192,750 - $154,200]		38,550	Favourable			
Sales volume variance based on selling price [$377,500 - $302,000]		75,500	Favourable			

		Actual Results		Flexible Results		Standard Results
Single book						
Revenue	(11,000 × $7.65)	84,150	(11,000 × $6.85)	75,350	(15,000 × $6.85)	102,750
Variable costs	(11,000 × $3.55)	(39,050)	(11,000 × $3.64)	(40,040)	(15,000 × $3.64)	(54,600)
Contribution margin		45,100		35,310		48,150

Sales price variance [11,000 × ($7.65 - $6.85), or $84,150 - $75,350]	8,800	Favourable
Sales volume variance based on contribution margin [$48,150 - $35,310]	12,840	Unfavourable
Sales volume variance based on selling price [$102,750 - 75,350]	27,400	Unfavourable

	Actual Results	Flexible Results	Standard Results
Combined			
Combined contribution margin	205,600	228,060	202,350

Sales price variance	21,200	Unfavourable
Sales volume variance based on contribution margin	25,710	Favourable
Sales volume variance based on selling price	48,100	Favourable

Due to the lower actual selling price, there was an unfavourable sales price variance for the box set. However, it appears that the lower price, compared to the standard selling price, created more demand. The higher volume of actual sales therefore resulted in a favourable sales volume variance. In total, the actual amount contributed to profit was higher than the standard (budgeted) amount because the increased demand was more than enough to make up for the reduction in the selling price.

By comparison, the sales variance for the single book product showed the reverse—there was a favourable price difference in that the actual selling price was higher than standard, but actual volumes sold were less than budgeted, resulting in an unfavourable sales volume variance. For this product, the actual contribution margin was lower than the standard.

In combination, although there was a large unfavourable price variance, sales volume variance was favourable.

These results indicate that consumers are price sensitive. It therefore appears that the marketing strategy was effective. The research indicated that there would be an increase in sales of box sets for children, which there was, and the department therefore spent more on marketing these products. By decreasing the price for the box set, the quantity demanded increased, and the strategy resulted in a higher actual contribution margin than the standard (budgeted amount).

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

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

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

Reaching competence – The candidate attempts to analyze the sales price variance and sales volume variance for the box-set and single book products.

Competent – The candidate analyzes the sales price variance and sales volume variance for the box-set and single book products.

Competent with distinction – The candidate analyzes the sales price variance and sales volume variance for the box-set and single book products, and concludes on whether the 2021 strategy was effective in increasing profits.

Assessment Opportunity #3 (Common) (Depth and Breadth Opportunity)

The candidate prepares a target price analysis using full absorption cost-based pricing and demand-based pricing, and recommends a selling price.

The candidate demonstrates competence in Management Accounting.

CPA Map Technical Competencies:		**Core**
3.3.2	Evaluates and applies cost management techniques appropriate for specific costing decisions	**B**
3.4.1	Evaluates sources and drivers of revenue growth	**B**
3.5.1	Performs sensitivity analysis	**A**

CPA Map Enabling Competencies:
6.1.2 Uses qualitative and quantitative techniques to clarify the nature of problems
6.2.4 Completes thorough quantitative and qualitative analyses to identify and evaluate potentially viable alternatives
6.3.1 Uses evidence and judgment to recommend and justify solutions or conclusions
6.3.3 Applies decision criteria to choose among viable alternatives

SPH needs to determine the price of a new adult non-fiction book called “Forgotten Landscapes.” Two methods are used by SPH: a full absorption cost-based pricing method and a demand-based pricing method. Jonathan wants the target price determined under each of these scenarios, and a recommended selling price.

Full Absorption Cost-based Pricing Method

<u>Single book</u>	
Direct materials	$24.30
Direct labour	4.00
Variable production overhead	3.00
Total variable production costs per unit	31.30
Fixed production overhead ($150,000/10,000)	15.00
Unit production cost	$46.30
Add 50% markup	23.15
Target selling price	$69.45
<u>Selling, general and administrative (SG&A) costs</u>	
Variable SG&A	$2.50 per book
Fixed SG&A (8,000 to 14,000 units)	$130,000
<u>Assuming 10,000 books sold (initial print run is for 10,000)</u>	
Total revenues, assuming 10,000 books sold	$694,500
Variable production costs	(313,000)
Fixed production overhead	(150,000)
Variable SG&A	(25,000)
Fixed SG&A	(130,000)
Operating profit	$ 76,500
Percentage	11%

Demand-based Pricing Method

					Note
Price	$60.00	$65.00	$70.00	$75.00	
Books expected to be sold	14,000	12,500	9,500	8,500	
Total revenues	$840,000	$812,500	$665,000	$637,500	
Variable production costs	(438,200)	(391,250)	(297,350)	(266,050)	1
Fixed production overhead	(150,000)	(150,000)	(150,000)	(150,000)	2
Variable SG&A costs	(35,000)	(31,250)	(23,750)	(21,250)	3
Fixed SG&A costs	(130,000)	(130,000)	(130,000)	(130,000)	2
Operating profit	$ 86,800	$110,000	$ 63,900	$ 70,200	
Percentage	10%	14%	10%	11%	

Notes:

1. $31.30 variable production costs (calculated above) × volume per year
2. Fixed costs as presented
3. $2.50 variable SG&A costs × volume per year

Recommendation

Based on the analysis above, a price of $65 is recommended, as this will yield the highest operating profit of 14%. Although this is below the target price of $69.45 at 10,000 units (required to ensure that costs are covered, with a markup of 50%), the demand analysis indicates that, at $70 (i.e., closest to $69.45), only 9,500 units will be sold and not the 10,000 that are produced, which will yield a lower operating profit.

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

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

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

Reaching competence – The candidate attempts to prepare a target price analysis, using full absorption cost-based pricing and demand-based pricing.

Competent – The candidate prepares a target price analysis, using full absorption cost-based pricing and demand-based pricing, and recommends a selling price.

Competent with distinction – The candidate prepares a comprehensive target price analysis, using full absorption cost-based pricing and demand-based pricing, and recommends a selling price.

Assessment Opportunity #4 (Common) (Depth and Breadth Opportunity)

The candidate identifies and discusses the factors to be considered in the selection of the pricing method to be used.

The candidate demonstrates competence in Management Accounting.

CPA Map Technical Competencies:		**Core**
3.4.1	Evaluates sources and drivers of revenue growth	**B**

CPA Map Enabling Competencies:
5.1.1 Applies general business knowledge to enhance work performed
6.1.2 Uses qualitative and quantitative techniques to clarify the nature of problems
6.2.1 Maintains an objective and questioning mindset to avoid biased analyses
6.2.4 Completes thorough quantitative and qualitative analyses to identify and evaluate potentially viable alternatives
6.3.1 Uses evidence and judgment to recommend and justify solutions or conclusions
6.3.2 Articulates limitations to recommendations
6.3.3 Applies decision criteria to choose among viable alternatives

Considerations when using the full absorption cost-based pricing model are as follows:

- As it uses internal data gathered on costs, this method is normally considered more reliable. However, given that the printing of this book will be more challenging than SPH's normal books, the cost estimates used may not be as reliable, and thus this model may not provide accurate information.
- Consistent across all books, SPH's policy is to add 50% to the costs to determine the selling price. Given that expected margins on this book will be lower than other books, however, applying a consistent percentage to this book may not make sense.
- This method assumes that all the books printed will be sold, which may not be the case, especially since SPH has already made a commitment for 10,000 books to be printed. Based on demand analysis, if $70 is used as the selling price, only 9,500 units would be sold, which is less than the 10,000 used in the calculation.
- Another disadvantage is that this method ignores the competition and the demand for a certain product in the market. We know that a competitor's similar book with a more famous photographer is priced at $70. Therefore, the price of $69.45 may not be a big enough difference for a lesser-known photographer.

Based on these considerations, this method is good to use as a benchmark for this product, and to then compare to the demand curve.

Considerations when using the demand-based pricing model are as follows:

- This pricing model considers the customer, the value of the product to the customer, and the price that the customer is willing to pay. As the competitor's book by a more famous photographer is selling for $70, the price of SPH's book should be lower, given that it is by a lesser-known photographer.
- This model also considers the demand curve for the product. In this case, we see that the demand changes based on price, and that there is price elasticity; as the price declines, the volume of expected sales increases.
- We also expect that there is high demand for the product; SPH just needs to determine the correct price. The goal is to choose the price at which the greatest number of books will be sold.
- The disadvantage of this model is that the information is gathered using market research. Therefore, the volume sold at various price points is only an estimate of what might occur. Actual results may be very different from the estimates.

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

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

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

Reaching competence – The candidate attempts a discussion of the factors to consider when determining which method to use.

Competent – The candidate discusses the factors to consider when determining which method to use.

Competent with distinction – The candidate thoroughly discusses the factors to consider when determining which method to use.

Assessment Opportunity #5 (Common) (Depth and Breadth Opportunity)

The candidate discusses the required inventory adjustments.

The candidate demonstrates competence in Financial Reporting.

CPA Map Technical Competencies:		Core
1.2.2	Evaluates treatment for routine transactions	A

CPA Map Enabling Competencies:
6.2.1 Maintains an objective and questioning mindset to avoid biased analyses
6.2.4 Completes thorough quantitative and qualitative analyses to identify and evaluate potentially viable alternatives
6.3.1 Uses evidence and judgment to recommend and justify solutions or conclusions

Regarding inventory, certain events occurred before December 31, 2021, and were communicated in January 2022. Since the events occurred before year end, the accounting impact of these events should be reflected in the 2021 financial statements.

Inventory Valuation

There are several issues related to inventory. As per *IAS 2 Inventories*, paragraph 9, "*inventories shall be measured at the lower of cost and net realisable value*" (NRV). We should therefore determine the NRV of the inventory to see if any adjustments are required for the inventory as at December 31, 2021.

All of these books are in different categories and subject areas. As stated in IAS 2.29, inventories are usually written down to NRV item by item. It is only appropriate to group similar or related items if they have similar purposes or end uses, and cannot be feasibly evaluated separately from other items in that product line. As each of the books highlighted is for a different subject matter and a different level of student, and can be separately assessed, the NRV is therefore determined item by item.

Finished goods inventory – returns in transit

Since SPH takes ownership of returns when the books leave the customer's premises, we must first determine the correct quantities on hand of inventory returns in transit.

Title	Quantity	Notes	Revised Quantity
Introductory Physics	3,200	Received – 2,000 units, damaged and not resaleable	1,200
Biochemistry – Advanced, Fifth Edition	4,700	Received – all in good condition	4,700

As per IAS 2.28, *"the cost of inventories may not be recoverable if those inventories are damaged, if they have become wholly or partially obsolete, or if their selling prices have declined*." SPH has some units of *Introductory Physics* inventory that have been damaged and will have an NRV equal to $0.

In addition, as noted by Maria, the fifth edition of the biochemistry textbook has become obsolete due to a new edition being released (old editions are no longer sold), and therefore will also have an NRV equal to $0.

Estimating NRV for finished goods inventory

In IAS 2, the NRV is defined to be the estimated selling price in the ordinary course of business less the estimated costs of completion and the estimated costs necessary to make the sale. In the case of SPH, there is a 5% commission paid to its salespeople, variable shipping costs incurred which average to $1.50 per textbook, and royalties paid to authors, which would be in the range of 10% to 15%, or an average of 12.5%.

IAS 2.31 states that, if the inventory is held for committed customer contracts, the contract price is used for that amount of inventory. Any inventory exceeding the committed amount will have an NRV based on general selling prices.

Per-unit Cost and NRV

Inventory Item	Cost per Book	Sales Price per Book	NRV per Book (Note)	Lower of Cost and NRV per Book
Introduction to Ecology – under contract	$57.20	$75.00	$75.00 × (1 - 12.5% - 5%) - $1.50 = $60.38	$57.20
Introduction to Ecology – balance	$57.20	$55.00	$55.00 × (1 - 12.5% - 5%) - $1.50 = $43.88	$43.88
Introductory Physics	$15.78	$25.30	$25.30 × (1 - 12.5% - 5%) - $1.50 = $19.37	$15.78
Biochemistry – Advanced, Fifth Edition	$32.90	$28.60	$0.00	$0.00

Note: Sales price for December 2021, less royalties, which is assumed to be the average of 12.5%, less 5% commission, and less $1.50 for shipping

Finished Goods Inventory – Introduction to Ecology

	Recorded Amounts			Corrected Amounts		
	Quantity	Unit Cost	Inventory Value	Correct Quantity	Lower of NRV and Unit Cost	Revised Inventory Amount
Under contract	10,000	$57.20	$572,000	7,000	$57.20	$400,400
Balance				3,000	$43.88	131,640
			$572,000			$532,040
					Write-down required	$39,960

Inventory in Transit

	Recorded Amounts			Corrected Amounts		
	Quantity	Unit Cost	Inventory Value	Correct Quantity	Lower of NRV and Unit Cost	Revised Inventory Amount
Introductory Physics	3,200	$15.78	$50,496	1,200	$15.78	$18,936
Biochemistry – Advanced, Fifth Ed.	4,700	$32.90	$154,630	4,700	$0.00	0
			$205,126			$18,936
					Write-down required	$186,190

The adjustment required to record inventory write-down for finished goods and in transit will be:

DR Inventory write-down (cost of goods sold) ($39,960 + $186,190)	$226,150	
CR Inventory		$226,150

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

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

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

Reaching competence – The candidate discusses some of the required inventory adjustments.

Competent – The candidate discusses several of the required inventory adjustments.

Competent with distinction – The candidate discusses most of the required inventory adjustments.

Assessment Opportunity #6 (Common) (Depth and Breadth Opportunity)

The candidate discusses the accounting treatment for the Kingston University contract.

The candidate demonstrates competence in Financial Reporting.

CPA Map Technical Competencies:		Core
1.2.2	Evaluates treatment for routine transactions	A

CPA Map Enabling Competencies:
6.2.1 Maintains an objective and questioning mindset to avoid biased analyses
6.2.4 Completes thorough quantitative and qualitative analyses to identify and evaluate potentially viable alternatives
6.3.1 Uses evidence and judgment to recommend and justify solutions or conclusions

Kingston University Contract

SPH signed a new sales contract with Kingston University (Kingston). Under *IFRS 15 Revenue from contracts with customers*, there are five steps for revenue recognition:

1. Identify the contract with the customer.
2. Identify separate performance obligations, if they exist.
3. Determine the overall transaction price.
4. Allocate the transaction price to the separate performance obligations.
5. Determine when the performance obligation is complete, and revenue can be recognized.

<u>Step 1: Identify the contract with the customer.</u>

The contract is valid in that it is in writing, outlines the rights regarding the transfer of the product from SPH to the customer, specifies the transaction price, and specifies payment terms. In addition, collection of the consideration is probable because there is a note of full payment being received on September 16.

<u>Step 2: Identify separate performance obligations, if they exist.</u>

IFRS 15.22 requires that, for each customer contract, the company identify each promise to transfer a good or service as a separate performance obligation, if the good or service is distinct or there is a series of distinct services that are the same and are transferred to the customer in the same manner.

IFRS 15.24 states that, "*a contract with a customer generally explicitly states the goods or services that an entity promises to transfer to a customer.*"

For this contract, each unit includes a printed copy of the textbook and a subscription to the online learning resources (OLRs) for the period from September 1, 2021, to April 30, 2022.

We must next determine if the book and the subscription to the OLRs are distinct.

IFRS 15.27 states that:

> *"A good or service that is promised to a customer is distinct if both of the following criteria are met:*
> *(a) the customer can benefit from the good or service either on its own or together with other resources that are readily available to the customer (i.e., the good or service is capable of being distinct); and*
> *(b) the entity's promise to transfer the good or service to the customer is separately identifiable from other promises in the contract (i.e., the promise to transfer the good or service is distinct within the context of the contract)."*

Under this contract, Kingston must sell the textbook and the OLRs as a bundle to each student. Kingston is not allowed to sell each component separately; therefore, the students will receive the textbooks and OLRs as a package, and SPH does not have separately identifiable promises to transfer the items to Kingston. In addition, students need to use the two together. Therefore, Kingston cannot benefit from either the textbook or the OLRs on their own and, therefore, criterion (a) is not met.

For criterion (b), SPH shipped the textbooks to Kingston by August 15, 2021. The OLRs will be provided from September 1, 2021, to April 30, 2022. Therefore, this criterion is met as the promise to deliver the textbooks is separately identifiable from the OLRs.

However, IFRS 15.29 further identifies "*factors that indicate that two or more promises to transfer goods or services to a customer are not separately identifiable."* One of these factors is part (c): "*the goods or services are highly interdependent or highly interrelated. In other words, each of the goods or services is significantly affected by one or more of the other goods or services in the contract. For example, in some cases, two or more goods or services are significantly affected by each other because the entity would not be able to fulfil its promise by transferring each of the goods or services independently."*

The OLRs are used in conjunction with the textbook, so a student cannot use the OLRs without the textbook, although the textbook could be used without the OLRs if the student did not wish to complete the related course. The textbook and the OLRs are interrelated and highly dependent for Kingston and for its students.

Since the criteria for distinct goods are not both met, the textbook and OLRs must be treated as a single performance obligation.

<u>Step 3: Determine the overall transaction price.</u>

The total transaction price is \$360,000 (3,000 units × \$120).

<u>Step 4: Allocate the transaction price to the separate performance obligations.</u>

Since there is only one performance obligation, there is no separation of the transaction price.

Step 5: Determine when the performance obligation is complete, and revenue can be recognized.

Each obligation is complete as the control of goods is transferred to Kingston. Because SPH has given a subscription for eight months for access to the OLRs for Kingston's students, and the book and the OLRs are considered one performance obligation, SPH will be delivering its performance obligation over the eight months and not at a single point in time. Assuming that the OLRs are delivered equally over the period, the total contract amount will be earned evenly over eight months, from September 1, 2021, to April 30, 2022.

To date, SPH has invoiced sales to Kingston under this contract for $360,000, which has all been included in revenue for 2021.

At December 31, 2021, the portion of this transaction to be recognized as a contract liability is:

Total sales recognized = $360,000
Sales that should have been recognized = $360,000 × 4/8 months = $180,000
Deferred portion = $360,000 - $180,000 = $180,000

The correcting journal entry will be:

DR Revenue	$180,000	
CR Contract liability		$180,000

The revenue related to the contract liability will be recognized evenly over the period from January 1, 2022, to April 30, 2022.

Incremental costs incurred to obtain the contract

IFRS 15.91 states that: "*An entity shall recognise as an asset the incremental costs of obtaining a contract with a customer if the entity expects to recover those costs.*"

IFRS 15.92 and 15.93 provide additional explanation on the nature of the costs. These include incremental costs, such as sales commissions, but exclude fixed costs that would have been incurred regardless of the sales contract.

In this case, SPH incurred the following costs related to obtaining the Kingston contract:
- Commission paid (5% × $360,000) = $18,000
- Travel costs to deliver the proposal = $4,800

Commission costs are incremental costs of obtaining the contract since they would not have been incurred without the proposal being accepted by Kingston (IFRS 15.92). The travel costs, however, are not incremental as these costs were incurred to deliver the proposal and would have been incurred regardless of whether the contract was approved, and they are not explicitly chargeable to the customer (IFRS 15.93).

The incremental costs incurred may be capitalized and amortized over the period of the performance obligation. Alternatively, as a practical matter (IFRS 15.94), since the amortization period is less than one year, SPH could also expense these costs immediately.

If SPH wants to maximize its earnings, it will recognize the qualifying costs (the commissions) as an asset. These costs would then be amortized over the same period as the revenue.

Contract costs incurred	$18,000
Amortization to December 31 (4/8)	(9,000)
Amount remaining	$9,000

Adjusting journal entries required will be:

DR Contract costs	$18,000	
CR Sales expenses		$18,000
DR Amortization of contract costs	$9,000	
CR Accumulated amortization – contract costs		$9,000

Any cost of goods sold (such as the cost of the book inventory that was sold) associated with the deferred portion of the revenue would also need to be reversed. These costs would then be deducted in the year that portion of the revenue is recognized. More information is required to determine the amount of this adjustment.

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

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

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

Reaching competence – The candidate attempts to discuss the accounting treatment for the Kingston University contract.

Competent – The candidate discusses the accounting treatment for the Kingston University contract.

Competent with distinction – The candidate thoroughly discusses the accounting treatment for the Kingston University contract.

DAY 2 – MARKING GUIDE – ASSURANCE
SOLITARY PUBLISHING HOUSE LIMITED (SPH)
ASSESSMENT OPPORTUNITIES

To: Kaylee Verra
From: CPA
Re: Various matters at SPH

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

Assessment Opportunity #7 (Depth Opportunity)
The candidate discusses the accounting treatment for the joint arrangement with AppsWiz.
The candidate demonstrates competence in the Assurance role.

CPA Map Technical Competencies:		**Core**	**Elective**
1.2.3	Evaluates treatment for non-routine transactions	**B**	**A**

CPA Map Enabling Competencies:
6.2.1 Maintains an objective and questioning mindset to avoid biased analyses
6.2.4 Completes thorough quantitative and qualitative analyses to identify and evaluate potentially viable alternatives
6.3.1 Uses evidence and judgment to recommend and justify solutions or conclusions

Doris recorded the $500,000 related to SmartKids as a production expense. Guidance for this type of arrangement is provided under *IFRS 11 Joint arrangements*.

First, we need to determine if the arrangement between AppsWiz and SPH meets the definition of a joint arrangement. Per IFRS 11.5:

> *"5 A joint arrangement has the following characteristics:*
>
> > *(a) The parties are bound by a contractual arrangement (see paragraphs B2–B4).*
> > *(b) The contractual arrangement gives two or more of those parties joint control of the arrangement (see paragraphs 7–13)."*

As there is a contractual agreement outlining the specific rights and responsibilities of each party, criterion (a) is met. The agreement also provides for joint control, as all assets purchased and liabilities incurred by SmartKids must be approved by both SPH and AppsWiz, so all decisions related to that company will have to be made jointly.

Next, per IFRS 11:

> *"14 An entity shall determine the type of joint arrangement in which it is involved. The classification of a joint arrangement as a joint operation or a joint venture depends upon the rights and obligations of the parties to the arrangement.*
>
> *15 A joint operation is a joint arrangement whereby the parties that have joint control of the arrangement have rights to the assets, and obligations for the liabilities, relating to the arrangement. Those parties are called joint operators.*
>
> *16 A joint venture is a joint arrangement whereby the parties that have joint control of the arrangement have rights to the net assets of the arrangement. Those parties are called joint venturers."*

IFRS 11.B33 provides a flow chart of the factors to consider when determining whether a joint arrangement is a joint operation or a joint venture when the arrangement is structured through a separate vehicle, which is the case, as SPH and AppsWiz created a new legal entity, SmartKids, for this joint arrangement.

The first question to consider is, "*Does the legal form of the separate vehicle give the parties the rights to the assets, and obligations for the liabilities, relating to the arrangement?*" In this case, all assets purchased and liabilities incurred by SmartKids will belong to SmartKids; therefore, SPH and AppsWiz do not have rights to the assets and liabilities, but to the shares of the company. Therefore, this is not the case.

The next question to consider is, "*Do the terms of the contractual arrangement specify that the parties have rights to the assets, and obligations for the liabilities, relating to the arrangement?*" The contractual arrangement itself does not appear to have any terms that would provide for SPH or AppsWiz having rights to the assets and liabilities generated by SmartKids. Therefore, this is not the case.

Finally, we need to consider, "*Have the parties designed the arrangement so that (a) its activities primarily aim to provide the parties with an output (i.e., the parties have rights to substantially all of the economic benefits of the assets held in the separate vehicle), and (b) it depends on the parties on a continuous basis for settling the liabilities relating to the activity conducted through the arrangement?*" SmartKids will be producing the line of new books that it will sell itself, so these outputs are not used by either SPH or AppsWiz. In addition, it is not expected that SmartKids will depend on a continuous basis on SPH or AppsWiz to settle liabilities, as it will eventually generate sales to settle its own liabilities. Therefore, this is not the case.

Given the analysis above, IFRS 11 would consider this arrangement a joint venture. Per IFRS 11.24:

> *"A joint venturer shall recognise its interest in a joint venture as an investment and shall account for that investment using the equity method in accordance with IAS 28 Investments in Associates and Joint Ventures unless the entity is exempted from applying the equity method as specified in that standard."*

The exemptions referenced are found in *IAS 28*, paragraph 17:

> *"An entity need not apply the equity method to its investment in an associate or a joint venture if the entity is a parent that is exempt from preparing consolidated financial statements by the scope exception in paragraph 4(a) of IFRS 10 or if all the following apply:*
>
> *(a) The entity is a wholly-owned subsidiary, or is a partially-owned subsidiary of another entity and its other owners, including those not otherwise entitled to vote, have been informed about, and do not object to, the entity not applying the equity method.*
> *(b) The entity's debt or equity instruments are not traded in a public market (a domestic or foreign stock exchange or an over-the-counter market, including local and regional markets).*
> *(c) The entity did not file, nor is it in the process of filing, its financial statements with a securities commission or other regulatory organisation, for the purpose of issuing any class of instruments in a public market.*
> *(d) The ultimate or any intermediate parent of the entity produces financial statements available for public use that comply with IFRSs, in which subsidiaries are consolidated or are measured at fair value through profit or loss in accordance with IFRS 10."*

The above exemptions do not apply to SPH; while criterion (b) is met (SPH is private and therefore not traded in a public market) and criterion (c) is met (there is no indication that SPH is filing its financial statements with a securities commission as they are privately owned), criterion (a) is not met as it is not a wholly-owned subsidiary (it is owned by shareholders), and criterion (d) is not met as SPH does not have a parent company. Therefore, SPH should recognize its interest in SmartKids using the equity method. Per IAS 28.10:

> *"Under the equity method, on initial recognition the investment in an associate or a joint venture is recognised at cost, and the carrying amount is increased or decreased to recognise the investor's share of the profit or loss of the investee after the date of acquisition. The investor's share of the investee's profit or loss is recognised in the investor's profit or loss. Distributions received from an investee reduce the carrying amount of the investment. Adjustments to the carrying amount may also be necessary for changes in the investor's proportionate interest in the investee arising from changes in the investee's other comprehensive income. Such changes include those arising from the revaluation of property, plant and equipment and from foreign exchange translation differences. The investor's share of those changes is recognised in the investor's other comprehensive income (see IAS 1 Presentation of Financial Statements)."*

Therefore, the amount to be recognized should be the initial investment of $500,000, less SPH's share of SmartKids' net loss for 2021, which equals $100,000 ($200,000 × 50%).

The adjustments to correct the amounts related to this arrangement are as follows:

DR Investment in joint venture	$500,000	
CR Production costs		$500,000
DR Investment loss	$100,000	
CR Investment in joint venture		$100,000

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

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

Nominal competence – The candidate does not meet the standards of reaching competence.

Reaching competence – The candidate attempts to discuss the accounting treatment for the joint arrangement with AppsWiz.

Competent – The candidate discusses the accounting treatment for the joint arrangement with AppsWiz.

Competent with distinction – The candidate thoroughly discusses the accounting treatment for the joint arrangement with AppsWiz.

Assessment Opportunity #8 (Depth Opportunity) The candidate assesses the risk of material misstatement. *The candidate demonstrates competence in the Assurance role.*

CPA Map Technical Competencies:		**Core**	**Elective**
4.3.5	Assesses the risks of the project, or, for audit engagements, assesses the risks of material misstatement at the financial statement level and at the assertion level for classes of transactions, account balances, and disclosures	**B**	**A**

CPA Map Enabling Competencies: *6.1.3 Demonstrates skepticism, objectivity, due care and persistence when identifying issues* *6.2.1 Maintains an objective and questioning mindset to avoid biased analyses* *6.2.4 Completes thorough quantitative and qualitative analyses to identify and evaluate potentially viable alternatives* *6.3.1 Uses evidence and judgment to recommend and justify solutions or conclusions*

An important first step in planning the December 31, 2021, year-end audit of SPH is to assess the risks of material misstatement at the financial statement level.

We have identified the following risks of material misstatement at the financial statement level:

- Brian plans to sell his 40% ownership interest in SPH's shares to finance his retirement. In addition, Jefferson Investments Inc. (Jefferson) has expressed an interest in purchasing shares and intends to use the December 31, 2021, year-end audited financial statements to determine the offer amount. Therefore, to obtain a higher price for his SPH shares, there is a risk of Brian directing the accounting department to account for the transactions in a manner that will maximize the reported assets and income before income taxes.
- Suzanne, SPH's controller, left SPH in October 2021. To date, Suzanne's role has not yet been filled, and the accounting department is short-staffed. Understaffing is likely to result in the accounting for SPH's transactions not being completed in a timely manner, and increases the likelihood of errors. Although Suzanne's departure has caused the accounting department to be short-staffed, SPH has taken action to rectify the issue on a temporary basis until Suzanne is replaced. Effective December 15, 2021, internal audit loaned Louise Swanson to the accounting department. As a CPA, Louise should be able to account for SPH's day-to-day transactions, as well as any non-standard transactions. However, we are also aware that Louise has struggled to review the staff's work in a timely manner, so there is still a risk that errors will not be detected at the financial statement level.
- Revenues have been declining overall, and specifically in the textbook division and the adult non-fiction division. This may put pressure on SPH to engage in aggressive accounting to present better performance.

- SPH's contract with Kingston has different contractual terms than for previous sales contracts, and our work to date reveals that the accounting for the transaction was incorrect. Similarly, accounting errors were detected with respect to SPH's inventory and the joint arrangement with AppsWiz. The presence of existing accounting errors increases the likelihood that there are other undetected errors in the financial statements.
- As discussed below, there are weaknesses in internal controls in the children's books division, which could impact the accuracy of SPH's accounting and lead to increased errors in the sales cycle, as controls to detect errors may not be functioning appropriately. However, it appears that the control weaknesses discussed below are limited to the children's books division, as walkthroughs of the sales, purchases, and payroll cycles were completed as part of interim fieldwork and the internal controls were found to be operating effectively. Additionally, based on FE's experience in prior years and IA's audit report regarding the children's books division, it appears that these weaknesses in internal controls were not issues until Yolanda's November 1 start date. Therefore, the impact on increasing risk will be reduced.
- IT delayed a planned upgrade of the accounting software until early 2022, and it was noted that, in the last few weeks of 2021, the program would freeze unexpectedly. In addition, Doris wonders if the accounting subledgers are accurate. This increases the risk of error as the software may not be functioning appropriately.
- As a mitigating factor to the financial statement risks identified above, internal audit was formed in July 2020, and had been auditing for 18 months by the time of SPH's December 31, 2021, year end. Based on the internal audit charter and other information gathered, it appears that the internal audit department should contribute positively to SPH's control environment and the accuracy of its financial reporting.

Given the significant number of factors that increase the risk of material misstatement, the overall risk of material misstatement should be assessed as high.

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

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

Nominal competence – The candidate does not meet the standards of reaching competence.

Reaching competence – The candidate discusses some of the risks of material misstatement at the financial statement level.

Competent – The candidate discusses several of the risks of material misstatement at the financial statement level, and concludes on the overall risk of material misstatement or recognizes that the auditor needs to respond to the risks identified.

Competent with distinction – The candidate discusses most of the risks of material misstatement at the financial statement level, and concludes on the overall risk of material misstatement or recognizes that the auditor needs to respond to the risks identified.

Assessment Opportunity #9 (Depth Opportunity)

The candidate discusses materiality and the audit approach.

The candidate demonstrates competence in the Assurance role.

CPA Map Technical Competencies:		**Core**	**Elective**
4.3.4	Assesses materiality for the assurance engagement or project	**B**	**A**
4.3.6	Develops appropriate procedures, including Audit Data Analytics (ADA), based on the identified risk of material misstatement	**B**	**A**

CPA Map Enabling Competencies:
6.2.1 Maintains an objective and questioning mindset to avoid biased analyses
6.2.4 Completes thorough quantitative and qualitative analyses to identify and evaluate potentially viable alternatives
6.3.1 Uses evidence and judgment to recommend and justify solutions or conclusions

Materiality

As part of the audit plan for the December 31, 2021, year-end audit, materiality should be determined, based on the users of SPH's financial statements. There are several users, as follows:

- Brian, Doris, Jonathan, Rodney, and Maria will use SPH's financial statements to assess the return on their investment in SPH's shares, including any capital appreciation and/or the extent to which dividends are likely to be declared. As such, they will be interested in the net income generated by SPH.
- Although we do not know how Jefferson will value SPH's shares, since it will be purchasing the shares in a company that is a going concern, the shares are likely to be valued based on SPH's earnings and/or cash flow potential. As such, Jefferson will be interested in information about the net income generated by SPH. Jefferson will also be focused on income, as a proxy for the cash flows that it can expect SPH to generate, to assess whether SPH will be able to repay the outstanding bonds payable.
- SPH's short-term creditors (suppliers, authors, etc.) and the financial institution that provided its term loan will also be interested in SPH's income, as it can be used to predict cash flows available to repay SPH's outstanding obligations.

According to the Application and Other Explanatory Material in CAS 320:

> *"A4 Determining materiality involves the exercise of professional judgment. A percentage is often applied to a chosen benchmark as a starting point in determining materiality for the financial statements as a whole …*
>
> *A5 Examples of benchmarks that may be appropriate, depending on the circumstances of the entity, include categories of reported income such as profit before tax, total revenue, gross profit and total expenses, total equity or net asset value. Profit before tax from continuing operations is often used for profit-oriented entities.*
>
> *A8 Determining a percentage to be applied to a chosen benchmark involves the exercise of professional judgment. There is a relationship between the percentage and the chosen benchmark, such that a percentage applied to profit before tax from continuing operations will normally be higher than a percentage applied to total revenue. For example, the auditor may consider five percent of profit before tax from continuing operations to be appropriate for a profit-oriented entity in a manufacturing industry, while the auditor may consider one percent of total revenue or total expenses to be appropriate for a not-for-profit entity. Higher or lower percentages, however, may be deemed appropriate in the circumstances."*

Therefore, given the users' focus on income, income from continuing operations before income taxes would be an appropriate basis upon which to determine materiality. Given the users of SPH's financial statements and their sensitivity to errors, I recommend, as suggested by CAS, that materiality be based on 5% of income from continuing operations, as there is nothing to indicate that something other than the normal 5% should be used.

The calculation is as follows:

Income before taxes	$	6,717,000
Less: Write-down of inventory		(226,150)
Less: Revenue prematurely recognized on contract with Kingston		(180,000)
Add: Adjustment for unamortized contract costs related to contract with Kingston ($18,000 - $9,000)		9,000
Less: Cost of sales related to revenue prematurely recognized		???
Add: Adjustment for joint arrangement ($500,000 - $100,000)		400,000
Adjusted income from continuing operations before income taxes	$	6,719,850
Percentage		5%
Planning materiality	$	335,992.50

As such, planning materiality should be set at $336,000. If additional accounting errors are detected as the audit progresses, it may be necessary to revise this planning materiality.

It is also necessary to calculate performance materiality. Per CAS 320.A13, performance materiality is "*set to reduce to an appropriately low level the probability that the aggregate of uncorrected and undetected misstatements in the financial statements exceed materiality for the financial statements as a whole*." Although it is also a matter of professional judgment, the acceptable range for performance materiality is 60% to 75% of overall materiality. Given that several risks of material misstatement have been identified at the financial statement level, I have selected a percentage at the lower end of the range, resulting in performance materiality of \$201,600 (\$336,000 × 0.6).

Audit Approach

Establishing the overall audit strategy requires that the auditor determine whether to adopt a combined or substantive audit approach. Internal audit did not report any material weaknesses or significant deficiencies in internal controls during 2021. Also (with the exception of sales-related controls in the children's books division), our walkthroughs of the sales, purchases, and payroll cycle support the adequacy of SPH's internal controls. Therefore, control risk should be assessed below maximum, and a combined audit approach would continue to be appropriate. However, as discussed below, several control weaknesses were identified in the children's books division, starting from Yolanda's November 1 start date. As such, it is recommended that FE adopt a combined audit approach, with increased substantive testing in the children's books division, particularly from November 1 to December 31.

In addition, it appears that the accounting software would freeze unexpectedly in the last few weeks of 2021. This creates an increased risk of error, as typical IT controls may not be functioning as intended, and manual entries may be more prone to being duplicated or missed. We will need to gain an understanding of the IT issues, and likely increase our substantive testing for the last few weeks of the year.

Finally, Suzanne resigned in October 2021. Given that the controller would likely be involved in performing many of the internal controls in the company, we will have to consider whether a combined approach is effective for the last three months of the year; as controls may not be working as effectively during that period, a substantive approach may be more appropriate.

There is a potential that we may be relying on the work of internal audit. Additional work will have to be performed if this is the case (see below).

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

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

Nominal competence – The candidate does not meet the standards of reaching competence.

Reaching competence – The candidate attempts to discuss materiality and the audit approach.

Competent – The candidate discusses materiality and the audit approach.

Competent with distinction – The candidate provides an in-depth discussion of materiality and the audit approach.

Assessment Opportunity #10 (Depth Opportunity)

The candidate recommends audit procedures for the accounting issues discussed and the newly constructed warehouse.

The candidate demonstrates competence in the Assurance role.

CPA Map Technical Competencies:		**Core**	**Elective**
4.3.6	Develops appropriate procedures, including Audit Data Analytics (ADA), based on the identified risk of material misstatement	**B**	**A**

CPA Map Enabling Competencies:
6.1.3 Demonstrates skepticism, objectivity, due care and persistence when identifying issues
6.2.1 Maintains an objective and questioning mindset to avoid biased analyses
6.2.4 Completes thorough quantitative and qualitative analyses to identify and evaluate potentially viable alternatives
6.3.1 Uses evidence and judgment to recommend and justify solutions or conclusions

To provide audit evidence for each of the accounting issues, the following audit procedures are recommended.

Inventory

- Regarding the valuation of the finished goods inventory, FE should select a sample and:
  - Obtain the calculation of the inventory item’s cost, and vouch specific items to supporting documentation, such as direct labour to timesheets, and direct materials to purchase invoices.

  - Review the selling prices for these items in any contracts with customers and/or the price list. If contracts and price lists are not available, the invoice for a sale subsequent to year end should be reviewed. FE will also need to agree the variable shipping costs to the related shipping contract(s), the 5% commission to the compensation agreements with SPH's salespeople, and the royalties paid to contracts with authors.
  - Recalculate the lower of cost and net realizable value.
- There is information to suggest that Sheldon High School returned books (Introductory Physics – 2,000 units) to inventory just prior to year end, and that the value of that inventory is impaired. FE will need to review the documentation prepared by the audit junior who attended the year-end inventory count, to verify whether the damaged inventory was included in the inventory balance in error. FE should then discuss with management whether these units are, in fact, unsaleable and will be destroyed, or if they can be sold for less than the usual selling price. It will then be necessary to recalculate the write-down of these inventory items, to verify accuracy.
- For the Introduction to Ecology textbooks committed under contract, the contract should be reviewed for the relevant terms, such as the quantity of books to be purchased and the purchase price. FE should review shipping documents, to ensure that 13,000 units have been shipped as of December 31, 2021.

Kingston Contract

- FE should obtain, and read, the contract, to ensure that it understands the terms, especially those related to: the fact that the book and online resources cannot be sold separately; the period during which students will be provided with access to the online resources; and any return privileges. In addition, FE should confirm the contract price.
- FE should ensure that contents from the textbook are needed for completing the assignments in the OLRs, to confirm that the two items relate to one performance obligation.
- The most significant risks related to the contract are occurrence, cut-off, and accuracy. As such, FE should obtain shipping documents containing the customer's signature, confirming that the printed book and online resources were received by the customer on August 14.
- The amount of cash that should have been received should be agreed to the bank deposit for the payment received in full on September 16.
- To verify the cut-off of the revenue to be recognized, FE will need to recalculate the revenue to be recognized from September 1 to December 31, 2021, and the contract liability to be recognized for the unearned revenue for the period from January 1 to April 30, 2022.
- Regarding the contract costs, FE should vouch the costs incurred to payroll records (for the commissions paid), to ensure that the contract cost asset has been valued appropriately and that all costs capitalized qualify for capitalization.
- FE should re-perform the calculation of the amortization of the contract cost asset, to ensure the accuracy of the carrying amount as at December 31, 2021.

Joint Arrangement

- There is a risk that the arrangement has not been properly classified. To verify whether the joint venture classification is appropriate, FE should:
  - Review supporting documentation, such as incorporation documents, to ensure that there is a new legal entity created for the arrangement.
  - Review share issuance documents, to ensure that SPH and AppsWiz are the only shareholders, each with 50% of the common shares.
  - Review the joint venture's bank statements, to vouch the cash received of $500,000 from both SPH and AppsWiz for the purchase of common shares. The quantity of shares purchased should be vouched to copies of share certificates issued.
  - Review the terms of the contractual agreement to ensure that:
    a) There are no clauses indicating that SPH or AppsWiz would own assets purchased or liabilities incurred by SmartKids.
    b) There are no clauses indicating that SPH and AppsWiz would settle SmartKids' liabilities on a continuous basis.
- To ensure that amounts recorded by SPH under the equity method are accurate, FE will also need to review SmartKids' financial statements, to determine whether the $200,000 loss is accurate.
- FE will need to recalculate the values in the financial statements related to equity accounting for SPH's and AppsWiz's investment in SmartKids.

Warehouse Land and Building

- SPH has spent a total of $3 million on the purchase of land and construction of a building for an additional warehouse. This is significantly above materiality (calculated above).
- To ensure the existence of the land and building, FE should attend the construction site and observe the land and building.
- To ensure that SPH has the rights to the land and building, FE should: review the purchase agreement for the land to ensure that SPH is the owner; and review the contract with the construction company to ensure that SPH hired the company to do the construction.
- To ensure that the amounts have been accurately recorded, FE should review the purchase agreement for the land, for the purchase amount. FE should also obtain a listing of costs incurred to date for the construction, select a sample, and vouch the amount to supporting documentation, such as an invoice. FE should also review the invoice for the nature of the work, to ensure that it is capital.
- FE should obtain evidence to support the estimated useful life and salvage value of the asset, by discussing the estimates with management and corroborating the estimates with other support, such as by obtaining information on historical useful lives of warehouses for SPH. Based on this information, amortization recorded for the year should be recalculated.

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

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

Nominal competence – The candidate does not meet the standards of reaching competence.

Reaching competence – The candidate recommends some audit procedures for the accounting issues discussed and newly constructed warehouse.

Competent – The candidate recommends several audit procedures for the accounting issues discussed and newly constructed warehouse.

Competent with distinction – The candidate recommends most of the audit procedures for the accounting issues discussed and newly constructed warehouse.

Assessment Opportunity #11 (Depth Opportunity)

The candidate discusses risks in the sales cycle, provides audit procedures for each of these risks, and describes any additional information required.

The candidate demonstrates competence in the Assurance role.

CPA Map Technical Competencies:		**Core**	**Elective**
4.3.5	Assesses the risks of the project, or, for audit engagements, assesses the risks of material misstatement at the financial statement level and at the assertion level for classes of transactions, account balances, and disclosures	**B**	**A**
4.3.6	Develops appropriate procedures, including Audit Data Analytics (ADA), based on the identified risk of material misstatement	**B**	**A**

CPA Map Enabling Competencies:
6.1.2 Uses qualitative and quantitative techniques to clarify the nature of problems
6.1.3 Demonstrates skepticism, objectivity, due care and persistence when identifying issues
6.2.1 Maintains an objective and questioning mindset to avoid biased analyses
6.2.2 Identifies patterns from data analysis
6.2.4 Completes thorough quantitative and qualitative analyses to identify and evaluate potentially viable alternatives
6.3.1 Uses evidence and judgment to recommend and justify solutions or conclusions

The risks in the sales cycle, recommended procedures, and additional information required are as follows.

Existence and Accuracy of Sales

Risk: As SPH's sales representatives are paid a commission based on sales, creating an incentive to overstate it, there is an increased fraud risk related to sales. Also, there are control weaknesses in the children's books division as a result of the policy and procedures changes made by the new sales manager (see discussion below), which increases the risk of error and fraud. Further, Brian has expressed his interest in selling his shares, creating an incentive for him to manipulate the financial statements of SPH to be more profitable and increasing the fraud risk related to sales.

Procedures and/or additional information required: FE should vouch a sample of sales to the related orders, shipping documents, and sales invoices, to establish the occurrence of the reported sales. This procedure will also provide evidence of the accuracy of the reported sales. FE should also increase the sample size as it relates to the children's books division, beginning with Yolanda's November 1 start date, given the weaknesses in internal controls.

Alternatively, FE could send positive confirmations to a sample of customers. For any replies not received in a timely manner, FE should follow up with the customer. Should the customer still not respond to the confirmation request, FE should agree the sales amount to supporting documentation, including the sales invoice, shipping documents, and evidence of collection subsequent to year end.

Monthly Sales as a Percentage of Annual Sales

Risk: SPH's monthly sales as a percentage of annual sales closely tracked the industry percentages, except in December, when SPH's proportion of monthly sales was considerably less than that of the industry, suggesting a completeness risk. The increase in industry sales appears to be reasonable, given that sales of books are likely to increase due to the holiday gift-giving season. Similarly, an increase in textbook sales would be expected, given that educational institutions would be purchasing textbooks in advance of the upcoming semester. The decrease for SPH is inconsistent, both with a bias to inflate sales in order to increase commissions to sales representatives, and with the implementation of a volume discount, which would be expected to increase their sales volume, further highlighting the need to investigate.

Procedures and/or additional information required: Prior to performing any procedures, FE should request that management provide a breakdown of sales by division by month, and research sources of similar information for the publishing industry. After determining in which division(s) the discrepancy occurred, FE should discuss the discrepancy with management. Depending on the results of that discussion, further procedures will be required. For example, FE should consider tracing from the sales orders to the shipping documents and sales invoices, and then to the accounts receivable subledger / general ledger, to ensure completeness. Alternatively, FE might vouch sales recorded subsequent to year end to supporting documentation, such as shipping documents, to ensure that they should not have been recorded prior to year end.

Subledger not Matching Financial Statement Amount

Risk: According to the statement of financial position and related notes, SPH reported gross accounts receivable of $8,524,000 and an allowance for doubtful accounts of $256,000, for a net amount of $8,268,000. According to the A/R subledger, gross accounts receivable totaled $8,543,000. Therefore, there is an unexplained difference of $19,000 and it is not clear which source, if either, is accurate. This is particularly concerning because Doris mentioned that IT delayed a planned upgrade of the accounting software and the system has been freezing, suggesting that there may be errors, not only in accounts receivable but in other financial statement line items. Although this difference is well below performance materiality, it could be the result of material offsetting differences, and must be thoroughly investigated.

Procedures and/or additional information required: FE will need to first discuss the difference with management, internal audit, and IT, to determine if they were aware of the issue and to obtain additional information about the cause of the difference. FE should also request the sales journal and complete A/R subledger from management, and use computer-assisted audit techniques to compare them, to identify and investigate any differences. FE should also scan the general ledger accounts for sales, returns, and accounts receivable for any manual adjustments that were not recorded in the A/R subledger. Finally, for a sample of sales, returns, and payments on account, FE will need to agree the recorded amounts to both the general ledger accounts and A/R subledger.

Valuation of Accounts Receivable

Risk: Given the increases in accounts outstanding longer than 60 days and related write-offs, the valuation of accounts receivable is another risk. In addition, credit scores of customers in the Western and Atlantic regions are worse than in the Quebec and Ontario regions, per the weekly management dashboard reporting. Further, the entire balance of accounts receivable outstanding for greater than 90 days is likely uncollectible, given that We Love Books has filed for bankruptcy in 2022. Without considering any other information, as the accounts outstanding greater than 90 days totals $840,000, an allowance for doubtful accounts of 3% of gross receivables, or $256,000, will not be sufficient as at December 31, 2021. Without adjustment, there is a material error in the valuation of accounts receivable.

Procedures and/or additional information required: FE should select a sample of accounts from the aged accounts receivable listing and re-perform the aging, to ensure that the accounts have been categorized correctly. FE should then perform subsequent receipts testing, particularly for accounts outstanding greater than 60 days. Regarding We Love Books, FE should discuss that account with management and legal counsel, to determine why it has not yet been specifically allowed for. FE may also want to do an Internet search for news reports regarding the companies' financial situations and bankruptcy filings, particularly for those customers in the over-60-days category. FE will need to ask Doris and/or Connor to provide additional information regarding the historical percentages of uncollectible accounts by age, region, and customer credit score, and research industry averages for uncollectible accounts. FE should also examine industry reports regarding the impacts of the recession on the publishing industry, and expectations regarding economic recovery. This information can then be used to prepare FE's own estimate of the required allowance for doubtful accounts, for comparison with that determined by management.

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

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

Nominal competence – The candidate does not meet the standards of reaching competence.

Reaching competence – The candidate discusses some risks, audit procedures, and/or additional information required.

Competent – The candidate discusses several risks, audit procedures, and/or additional information required.

Competent with distinction – The candidate thoroughly discusses several risks, audit procedures, and/or additional information required.

Assessment Opportunity #12 (Depth Opportunity)

The candidate discusses the appropriateness of using the work of SPH's internal audit department, and suggests procedures that will be required in order to use their work.

The candidate demonstrates competence in the Assurance role.

CPA Map Technical Competencies:		**Core**	**Elective**
4.3.6	Develops appropriate procedures, including Audit Data Analytics (ADA), based on the identified risk of material misstatement	**B**	**A**

CPA Map Enabling Competencies:
6.2.1 Maintains an objective and questioning mindset to avoid biased analyses
6.2.4 Completes thorough quantitative and qualitative analyses to identify and evaluate potentially viable alternatives
6.3.1 Uses evidence and judgment to recommend and justify solutions or conclusions

There is guidance provided in *CAS 610 Using the work of internal auditors*. According to paragraph 15:

> *"The external auditor shall determine whether the work of the internal audit function can be used for purpose of the audit by evaluating the following:*
>
> *(a) The extent to which the internal audit function's organizational status and relevant policies and procedures support the objectivity of the internal auditors;*
> *(b) The level of competence of the internal audit function; and*
> *(c) Whether the internal audit function applies as systematic and disciplined approach including quality control."*

Objectivity of Internal Auditors

Belvin is responsible for confirming the independence of internal audit to the audit committee, at least annually. In addition, Belvin reports functionally to the audit committee and administratively to Brian. This means that Belvin's primary accountability is to the audit committee. Additionally, Belvin would report to the audit committee any corrective actions recommended that are not implemented by management. Belvin would only report to Brian for administrative matters, such as approvals of his vacation requests and expense reports. This reporting structure contributes to the objectivity of the internal audit function, as management should not be able to unduly influence the audits that are performed or threaten Belvin's continued employment, should an internal audit report be issued that reflects negatively on the management of the area under audit.

Additionally, Louise was loaned to the accounting department effective December 15, 2021. As Louise could have direct operational responsibilities or authority over activities that are audited now or in the future by internal audit, this could result in a violation of the objectivity of internal audit. At a minimum, there could be a perception that the independence of internal audit was compromised, as Louise's internal audit colleagues may be reluctant to question any of the accounting treatments that she was involved with during the last two weeks of 2021. Should there be a desire to use the work of internal audit during the year ending December 31, 2022, there could be even more significant concerns, as Louise could be placed in the position of auditing her own work if she returns to internal audit once Doris has time to replace Suzanne.

Level of Competence

It was determined that Belvin has both CPA and Certified Internal Auditor (CIA) designations, along with considerable assurance experience with an accounting firm. The audit managers are required to have both CPA, and CIA or Certified Information Systems Auditor (CISA) designations, and a minimum of two years of internal audit experience. Auditors are required to have Commerce degrees and to complete the CIA and CISA program within two years of their start dates with SPH. Therefore, it would be reasonable to conclude that internal audit has sufficient competence to carry out its responsibilities, particularly since all files are reviewed by the audit managers and then Belvin.

Systematic and Disciplined Approach

Belvin submits an annual risk-based internal audit plan, for approval by the audit committee. Audit managers are responsible for planning internal audits, which are then performed by auditors, and for reviewing the work performed by the auditors. In addition, the audit managers draft the audit reports. Finally, Belvin performs a final review of all audit files, and the audit reports, prior to their issuance to management. These processes all suggest a systematic approach to auditing, and a commitment to quality.

Conclusion

Based on the above analysis, it would be appropriate for FE to use the work of internal audit in the performance of the audit. However, it would be necessary to manage the perceived conflict, due to the assistance that Louise has provided to the accounting department since December 15, 2021. This could be achieved by FE performing a thorough review of any internal audit work performed, and the related findings and recommendations, during the last two weeks of 2021. When auditing the 2022 year-end financial statements, if Louise continues in this new role for an extended period, it would be necessary to ensure that she not oversee any internal audits performed in the accounting department for at least one year following her return to internal audit.

Use of the Work of IA

CAS 610 provides the following guidance regarding using the work of the internal audit function:

"21. If the external auditor plans to use the work of the internal audit function, the external auditor shall discuss the planned use of its work with the function as a basis for coordinating their respective activities.

22. The external auditor shall read the reports of the internal audit function relating to the work of the function that the external auditor plans to use to obtain an understanding of the nature and extent of the audit procedures it performed and related findings.

23. The external auditor shall perform sufficient audit procedures on the body of work of the internal audit function as a whole that the external auditor plans to use to determine its adequacy for purposes of the audit, including evaluating whether:
(a) The work of the function has been properly planned, performed, supervised, reviewed and documented;
(b) Sufficient appropriate evidence has been obtained to enable the function to draw reasonable conclusions; and
(c) Conclusions reached are appropriate in the circumstances and the reports prepared by the function are consistent with the results of the work performed."

Therefore, prior to using IA's work on the audits of sales, general and administration costs, payroll, and sales and marketing costs, I recommend that FE do the following:

- Review the internal audit charter, to confirm Belvin's responsibilities as it relates to internal audit's objectivity.
- Review the resumés of Belvin, the audit managers, and the auditors, to ensure that they have the credentials and experience required for their positions.
- Review minutes of the audit committee, to ensure that Belvin is reporting matters discovered by internal audit to them.
- When reviewing the work of internal audit, check for evidence that Belvin has reviewed the work.
- To use the work of internal audit with respect to sales, general and administrative costs, payroll, and sales and marketing, review the planning of the audits, nature and extent of work performed, and conclusions reached. This would include re-performing a sample of the procedures performed by internal audit.

Given the issues that internal audit noted in the audit of sales and marketing costs, FE should consider whether it is necessary to perform procedures to ensure the occurrence and accuracy of these costs.

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

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

Nominal competence – The candidate does not meet the standards of reaching competence.

Reaching competence – The candidate discusses the appropriateness of using the work of SPH's internal audit department or suggests procedures that will be required in order to use their work.

Competent – The candidate discusses the appropriateness of using the work of SPH's internal audit department and suggests procedures that will be required in order to use their work.

Competent with distinction – The candidate thoroughly discusses the appropriateness of using the work of SPH's internal audit department and suggests procedures that will be required in order to use their work.

Assessment Opportunity #13 (Depth Opportunity)

The candidate discusses the weaknesses in internal controls in the children's books division and provides recommendations for addressing them.

The candidate demonstrates competence in the Assurance role.

CPA Map Technical Competencies:		**Core**	**Elective**
4.1.1	Assesses the entity's risk assessment processes	**A**	**A**
4.1.2	Evaluates the information system, including the related processes, using knowledge of data requirements and risk exposures	**B**	**A**

CPA Map Enabling Competencies:
6.1.3 Demonstrates skepticism, objectivity, due care and persistence when identifying issues
6.2.1 Maintains an objective and questioning mindset to avoid biased analyses
6.2.4 Completes thorough quantitative and qualitative analyses to identify and evaluate potentially viable alternatives
6.3.1 Uses evidence and judgment to recommend and justify solutions or conclusions

The walkthroughs of the purchases and payroll cycles confirmed that the internal controls were consistent with those relied upon in prior audits, except in the children's books division, where several changes have recently been made. There were a number of weaknesses in internal controls in the children's books division that should be included in the management letter.

Customer Setup and Write-off Approval

Weakness: Sales representatives are allowed to set up new customers, and approve the write-off of any uncollectible accounts.

Implication: It is not appropriate for sales representatives to engage in these two tasks, as it results in a lack of segregation of duties, such that an unscrupulous sales representative could increase their commission on sales by adding a fictitious customer and sales to the system. By writing off an outstanding account, there would be no outstanding account balance that would trigger an investigation, resulting in the inappropriate behaviour going unrecognized for an extended period of time.

Recommendation: Yolanda should approve any new customers in the system, and the write-off of customer accounts, and she should do so only after a thorough review and approval process. As a part of this process, Yolanda should verify that the customer is real, such as by doing an online search for the company name and ensuring that it has a website. If Yolanda is made responsible for approving customer setups, credit limits, and any write-offs of uncollectible accounts, it would be preferable if no part of her compensation was linked to the volume of sales. If this is not possible, any commission paid to Yolanda should be tied only to sales for which collection has occurred, to encourage her to carry out her responsibilities with diligence.

Credit Limits

Weakness: Sales representatives are allowed to determine the customers' credit limits.

Implication: This is not appropriate. As sales representatives receive a 5% commission on sales, they would be incentivized to grant credit to customers who are not credit-worthy, or provide too much credit to customers who may not be in the financial position to pay their accounts, in order to increase sales and their associated commission. This could result in account write-offs, which would negatively impact the children's books division's financial performance.

Recommendation: Yolanda should be tasked with approving credit limits based on an assessment of the customers' credit worthiness. This could include reviewing the customers' financial statements, running credit reports, etc.

Pre-populated Information

Weakness: Sales representatives override any incorrect pre-populated information in the sales system before submitting an order.

Implication: There are two issues with this. If the sales representatives simply overwrite the information in the order and the pre-populated information is not fixed in the master customer database, there are increased chances for error, as the sales representative may not notice the error in the pre-populated information the next time. In addition, the pre-populated fields are items that should not be changed by the sales representatives, as it provides an opportunity for fraud. For example, a sales representative can simply change the customer address to another address and have items shipped there, and then write off the amount. Or if they change the pre-populated sales price in the order, they could charge certain customers (such as family and friends) less than the approved amount, which would decrease SPH's profitability.

Recommendation: The accounts receivable department should be responsible for making any changes to the pre-populated information. Any requests for change should be approved by Yolanda, who should request appropriate support for the change. For example, if an address change is requested, confirmation from the customer should be obtained. If the price is changed, the sales representative should provide their rationale for a non-standard price, which Yolanda should review and determine whether it should be approved.

Volume Discounts

Weakness: Sales representatives are allowed to provide a 10% volume discount if they feel that the customer is purchasing more than their usual amount.

Implication: By not providing specific criteria for when customers qualify for volume discounts, a sales representative may offer a discount to every customer, even if the customer would not have purchased any more items, causing a significant reduction in SPH's revenue.

Recommendation: Specific criteria should be created for when customers would qualify for volume discounts. This should not be customer specific, but based on a set volume, as only a specific level of volume would reduce SPH's costs (e.g., reduced number of shipments, etc.) sufficiently to offset the discount.

Tablets

Weakness: Tablets were distributed without virtual private network access, encryption, and antivirus software, and sales staff were instructed to return the tablets between Christmas and New Year's Day so that IT could add those security measures.

Implication: While it is important for sales representatives to stay connected while visiting customers, it was inappropriate for the tablets to be issued to the sales representatives without proper security measures being implemented. Sales representatives would have considerable customer information (contact information, order history, financial statements, credit histories, etc.) stored on those devices. Should the tablets be compromised or stolen, this could result in reputational damage and financial penalties for breaching privacy legislation.

Recommendation: In future, all information technology assets must be properly secured prior to their issuance. If they have not already done so, the sales representatives must immediately return the tablets so that IT can make the necessary security updates.

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

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

Nominal competence – The candidate does not meet the standards of reaching competence.

Reaching competence – The candidate discusses some of the internal control weaknesses in the children's books division and provides recommendations for addressing them.

Competent – The candidate discusses several of the internal control weaknesses in the children's books division and provides recommendations for addressing them.

Competent with distinction – The candidate discusses most of the internal control weaknesses in the children's books division and provides recommendations for addressing them.

DAY 2 – MARKING GUIDE – FINANCE
SOLITARY PUBLISHING HOUSE LIMITED (SPH)
ASSESSMENT OPPORTUNITIES

To: Michel Hebert
From: CPA
Subject: Various matters at SPH

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

Assessment Opportunity #7 (Depth Opportunity)

The candidate prepares a net present value analysis, to assess whether SPH should accept Chantal Summer as a new author, using SPH's new author selection methodology.

The candidate demonstrates competence in the Finance role.

CPA Map Technical Competencies:		Core	Elective
5.3.1	Develops or evaluates capital budgeting processes and decisions	B	A

CPA Map Enabling Competencies:
6.2.1 Maintains an objective and questioning mindset to avoid biased analyses
6.2.4 Completes thorough quantitative and qualitative analyses to identify and evaluate potentially viable alternatives
6.3.1 Uses evidence and judgment to recommend and justify solutions or conclusions

The following net present value analysis was prepared based on SPH's new author selection methodology and other key assumptions provided by SPH management.

		31-Dec-22	31-Dec-23	31-Dec-24	31-Dec-25	31-Dec-26	31-Dec-27
		0	1	2	3	4	5
Upfront costs							
Editing and design costs		$ (50,000)	$ 0	$ 0	$ 0	$ 0	$ 0
Translation costs				(15,000)			
Gross revenues	Note 1		1,049,600	524,800	393,600	393,600	262,400
Production and fulfillment costs	Note 2		(321,280)	(160,640)	(120,480)	(120,480)	(80,320)
Sales commissions	5%		(52,480)	(26,240)	(19,680)	(19,680)	(13,120)
Royalties incurred and expensed	15%		(157,440)	(78,720)	(59,040)	(59,040)	(39,360)
Variable marketing costs	13%		(136,448)	(68,224)	(51,168)	(51,168)	(34,112)
Fixed marketing costs		(275,000)					
General and administration			0	0	0	0	0
Amortization of printing machines			0	0	0	0	0
Net cash flows before taxes		(325,000)	381,952	175,976	143,232	143,232	95,488
Taxes	27.0%	87,750	(103,127)	(47,514)	(38,673)	(38,673)	(25,782)
Upfront royalty (not tax deductible)		(450,000)					
Addback of earned royalty paid up front	Note 3		157,440	78,720	59,040	59,040	39,360
After-tax cash flows		$(687,250)	$ 436,265	$207,182	$163,599	$163,599	$109,066
Discount Rate	9.0%						
PV factor		1.0000	0.9174	0.8417	0.7722	0.7084	0.6499
Present value		$(687,250)	$ 400,230	$174,385	$126,331	$115,894	$ 70,882
Net present value	**$200,472**						

Notes:

Note 1: Revenue							
Sales volume allocation	Given in App IX		40%	20%	15%	15%	10%
Hardcover							
Sales volumes (000s)	120,000		$ 48,000	$ 24,000	$ 18,000	$ 18,000	$ 12,000
Price per unit	9.50		9.50	9.50	9.50	9.50	9.50
			456,000	228,000	171,000	171,000	114,000
Paperback							
Sales volumes (000s)	240,000		96,000	48,000	36,000	36,000	24,000
Price per unit	5.50		5.50	5.50	5.50	5.50	5.50
			528,000	264,000	198,000	198,000	132,000
E-Book							
Sales volumes (000s)	40,000		16,000	8,000	6,000	6,000	4,000
Price per unit	4.10		4.10	4.10	4.10	4.10	4.10
			65,600	32,800	24,600	24,600	16,400
Net revenue			$1,049,600	$524,800	$393,600	$393,600	$262,400
Note 2: Production and fulfillment costs							
Hardcover revenues	35.0%		$159,600	$ 79,800	$ 59,850	$ 59,850	$ 39,900
Paperback revenues	30.0%		158,400	79,200	59,400	59,400	39,600
E-book revenues	5.0%		3,280	1,640	1,230	1,230	820
			$321,280	$160,640	$120,480	$120,480	$80,320
Note 3: Royalty fees							
Upfront payment		$450,000					
Less royalties incurred due to sales			$(157,440)	$(78,720)	$(59,040)	$(59,040)	$(39,360)
Amount of upfront payment not yet earned.			292,560	213,840	154,800	95,760	56,400
Amount of royalty fee added back since not a cash flow			157,440	78,720	59,040	59,040	39,360

- The percentage of total volume of sales (which is estimated at 400,000 books) is: hardcover – 30%; paperback – 60%; and e-book – 10%.
- The travel costs of $25,000 relate to conference costs that SPH's editors would incur whether or not they met Chantal; further, these costs have already been incurred and are not incremental to the decision of whether to accept Chantal Summer. These costs have therefore been excluded from the analysis.
- Overhead and printing press cost allocations have been excluded as they are not relevant costs to this decision.
- The upfront royalty payment is not deducted for tax purposes. Instead, each year, as the royalty is earned by the author and incurred as an expense by SPH, it is taken as a deduction before taxes, and then added back after the taxes are calculated.

Conclusion

Based on the above analysis, adding Chantal would result in a positive net present value of $200,472, and therefore appears to be a good investment for SPH from a quantitative perspective.

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

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

Nominal competence – The candidate does not meet the standards of reaching competence.

Reaching competence – The candidate attempts a net present value analysis.

Competent – The candidate prepares a net present value analysis and concludes on whether SPH should accept Chantal Summer.

Competent with distinction – The candidate prepares a complete net present value analysis and concludes on whether SPH should accept Chantal Summer.

Assessment Opportunity #8 (Depth Opportunity)

The candidate assesses the sales data provided and assumptions that SPH's editors made as part of the new author selection methodology, and their impact on the Chantal Summer analysis.

The candidate demonstrates competence in the Finance role.

CPA Map Technical Competencies:		**Core**	**Elective**
5.1.3	Assesses reporting systems, data quality and the analytical models used to support financial analysis and decision-making	**B**	**A**
5.3.1	Develops or evaluates capital budgeting processes and decisions	**B**	**A**

CPA Map Enabling Competencies:
6.2.1 Maintains an objective and questioning mindset to avoid biased analyses
6.2.2 Identifies patterns from data analysis
6.2.3 Questions the relevance and tests the quality of information and assumptions in own analyses

While the net present value analysis appears to support the acceptance of Chantal as a new author, the analysis is predicated on very strong sales assumptions. There are also factors to consider regarding the sales volume and other assumptions.

SPH management provided sales volume data on new authors accepted by SPH. In assessing this data, only information that is comparable for Chantal Summer should have been included:

- Data related to textbook and non-fiction authors has been excluded as Chantal is proposing a children's book.
- Although the data extends back five years and the older data may be less relevant, given the increased influence of social media in recent years, the older data has not been excluded as it provides additional data points that may be helpful.
- Note that some of the data points (such as sales volumes) are based on estimates and may therefore be less reliable; no data points have been excluded based on this given that the most recent new author data contains the most estimates but is also likely more relevant.

					Sales volume		Sales format		
Launch Date	**Genre**	**Languages sold**	**Royalty Rate**	**Instagram followers (prior to launch)**	**Years 1 - 5**	**Years 6+**	**Hardcover**	**Paperback**	**E-book**
05-Oct-21	Children	English	9.25%	233,000	210,000	117,000	30%	30%	40%
15-Jan-21	Children	English, French	10.00%	1,089,000	403,000	298,000	20%	20%	60%
30-Aug-20	Children	English	11.00%	N/A	120,000	27,000	40%	50%	10%
02-Dec-19	Children	English, Spanish	10.75%	175,000	230,000	65,000	20%	40%	40%
10-Dec-18	Children	English, French	10.25%	N/A	168,000	71,000	30%	50%	20%
10-Nov-17	Children	English	10.00%	N/A	108,000	10,000	50%	45%	5%
		Average - all	10.21%		206,500	98,000	32%	39%	29%
		Language division							
		Average - dual languages		632,000	267,000	144,667	23%	37%	40%
		Average - English only		233,000	146,000	51,333	40%	42%	18%
		Social media presence							
		Average - Instagram followers		499,000	281,000	160,000	23%	30%	47%
		Average - no Instagram followers		N/A	132,000	36,000	40%	48%	12%

Years 1 to 5 – Sales Volume

SPH's editors indicate that they expect Chantal's book to generate a sales volume of 400,000 books over a five-year period. In the historical data, the average sales volume for the first five years is 203,400, which is far short of the 400,000 books that Chantal is expected to sell. Further, only one title has generated a sales volume of over 400,000, and that author had 1,089,000 Instagram followers prior to launch (which is more than Chantal). Therefore, there is a risk that the sales volume assumption is too optimistic. However, we have considered additional factors.

Authors whose books are translated and sold in other languages tend to generate higher sales than those whose books are only sold in English. Given the popularity of Chantal's evening talk show in Latin America, she may have strong appeal in Spanish speaking markets, which could support a higher sales volume assumption.

Social media presence appears to have a very strong impact on sales volumes; an author with a strong social media presence tends to generate higher sales. Chantal has a social media presence significantly higher than most of the past new authors (except for one author, who had 1,089,000 Instagram followers prior to launch). Chantal's large number of Instagram followers could also support a higher sales assumption.

Years 6 and Onward – Sales Volume

SPH's selection methodology suggests that the analysis should be based on the assumption that new books will have a five-year life. However, the data suggests that, on average, 33% of a book's total sales volume is generated in Years 6 and onward, which is substantial. In particular, for authors with a strong social media presence, the sales volumes in Years 6 and onward tend to be higher, representing 36% of a book's total sales volumes.

To fully consider the returns that Chantal's book could generate, the analysis should also consider the potential sales beyond the first five years.

E-book Sales

SPH's selection methodology suggests that the sales volume breakdown for each title should be 30% hardcover, 60% paperback, and 10% e-books. However, the data indicates that, on average, a higher percentage of sales is in e-book format (with a correspondingly lower percentage of hardcover and paperback sales volumes), particularly in recent years. This is particularly true for books whose authors have a social media presence; for authors with Instagram followers, the average sales volume breakdown is 23% hardcover, 30% paperback, and 47% e-books. This is also particularly true for authors whose books are published in multiple languages; the average sales volume breakdown for such authors is 23% hardcover, 37% paperback, and 40% e-books. A different split would result in a different sales mix, which would impact revenues and profits from the sale of the books.

Additional Books

The net present value analysis considers the publication of a single book and does not therefore take into account future sales generated from other books by the author. If Chantal continues to publish books with SPH, her acceptance as an author could produce strong returns over the longer term.

Royalty Rate

The royalty rates for the other authors range from 9.25% to 11%, which is below the 15% that Chantal has requested. In addition, the upfront royalty fee of $450,000 is not earned by Chantal during the first five years (only royalties of $393,600 are earned). As indicated in the industry summary, if royalty fees are paid in advance, this is generally up to one-third of projected royalties from the first print batch. In Chantal's case, this would be $131,200 as per the net present value analysis, not $450,000. SPH should consider renegotiating the royalty rate that Chantal has requested to something more reasonable in the children's book market, and provide an upfront royalty that is more in line with the market, and with the royalties that Chantal is expected to earn, based on her projected sales.

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

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

Nominal competence – The candidate does not meet the standards of reaching competence.

Reaching competence – The candidate attempts an analysis of the sales data or discusses some of the assumptions made by SPH's editors as part of the new author selection methodology.

Competent – The candidate analyzes the sales data and discusses the assumptions made by SPH's editors as part of the new author selection methodology, and their impact on the Chantal Summer decision.

Competent with distinction – The candidate thoroughly analyzes the sales data and discusses the assumptions made by SPH's editors as part of the new author selection methodology, and their impact on the Chantal Summer decision.

Assessment Opportunity #9 (Depth Opportunity) The candidate prepares a valuation of SPH's common equity using the capitalized EBITDA method. *The candidate demonstrates competence in the Finance role.*

CPA Map Technical Competencies:		**Core**	**Elective**
5.4.2	Applies appropriate methods to estimate the value of a business	**B**	**A**

CPA Map Enabling Competencies: *6.2.1 Maintains an objective and questioning mindset to avoid biased analyses* *6.2.4 Completes thorough quantitative and qualitative analyses to identify and evaluate potentially viable alternatives*

As requested, MC has prepared a high-level valuation analysis of the common shares of SPH, which may be used in assessing any future share transactions.

MC's valuation analysis of SPH is included below. Note that the financial results have not been adjusted for the accounting issues identified.

(In thousands of dollars)	Note	F2021	F2020
Net income and comprehensive income	1	$ 4,903	$ 7,948
Add: Income taxes	1	1,814	2,940
Add: Interest expense - term loan	1	598	643
Add: Interest expense - bonds	1	354	0
Less: Interest income - HHI bonds	1	(23)	0
Add: Depreciation	1	2,203	2,315
Add: Depreciation and amortization related to production	1	850	875
Add: Amortization of preproduction costs	1	972	1,720
EBITDA		11,671	16,441
Normalization adjustments			
Related party: above market founder's renumeration	2	150	50
Below market rent	3	(8)	(12)
Textbook revenues	4	441	(441)
Above market royalties	5	110	0
Sum of normalization adjustments		693	(403)
Normalized EBITDA		$ 12,364	$ 16,038
		Low	**High**
Selected EBITDA, range		$ 12,400	$ 16,000
EV / EBITDA multiple	6	6.75	5.75
Enterprise value		83,700	92,000
Less: Bond payable - Jefferson	7	(8,500)	(8,500)
Less: Term loan	7	(9,840)	(9,840)
Add: Redundant cash	8	0	0
Add: Bond Investment - HHI	7	924	924
Add: Redundant industrial property	9	400	400
Equity value, before bond conversion		66,684	74,984
Current number of shares outstanding		2,000,000	2,000,000
Value per share		$ 33.34	$ 37.49

The common equity of SPH has a value of $66.7 to $75.0 million (which implies a per-share price of $33.34 to $37.49).

Notes:

1. Sourced from draft fiscal 2021 income statement, and does not incorporate possible changes due to a review of accounting issues.
2. Added back above-market CEO renumeration: fiscal 2021 – $150,000 = $350,000 - $200,000; fiscal 2020 – $50,000 = $250,000 - $200,000.
3. Adjusted for below-market rents of $1,000 per month for 12 months of fiscal 2020, and for eight months of fiscal 2021.
4. Adjusted for disrupted textbook sales: $441,000 = +$980,000 × 45% margin.
5. Adjusted for one-time author bonus and above-market royalties: $600,000 × (20% - 10%) + $50,000.
6. Based on recent precedent of transactions for somewhat comparable, private publishing companies.
7. Sourced from draft fiscal 2021 balance sheet.
8. No information was provided about excess cash available. In this analysis, we have assumed that the existing cash balance is required to finance working capital and is therefore not considered redundant, even though there might be seasonal redundancy.
9. As it is vacant and not used for core operations, the industrial property is treated as a redundant asset. Note that latent taxes and disposal costs should also be considered.

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

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

Nominal competence – The candidate does not meet the standards of reaching competence.

Reaching competence – The candidate attempts a valuation of SPH.

Competent – The candidate prepares a valuation of SPH's common equity using the capitalized EBITDA method.

Competent with distinction – The candidate prepares a thorough valuation of SPH's common equity using the capitalized EBITDA method.

Assessment Opportunity #10 (Depth Opportunity)

The candidate discusses Jefferson's motivation for replacing its outstanding bonds with convertible bonds, the risks and benefits to SPH, and recommends whether SPH should accept the proposal.

The candidate demonstrates competence in the Finance role.

CPA Map Technical Competencies:		**Core**	**Elective**
5.2.3	Evaluates sources of financing	**B**	**A**

CPA Map Enabling Competencies:
5.1.1 Applies general business knowledge to enhance work performed
5.1.3 Develops and uses knowledge of the organization, industry and stakeholders
6.2.1 Maintains an objective and questioning mindset to avoid biased analyses
6.3.1 Uses evidence and judgment to recommend and justify solutions or conclusions
6.3.2 Articulates limitations to recommendations
6.3.3 Applies decision criteria to choose among viable alternatives

Jefferson has proposed that the bonds that it currently owns be replaced with a convertible bond. Our analysis of this proposal is as follows.

Jefferson's Motivation

As an investment firm, Jefferson is most likely motivated to maximize investment returns. We know that Jefferson is interested in acquiring equity in SPH, and the convertible bond is another way to accomplish this objective.

If the currently issued, non-convertible bonds are replaced with a convertible bond, Jefferson will continue to collect interest payments but at a lower rate of 2.5% versus 5% for the current outstanding bonds. Jefferson will receive interest payments of $212,500 per year on the outstanding bonds until the time of conversion, or the bond reaches maturity on February 28, 2026. If the bond is not converted prior to December 31, 2023, Jefferson will continue to hold the bond and receive interest, but will no longer hold a conversion right.

The convertible bond allows Jefferson to purchase shares in SPH at some future date prior to December 31, 2023, at a price that could be lower than market value. This conversion only takes place if Jefferson chooses; there is no obligation to convert. A conversion will only occur if the conversion right is "in the money," that is, if the fair market value of SPH's shares is higher on a fully diluted basis than the conversion price of $38.64 ($8.5 million/220,000 shares). Should a conversion occur, Jefferson will exchange the $8.5 million bond outstanding for 220,000 common shares.

On conversion, Jefferson will own 220,000/2,220,000, or 9.9%, of SPH. As this is more than 100,000 shares, an equity ownership of this size would confer Jefferson with a board seat, providing it with insight into SPH's strategy and operations, as well as some influence over the governance of the company. Jefferson would have some influence over the payment of dividends, issuance of debt, and so on.

The strike price indicated in Jefferson's offer was likely arrived at based on its view of the equity value of SPH. Based on our calculations above, we estimate the value of a common share of SPH to be in the range of $33.34 to $37.49 (midpoint of $35.42). The highest price in this range is just below the conversion price of $38.64. Therefore, Jefferson may choose to exercise its right to convert the bond prior to December 31, 2023, if the value of SPH continues to increase.

The convertible bond provides Jefferson with some downside risk protection as it continues to earn interest income, although at a lower rate. Furthermore, the convertible bond ranks higher than equity in the event of a corporate liquidation.

As Jefferson will have likely learned much about SPH in performing its due diligence for the original bond investment, and in subsequent interactions with SPH, it could be in a good position to understand the underlying value of SPH. Given that Jefferson has acquired other publishing businesses, Jefferson may have a broader strategy in mind, such as merging SPH with another publisher in order to realize additional value.

While the 9.9% equity (220,000/2,220,000 shares) interest and single board seat would not in itself provide Jefferson with control over SPH, combined with the 40% equity interest (800,000) owned by Brian McGregor (assuming that Jefferson wants to acquire the shares that Brian is considering selling), Jefferson would have an overall equity interest of 46% (1,020,000/2,220,000). While a 46% equity interest would not provide a majority interest, it would be the largest block of shares, enabling Jefferson to have significant influence over the governance of SPH, including decisions on strategy, investments, financing, dividends, and mergers.

Risks and Benefits to SPH

As noted above, the lower coupon rate of 2.5% will reduce SPH's annual interest expense from $425,000 to $212,500, thereby generating annual savings of $212,500 before taxes, which is beneficial from a cash flow perspective. Management might be able to utilize this cash to grow the business.

If Jefferson does convert, the entire interest is saved. As noted above, since the conversion price is just slightly higher than the high range of current fair values, and assuming that SPH continues to increase shareholder value, the likelihood of conversion is very high. However, this conversion will cause a dilution in the fair value of SPH's existing shares.

On conversion, Jefferson would become an owner of 9.9% equity interest and would be able to nominate a director to SPH's board. As Jefferson has experience in the publishing industry, its involvement with SPH could offer useful industry insights and help the company run more efficiently.

If Jefferson goes on to purchase Brian's shares, it will own the highest percentage of shares in comparison with the other shareholders and have a large influence over the board's decisions. There is the potential that Jefferson's goals and objectives will be contrary to SPH's current goals and objectives, causing conflict between shareholders and potentially changing SPH's operational direction.

Additionally, the fact that Jefferson has previously been involved with a publishing industry merger and has expressed an opinion that the industry may need to consolidate, could suggest that it intends to employ the same strategy with SPH. Such a strategy could entail merging SPH with another entity and attempting to realize synergies on the merger, which could include reductions in corporate overhead. This could be detrimental to SPH, its employees, and existing management.

Recommendation

Jefferson has likely proposed the switch to a convertible bond arrangement because it believes this will provide stronger returns than the existing bond investment, and the conversion option provides it with a path to equity ownership if it believes that there is upside in owning equity. The valuation analysis prepared by MC indicates that, as of December 31, 2021, the value of a common share of SPH is in the range of $33.34 to $37.49, which is just below the proposed strike price of $38.64 per share. As such, if the value of SPH continues to increase, Jefferson could be motivated to exercise on the conversion option. Furthermore, if Jefferson acquires Brian McGregor's shares, Jefferson would have a 46% interest in SPH, thereby creating the largest block of shares and providing it with significant influence over SPH's operations. The only real benefit of note is that SPH would reduce its interest expense for as long as the bond remains outstanding. Overall, the proposal appears to be highly favourable to Jefferson and unfavourable to SPH and its current shareholders. Note that if Jefferson does not acquire Brian's shares, Jefferson would have a board seat and a 9.9% equity interest, but would not have significant influence or control over SPH.

Based on the above analysis, we recommend that SPH decline the offer.

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

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

Nominal competence – The candidate does not meet the standards of reaching competence.

Reaching competence – The candidate attempts to discuss Jefferson's motivation or the risks and benefits to SPH.

Competent – The candidate discusses Jefferson's motivation, the risks and benefits to SPH, and concludes on whether SPH should accept the proposal.

Competent with distinction – The candidate thoroughly discusses Jefferson's motivation, the risks and benefits to SPH, including Jefferson's potential ownership percentage and its impact on SPH. The candidate concludes on whether SPH should accept the proposal.

Assessment Opportunity #11 (Depth Opportunity)

The candidate assesses the impact of WBL's proposed 5% discount for invoices paid within 10 days on SPH's bank covenant and cash flow, and provides a recommendation on whether SPH should accept the discount.

The candidate demonstrates competence in the Finance role.

CPA Map Technical Competencies:		**Core**	**Elective**
5.1.1	Evaluates the entity's financial state	**A**	**A**

CPA Map Enabling Competencies:
6.2.1 Maintains an objective and questioning mindset to avoid biased analyses
6.2.4 Completes thorough quantitative and qualitative analyses to identify and evaluate potentially viable alternatives
6.3.1 Uses evidence and judgment to recommend and justify solutions or conclusions

SPH has been offered new payment terms from a supplier, WBL, which provides a 5% discount if invoices are paid within 10 days.

SPH wants to understand the implications on the working capital forecast and its bank covenant and cash flow. In preparing this forecast, we want to ensure that there is sufficient cash available to pay within the discount period, and to determine the costs and savings, if any, if these new terms are accepted.

In addition, given the covenant on its term loan, the company must maintain a current ratio of 1.0 or greater.

Based on the current forecast, the company's current ratio stays at or above 1.0 for each quarter.

(In thousands of dollars)	31-Mar-22	30-Jun-22	30-Sep-22	31-Dec-22
Cash	$ 1,350	$ 1,150	$ 740	$ 1,480
Accounts receivable	6,308	3,964	10,665	8,968
Inventories	6,372	8,940	7,180	7,002
Prepaid expenses	3,156	2,950	2,644	3,120
	17,186	17,004	21,229	20,570
Accounts payable	7,373	9,153	9,452	8,130
Accrued liabilities	6,820	5,850	7,330	8,950
Contract liability - Unearned revenue	1,360	1,075	1,265	1,210
Income taxes payable	140	140	140	240
Current portion of long-term debt	750	750	750	750
	16,443	16,968	18,937	19,280
Current ratio	1.05	1.00	1.12	1.07

We have revised the accounts payable reconciliation to determine what the revised payments and ending balance would be for each quarter. This assumes that SPH would need to make a catchup payment in Q1 2022 (i.e., it would have to make a payment for the Q4 2021 purchases in Q1 2022):

(In thousands of dollars)	31-Mar-22	30-Jun-22	30-Sep-22	31-Dec-22
Accounts payable - Opening	$ 7,520	$ 6,173	$ 7,553	$ 7,752
Purchases				
WBL	1,200	1,600	1,700	1,350
Other suppliers	7,648	9,384	9,643	8,406
	8,848	10,984	11,343	9,756
Payments				
WBL	(2,600)	(1,600)	(1,700)	(1,350)
Other suppliers	(7,595)	(8,004)	(9,444)	(9,378)
	(10,195)	(9,604)	(11,144)	(10,728)
Accounts payable - Closing	$ 6,173	$ 7,553	$ 7,752	$ 6,780

We have also provided a schedule to show the revised cash balance as a result of paying for WLB purchases in the quarter in which they are incurred. As shown below, this results in a cash deficit in Q2, 2022, and Q3, 2022, which will have to be financed through SPH's line of credit. Therefore, if the discount is taken, the company will incur finance charges, as shown below:

(In thousands of dollars)	31-Mar-22	30-Jun-22	30-Sep-22	31-Dec-22
Forecast cash balance	$ 1,350	$ 1,150	$ 740	$ 1,480
Less: additional (saved) payments to WBL				
Q1 2022	(1,140)	(1,140)	(1,140)	(1,140)
Q2 2022		(320)	(320)	(320)
Q3 2022			(15)	(15)
Q4 2022				418
	210	(310)	(735)	423
Less: finance costs @ 3%	0	0	(4)	(1)
Revised closing cash balance	$ 210	$ (310)	$ (739)	$ 422

We have also recalculated SPH's current ratio, based on the above, which indicates that SPH's current ratio improves marginally as a result of the discount:

(In thousands of dollars)	31-Mar-22	30-Jun-22	30-Sep-22	31-Dec-22
Cash	$ 210	$ 0	$ 0	$ 422
Accounts receivable	6,308	3,964	10,665	8,968
Inventories	6,372	8,940	7,180	7,002
Prepaid expenses	3,156	2,950	2,644	3,120
	16,046	15,854	20,489	19,512
Line of credit	0	310	739	0
Accounts payable	6,173	7,553	7,752	6,780
Accrued liabilities	6,820	5,850	7,330	8,950
Contract liability - Unearned revenue	1,360	1,075	1,265	1,210
Income taxes payable	140	140	140	240
Current portion of long-term debt	750	750	750	750
	15,243	15,678	17,976	17,930
Current ratio	1.05	1.01	1.14	1.09

The total value of the discount of 5% on WBL purchases of $5,850,000 = $292,500, prior to consideration of the finance costs, which are nominal.

Recommendation

SPH should take advantage of the 5% discount and pay the WBL invoices within 10 days. The savings in purchase costs will be greater than the foregone investment income earned on investing any excess cash, and the finance charges that must be paid on the short-term borrowing.

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

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

Nominal competence – The candidate does not meet the standards of reaching competence.

Reaching competence – The candidate attempts to calculate the new current ratio (bank covenant) or the impact on cash flows.

Competent – The candidate attempts to calculate the new current ratio (bank covenant) and the impact on SPH's cash flows, and provides a recommendation on whether SPH should take the discount.

Competent with distinction – The candidate calculates the new current ratio (bank covenant) and the impact on SPH's cash flows, and provides a recommendation on whether SPH should take the discount.

Assessment Opportunity #12 (Depth Opportunity)

The candidate recommends whether to acquire the intellectual property rights of a collection of children's books, based on an analysis of the proposed purchase price and a qualitative analysis of decision factors related to the acquisition.

The candidate demonstrates competence in the Finance role.

CPA Map Technical Competencies:		**Core**	**Elective**
5.4.3	Estimates the value of an intangible asset	**C**	**B**
5.6.1	Evaluates the purchase, expansion, or sale of a business	**B**	**A**

CPA Map Enabling Competencies:
6.2.1 Maintains an objective and questioning mindset to avoid biased analyses
6.2.4 Completes thorough quantitative and qualitative analyses to identify and evaluate potentially viable alternatives
6.3.1 Uses evidence and judgment to recommend and justify solutions or conclusions
6.3.2 Articulates limitations to recommendations

There are two components to analyzing this transaction. First, SPH must understand whether the offer price is a reasonable market price for the Legacy Library. Second, SPH must understand the potential risks and rewards of the transaction, and the implications for SPH's business model.

Valuation

To determine if the valuation of the Legacy Library is reasonable, we will examine comparable transactions to see the licensing income earned on the price paid. We will then compare this average rate against the licensing income estimated to be earned on the Legacy Library.

Date	Name	Annual Licensing Income	Price	Description	Include / Exclude	Licensing Fee / Price	Notes
Subject Assets							
TBD	Legacy Portfolio	500,000	5,000,000	Subject portfolio	N/A	10.0%	1
Recent Intellectual Property Transactions							
13-Nov-21	Mystery library	2,020,000	23,000,000	Library of mystery novels from the past 30 years. Income derived from licensing current works and for reprints.	Include	8.8%	2
30-May-21	Vintage Comics	2,350,000	15,235,294	Portfolio of classic comic book rights. Income derived from licensing for reprints, collections, and video streaming.	Exclude	N/A	3
16-Jan-21	Classic Management Theory	1,700,000	23,333,333	Portfolio of well-known management literature. Income derived from licensing for reprints.	Include	7.3%	2
23-Feb-20	Modern Children's Stories IV	1,100,000	12,666,667	30-year fixed term copyrights for portfolio of modern children's books.	Include	8.7%	4
24-Aug-20	Artwork portfolio	215,000	23,125,000	Portfolio of physical paintings and intellectual property rights. Income derived from licensing for printed materials.	Exclude	N/A	5
Average of recent transactions						**8.3%**	

Notes:

1. Annual income of $500,000 is equal to 10% of the asking price. This rate is higher than for companies listed in the comparable transactions, which range from 7.3% to 8.8%.
2. Although the underlying intellectual property (IP) is somewhat different, the nature of the income appears to be reasonably comparable to the subject portfolio. In the case of Mystery Library, it is for a library of mystery novels, where the income earned is solely on licensing and reprints. In the case of Classic Management Theory, this is for non-fiction, and revenue is derived from licensing for reprints. These methods of earning income are comparable to those of the Legacy Library. Both transactions have therefore been included for valuation purposes.
3. In the case of Vintage Comics, there is additional income from video streaming, making the underlying portfolio less comparable. Further, vintage comics are a niche market and may be considered less comparable to children's books. This comparable has therefore been excluded from the valuation analysis; however, it does provide some estimate of the value of the subject portfolio of video streaming licensing fees.
4. Copyrights over children's books is highly comparable to the subject, although the fixed term of rights should lower the value of the asset, other things being equal. This comparable has been included in determining a multiple for comparable transactions.
5. The transaction price will have been impacted by the physical component of the portfolio, which makes it less comparable. Therefore, this transaction has been excluded from the analysis.

Based on the above analysis, there were three somewhat comparable portfolios of IP rights that transacted in the past two years. The average implied income yield (licensing fee /price) across these transactions was 8.3%. It is worth noting that one of the excluded transactions (i.e., Vintage Comics) related to a portfolio of IP rights in which video streaming rights have been monetized, and that the implied licensing fee / purchase price on this transaction was 15.4% ($2,350,000/$15,235,294).

The analysis also includes the Legacy Library for comparison purposes, with an implied net income yield of 10%. Relative to the somewhat comparable transactions, the net income yield of the Legacy portfolio appears favourable. In other words, SPH can expect a 10% income yield on the purchase price, compared to the average of only 8.3%. The favourable pricing may be due to Legacy being a forced seller and, rather than conducting a competitive sales process to obtain the highest price available, Legacy may have instead contacted SPH directly. Given the need to liquidate the business, Legacy may be facing time constraints for completing a transaction, and may also be willing to entertain a lower price. The Legacy portfolio is also significantly smaller than other transactions, which could also be a contributing factor to supporting a higher income yield.

Therefore, the offer price of $5 million appears reasonable.

Risks and Opportunities

Risks and opportunities to consider in connection with the proposed transaction include the following:

- The proposed transaction appears to be favourably priced on a percentage basis relative to other recent transactions. However, we understand that the underlying IP is aged, given that most of the titles were published 20 years ago, and may not continue to produce reliable income.
- SPH could likely generate higher returns by publishing children's books that it owns the rights to, and benefit from operating leverage, compared to hiring new authors and paying a royalty. As such, a business model in which SPH directly purchases IP could offer more attractive returns.
- The library content consists of quality intellectual property that has stood the test of time and continues to sell reasonably well. An investment in this content is likely less risky than an investment in new content, particularly in a new, unproven, author.
- One drawback of this business model is that it does not provide new and exciting content to the market. It is very unlikely that SPH will be able to use the acquisition to boost its brand in a dramatic way.
- There is limited potential short-term upside to be derived from publishing the new content. However, there is potential long-term upside if benefits continue to be derived from the rights over time.
- SPH could potentially achieve considerable benefits from the rights if they can be translated into another medium, particularly video streaming or movies. This upside may be a remote possibility, given SPH's current business model and lack of experience in these sectors, but is a positive factor to consider.
- If SPH decides to proceed with the proposed transaction, it will need to arrange for financing. As IP is not a physical asset, it may be more difficult to use it as security for a loan, or the financing could attract a higher interest rate. SPH may have to borrow on the basis of its corporate credit quality. Further analysis will need to be performed to assess the sources of funds for financing the transaction.

Overall, the Legacy Library appears to be an attractive opportunity for SPH, and the indicative pricing appears to be favourable relative to recent transactions of somewhat comparable intellectual property. SPH should conduct due diligence to understand the quality of the assets, and the company's ability to integrate and monetize the assets.

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

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

Nominal competence – The candidate does not meet the standards of reaching competence.

Reaching competence – The candidate attempts to assess whether the offer price is reasonable.

Competent – The candidate assesses whether the offer price is reasonable and provides a qualitative discussion of the decision factors. The candidate provides a supported recommendation on whether SPH should pursue the transaction.

Competent with distinction – The candidate thoroughly assesses whether the offer price is reasonable and provides a qualitative discussion of the decision factors. The candidate provides a supported recommendation on whether SPH should pursue the transaction.

Assessment Opportunity #13 (Depth Opportunity)

The candidate discusses how the company should invest its surplus cash, given its investment objectives.

The candidate demonstrates competence in the Finance role.

CPA Map Technical Competencies:		**Core**	**Elective**
5.2.1	Evaluates the entity's cash flow and working capital	**A**	**A**
5.2.2	Evaluates the entity's investment portfolio	**B**	**A**

CPA Map Enabling Competencies:
5.1.3 Develops and uses knowledge of the organization, industry and stakeholders
6.2.1 Maintains an objective and questioning mindset to avoid biased analyses
6.3.1 Uses evidence and judgment to recommend and justify solutions or conclusions
6.3.2 Articulates limitations to recommendations
6.3.3 Applies decision criteria to choose among viable alternatives

As at December 31, 2021, SPH held $1,529,000 in cash and cash equivalents, and has asked for guidance on how any excess cash should be invested. The working capital forecast indicates that SPH's cash flow fluctuates during the year, which means that SPH should not be investing the full amount or should be investing it (or a portion of it) in short-term investment. Further, if SPH takes the discount from WBL, SPH would not have surplus funds in all quarters. As a result, it is more important that any investments made with surplus funds need to be either short-term in nature and/or highly liquid. SPH has stated that, in addition to liquidity, its objective is to generate capital growth.

The following investment options have been considered for SPH's surplus cash:

- HHI Series 2020 bonds: SPH already holds an investment in HHI, so it should already understand the risks of the investment. It is not clear if these bonds are publicly traded; if so, SPH should be able to liquidate its investment if and when needed. If not, it is often difficult to liquidate privately-held bonds, given the limited market. In addition, it will earn interest income which is likely at rates higher than that on bank accounts and bank term deposits. However, this is a very large single investment by SPH, considering its balance sheet. There are considerable risks with this strategy. For instance, should HHI encounter financial difficulties, SPH may no longer have liquidity in its investment. Also, should the bond need to be sold, the price received could be below the initial purchase price, particularly if they are not publicly traded (and therefore somewhat illiquid). Therefore, although it can meet the objective of generating capital growth, its potential lack of liquidity and the fact that it may have to be sold in the short-term at an unfavourable price makes this an inappropriate investment.
- Public equities: While public equities are generally highly liquid and provide the opportunity for high returns, they also pose the risk of significant losses if SPH has to sell in the short-term. An exchange-traded fund (such as one that reproduces the investment mix of the TSX) benefits from the diversification effect of a portfolio of numerous underlying assets, but still provides equity risk to the holder. Although this investment type meets the objectives of growing the capital and being liquid, there is potential for significant losses if the company is forced to sell when the price is below original cost. Therefore, because there is also the criterion of holding for only a short period of time, as it creates a risk of significant losses for funds that are critical to fund the business, this is not an appropriate investment option for the surplus cash.
- Money market: Money market investments are short-term investments (typically 30, 60, or 90 days) in investment-grade government or corporate debt with short maturities. These investments are considered liquid and very low-risk, but provide a low return commensurate with this low risk. While generally considered to be low-risk, money market investments are not risk-free, and there is a risk that SPH could experience a loss of principal. Given the low-risk and short-term investment horizon that is consistent with SPH's cash usage during the year, this appears to be a strong investment option.

- Bank term deposits: With this option, SPH would invest in short-term deposit instruments (perhaps 60- or 90-day investments) with a bank, that would generate interest income. Many of these instruments feature guarantees that reduce the risk of loss, but require the funds to stay locked in for a fixed period of time. This option is more favourable than the savings account option as it will generate higher rates of interest; however, interest rates on these investment vehicles also tend to be very low. Depending on the current market rates being offered, this option may meet all of the company's objectives to generate capital growth, be liquid, and be held for short periods.
- Bank savings account: With this option, SPH could simply deposit its cash in a savings account with its existing bank. This option is very low-risk as large Canadian banks are generally considered to be secure financial institutions. Bank deposits are also protected by deposit insurance, but this is limited to $100,000, which is far below SPH's current cash and cash equivalents balance. Unfortunately, rates of interest on savings deposits have been minimal (about 0.5% to 1.0%) for an extended period, and this is not expected to change in the near term. Given the company's objective of generating capital growth, the low rate of interest on these deposits makes this option a poor investment of excess cash.

Recommendation

Given the company's objective of generating capital growth while maintaining liquidity, and the need for a short-term holding period, SPH should not invest in public equities or additionally into HHI, and might even want to liquidate its current investment in HHI. A lower-risk option, such as a bank savings account, does not present the same risk of loss, but only provides minimal investment returns. We recommend that SPH investigate current rates of return on money market investments and bank term deposits, to determine the most attractive rates of return currently available, and invest accordingly.

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

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

Nominal competence – The candidate does not meet the standards of reaching competence.

Reaching competence – The candidate attempts to discuss some of the investment options.

Competent – The candidate discusses each type of investment and provides a recommendation.

Competent with distinction – The candidate discusses the risks associated with each type of investment, considering SPH's investment objectives and cash requirements, and provides a recommendation.

DAY 2 – MARKING GUIDE – PERFORMANCE MANAGEMENT
SOLITARY PUBLISHING HOUSE LIMITED (SPH)
ASSESSMENT OPPORTUNITIES

To: Michel Hebert
From: CPA
Subject: Various matters at SPH

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

Assessment Opportunity #7 (Depth Opportunity)

The candidate determines which percentage price reduction produces the highest profitability by performing a cost-volume-profit analysis for the new e-book proposal.

The candidate demonstrates competence in the Performance Management role.

CPA Map Technical Competencies:		**Core**
3.5.1	Performs sensitivity analysis	**A**
3.5.2	Evaluates sustainable profit maximization and capacity management performance	**A**

CPA Map Enabling Competencies:
6.2.2 Identifies patterns from data analysis
6.2.4 Completes thorough quantitative and qualitative analyses to identify and evaluate potentially viable alternatives
6.3.1 Uses evidence and judgment to recommend and justify solutions or conclusions
6.3.2 Articulates limitations to recommendations
6.3.3 Applies decision criteria to choose among viable alternatives

To determine the best price at which to market the high-volume e-books, a cost-volume-profit analysis has been prepared. Each of the proposed discounts, being 20% through to 60%, has been analyzed. The $20 average selling price of e-books of this genre has been used as the base price.

Discount	**20%**	**30%**	**40%**	**50%**	**60%**
Selling price	$16	$14	$12	$10	$8
Sales volume (each 10% reduction increases volume by 30%)	3,000	3,900	5,070	6,591	8,568
Revenue	48,000	54,600	60,840	65,910	68,544
Royalty fees (12% of selling price)	5,760	6,552	7,301	7,909	8,225
Variable selling costs (5% of selling price)	2,400	2,730	3,042	3,296	3,427
Variable selling, general and administration ($2.50 per unit)	7,500	9,750	12,675	16,478	21,420
Design, editing, preparing e-book format, sales and marketing	22,800	22,800	22,800	22,800	22,800
Total costs	38,460	41,832	45,818	50,483	55,872
Profit	9,540	12,768	15,022	15,427	12,672
Profit margin	20%	23%	25%	23%	18%

Assumptions made for the analysis are as follows:

- Fixed costs, which are not impacted by volume, total $28,500, and include: editing of $6,000; design of $5,000; production of $4,500; and sales and marketing of $13,000. As suggested by Maria, we have assumed that these costs could be lowered by 20%.
- Royalty fees, variable selling costs, and variable selling, general and administration costs remain a constant amount of sales, and are not impacted by volume.
- Maria stated that there is a linear relationship between sales volume and price. While we have performed the analysis under this assumption, this relationship may not exist. There may be a limit to the demand for certain e-books, regardless of how low the price. If this assumption is incorrect, results of the analysis will vary.

Based on the above analysis, a 40% discount, giving a $12 selling price, generates the highest profit margin, at 25%. The next highest profit margins are for the 30% and 50% discounts, at margins of 23%. However, the highest profit in absolute dollars is obtained at a price of $10. Therefore, marketing the e-books at a price between $10 and $14 would appear to be the most profitable strategy for SPH to pursue.

Maria stated that sales of the e-books will not cannibalize other SPH sales. However, limited readership for these types of books could result in sales of one e-book cannibalizing sales of another. There is also a risk that sales of fiction e-books may erode SPH's sales of other offerings. However, there is also the possibility that such sales will increase SPH's presence in the overall market and have a positive effect on the sales of other segments. More information should be obtained, to try and substantiate the risk of cannibalization.

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

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

Nominal competence – The candidate does not meet the standards of reaching competence.

Reaching competence – The candidate attempts a cost-volume-profit analysis, to determine which percentage price reduction will produce the highest profitability for the new e-book proposal.

Competent – The candidate provides a cost-volume-profit analysis, to determine which percentage price reduction will produce the highest profitability for the new e-book proposal.

Competent with distinction – The candidate provides a thorough cost-volume-profit analysis, to determine which percentage price reduction will produce the highest profitability for the new e-book proposal.

Assessment Opportunity #8 (Depth Opportunity)

The candidate prepares an incremental cost analysis for the creation of videos, and compares that cost to the targeted cost in order to recommend whether to pursue the project.

The candidate demonstrates competence in the Performance Management role.

CPA Map Technical Competencies:		**Core**	**Elective**
3.3.2	Evaluates and applies cost management techniques appropriate for specific costing decisions	**B**	**A**

CPA Map Enabling Competencies:
6.1.2 Uses qualitative and quantitative techniques to clarify the nature of problems
6.2.4 Completes thorough quantitative and qualitative analyses to identify and evaluate potentially viable alternatives
6.3.1 Uses evidence and judgment to recommend and justify solutions or conclusions
6.3.2 Articulates limitations to recommendations

Video Lecture Cost Analysis

The decision to produce videos depends on the incremental costs that will be incurred in their production. By considering these costs, we can measure the cash outflows that would result from the production of videos.

The following costs are considered incremental to the cost of producing a video:

- Expenses that will be incurred in the future as a result of the business decision, including costs that can be avoided if the lectures are not produced
- Opportunity costs, such as cash inflows that will be sacrificed as a result of the decision to produce the lectures
- Differential costs that arise between the alternatives of producing the lectures and not producing them

The following costs are not considered relevant to the cost of producing a video:

- Sunk costs, such as expenditures that have already been incurred
- Committed costs, such as future costs that cannot be avoided
- Non-cash expenses, such as depreciation
- General and administrative overhead

The relevant costs for each cost category involved in producing the lectures are as follows:

Recording equipment	$20,000	SPH currently owns one HD film camera; as it has already been purchased and is not being used for other purposes, this camera is considered a sunk cost. As one additional camera will need to be purchased for this initiative, this cost ($50,000) may be considered relevant to the analysis. Because it will be purchased solely for use in this project, the capital cost of the recording equipment ($150,000) is also a relevant cost. The cost of both items should be allocated to each course, based on the expected useful life of the assets, being 2,000 hours of film time. Since the videos for one course will require approximately 200 hours of film time, the cost of the recording equipment for producing one course could be considered to be $20,000/course [($50,000 + $150,000) × (200/2,000)].
Technical expert	$50,000	As the cost of the technical expert is based on the number of videos produced, their cost is relevant to this analysis. The cost is calculated as their hourly rate ($200) × the amount of hours required to produce a video [(200 + 50 hours of preparation) = 250 × $200 = $50,000)].
Web hosting	$1,500	The cost of SPH's current online platform is a sunk cost. The current market rate for web hosting of $150/GB is a relevant cost because it is the cost of purchasing additional space for hosting large files. As SPH will be creating several videos, the marginal cost of 10GB of storage (10GB × $150/GB = $1,500) has been included.

Labour	$80,000	As 20% of the film crew work could be performed by SPH staff, it may not be an incremental cost. However, as it is unclear whether existing staff would be idle or could work on other tasks that have an opportunity cost for SPH, we have included 100% of the labour costs.
Editor's salary		As we assume that the editor will not be idle if the videos are not produced, their salary of $2,000 is considered a fixed cost, and is not therefore considered relevant.
Rent – studio	$11,000	The cost of a studio to edit the lecture videos is relevant.
Rent – SPH boardroom		The rental of SPH's boardrooms is a committed cost that cannot be avoided, regardless of whether SPH produces the lectures. Therefore, the $10,000 is not considered relevant to this analysis.
Total	$162,500	

Based on the above, the total relevant cost per video is approximately $162,500. Based on 1,200 projected students per course, the cost of $135.41 per student exceeds the target cost set by SPH of $125 per student.

However, for the purposes of this analysis, the capital cost of purchasing the additional camera and recording equipment are considered to be incremental costs, as the equipment would need to be purchased to produce the videos. We calculated the per-course cost of this equipment using the estimated useful life of the equipment, its cost, and the time required to produce one video.

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

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

Nominal competence – The candidate does not meet the standards of reaching competence.

Reaching competence – The candidate attempts an incremental cost analysis for the videos.

Competent – The candidate provides an incremental cost analysis for the videos.

Competent with distinction – The candidate provides a thorough incremental cost analysis for the videos, and provides a recommendation based on the targeted cost.

Assessment Opportunity #9 (Depth Opportunity)

The candidate provides a summary of the effectiveness of the ProofONE editing program, and recommends KPIs, if the program is adopted.

The candidate demonstrates competence in the Performance Management role.

CPA Map Technical Competencies:		Core	Elective
2.3.1	Evaluates the entity's strategic objectives and related performance measures	B	A

CPA Map Enabling Competencies:
6.1.2 Uses qualitative and quantitative techniques to clarify the nature of problems
6.2.2 Identifies patterns from data analysis
6.2.3 Questions the relevance and tests the quality of information and assumptions in own analyses
6.2.4 Completes thorough quantitative and qualitative analyses to identify and evaluate potentially viable alternatives
6.3.1 Uses evidence and judgment to recommend and justify solutions or conclusions
6.3.2 Articulates limitations to recommendations
6.3.3 Applies decision criteria to choose among viable alternatives

We have assessed the dataset for the test run of the ProofONE program, provided a summary of the effectiveness of the program, and recommended KPIs for measuring the program in the future, should it be adopted.

	ProofONE Time per Page (seconds)	Editor Time per Page (seconds)	Editor + ProofONE Time (seconds)	Lead Time (months)	Flags per Page
A	2.42	22.46	24.88	8.32	0.52
B	3.89	21.32	25.21	7.90	0.50
C	4.18	14.23	18.41	6.21	0.20
D	9.42	17.78	27.20	11.32	0.13
E	7.25	14.00	21.25	3.60	0.31
F	9.40	8.67	18.07	8.50	0.05
Average	6.09	16.41	22.50	7.64	0.29

The most obvious potential benefit of the program is the ability to edit each book faster, and potentially reduce overall publication lead times. We have identified four ways of measuring the speed of the program and its impact on publication times.

- Edit time per page, ProofONE:
  - For the six books, the edit time per page was about six seconds for the ProofONE program. This average time appeared to increase over the test run, which could be due to the machine taking longer to process the algorithms as more rules are inputted. To continue to monitor ProofONE's speed and ensure that it is not slowing down too much, SPH should make edit time a future key metric.

- Edit time per page, editorial staff:
  - The average time spent by an SPH editor on copy-editing the textbooks is 60 seconds per page. Average time spent editing would be an appropriate benchmark to use when assessing whether the machine is allowing editors to reduce editing time.
  - The test run results indicate that the average time spent by the SPH editor per page was an average of about 16 seconds per page. The average time per page appeared to decrease over the six books, with the exception of book D, which, as it contained a significantly higher number of errors than the other books, may be an outlier.

- Overall edit time per page, ProofONE + editorial staff:
  - Overall edit time per page would also be an effective metric for SPH to monitor in the future. Presumably, the overall edit time per page should be less than 60 seconds, the time typically required by an SPH editor to edit on their own.
  - The test run results showed this metric as decreasing over the six books, with the exception of book D, which, as suggested above, may be an outlier.

- Publication lead time:
  - SPH would be interested in monitoring whether the introduction of this program could reduce overall publication lead time. The current lead time for these books is 10 months.
  - Average lead time to publication across the six books was 7.64 months, which is a 24% reduction over the typical average publication lead time.

Another potential benefit of the program is the possibility of catching more mistakes. SPH has a reputation of producing accurate textbooks, and even small grammatical or reference errors could impact this reputation. The ability of the machine to catch and fix errors effectively will be of interest to SPH.

- Errors missed:
  - The number of errors missed by the program is a key metric of accuracy. SPH will want to have enough confidence in the system that a human editor does not need to review every page to see if the machine missed anything. The machine should be able to be trusted to flag all the errors it has been coded to identify and fix.
  - This metric could be measured by "Errors not found by ProofONE," on a per-page basis. The books were tested in sequence and the "Errors not found by ProofONE" decreased over the course of the test run. However, at the end of the test run, the machine was still missing some errors. To ensure that no errors are missed in future books, it may be necessary to further refine the algorithm and perform additional human review.

- False positives:
  - False positives are defined as issues that are flagged when there are no actual errors. Although it is inefficient for editors to have to clear flags that are not related to actual errors, this is less concerning than errors missed.
  - The number of false positives appears to fluctuate somewhat over the course of the test run. It may be that, as the algorithm was refined, the machine flagged certain items that were not actually errors, but then learned tolerances as the issues were cleared.

- Overall accuracy (false positives + errors missed / errors fixed):
  - The overall accuracy of the system could be tested by adding the above metrics and dividing by the number of errors fixed. SPH could then assess whether the system was getting more accurate, or could compare the accuracy figures to accepted thresholds.
  - Over the course of the test run, the average overall accuracy appeared to trend upwards. For example, for book A, the machine was 92.7% accurate, while for book F, the machine was over 99% accurate.

A third benefit is the ability to reduce the amount of human interaction needed to process books. It may not be SPH's intention to completely eliminate human review of the books, but allowing editors to focus less on minute errors and more on value-added editing, such as fact checking or fixing technical language, will likely empower the editors, result in higher-quality textbooks, and reduce costs for SPH. There are a few metrics that could help SPH measure human intervention.

- Intervention rate:
  - So far, none of the books have been completed without human intervention. However, as the accuracy seems to be improving, this may eventually be achievable. SPH may wish to retain some form of oversight, to ensure that the algorithms are being applied correctly. However, tracking whether books are able to proceed without human intervention may also be useful for maximizing the effectiveness of the system.

- Flags per page:
  - This metric appears to decrease over the course of the test run, from an average of 0.41 from the first three books to 0.16 over the next three books.
  - The errors flagged for human intervention could be a useful metric for determining how effectively the program is learning. Ideally, this metric would decrease over time, as SPH's editors continue to add rules and teach the program. SPH should monitor this metric in conjunction with the accuracy metrics, to ensure that the program is appropriately flagging errors.

- Editor satisfaction rate:
  - Several of the editors noted that it was tedious teaching the program the algorithms and clearing false flags. Other editors noted the opposite; they felt they were able to focus on more value-added edits without having to fix routine mistakes. Editors also noted that the program was fairly accurate with routine decisions, but fairly poor at fixing the more complex edits. Considerable time appeared to have been spent adding to the algorithm, to teach the program acceptable situations.
  - SPH will want to ensure that their editors' job satisfaction level isn't harmed by working with this program. SPH could monitor this by polling the editors after the completion of each book.

Recommendation

Overall, the program appears to be effective. It has not replaced the need for human editors, but is able to reduce the average time per page spent editing the books. In theory, as the program becomes more effective at identifying and correcting mistakes, the editors should be able to focus on more value-added services, such as improving natural language in the text. Further testing should be conducted, and a full cost-benefit analysis performed. This program must be implemented carefully. The automation of tasks may be perceived negatively by SPH staff, who might feel that their expertise is of less value and that their jobs may be in jeopardy. This risk is increased by the fact that SPH is considering outsourcing its sales function, as will be discussed later in this report. The communication of this decision to the employees must be focused on the fact that the employees' work will be less clerical and more challenging.

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

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

Nominal competence – The candidate does not meet the standards of reaching competence.

Reaching competence – The candidate attempts to analyze the effectiveness of the program, and recommends a few KPIs for measuring the program.

Competent – The candidate analyzes the effectiveness of the program, and recommends some KPIs for measuring the program.

Competent with distinction – The candidate analyzes the effectiveness of the program, and recommends several KPIs for measuring the program.

Assessment Opportunity #10 (Depth Opportunity)

The candidate assesses the performance of the AERU pilot project compared to the current structure's production and profitability levels.

The candidate demonstrates competence in the Performance Management role.

CPA Map Technical Competencies:		**Core**	**Elective**
3.2.3	Computes, analyzes, or assesses implications of variances	**A**	–

CPA Map Enabling Competencies:
6.1.2 Uses qualitative and quantitative techniques to clarify the nature of problems
6.2.2 Identifies patterns from data analysis
6.2.3 Questions the relevance and tests the quality of information and assumptions in own analyses
6.3.1 Uses evidence and judgment to recommend and justify solutions or conclusions
6.3.2 Articulates limitations to recommendations
6.3.3 Applies decision criteria to choose among viable alternatives

The proposal for the AERU project has been reviewed, and the expected outcomes of the program have been compared to actual events.

Books Published per Employee

- The AERU published 16 new book titles over the course of the pilot, which represents two book titles per employee. This production is considerably more than the book titles published per employee under the current structure (54/78 = 0.7), and well above the expected outcome of the 20% increase.
- The increase could be a result of the effectiveness of the program. It could also be impacted by the AERU team's consisting of the best employees in their field.

Lead Times

- The average lead time noted in the program was nine months, which is 13% shorter than the current average lead time.
- The expectation that AERU could reduce lead times by 30% was not met. However, as AERU was brand new, with a new team and new processes, further efficiencies could be gained in the future. It is also possible that other AERUs may experience longer lead times because of having employees who are less capable than the exceptional employees selected to participate in the pilot project. Further, it may be that certain processes in publication cannot be sped up, and that the 30% reduction is an unreasonable expectation.

Average Sales Volume per Book Title

- The average sales volume per book title for the AERU was 1,094 sales per book title (revenue/ average selling price / books published), which represents an increase of 13% compared to the traditional structure, which experiences average sales volumes of 967 sales per book title (52,200 new books sold / 54 book titles published).
- While this increase did not meet the objective of 15%, it is still considerable. However, AERU experienced lower-than-average selling prices per book titles than under the current structure ($85). Rather than the increased timeliness of the content, this reduced price could be the driver behind the increase in sales volumes.

Other Observations

- There was one reprint noted in the pilot project, compared to none for the segment overall. Since the initial print run is unsaleable, reprints negatively impact profit margins and are a potential area of concern. Reprints could potentially impact SPH's reputation in the industry. One possible cause for the reprint is that AERU members rushed the publication of the book in order to achieve their targets; another possibility is that there was a lack of oversight for the project. This matter should be investigated further.
- For a number of reasons, the results of the program are difficult to extrapolate to the overall population. First, the number of units is quite small, and thus represents a potentially unreliable sample size with which to extrapolate results to the rest of the company. Second, the best employees appear to have been selected for this project. These employees may have been more capable of producing higher volumes than the average employee, or perhaps have even been keen to achieve certain targets if they knew their work was evaluated and could influence the structure of their division.
- It is unclear whether the current incentive structure applies to employees in the AERU, and therefore, the employees may not have been as motivated to perform as they would be under the current structure. There is a possibility that performance could be improved further if employees were appropriately motivated.

Overall

Overall, it appears that AERUs can be effective in increasing the number of book titles published per employee, and can reduce publication lead times. Although average sales appear to be higher, it is possible that other factors contributed to this phenomenon, including a reduced average selling price per book title. As there were reprints in the AERU, the sufficiency of oversight in the units should be considered when deciding to move forward with this structure. Before further development of the program, it would be prudent to conduct a pilot with employees at a more representative performance level, and to motivate them in accordance with the rest of the adult non-fiction division.

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

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

Nominal competence – The candidate does not meet the standards of reaching competence.

Reaching competence – The candidate attempts to assess the performance of the AERU pilot project.

Competent – The candidate assesses the performance of the AERU pilot project.

Competent with distinction – The candidate thoroughly assesses the performance of the AERU pilot project.

Assessment Opportunity #11 (Depth Opportunity)

The candidate proposes changes to the incentive plan for those in the AERU, and considers the risks of the proposed new plan.

The candidate demonstrates competence in the Performance Management role.

CPA Map Technical Competencies:		**Core**	**Elective**
3.7.1	Analyzes the implications of management incentive schemes and employee compensation methods	B	A

CPA Map Enabling Competencies:
6.1.1 Identifies and articulates issues within areas of work responsibility
6.3.1 Uses evidence and judgment to recommend and justify solutions or conclusions
6.3.2 Articulates limitations to recommendations
6.3.3 Applies decision criteria to choose among viable alternatives
6.4.2 Identifies potential barriers to change

Applicability of Current Incentive Scheme to AERU

The pilot project team structure included two lead editors, four support staff, and two publicists, whose bonuses, rather than being directly influenced by their actions in the AERU, were impacted by the actions of the other members of their respective departments. For example, despite the fact that, compared to the rest of the segment, average sales per book title published in the AERU increased, the publicists did not receive a bonus for the year. The members of the AERU will therefore not be appropriately motivated to perform to the best of their abilities, and in the best interests of SPH.

The issue with the current program, for each type of employee in the AERU, is as follows.

<u>Editors</u>

Under SPH's current incentive program, a bonus pool is created based on the net profit from each division, and then allocated to the editors based on their level of seniority in the company. This program leads to the editors in the AERU having their results diluted by the rest of the division. The amount of their bonus is further dictated by seniority, which has nothing to do with their actual performance in the AERU.

<u>Support staff</u>

The support staff currently receive a bonus based on the net profit of their division. The bonus is equal for all support staff. As any such success in the AERU would be diluted by the results of the rest of the division, the support staff have no additional incentive to contribute to the success of the AERU. Additionally, the fact that these employees receive the same bonus as the other support staff members may demotivate them even further.

<u>Publicists</u>

As members of the marketing department, publicists are given bonuses based on the achievement of various targets, such as total sales volume. This is an issue for the publicists in the AERU, as they may have no ability to impact these measures, and if these measures are not met, they may not qualify for a bonus, despite any positive contributions to the AERU.

Proposed Custom AERU Incentive Plan

Incentives for the members of the AERU should motivate them to achieve personal goals for their area of expertise that are congruent with SPH's goals and strategy.

The metrics used to assess the employees could be based on the same metrics that are used to evaluate the success of the AERU program: book titles published per staff; publication lead times; and average sales volume per book title published. As the employees working in the AERU are part of a team, the entire AERU could be evaluated based on these metrics, which would encourage collaboration within the team. Individuals could also be evaluated based on their contributions to the team's success.

The bonus pool could still be based on the overall results of the division to which the AERU contributes. As it contains costs that the division and the AERU cannot control, such as production costs, the net profit of the division may not be an appropriate driver. A driver such as operating revenue may be a more appropriate measure.

As experienced by the publicists in the AERU when the marketing department did not meet their targets, efforts should be taken to reduce the likelihood of "all or nothing" incentive schemes. To keep them motivated throughout the year, staff should receive a partial bonus for meeting some of the key objectives.

To encourage accuracy, we would also recommend that the cost of any reprints be deducted from the calculation of the bonus pool. Reprints that are the result of causes out of the staff's control should not be deducted.

Possible Risks of Implementing New Plan

As the members of the AERU work as a team, having some of the incentives more heavily weighted on individual success, rather than on the success of the team, could lead to decreased levels of collaboration, or potentially even a dysfunctional AERU. This possibility could be mitigated by calculating the bonus to be paid to each member with equal weighting for individual and team performance.

The difference between the AERU incentive structure and the current incentive scheme could create a perception of unfairness in the organization, especially if one group is able to achieve greater bonuses by their inclusion in a specific group. This situation could be mitigated by aligning the current incentive scheme with the proposed scheme of the AERU, or eventually rolling out the AERU structure across all divisions.

Some of the members of the AERU, such as those with the most seniority, may receive a lower bonus under the new plan. They could be shifting from an existing structure that benefits them to one that is less beneficial. This situation could be mitigated by aligning the rest of the organization with the new proposed structure, having proper communication around the proposed changes, or establishing minimum bonus thresholds for senior employees.

As the members of the AERU are from different departments, such as editorial, support, and marketing, they have differing goals, and have been conditioned to be motivated to meet these differing goals. Even with a carefully planned incentive scheme, it may be difficult to align the different objectives of these team members.

Having a separate incentive scheme for AERUs could create more work for the managers, as they would need to evaluate employees based on a completely new and different scheme. SPH's current scheme is easy to administer, and the new scheme could therefore create resistance from employees, and from managers who resent the additional requirements for evaluation.

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

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

Nominal competence – The candidate does not meet the standards of reaching competence.

Reaching competence – The candidate attempts to discuss an incentive plan for those in the AERU.

Competent – The candidate discusses an incentive plan for those in the AERU, considering some of the flaws in SPH's current incentive plan, and discussing some of the risks related to the new plan.

Competent with distinction – The candidate discusses in depth an incentive plan for those in the AERU, considering several of the flaws in SPH's current incentive plan, and discusses several of the risks related to the new plan.

Assessment Opportunity #12 (Depth Opportunity)

The candidate provides a qualitative assessment of the benefits and risks associated with the proposal to outsource SPH's sales function.

The candidate demonstrates competence in the Performance Management role.

CPA Map Technical Competencies:		Core	Elective
2.5.2	Assesses the impact of IT/IS risks on enterprise risk and recommends appropriate risk management strategies	B	A
3.4.1	Evaluates sources and drivers of revenue growth	B	A

CPA Map Enabling Competencies:
6.1.2 Uses qualitative and quantitative techniques to clarify the nature of problems
6.1.3 Demonstrates skepticism, objectivity, due care and persistence when identifying issues
6.2.4 Completes thorough quantitative and qualitative analyses to identify and evaluate potentially viable alternatives
6.3.1 Uses evidence and judgment to recommend and justify solutions or conclusions
6.3.2 Articulates limitations to recommendations
6.3.3 Applies decision criteria to choose among viable alternatives

Benefits of Outsourcing the Sales Function

- The most obvious benefit of outsourcing SPH's sales function is the possibility of reducing its costs. While Roger did not provide any specifics as to the cost of their service, it could be inferred that it would be more of a variable-based fee because the salespeople are compensated solely on commission. This arrangement could reduce SPH's fixed costs, helping it to compete in an industry that is experiencing significant cost pressures. Roughly 70% of SPH's selling and marketing costs, on average, are fixed costs [case fact in Common section, Industry Background], which Roger claims can be eliminated almost entirely by outsourcing. As such, outsourcing this department could represent up to $8.7 million in cost savings (70% × $12.4 million, the total selling and marketing expense on the most recent financial statements).
- Another significant benefit of outsourcing the sales function is the possibility of increased sales. Big M salespeople are remunerated on a 100% commission structure, and would therefore be highly motivated to increase sales for SPH. Also, it appears that Big M has a number of clients in the publishing industry, and as a result, could have significant bargaining power with retailers. Roger mentioned that Big M has a large database of information, which they use to directly market to prospective clients. This kind of reach could be difficult for SPH to achieve on its own. In addition, Roger mentioned guaranteeing sales growth of 20% in the first year, which would be a generous increase to SPH's sales in an industry that is experiencing declining revenues.
- By removing some of the complexity of the organization, outsourcing will benefit SPH by reducing its administrative burden.

Risks of Outsourcing the Sales Function

- As Roger mentioned that there is no contract to be signed, there is a risk that Big M is unable to deliver its proposed services or reneges on its obligations to SPH. This arrangement is a significant concern, given that SPH is handing sensitive company information over to Big M. In addition, it is unclear how Big M can guarantee a certain level of sales without a contract. This makes it possible for Big M to renege on its obligations with no recourse for SPH. To mitigate this risk, SPH should insist on a mutually enforceable contract, to be signed by both parties.

- By Big M replacing SPH's existing sales process with its own approach, there is a risk that SPH will be unable to perform its own sales function in the future if the arrangement with Big M does not work out. It is a risk to have one supplier performing such a significant function for the organization, especially one over which SPH has little or no control. SPH should ensure that a contract is established for the services provided, and consider using a phased approach, to determine whether the arrangement is effective before committing to fully replacing its entire sales process.
- Roger mentioned that Big M guarantees 20% sales growth, but then qualifies this statement by mentioning that the growth is "adjusted for elements that are out of their control." It is unclear what is meant by this statement; returns could be considered out of their control, as could decreases in sales volumes due to world events or trends. There is a possibility that Big M does not provide the service promised and then reneges on its guarantee. To mitigate this risk, SPH should insist on an enforceable contract between the two parties. SPH's legal team should review all clauses related to the guarantee presented by Roger.
- There is a risk that Big M appropriates SPH's current sales information by adding it to its database. If SPH cancels this service, it could be very difficult to get this information back, or somehow prevent Big M from using it further. Also, giving Big M access to SPH's sales information creates the risk that SPH will lose those clients if the relationship with Big M ceases, and Big M uses this information to generate sales for a different client. If SPH decides to work with Big M, we would recommend creating a carefully worded contract that addresses the above points.
- Since Big M salespeople are paid 100% based on commission, they will be highly motivated to generate sales, but this motivation may create incentives for the salespeople to use undesirable tactics. These measures could include using personal data in an unethical fashion. SPH may want to consider the implications of a compensation structure that is entirely variable, and ensure that any contracts with Big M are structured to prevent any unwanted behaviour.
- There is a risk that Big M salespeople will deliver a service that is not in keeping with SPH's current standards, thus damaging SPH's reputation in the industry and reducing sales. Some retailers have had issues with independent sales agents. SPH should perform a reference check with Big M's other clients and retailers, to determine if Big M's level of service meets SPH's standards.
- At least in the short term, several fixed costs associated with the sales function might remain despite the decision to outsource. It might take a few years before the increased efficiencies anticipated have a genuinely meaningful impact on the bottom line.

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

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

Nominal competence – The candidate does not meet the standards of reaching competence.

Reaching competence – The candidate attempts to provide an assessment of the benefits and risks associated with the proposal to outsource SPH's sales function.

Competent – The candidate provides an assessment of the benefits and risks associated with the proposal to outsource SPH's sales function, and provides a recommendation.

Competent with distinction – The candidate provides a thorough assessment of the benefits and risks associated with the proposal to outsource SPH's sales function, and provides a recommendation

Assessment Opportunity #13 (Depth Opportunity)

The candidate discusses the external factors that impact SPH's strategic direction, and provides an overall assessment of the various initiatives proposed.

The candidate demonstrates competence in the Performance Management role.

CPA Map Technical Competencies:		**Core**	**Elective**
2.3.2	Evaluates the entity's internal and external environment and its impact on strategy development	**B**	**A**

CPA Map Enabling Competencies:
5.1.1 Applies general business knowledge to enhance work performed
6.1.1 Identifies and articulates issues within areas of work responsibility
6.2.1 Maintains an objective and questioning mindset to avoid biased analyses
6.2.2 Identifies patterns from data analysis
6.3.1 Uses evidence and judgment to recommend and justify solutions or conclusions

In our overall assessment of the initiatives that SPH should pursue, we will first discuss the risk factors present in SPH's external environment.

External Risk Factors in SPH's Business Environment

Risk: Smaller publishers can publish e-books at very low costs and sell directly to online retailers or consumers.
Impact on SPH: This factor may put pressure on publishers such as SPH, which is a larger organization with fixed costs that are difficult to reduce. SPH may lose market share in its existing offerings, or be unable to enter markets in which lower cost structures are prevalent.

Risk: The competitive landscape includes four large, well-established corporations that together have a high percentage of market share. These publishers have the resources to aggressively market their products and control the distribution channels.
Impact on SPH: As a mid-sized company with limited resources, SPH may be unable to compete with these large corporations in terms of marketing power and distribution reach. Therefore, it may be necessary to differentiate its products and brand in other ways in order to stay relevant in the market.

Risk: Authors might be tempted to self-publish and/or sell their work directly to online retailers and consumers.
Impact on SPH: At present, SPH is the intermediary that enables authors to get their work to consumers. If authors start bypassing this process, this could further erode SPH's revenues and market share.

Risk: The price of the primary material in the product can fluctuate significantly and is projected to rise in the immediate future.
Impact on SPH: Rising input costs can place pressure on SPH to increase its prices, which is contrary to the trend in the industry, which sees consumers preferring cheaper alternatives.

Risk: Total revenue for the publishing industry has declined as consumers spend less on books, a trend that is expected to continue in the future. In addition, due to the increasing proportion of e-book sales to print book sales, average selling prices for specific titles have declined.
Impact on SPH: Declining revenues in the industry places additional pressure on SPH to cut costs or increase spending on marketing in order to increase demand. This places increased pressure on maintaining desired profit margins.

E-books

In our analysis of SPH's proposal to produce and promote low-cost e-books, we found that a selling price between \$10 and \$14 could be a profitable strategy for SPH. While these margins are dependent on assumptions that need to be investigated further, the preliminary results suggest that SPH may be able to compete with some of the emerging smaller presses using this approach. As this proposal might impact SPH's brand image, especially in the textbook segment, it may be necessary to develop a separate branch that publishes these books under a different brand.

Video Lectures

Depending on which costs are considered relevant to the analysis, developing videos to accompany SPH's textbooks may or may not be a viable strategy from a cost perspective. However, from a strategic perspective, this kind of product augmentation could provide SPH with differentiation in the marketplace that gives them a competitive advantage over rivals. Being the first adopter in this field may be particularly effective as universities may be less likely to switch providers once they have incorporated the videos into their courses. To determine if the current cost structure is viable, it may be necessary to perform further capital budgeting analysis on the proposal.

AERUs

Producing books under the AERU structure appears to be more effective than under the traditional structure. Other positive impacts of the AERU process are that books are brought to market more quickly and may increase sales volumes. While the sample size is small, and there are other factors that potentially influence the results, this could be an effective way for SPH to increase revenues while maintaining costs.

Outsourcing Sales

While we noted several risks associated with the proposal to outsource the sales function of SPH, there would be benefits to this approach as well. Depending on the effectiveness of the vendor, the biggest benefit is a likely reduction in costs as well as a potential increase in revenue. To properly assess whether SPH should move forward with this proposal, we would need more quantitative information.

ProofONE

The use of artificial intelligence to provide copy-editing services appears to be a viable option for reducing costs. Before a final decision is made about its application, the full cost of this program will need to be assessed, including the reduction in editors' time, and the potential implications of reducing the editorial workforce within SPH.

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

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

Nominal competence – The candidate does not meet the standards of reaching competence.

Reaching competence – The candidate attempts to discuss SPH's external risk factors and their impact on SPH's strategic direction, or the proposed initiatives.

Competent – The candidate discusses some of SPH's external risk factors and their impact on SPH's strategic direction, or the proposed initiatives.

Competent with distinction – The candidate discusses several of SPH's external risk factors and their impact on SPH's strategic direction, and the proposed initiatives.

DAY 2 – MARKING GUIDE – TAXATION
SOLITARY PUBLISHING HOUSE LIMITED (SPH)
ASSESSMENT OPPORTUNITIES

To: Michel Hebert
From: CPA
Re: Various matters at SPH

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

Assessment Opportunity #7 (Depth Opportunity)

The candidate determines the tax implications of the proposed sale of SPH shares by Brian and Rodney.

The candidate demonstrates competence in the Taxation role.

CPA Map Technical Competencies:		**Core**	**Elective**
6.3.2	Evaluates income taxes payable for an individual	**B**	**A**
6.6.3	Analyzes income tax implications of the purchase and sale of a CCPC	**B**	**B**

CPA Map Enabling Competencies*:*
6.1.2 Uses qualitative and quantitative techniques to clarify the nature of problems
6.2.4 Completes thorough quantitative and qualitative analyses to identify and evaluate potentially viable alternatives
6.3.1 Uses evidence and judgment to recommend and justify solutions or conclusions

Qualified Small Business Corporation (QSBC) Shares

A share of a corporation will be a QSBC share if **all** of the following conditions are met:

1. At the time of sale, the corporation is a small business corporation (SBC), and it was owned by the individual, or their spouse or common-law partner.

   An SBC is a Canadian-controlled private corporation (CCPC) in which all or substantially all (90% or more) of the fair market value (FMV) of its assets are:
   a. Used mainly in an active business carried on primarily in Canada by the corporation;
   b. Shares or debts of connected corporations that were SBCs; or
   c. A combination of the two types of assets above.

2. Throughout the 24 months immediately before the shares were disposed of, the shares were owned by the individual, a partnership of which the individual was a member, or a person related to the individual.

3. Throughout the 24 months immediately before the shares were disposed of, they were shares of a CCPC, and more than 50% of the FMV of the assets of the corporation met the description from the first condition above.

<u>Small business corporation</u>

CCPC

SPH is a CCPC, as it is a private corporation that is not controlled by non-residents of Canada (all the shareholders live near Toronto).

90% Asset test

The only inactive asset in the balance sheet for SPH is the bond investment of $924,000. The rest of the assets in the balance sheet are all assets that are used in active business, including goodwill that has not been recorded. The FMV of the assets—assuming the liabilities have FMV equal to their book value, which is usually the case—is as follows (in thousands of dollars):

FMV of equity	$60,000
Plus: liabilities	37,889
FMV of assets	97,889
Less: bond investment	(924)
FMV of assets used in active business	$96,965

The total percentage of assets that are being used in active business is 99% ($96,965 ÷ $97,889). This percentage indicates that SPH is an SBC, and its shares meet the first condition for QSBC share treatment.

We should also consider whether cash is an inactive asset. In 2021, cash has significantly increased, from $250,000 to $1,529,000. This amount is still a very small percentage of the company's activities. However, as the company was operating with cash of about $250,000 as of December 31, 2020, this increase in cash might be considered inactive, as the cash may not be needed for the operations of the business. This is especially relevant as SPH is contemplating a large investment in shares of public companies. Even if we consider the entire balance of cash as inactive, however, the balance is only 1.6% of the FMV of the assets ($1,529 ÷ $97,889), and the company would still easily meet the 90% asset test.

Brian's shares

Brian has owned the shares since incorporation. His shares would therefore meet the second test of owning the shares for 24 months.

Based on the balance sheet provided in Appendix III, over the last two years, SPH's assets would likely also meet the 50% asset test. In 2020, there are no inactive assets and there is no information provided that indicates otherwise. This assumes that the $250,000 of cash on the 2020 balance sheet was used in the active business, and that the balance sheets at the year ends are representative of the FMV of SPH's assets through the full 24 months.

As Brian's shares would qualify to be QSBC shares, he would be eligible for the lifetime capital gains deduction (LCGD). The current limit is $456,815, of which Brian has used $175,000. Brian has $281,815 of LCGD available to use on his share sale.

Proceeds of disposition	$24,000,000	(40% of $60,000,000)
Adjusted cost base (ACB)	(100)	
Capital gain	23,999,900	
Taxable capital gain	11,999,950	(50%)
LCGD	(281,815)	
Income inclusion	$11,718,135	

This income inclusion is used later in the calculation of Brian's and Sarah's taxes.

Rodney's shares

Similar to the analysis for Brian, Rodney's shares would meet the first test because SPH is an SBC, and the third test, making the same assumptions about SPH's assets for the last 24 months.

However, as Rodney became a shareholder on December 30, 2020, he will not have held his shares for 24 months if he sells them on March 31, 2022, and thus will not meet the second test.

As all three tests need to be met and Rodney does not meet the second test, he will not be eligible for the LCGD, and his federal tax payable on his sale of shares would be as follows:

Proceeds of disposition	$9,000,000	(15% of $60,000,000)
ACB	(1,400,000)	
Capital gain	7,600,000	
Taxable capital gain	$3,800,000	(50%)
LCGD	(0)	
Income inclusion	$3,800,000	
Taxes	$1,254,000	(33%)

Because Rodney already earns employment income in excess of $250,000, the taxable capital gain on the sale of shares of Jefferson will be taxed at the highest federal rate of 33%.

As a planning point, as the only test that Rodney has not met is the requirement to hold the shares for 24 months, he may wish to negotiate with Jefferson that it will acquire his shares after December 30, 2022, to help him meet that requirement.

Finally, where an individual claims the LCGD in a year, alternative minimum tax can apply. This should be evaluated further to ensure that the benefit of the LCGD is not lost. We have also assumed that neither taxpayer has a cumulative net investment loss (CNIL), which would also affect these results.

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

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

Nominal competence – The candidate does not meet the standards of reaching competence.

Reaching competence – The candidate attempts to analyze whether SPH’s shares are QSBC shares and attempts to calculate taxes payable for Rodney.

Competent – The candidate analyzes whether SPH’s shares are QSBC shares, considering multiple tests, and calculates taxes payable for Rodney.

Competent with distinction – The candidate analyzes whether SPH’s shares are QSBC shares, considering multiple tests, provides a recommendation to address the shortcoming, and calculates taxes payable for Rodney.

Assessment Opportunity #8 (Depth Opportunity)

The candidate discusses the tax implications of Jefferson acquiring 55% of the shares of SPH.

The candidate demonstrates competence in the Taxation role.

CPA Map Technical Competencies:		Core	Elective
6.1.3	Explains implications of current trends, emerging issues and technologies in taxation	C	B
6.2.1	Evaluates general tax issues for a corporate entity	B	A
6.2.2	Advises on taxes payable for a corporation	B	A
6.6.3	Analyzes income tax implications of the purchase and sale of a CCPC	B	B

CPA Map Enabling Competencies*:*
6.1.1 Identifies and articulates issues within areas of work responsibility
6.3.1 Uses evidence and judgment to recommend and justify solutions or conclusions
6.4.1 Develops preliminary implementation plans within areas of work responsibility

Acquisition of Control

On March 31, 2022, Jefferson will have acquired 55% of the shares of SPH, meaning it will have control of the corporation. This will result in an acquisition of control. Jefferson is a CCPC; therefore, there will be no change in status for SPH. This results in several implications for the company.

Deemed taxation year end

There will be a deemed taxation year end one day before the control is acquired. This means there will be a short taxation year for SPH as at March 30, 2022.

The short taxation year will still count as one full year of any non-capital losses, although in this case, SPH does not have any.

Capital cost allowance (CCA) and the small business deduction (SBD) will be prorated, based on the number of days in the short taxation year. This could increase taxable income and taxes payable.

SPH will need to choose a new year end, and the first taxation year after the acquisition cannot exceed 53 weeks.

Loss expiry

SPH has $100,000 of net capital losses carrying forward. These losses will expire and cannot be carried forward after the deemed year end that takes place because of the acquisition.

Although it does not appear that SPH has any of these, allowable business investment losses, property losses, and unused charitable donations will also expire, and cannot be carried forward after the deemed year end.

Recognition of accrued losses

Immediately before an acquisition of control, capital property and depreciable property with inherent losses are deemed to have been disposed of, and then immediately reacquired, at their FMVs.

We know the FMV of all Class 8 assets is $7.5 million. The undepreciated capital cost (UCC) at the end of the year, calculated later, is $9.03 million. Therefore, deemed CCA of $1.53 million needs to be claimed on this class.

There is no information to suggest that there is any non-depreciable capital property with any inherent losses; it was noted that land has all appreciated in value.

If the deemed CCA yields a non-capital loss for the deemed taxation year, the non-capital loss can be carried back up to three years against previous taxation years in which there has been income. If there are still non-capital losses remaining after this, they may be carried forward for use in SPH. However, they can only be carried forward for use against income from the same or a similar business, and only if that business has a reasonable expectation of profit immediately after the acquisition. There is nothing to indicate that these conditions would not be met.

Election to recognise accrued gains

The taxpayer (SPH) is also allowed to increase the capital cost of capital property up to its FMV on acquisition of control. Given that there is land with accrued gains, an election could be made to absorb the capital losses that will expire. The new ACB of the property would be equal to the elected amount.

Small business deduction (SBD)

Associated companies must share the small business limit. As Jefferson will control SPH, it will be associated and must share the small business limit of $500,000. If Jefferson currently uses all of its small business limit, SPH will not get any SBD when calculating its taxes payable, assuming that Jefferson does not want to allocate any of its small business limit to it.

In addition, the small business limit available to SPH and Jefferson can be ground down or eliminated, depending upon the taxable capital of the associated group. Jefferson has taxable capital of $12 million. SPH's equity, calculated later, exceeds the threshold of $15 million, at which point the small business limit (and, thus, the SBD) is fully eliminated for taxation years beginning before April 8, 2022. Therefore, neither company will have any SBD available for the December 31, 2022, taxation year of each corporation. In fact, based on the new (combined) taxable capital, any SBD previously available to Jefferson would become unavailable to it.

However, under the 2022 federal budget, the new threshold at which the SBD is fully eliminated will be $50 million for taxation years beginning after April 7, 2022. If this legislation passes, both Jefferson and SPH would again be eligible for a portion of the small business limit, and could claim some amount of SBD, based on their combined taxable capital for the year. Assuming both corporations continue with a December 31 taxation year end, this would be available starting in their 2023 taxation years.

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

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

Nominal competence – The candidate does not meet the standards of reaching competence.

Reaching competence – The candidate attempts to discuss the acquisition of control.

Competent – The candidate discusses the acquisition of control.

Competent with distinction – The candidate discusses in depth the acquisition of control.

Assessment Opportunity #9 (Depth Opportunity)

The candidate determines Brian's and Sarah's expected personal taxes for 2022.

The candidate demonstrates competence in the Taxation role.

CPA Map Technical Competencies:		**Core**	**Elective**
6.3.2	Evaluates income taxes payable for an individual	**B**	**A**
6.3.3	Analyzes specific tax-planning opportunities for individuals	**B**	**B**

CPA Map Enabling Competencies*:*
6.1.2 Uses qualitative and quantitative techniques to clarify the nature of problems
6.2.4 Completes thorough quantitative and qualitative analyses to identify and evaluate potentially viable alternatives
6.3.1 Uses evidence and judgment to recommend and justify solutions or conclusions

Principal Residence Exemption (PRE)

Before we can calculate Brian's and Sarah's income for 2022, we need to determine if there will be an income inclusion for the sale of their Toronto home. Brian and Sarah can only claim the PRE on one property in each year. To determine whether they should claim the PRE on their Toronto home or preserve it for use against the eventual sale of their cottage, we need to determine which has the greater annual gain.

The Toronto home was purchased in 2010. As they live in this property, they are eligible to claim the PRE on its sale. Their cottage is also eligible for the PRE because they habitually reside there, even if only for part of the year. It has been owned since 2015.

Calculation of the average capital gain per year is as follows:

	Toronto Home	Cottage
FMV	$7,000,000	$1,000,000
ACB	(2,500,000)	(250,000)
Capital gain (FMV - ACB)	4,500,000	750,000
Years owned	13	8
Average gain per year	$ 346,154	$ 93,750

As the average capital gain per year on the Toronto property is much higher than on the cottage, it would be more tax efficient to claim the PRE on it. Therefore, there will be no income inclusion required.

I recommend that Brian and Sarah claim the PRE on the Toronto property for 12 of the 13 years it was owned (for example, from 2010 to 2021), to preserve one of the years (for example, 2022) for either the cottage or their new home. The formula to calculate the exemption adds one to the numerator, so (12 + 1)/13 of the gain will be exempted; that is, the entire gain will still be exempt.

For the PRE to be effective, Brian and Sarah must designate this property as their principal residence for these years in their income tax returns for the tax year in which they disposed of the property (that is, 2022). They would each be required to check the correct box on Schedule 3 and complete form T2091(IND) to make this designation.

Brian's and Sarah's Income Taxes for 2022

Pension splitting

Pension splitting is a strategy that allows one spouse to lower their tax payable by moving as much as 50% of their pension income into the income tax return of their spouse. This is usually useful when one spouse is in a higher tax bracket than the other. If pension splitting is chosen, there is an election that needs to be filed for each year where this choice is made. Income eligible for pension splitting includes registered retirement income fund (RRIF) income and payments from a registered pension plan, among other kinds of pensions.

Given that Brian will include a large amount in income for 2022 from the sale of SPH shares, the couple should claim the maximum amount of pension splitting available, being 50% of Brian's RRIF income.

Payments under the CPP are not eligible for pension splitting. Brian and Sarah could, however, "share" their CPP benefits by applying to split it at the source. However, in future years, because the gain on sale of shares is not recurring, this may not be necessary, as pension splitting seems sufficient to keep them in the same tax bracket.

Note that for purposes of the tax calculation below, I have assumed that Brian has opted to stop contributing to CPP since he is over age 65 and is already collecting CPP benefits. However, this should be confirmed, as a portion of CPP contributions would provide a deduction from income and a portion would provide a credit against taxes.

Calculation of income

	Brian	Sarah
Canada Pension Plan (CPP)	$ 7,055	$ 14,110
RRIF income	75,000	15,000
Pension income		40,000
Employment income	80,000	
Total before gain on sale of SPH shares	162,055	69,110
Gain on sale of SPH shares	11,718,135	
Total before pension splitting	11,880,190	69,110
Pension splitting (50% × $75,000)	(37,500)	37,500
Net income for tax purposes and taxable income	$ 11,842,690	$ 106,610

Calculation of taxes payable

The calculation of their taxes is as follows:

	Brian	Sarah
Taxable income	$ 11,842,690	$ 106,610
Basic personal amount	$ 12,719	$ 14,398
Canada employment amount	1,287	
Pension amount	2,000	2,000
Total (Note 1)	$ 16,006	$ 16,398
Federal tax credits (15%)	2,401	2,460
Federal tax on taxable income (Note 2)	$ 3,886,268	$ 19,437
Minus: federal tax credits	2,401	2,460
	$ 3,883,867	$ 16,977

Note 1: As they are both over 65, Brian and Sarah would normally be eligible for the age amount; however, their incomes are high enough that this would be ground down to nil, so it is not shown here.

Note 2: Federal tax on taxable income

	Brian	Sarah
Tax on base amount	$51,344	$17,820
Tax on excess	($11,842,690 - $221,708) × 33% = $3,834,924	($106,610 - $100,392) × 26% = $1,617
Federal tax on taxable income	$3,886,268	$19,437

Old age security (OAS)

Sarah and Brian have not received OAS, and have until they turn 70 to continue to defer this amount. Once Brian does start receiving OAS, if his income continues to be higher than $81,761 (or the higher amount for that year indexed to inflation), there will be a claw back of the OAS (Part I.2 tax). Given his large income in 2022 from the sale of SPH shares, I recommend waiting until at least after 2022 to begin claiming OAS.

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

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

Nominal competence – The candidate does not meet the standards of reaching competence.

Reaching competence – The candidate attempts a calculation of taxes payable for Sarah and Brian.

Competent – The candidate prepares a reasonable calculation of taxes payable for Sarah and Brian.

Competent with distinction – The candidate prepares a reasonable calculation of taxes payable for Sarah and Brian, and addresses planning considerations.

Assessment Opportunity #10 (Depth Opportunity)

The candidate discusses the tax implications of replacement property.

The candidate demonstrates competence in the Taxation role.

CPA Map Technical Competencies:		**Core**	**Elective**
6.2.2	Advises on taxes payable for a corporation	**B**	**A**

CPA Map Enabling Competencies*:*

6.1.2 Uses qualitative and quantitative techniques to clarify the nature of problems
6.2.2 Identifies patterns from data analysis
6.3.1 Uses evidence and judgment to recommend and justify solutions or conclusions

Replacement Property

Whenever any depreciable or capital property of a corporation is disposed of, whether voluntarily or involuntarily, and a replacement property is acquired within a certain time period, subsection 44(1) of the Income Tax Act provides for a deferral of all or part of the capital gain on disposition. When a replacement property is acquired within the specified time limits, recapture of CCA on the disposition can also be deferred.

If a property meets the following conditions, it can qualify as a replacement property for the former property owned by the taxpayer (ss. 44(5)):

> *"(a) it is reasonable to conclude that the property was acquired by the taxpayer to replace the former property;*
>
> *(a.1) it was acquired by the taxpayer and used by the taxpayer or a person related to the taxpayer for a use that is the same as or similar to the use to which the taxpayer or a person related to the taxpayer put the former property;*
>
> *(b) where the former property was used by the taxpayer or a person related to the taxpayer for the purpose of gaining or producing income from a business, the particular capital property was acquired for the purpose of gaining or producing income from that or a similar business or for use by a person related to the taxpayer for such a purpose;*
>
> *(c) where the former property was a taxable Canadian property of the taxpayer, the particular capital property is a taxable Canadian property of the taxpayer; and*
>
> *(d) where the former property was a taxable Canadian property (other than treaty-protected property) of the taxpayer, the particular capital property is a taxable Canadian property (other than treaty-protected property) of the taxpayer."*

Because SPH is considering selling the Tilly warehouse and moving to a smaller one on Foster Avenue, the first three criteria are met. The use of the old property and the new property is identical. As both properties are taxable Canadian property (real property located in Canada), and not treaty-protected (SPH is a Canadian resident, so treaties do not apply in this situation), the last two criteria are met.

There are different requirements for when the replacement property needs to be acquired for both involuntary and voluntary dispositions. As this is a voluntary disposition, the replacement property must be acquired before the later of:

- The end of the first tax year following the initial year; and,
- 12 months after the end of the initial year.

SPH would be purchasing the replacement property one month later and, therefore, it would meet the criteria above for voluntary disposition.

The calculation for deferral of capital gain is as follows:

	Land	Building
Proceeds of disposition	$ 1,050,000	$ 450,000
ACB	$ 700,000	$ 300,000
Cost of replacement property	$ 1,100,000	$ 500,000
a. Proceeds of disposition	$ 1,050,000	$ 450,000
Less: ACB	(700,000)	(300,000)
Capital gain otherwise determined (i)	$ 350,000	$ 150,000
b. Proceeds of disposition	$ 1,050,000	$ 450,000
Less: Cost of replacement property	(1,100,000)	(500,000)
Proceeds not reinvested (ii)	$ Nil	$ Nil
Capital gain to be reported: lesser of (i) and (ii)	Nil	Nil
Capital gain deferred	**$ 350,000**	**$ 150,000**
Capital cost of replacement property:		
Capital cost of property	$ 1,100,000	$ 500,000
Less capital gain deferred	(350,000)	(150,000)
New capital cost	**$ 750,000**	**$ 350,000**

As the lesser of cost and proceeds ($300,000) of the building would reduce the Class 1 pool, there would be no recapture to be deferred. The pool is $12 million at the beginning of 2021, and $11.52 million at the beginning of 2022 (calculated later). As the UCC exceeds the amount to be credited against it, there would not be any recapture.

Conclusion

The total cost of the new warehouse will be allocated as follows:

Land	$ 750,000
Building	350,000
Total	$ 1,100,000

The combined cost is $500,000 less than the actual cost of $1.6 million, which represents the deferred capital gain. Thus, when the replacement property is sold in the future, the capital gain will be $500,000 greater.

The warehouse was built in 2021 and will not be used for residential purposes; therefore, an additional allowance of 2% for buildings acquired after March 18, 2007, which are used for non-residential purposes, is allowed. To be eligible for this additional allowance, the building must be in a separate class and an election will need to be filed with the tax return for the taxation year in which SPH acquires the building, which will be 2022. This election will allow the Foster warehouse to be depreciated at 6% instead of the default 4%. The amount of the addition will be the new capital cost of $350,000.

It should also be noted that SPH has $100,000 of net capital losses carryforward available, that may be used against any taxable capital gains. If the sale takes place before any acquisition of control, SPH could consider not deferring the capital gain to make use of this loss. This would also generate some additions to the capital dividend account, which may be useful for planning purposes. However, using the election to recognize accrued gains discussed earlier may be a more efficient way to use these net capital losses.

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

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

Nominal competence – The candidate does not meet the standards of reaching competence.

Reaching competence – The candidate attempts to discuss the replacement property.

Competent – The candidate discusses the replacement property and attempts a calculation.

Competent with distinction – The candidate discusses the replacement property and performs a calculation.

Assessment Opportunity #11 (Depth Opportunity)

The candidate calculates taxable income.

The candidate demonstrates competence in the Taxation role.

CPA Map Technical Competencies:		Core	Elective
6.2.2	Advises on taxes payable for a corporation	B	A

CPA Map Enabling Competencies*:*
6.1.2 Uses qualitative and quantitative techniques to clarify the nature of problems
6.2.4 Completes thorough quantitative and qualitative analyses to identify and evaluate potentially viable alternatives
6.3.1 Uses evidence and judgment to recommend and justify solutions or conclusions

Calculation of the Estimated Net Income for Tax Purposes and Taxable Income

I have calculated net income for tax purposes and taxable income below.

				Notes
Net income from financial statements	$ 6,717,000			
Accounting adjustments:				
Revenue adjustment for Kingston	(180,000)			1
Sales expense – Kingston contract	18,000			2
Amortization of contract costs	(9,000)			2
Inventory write-down	(226,150)			3
Adjusted accounting income		$	6,319,850	
Add:				
Financial statement reserve (Kingston)	180,000			1
2020 tax reserve (unearned revenue)	1,350,000			1
Financial statement reserve (unearned revenue)	1,109,000			1
2020 tax reserve (doubtful accounts)	236,000			1
Financial statement reserve (unearned revenue)	256,000			1
Amortization related to production	850,000			4
Amortization of assets	2,203,000			4
50% meals & entertainment (total $1,600,000)	800,000			5
Golf membership fees	620,000			6
Total additions		$	7,604,000	
Deduct:				
Reserve for services not performed	(180,000)			1
2020 financial statement reserve (unearned revenue)	(1,350,000)			1
Reserve for goods not delivered	(1,109,000)			1
2020 financial statement reserve (doubtful accounts)	(236,000)			1
Reserve for doubtful accounts	(256,000)			1
CCA (see below)	(6,469,250)			4
Total deductions		$	(9,600,250)	
Net income for tax purposes and taxable income		**$**	**4,323,600**	

Notes:

1. Revenue is brought into income when received or receivable, so the accounting adjustment will be reversed for tax purposes. However, a tax reserve is available for services not performed, so a deduction for the same amount will be allowed. It is assumed that the existing unearned revenue balance on the financial statements is for goods not delivered, for which a tax reserve is also allowed. The prior year's reserve is brought back into income and the new amount deducted.

   Similarly, allowances for doubtful accounts are eligible for a tax reserve only when made on specific uncollectible accounts. I have assumed for this purpose that the allowance noted on the balance sheet is eligible for such a reserve. An additional bad debt expense of $1 million was deducted in income in December 2021, which I assume was a complete write-off of a specific account (since it exceeds the amount of allowance on the balance sheet). This write-off is allowed in full and requires no adjustment for income tax purposes.

2. Deductions are generally claimed for income tax purposes following the accounting treatment. As these amounts relate to cost of goods sold for deferred revenue, it is reasonable for tax to follow the accounting treatment. For the same reason, no adjustment is made for the amortization of pre-production costs.

3. Per ss. 10(1), "inventory shall be valued at the end of the year at the cost at which the taxpayer acquired the property or its fair market value at the end of the year, whichever is lower." Accordingly, no further adjustment is required for tax purposes after the accounting adjustment is made.

4. Amortization of depreciable assets is not deductible as this is an amount on account of capital. CCA is claimed instead. CCA is calculated as follows:

Class	UCC at Beginning of year	Additions	UCC for CCA (opening + 1.5X net additions)	CCA Rate	CCA	UCC at end of year (Opening + Additions - CCA)
1	$12,000,000		$12,000,000	4%	$ 480,000	$11,520,000
8	3,500,000	$8,900,000	16,850,000	20%	3,370,000	9,030,000
10	600,000		600,000	30%	180,000	420,000
50	400,000	2,690,000	4,435,000	55%	2,439,250	650,750
	$16,500,000				$6,469,250	$21,620,750

   The immediate expensing provision was announced in 2021 but was not substantively enacted by December 31, 2021, so has not been included in this calculation. Candidates who use this provision, however, will receive credit accordingly.

5. Only 50% of total meals and entertainment is deductible for tax purposes.

6. Golf membership fees are not deductible.

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

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

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

Reaching competence – The candidate attempts a calculation of taxable income.

Competent – The candidate prepares a calculation of taxable income.

Competent with distinction – The candidate prepares a thorough calculation of taxable income.

Assessment Opportunity #12 (Depth Opportunity)

The candidate calculates taxes payable for 2021, and calculates and discusses the tax implications of dividend income.

The candidate demonstrates competence in the Taxation role.

CPA Map Technical Competencies:		**Core**	**Elective**
6.1.3	Explains implications of current trends, emerging issues and technologies in taxation	**C**	**B**
6.2.2	Advises on taxes payable for a corporation	**B**	**A**

CPA Map Enabling Competencies*:*
6.1.2 Uses qualitative and quantitative techniques to clarify the nature of problems
6.2.4 Completes thorough quantitative and qualitative analyses to identify and evaluate potentially viable alternatives
6.3.1 Uses evidence and judgment to recommend and justify solutions or conclusions

Taxes Payable for 2021

Taxable income			$ 4,323,600
Investment income (HHI bonds)			23,000
Business income (remainder)			4,300,600
			$ 4,323,600
Part I tax	$ 4,323,600	38%	$ 1,642,968
Refundable tax on CCPC's investment income	23,000	10 2/3%	2,453
Federal tax abatement	4,323,600	10%	(432,360)
General rate reduction	4,300,600	13%	(559,078)
Total Part I tax			**$ 653,983**

Since SPH's taxable capital is well above the $15 million threshold for the small business limit grind, no SBD can be claimed. The federal business limit of $500,000 is reduced when a CCPC's taxable capital exceeds $10 million, and is eliminated when taxable capital reaches $15 million.

Taxable capital includes total retained earnings for the company, which, at the end of 2020 is $18,199,000, and share capital, which is $5,640,000, for total capital of $23,839,000. This alone is well above the $15 million threshold, and it is likely that several of the long-term liabilities would also be included in the calculation of taxable capital. Investment allowance for the year is deducted from the total capital, but this is likely to be minimal.

Note that the new threshold of $50 million, if enacted, would not apply to the 2021 taxation year, as discussed earlier.

Taxes Payable under $150,000 of Dividend Income

Taxable income			$ 4,323,600
Investment income (HHI bonds)			$ 23,000
Business income (remainder)			4,300,600
			$ 4,323,600
Part I tax	$ 4,323,600	38%	$ 1,642,968
Refundable tax on CCPC's investment income	23,000	10 2/3%	2,453
Federal tax abatement	4,323,600	10%	(432,360)
General rate reduction	4,300,600	13%	(559,078)
Total Part I tax			**$ 653,983**
Part IV tax	150,000	38 1/3%	57,500
Total federal tax			**$ 711,483**

Dividend income received from taxable Canadian corporations is deducted from net income for tax purposes before arriving at taxable income; therefore, taxable income and Part I tax in this scenario is equal to that under the scenario with no additional income.

However, Part IV tax is levied on the dividend income earned. Part IV tax is 38 1/3% of a corporation's dividends that are received from a non-connected corporation.

<u>Impact on the SBD</u>

The adjusted aggregate investment income grind on the small business limit would apply if SPH earned this much investment income. At this level of investment income, the SBD would be fully eliminated by this grind. For the 2022 taxation year (or taxation years, if an acquisition of control takes place), SPH would already receive no SBD due to the taxable capital grind, so this is not a concern.

Starting in 2023, depending on the taxable capital for that year, SPH may have had some small business limit available due to the higher taxable capital threshold proposed in Budget 2022. In this case, however, the small business limit would instead be ground down to nil by the adjusted aggregate investment income grind.

<u>Impact on RDTOH</u>

The Part IV tax is added to a refundable dividend tax on hand (RDTOH) account.

A private corporation accumulates RDTOH, which consists of the refundable portion of Part I tax on investment income (being 30 2/3% of aggregate investment income), and Part IV taxes paid. The RDTOH accounts are further subdivided into non-eligible RDTOH (NERDTOH) and eligible RDTOH (ERDTOH). If the corporation pays enough dividends, these amounts can be refunded through what is a called a dividend refund.

Assuming it began the year at zero, as SPH does not seem to have earned investment income before this, the NERDTOH account at the end of 2021 would be 30 2/3% of $23,000, or $7,053. This is non-eligible because it arises from sources that are not eligible dividends.

The ERDTOH account would include any Part IV tax paid on eligible dividends. In this example of $150,000 of dividend income from Canadian public companies, $57,500 would be included in the ERDTOH account. As public companies rarely pay dividends other than eligible dividends, it is assumed that the dividends received would all be eligible dividends.

To recover the entire balances, SPH needs to pay a dividend of 1/(38 1/3%) of the RDTOH balances. However, NERDTOH balances can only be refunded if SPH pays dividends other than eligible dividends. Given that SPH is not eligible for the SBD, it would need to ensure that it pays sufficient dividends other than eligible dividends (rather than electing for all dividends to be eligible) in order to obtain this dividend refund. ERDTOH balances can be refunded regardless of the type of taxable dividend paid.

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

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

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

Reaching competence – The candidate attempts a calculation of taxes payable.

Competent – The candidate prepares a calculation of taxes payable, including an attempt at the Part IV or RDTOH calculations.

Competent with distinction – The candidate prepares a calculation of taxes payable, and discusses the tax treatment of portfolio dividends, including a calculation of Part IV.

Assessment Opportunity #13 (Depth Opportunity)

The candidate determines the GST/HST payable for December.

The candidate demonstrates competence in the Taxation role.

CPA Map Technical Competencies:		Core	Elective
6.7.2	Analyzes GST obligations of a person	C	B
6.7.3	Calculates net tax for a person	C	B
6.7.4	Discusses GST compliance requirements	B	B

CPA Map Enabling Competencies*:*
6.1.2 Uses qualitative and quantitative techniques to clarify the nature of problems
6.2.4 Completes thorough quantitative and qualitative analyses to identify and evaluate potentially viable alternatives
6.3.1 Uses evidence and judgment to recommend and justify solutions or conclusions

GST/HST Calculation for December 2021
(in thousands of Canadian dollars)

			GST/HST charged	Note
Sales – total	$ 7,150			
Sales – Ontario	3,575	13%	$ 464.75	1
Sales – BC	3,575	5%	178.75	1
Bad debt write-off	$ 1,000			2
Ontario	500	13%	(65.00)	
BC	500	5%	(25.00)	
Total GST/HST collected			**$ 553.50**	

Input tax credits	Incurred		Input Tax Credit	
Production and royalty costs	2,650	13%	$ 344.50	3
Amortization of pre-production costs	81		0.00	4
New pre-production costs	100	13%	13.00	4
Depreciation and amortization related to production	71		0.00	5
Depreciation	183		0.00	5
Sales and marketing	800	13%	104.00	6
Meals and entertainment	50	13%	3.25	7
Golf membership fees	100		0.00	8
Bad debt expense	1,000		0.00	2
Bank charges	75		0.00	9
Professional fees	50	13%	6.50	6
Rent expense	534	13%	69.42	6
Utilities	209	13%	27.17	6
Office supplies	50	13%	6.50	6
Telephone and internet	42	13%	5.46	6
Capital asset purchases	269	13%	34.97	5
Total input tax credits			**614.77**	
Net tax			**(61.27)**	
GST/HST actually paid			146.00	
Difference			**$ (207.27)**	

Notes:

1. HST and GST have been calculated using the information presented for how much revenue was collected in BC and Ontario (50% in each province). The place-of-supply rules require that the GST/HST rate for the province to which goods are shipped be used.
2. Since it was in December that the amount became uncollectible, bad debt has been adjusted. It is assumed that bad debts were incurred in the same provinces as the sales (that is, 50% in each). Bad debt expense is claimed as an adjustment to GST/HST charged, rather than as an input tax credit (ITC).
3. Since production and royalty costs approximate inventory purchases, this figure has been used.
4. Pre-production costs were incurred in the amount of $100,000; amortization is not eligible for ITCs.
5. There were capital assets purchased during December for which the ITC can be claimed. ITCs are claimed based on when taxable items are purchased, not when they are deducted for financial statement purposes, so no ITC is claimed for the depreciation.
6. As all expenses and asset purchases were incurred in Ontario, 13% has been used throughout. However, it is likely that some of these expenses include items for which no GST/HST has been paid, such as salaries and wages, so we should obtain a report from the accounting system to determine exact amounts before finalizing the return.
7. Meals and entertainment have been adjusted, as only 50% of the GST/HST paid on meals and entertainment is eligible for an ITC.
8. Similar to the rules for income tax purposes, golf membership dues are not eligible for ITCs.
9. Bank charges are not subject to GST/HST; therefore, there is no ITC to claim.

Note that it has been assumed that the accounting system is already correctly recording GST/HST—that is, that the expense figures provided reflect the pre-GST/HST amounts, since the GST/HST charged and the ITCs available would be recorded directly into the GST/HST payable or refundable accounts.

<u>Late-filing penalty</u>

GST/HST returns for monthly filers are due at the end of the next month. The December 2021 return was therefore due on January 31, 2022, and it is now February. However, as the company was in a refund position, there will be no failure-to-file penalty. If, after adjusting for additional details found in the accounting system, there was indeed a balance owing, a penalty of 1% plus 0.25% multiplied by the number of months late (to a maximum of 12 months) will be owing.

To ensure that there are no revisions required, I should confirm whether the work MC performed for the month of November correctly reflects the adjustments noted above, since many of them may have also applied that month.

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

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

Nominal competence – The candidate does not meet the standards of reaching competence.

Reaching competence – The candidate attempts a calculation of net tax owing.

Competent – The candidate prepares a calculation of net tax owing.

Competent with distinction – The candidate prepares a thorough calculation of net tax owing and discusses penalties.

APPENDIX D

MAY 27, 2022 – DAY 3 SIMULATIONS, SOLUTIONS AND MARKING GUIDES

COMMON FINAL EXAMINATION
MAY 27, 2022 – DAY 3

Case #1 **(Suggested time: 75 minutes)**

It is May 25, 2022, and you, CPA, are meeting with the owner-managers of Intelligent House Construction Inc. (IHC), a new consulting client.

Anthony: On January 1, 2021, Benjy, Molly, and I founded IHC, a construction company that builds and sells affordable, intelligent houses (i.e., that have automated lights, door locks, and temperature control). We are all Canadian residents and each own one-third of the company.

Molly: We completed the construction of five houses in 2021 and started two more in December, completing them at the end of April 2022. Demand for our houses is high, and Anthony just found land for sale in an excellent location. We want to buy it and build 55 intelligent houses on it over the next three years, and then find more land and build another 85 houses.

We approached the bank for financing. They said our financial statements need to comply with ASPE (Appendix I). They identified issues with the accounting for sales transactions and suggested there may be adjustments required to other accounts. Please discuss any accounting issues you identify. To determine whether we can meet the capital and interest payments, the bank also requests a calculation of our federal corporate income taxes payable for 2021 and our cash flow projections for the next three fiscal years. Please assist us with these requests. Anthony compiled information to help you (Appendix II).

Anthony: Finally, I attended a strategy and governance training session last week and have some concerns (Appendix III).

APPENDIX I
FINANCIAL STATEMENTS
(Prepared by Molly)

Intelligent House Construction Inc.
Balance Sheet
As at December 31, 2021

			Note
Assets			
Cash	$	438,300	1
Inventory		44,700	
Property, plant and equipment		550,000	2
	$	1,033,000	
Liabilities			
Bank indebtedness	$	46,000	
Deferred revenue		200,000	3
Accounts payable		88,100	
Shareholder loan		191,000	
		525,100	
Shareholders' equity			
Share capital		9,000	
Retained earnings		498,900	
		507,900	
	$	1,033,000	

APPENDIX I (continued)
FINANCIAL STATEMENTS
(Prepared by Molly)

Intelligent House Construction Inc.
Income Statement
For the year ended December 31, 2021

			Note
Sales	$	1,836,300	4
Cost of sales			
Materials		396,300	
Labour		447,700	
Subcontractors		263,600	4
		1,107,600	
Gross profit		728,700	
Expenses			
Insurance		47,700	
Meals and entertainment		2,900	
Bank charges and interest		6,600	5
Advertising		11,200	
Office supplies		2,500	
Association dues		1,300	
Professional fees		2,700	
Repairs and maintenance		19,000	
Phone and utilities		10,300	
Depreciation and amortization		60,000	
Miscellaneous		65,600	6
		229,800	
Net income before tax	$	498,900	7

APPENDIX I (continued)
FINANCIAL STATEMENTS
(Prepared by Molly)

Notes:

1. Cash: This includes $175,000 that IHC is required to set aside, as part of its building contracts, until all post-construction work for its houses is complete. IHC purchased a $175,000 one-year GIC on March 1, 2021, which generates 1% annual interest. IHC received interest of $1,750, which I recorded in 2022's income.

2. Property, plant and equipment: On January 15, 2021, IHC paid $260,000 for a property (a newly constructed house valued at $220,000 and land valued at $40,000), which we use as a sales and administrative office. In February 2021, $350,000 of equipment was purchased, which belongs to Class 8 for tax purposes. The house and the equipment have been depreciated over their useful lives of 22 and 7 years, respectively.

3. Deferred revenue: In December 2021, IHC signed agreements for the sale of two houses for $400,000 each, and the buyers paid a 25% deposit. The total cost is estimated to be $250,000 per house. Costs of $62,500 per house were incurred by year end and are recorded in cost of sales.

4. Sales and subcontractors: One of our contractors, Control5, provides the materials, wires the house, and installs the control system based on the buyer's needs. If there are problems with the installation, the buyer contacts Control5 directly. Control5 establishes its price and bills IHC, which in turn charges the buyer, along with a 15% commission that IHC keeps as its fee. During the year, IHC recorded gross Control5 sales of $161,000 in revenue. The $140,000 paid to Control5 is recorded in the subcontractors' account in cost of sales.

5. Bank charges and interest: We remitted our payroll deductions late, which cost $3,800 in penalties.

6. Miscellaneous: In January 2021, IHC purchased various small tools totalling $30,600; each tool cost less than $500 and has a useful life of five years. At the end of December 2021, IHC purchased a new trailer for $35,000, which should last 10 years.

7. Taxes will be recorded using the taxes payable method.

APPENDIX II
NOTES FROM ANTHONY

We expect to borrow $1 million, at an annual interest rate of 8%. The principal is repayable in three equal annual payments beginning at the end of the first year.

With this financing, IHC plans to build 10 houses in the first year, 15 houses in the second year, and 30 houses in the third year. We expect to earn revenue of $400,000 per house and to have the same number of houses in progress at the end of each year.

The gross margin percentage over the next three years should be comparable to 2021.

In case of damage by our equipment to the municipal roads, the city in which the 55 houses will be built requires a deposit from IHC of $20,000 per house, at the start of construction of each house. If there is no damage, the deposit is returned a year later.

We will also have to pay an environmental fee of $200,000 every time we complete the construction of 10 houses in this city.

Insurance and advertising costs are expected to be 4.5% and 2.5% of total sales, respectively.

We plan to hire employees, who will support IHC's administrative functions, and to start paying ourselves salaries. This will cost $900,000 in the first year, and it will increase by 15% per year.

We will rent a warehouse starting the first year for $15,000 per month. A second, smaller warehouse will need to be rented starting the second year, for $5,000 per month.

All other expenses should increase at the same rate as sales.

APPENDIX III
ANTHONY'S STRATEGY AND GOVERNANCE CONCERNS

I have noted areas that need improvement at IHC and would like your thoughts and proposed solutions. Also, I have heard about key performance indicators. Please suggest some for IHC and explain how they would be helpful.

Molly is overwhelmed with the volume of accounting work. Our payroll deductions were remitted late, and, until last week, I didn't know we had a corporate income tax return to file.

We track the cost of each house as well as we can, but the spreadsheet we use is so complicated that I don't know how much profit we make on each house. I don't know what to look at in order to assess IHC's performance.

A good reputation is crucial in our industry. Buyers have complained about inappropriate comments made by some of our subcontractors. I'm not surprised—we barely have time to select subcontractors, let alone relay our values to them.

To determine the ideal price for our houses, we need to know our market. Until now, we have based our price on the margin we want.

Benjy and Molly are supposed to visit each job site weekly, but they don't have time, so they often designate one job coordinator per site to monitor the work performed. Last week, I went to a job site at 10:00 am and nobody was onsite. I wonder if our accountability structure is adequate for ensuring that everybody does their part. To be honest, Benjy, Molly, and I do not seem to be working together. I would like you to suggest ways for us to improve our governance to address these broader issues.

Benjy recently signed a $500,000 contract for electrical services on behalf of IHC with GEM Electricity. When I said he should have consulted with Molly and me beforehand, he said that since he is an electrician, he should be the one to select the electrical company. He said it was no different than Molly having just signed an offer to purchase five pieces of land without consulting us.

MARKING GUIDE 3-1
INTELLIGENT HOUSE CONSTRUCTION INC. (IHC)
ASSESSMENT OPPORTUNITIES

To: Anthony, Molly, and Benjy
From: CPA, consultant
Subject: Advice regarding Intelligent House Construction Inc. (IHC)

Assessment Opportunity #1 (Depth and Breadth Opportunity)

The candidate discusses the accounting treatment for the revenue-related transactions.

The candidate demonstrates competence in Financial Reporting.

CPA Map Technical Competencies:		**Core**
1.2.2	Evaluates treatment for routine transactions	**A**

CPA Map Enabling Competencies:
6.2.1 Maintains an objective and questioning mindset to avoid biased analyses
6.2.4 Completes thorough quantitative and qualitative analyses to identify and evaluate potentially viable alternatives
6.3.1 Uses evidence and judgment to recommend and justify solutions or conclusions

Revenue Recognition

ASPE requires that revenue be recorded on an accrual basis. To determine the appropriate method of revenue recognition for house building, ASPE criteria must be considered. As IHC is in the business of building and selling homes, this would constitute performing a long-term contract. Our options are the percentage of completion method or the completed contract method.

Per Section 3400.06, "*in the case of rendering of 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.*"

Per Section 3400.16, "*Revenue from service transactions and long-term contracts is usually recognized as the service or contract activity is performed, using either the percentage of completion method or the completed contract method.*"

Per Section 3400.18, "*the completed contract method would only be appropriate when performance consists of the execution of a single act or when the enterprise cannot reasonably estimate the extent of progress toward completion.*"

Given that IHC can reasonably determine the extent of progress toward completion of a house, the most appropriate accounting policy would be the percentage of completion method. The percentage completed of all houses in progress at year end would need to be estimated, and an equivalent percentage of the sales price would need to be reported as revenue on the income statement.

In the case of the 2021 financial statements, IHC indicated that it had partially completed two houses, which will sell for $400,000 each. The amount of revenue to record should be based on costs incurred as a percentage of total costs. The cost of each house is estimated to be $250,000, and the cost to build the houses to date was $62,500. Therefore, the houses are about 25% done in terms of costs ($62,500 ÷ $250,000). On that basis, we should recognize 25% of the total revenue of $800,000 ($400,000 × 2), being $200,000.

The deposit received should therefore be recorded as revenue in totality. The journal entry would be as follows:

DR Deferred revenue	$200,000	
CR Revenue		$200,000

Control5 Revenue

Per Section 3400.24, "*an entity is acting as a principal when it has exposure to the significant risks and rewards associated with the sale of goods or the rendering of services. Features that indicate that an entity is acting as a principal include:*

- *the entity has the primary responsibility for providing the goods or services to the customer or for fulfilling the order (for example, by being responsible for the acceptability of the products or services ordered or purchased by the customer);*
- *the entity has inventory risk before or after the customer order, during shipping or on return;*
- *the entity has latitude in establishing prices, either directly or indirectly (for example, by providing additional goods or services); and*
- *the entity bears the customer's credit risk for the amount receivable from the customer.*"

Because Control5 established the prices, has the primary responsibility of providing the services to the buyer, and the buyer contacts them when there is a problem, IHC is only acting as an agent.

This means that the revenue to be recorded by IHC should only be its commission, representing 15% of its total cost of $140,000 = $21,000.

The cost of sales and the revenue should therefore be reduced by $140,000.
The journal entry would be as follows:

DR Revenue	$140,000	
CR Cost of sales – subcontractors		$140,000

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

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

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

Reaching competence – The candidate attempts to discuss the revenue-related issues.

Competent – The candidate discusses the revenue-related issues.

Competent with distinction – The candidate discusses both revenue-related issues in depth and calculates the appropriate adjustments.

Assessment Opportunity #2 (Depth and Breadth Opportunity)

The candidate discusses other accounting issues for which the financial statements are not in compliance with ASPE.

The candidate demonstrates competence in Financial Reporting.

CPA Map Technical Competencies:		Core
1.2.2	Evaluates treatment for routine transactions	A

CPA Map Enabling Competencies:
6.2.1 Maintains an objective and questioning mindset to avoid biased analyses
6.2.4 Completes thorough quantitative and qualitative analyses to identify and evaluate potentially viable alternatives
6.3.1 Uses evidence and judgment to recommend and justify solutions or conclusions

Reserved Cash for Post-construction Work and Related Interest Income

Per Section 1510.04, *"Current assets shall be segregated between the main classes, such as, cash, investments, accounts and notes receivable, inventories and prepaid expenses."*

Section 1540.07 states: "*Cash subject to restrictions that prevent its use for current purposes, such as compensating balances required in accordance with lending arrangements, would not be included among cash and cash equivalents. Cash subject to restrictions would be classified on the balance sheet in accordance with CURRENT ASSETS AND CURRENT LIABILITIES, Section 1510, and increases and decreases would be reflected in cash flows from investing activities.*"

Section 1510.07 states: *"The following shall be excluded from current assets:*

(a) cash subject to restrictions that prevent its use for current purposes; and
(b) cash appropriated for other than current purposes unless such cash offsets a current liability."

The $175,000 set aside by IHC is a requirement of the building contracts, and must be held until all post-construction work is complete. IHC is prohibited from using the funds on current spending requirements. Therefore, the amount must be presented in a separate account, not to be aggregated with cash. As the GIC matures on March 1, 2022, and is therefore within one year of the year-end date, the amount will be presented in current assets.

In addition, the portion of the interest related to the GIC that was earned during 2021 has not been properly accounted for at December 31, 2021.

Per Section 3400.12, "*Revenue arising from the use by others of enterprise resources yielding interest, royalties and dividends shall be recognized when reasonable assurance exists regarding measurement and collectability. These revenues shall be recognized on the following bases:*
(a) interest: on a time proportion basis"

There is therefore $1,458 ($175,000 × 1% × 10 ÷ 12) of interest income to be recorded in IHC's 2021 income statement with respect to the revenue generated by the investment, even if the cash was received in 2022.

The journal entries for 2021 would be as follows:

DR Restricted cash	$175,000	
CR Cash		$175,000
DR Interest receivable	$1,458	
CR Interest income		$1,458

Note: The entry booked in 2022 should also be adjusted.

Trailer and Small Tools

IHC has currently recorded $65,600 of miscellaneous expenses, which includes a new trailer ($35,000), and various small tools ($30,600). Section 3061.03 provides a definition of property, plant, and equipment:

> *"(a) Property, plant and equipment are identifiable tangible assets that meet all of the following criteria:*
> *(i) are held for use in the production or supply of goods and services, for rental to others, for administrative purposes or for the development, construction, maintenance or repair of other property, plant and equipment;*
> *(ii) have been acquired, constructed or developed with the intention of being used on a continuing basis; and*
> *(iii) are not intended for sale in the ordinary course of business."*

The definition of property, plant, and equipment has been met because:

- the new trailer and small tools are held for use in the production of goods (houses, in this case);
- they have been acquired with the intention of being used on a continuing basis; and
- they are not intended for sale in the ordinary course of business, as they are being used to build houses.

As these items provide future economic benefit, they should be capitalized and not expensed. The items will be subsequently depreciated over their estimated useful lives, which is five years for the small tools ($30,600 ÷ 5 = $6,120 depreciation per year), and ten years for the trailer ($35,000 ÷ 10 = $3,500 depreciation per year). Since the trailer was purchased at the end of December 2021, depreciation will only start in January 2022.

The journal entry would be as follows:

DR PP&E	$65,600	
CR Miscellaneous		$65,600
DR Depreciation expense – small tools	$6,120	
CR Accumulated depreciation – small tools		$6,120

For practical reasons, IHC may decide to set an accounting policy to not capitalize small tools that are under a certain dollar threshold, as it would not be worth the time and effort it would take to record those tools and depreciate them over time.

Equipment

Equipment was purchased in February 2021 for a value of $350,000. This equipment is depreciated over seven years, which is appropriate since it represents its useful life. However, 12 months of depreciation was taken in 2021, when the equipment was owned only for 11 months. Depreciation should be decreased by $4,167 ($350,000 ÷ 7 years ÷ 12 months).

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

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

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

Reaching competence – The candidate attempts to discuss the accounting treatment for some of the other accounting issues.

Competent – The candidate discusses the accounting treatment for some of the other accounting issues.

Competent with distinction – The candidate thoroughly discusses the accounting treatment for most of the other accounting issues.

Assessment Opportunity #3 (Breadth Opportunity)

The candidate calculates IHC's federal corporate income taxes payable.

The candidate demonstrates competence in Taxation.

CPA Map Technical Competencies:		**Core**
6.2.2	Advises on taxes payable for a corporation	**B**
6.4.1	Evaluates adherence to compliance requirements	**B**

CPA Map Enabling Competencies:
6.1.1 Identifies and articulates issues within areas of work responsibility
6.1.2 Uses qualitative and quantitative techniques to clarify the nature of problems
6.2.4 Completes thorough quantitative and qualitative analyses to identify and evaluate potentially viable alternatives
6.3.1 Uses evidence and judgment to recommend and justify solutions or conclusions

			Note
Adjusted net income for accounting purposes		$759,838	1
Add back:			
Meals and entertainment	1,450		2
Penalty on payroll deductions	3,800		3
Depreciation and amortization	66,120		4
		71,370	
Deductions:			
CCA – other assets		171,150	5, 6
Net income for tax purposes and taxable income		660,058	
Federal small business rate (first $500,000)	9%	45,000	
Federal general rate (remainder)	15%	24,009	
Federal income taxes payable		$ 69,009	

Notes:

1. Original net income revised with the above accounting adjustments: $498,900 + $200,000 + $1,458 + $65,600 - $6,120 = $759,838.
2. Per 67.1(1) of the Income Tax Act, meals and entertainment are only 50% deductible: $2,900 × 50% = $1,450.
3. Under 18(1)(t), penalties paid to the Canada Revenue Agency are non-deductible.
4. As they are amounts on account of capital, depreciation and amortization are not deductible. Instead, IHC may claim capital cost allowance (CCA): $60,000 + $6,120 = $66,120.
5. The tools worth less than $500 each are included as Class 12 assets.
6. The CCA calculation is as follows:

Class	Asset	Additions	Acc. Inv. Incentive Adjustment	Total for CCA	Rate	CCA	Ending UCC Balance
1	Sales and admin. office	220,000	110,000	330,000	6%	19,800	200,200
8	Equipment	350,000	175,000	525,000	20%	105,000	245,000
10	Trailer	35,000	17,500	52,500	30%	15,750	19,250
12	Small tools	30,600	0	30,600	100%	30,600	0
		635,600				171,150	464,450

The trailer and small tools are both considered capital items for income tax purposes and are therefore not deductible from income, other than through the capital cost allowance regime.

The accelerated investment incentive applies to all additions in 2021 but, for Class 12, as this has a 100% CCA rate, it simply suspends the half-year rule (which does not apply to small tools in the first place), and does not require adjustment.

Instalments

As the balance payable this year exceeds $3,000, corporate tax instalments equal to one-quarter of the balance payable are due each quarter. Therefore, IHC will need to remit $17,252 ($69,009 ÷ 4) on the last day of each quarter of 2022. As it is eligible for the small business deduction, IHC is eligible for quarterly instalments. The first instalment is now late, and the deficiency can be made up for by paying the second instalment early.

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

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

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

Reaching competence – The candidate attempts to calculate IHC's federal corporate income taxes payable.

Competent – The candidate calculates IHC's federal corporate income taxes payable.

Competent with distinction – The candidate thoroughly calculates IHC's federal corporate income taxes payable.

Assessment Opportunity #4 (Depth and Breadth Opportunity)

The candidate prepares the cash flow projections for the next three fiscal years.

The candidate demonstrates competence in Finance.

CPA Map Technical Competencies:		**Core**
5.2.1	Evaluates the entity's cash flow and working capital	**A**

CPA Map Enabling Competencies:
6.1.2 Uses qualitative and quantitative techniques to clarify the nature of problems
6.2.3 Questions the relevance and tests the quality of information and assumptions in own analyses
6.3.2 Articulates limitations to recommendations

Intelligent House Construction Inc.
Cash Flow Projection

		Year 1	Year 2	Year 3	Note
Number of houses		10	15	30	
Unit price		400,000	400,000	400,000	
Inflows					
Sales		4,000,000	6,000,000	12,000,000	
Cost of sales	51%	2,040,000	3,060,000	6,120,000	1
Gross profit		1,960,000	2,940,000	5,880,000	
Loan cash inflow		1,000,000			
Interest income		1,750	1,750	1,750	2
Road damage deposit reimbursement			200,000	300,000	3
Total inflows		2,961,750	3,141,750	6,181,750	
Outflows					
Salaries		900,000	1,035,000	1,190,250	4
Road damage deposit		200,000	300,000	600,000	5
Environmental fee		200,000	200,000	600,000	6
Warehouse rental		180,000	240,000	240,000	7
Insurance		180,000	270,000	540,000	8
Advertising		100,000	150,000	300,000	9
Meals and entertainment		6,117	9,176	18,352	10
Bank charges and interest		13,922	20,883	41,766	10
Office supplies and materials		5,273	7,910	15,820	10
Association dues		2,742	4,113	8,227	10
Professional fees		5,695	8,543	17,086	10
Repairs and maintenance		40,078	60,117	120,234	10
Phone and utilities		21,727	32,590	65,180	10
Loan interest		80,000	53,333	26,667	11
Loan repayment		333,333	333,333	333,333	12
2021 income taxes owing (calculated earlier)		69,009			
Income taxes			3,929	82,513	13
Total outflows		2,337,896	2,728,927	4,199,428	14
Net cash flows		623,854	412,823	1,982,322	

Notes:

1. Revised percentage of cost of sales for Year 1 is 51% (($1,107,600 - $140,000) ÷ ($1,836,300 + $200,000 - $140,000)), which is applied to the three subsequent years.
2. $175,000 × 1% = $1,750.
3. None for the first year, $200,000 ($20,000 × 10 houses) for the second year, and $300,000 ($20,000 × 15 houses) for the third year, assuming no damage caused to the roads.
4. Salaries includes a 15% increase of $900,000 in Year 1.
5. $200,000 ($20,000 × 10 houses) for the first year, $300,000 ($20,000 × 15 houses) for the second year, and $600,000 ($20,000 × 30 houses) for the third year.
6. $200,000 ($200,000 for 10 houses completed) for the first year, $200,000 ($200,000 for 10 houses completed) for the second year, and $600,000 ($200,000 × 3 for 30 houses completed) for the third year.
7. $15,000 × 12 = $180,000 for the first year and ($15,000 + $5,000) × 12 = $240,000 for Years 2 and 3.
8. $180,000 ($4 million × 4.5%) for the first year, $240,000 ($6 million × 4.5%) for the second year, and $540,000 ($12 million × 4.5%) for the third year.
9. $100,000 ($4 million × 2.5%) for the first year, $150,000 ($6 million × 2.5%) for the second year, and $300,000 ($12 million × 2.5%) for the third year.
10. Calculated as increasing at the same level of sales: $4 million ÷ $1,896,300 = 211% increase for Year 1; $6 million ÷ $4 million = 150% increase for Year 2; and $12 million ÷ $6 million = 200% increase for Year 3.
11. Loan interest: $1 million × 8% = $80,000 for Year 1, ($1 million - $333,333) × 8% = $53,333 for Year 2, and ($1 million - $333,333 - $333,333) × 8% = $26,667 for Year 3.
12. Loan repayment: $1 million ÷ 3 = $333,333.
13. Gross profit plus interest income less all outflows except for loan repayment and Year 1 income taxes owing. For simplicity, income tax has been calculated at the higher rate and presented in the year following the year it relates to, and the timing of income tax instalments and final payments has been ignored.
14. As they do not apply beyond Year 1, miscellaneous expenses are not included.

Conclusion

With the $1 million of financing, cash flows are positive in each of the three years, which suggests that IHC can repay the debt and interest each year. However, it appears that the entire $1 million will not be necessary. You should consider whether a smaller amount should be borrowed, which would save a significant amount of interest.

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

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

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

Reaching competence – The candidate attempts to prepare the cash flow projection for the next three fiscal years.

Competent – The candidate prepares the cash flow projection for the next three fiscal years to see whether IHC can meet the capital and interest payments.

Competent with distinction – The candidate prepares a thorough cash flow projection for the next three fiscal years to see whether IHC can meet the capital and interest payments.

Assessment Opportunity #5 (Breadth Opportunity)

The candidate discusses the areas of improvement noted by Anthony and proposes solutions, suggests key performance indicators, and discusses the broader strategy and governance issues.

The candidate demonstrates competence in Strategy and Governance.

CPA Map Technical Competencies:		**Core**
2.1.3	Evaluates mechanisms used for compliance purposes	**B**
2.3.1	Evaluates the entity's strategic objectives and related performance measures	**B**
2.4.1	Analyzes key operational issues including the use of information assets and their alignment with strategy	**B**

CPA Map Enabling Competencies:
5.1.1 Applies general business knowledge to enhance work performed
5.1.2 Recognizes the interrelationships among departmental and functional areas within the organization
5.1.3 Develops and uses knowledge of the organization, industry and stakeholders
6.3.1 Uses evidence and judgment to recommend and justify solutions or conclusions
6.3.2 Articulates limitations to recommendations

Areas for Improvement

Compliance

Molly does not have time to keep up with IHC compliance deadlines, resulting in penalties to be paid by the entity. It is not clear whether every compliance obligation has been identified. We recommend hiring an accountant to take charge of the day-to-day accounting, payroll, compliance deadlines, and the preparation of needed management information. Rather than having to deal with administrative matters, this would allow the shareholders to focus on their strengths, and add more value to the company in the long run.

Job costing, revenue, and profit tracking

The long-term survival of IHC is dependant on its ability to generate profits on each house built and sold. Cost control is a key success factor in the industry, as the selling price of the houses is generally determined before the construction work begins. Cost overruns on a few houses can jeopardize IHC's solvency and its capacity to operate as a going concern. A robust job-costing system is key, as well as a budgetary control process that tracks variances between budgeted costs and actual costs for each specific house being built. Setting the right price for each house is also crucial, and right now, you are basing the price on the margin that you want. The spreadsheet that is currently being used does not seem to be providing you with the information you need. Instead of looking at the detail analysis, you need to have key performance indicators (KPIs) that will help you assess the situation. I have provided you with KPIs below that will help you achieve this.

Reputation

As IHC was very recently created and does not currently have a stable buyer base that can provide word-of-mouth advertising, its reputation is dependant on the satisfaction of the buyers purchasing houses from IHC in these first years. Monitoring and evaluating buyer satisfaction is extremely important in this context.

However, there seem to be issues with the subcontractors; inappropriate comments were made by some subcontractors, and subcontractors were not onsite when they were supposed to be, at 10:00 am, during your visit. There seems to be no rigorous process for selecting subcontractors, as you barely have time to select subcontractors and relay your values to them. To monitor how well the company is performing in this area, it might be relevant to formalize the subcontractor selection process, and to have buyers fill out a satisfaction questionnaire, evaluating the employees and subcontractors. I have suggested KPIs below to help you monitor customer satisfaction. IHC values should also be communicated to the subcontractors, so that they are able to follow them when dealing with IHC's customers.

Decision-making process

Both Molly and Benjy have made important decisions, such as signing a new vendor contract or signing an offer to purchase new land, without contacting the other shareholders or properly evaluating risks and opportunities.

In the future, any new projects that IHC is considering should go through a rigorous evaluation before being adopted. Risks and opportunities of each project should be considered and evaluated. The three shareholders, together, should consider their willingness to accept the risks identified, or determine if there are ways to mitigate those risks.

There should be an agreement between the three shareholders regarding what types of decisions require consensus of all the shareholders or by a single shareholder, and which shareholder should be responsible for which decisions. For example, any new projects would likely need the approval of all three shareholders before going ahead. There could also be dollar thresholds put in place in terms of approvals for items such as expenditures, signature of vendor contracts, hiring of employees, etc.

Key Performance Indicators (KPIs)

Some examples of KPIs that might be useful for IHC are as follows.

Financial measures

Examples of financial KPIs related to job costing, revenue, and profit, as discussed above, would include:

- budgeted construction cost versus actual construction cost variance for each of the basic components of the house (foundation, structure, furniture, electricity and plumbing, specific technical automation accessories, etc.).
- budgeted gross margin versus actual gross margin for each house; this ratio would incorporate the cost of the land.
- selling price of houses versus market prices of comparable houses.
- number of hours worked by subcontractors versus standard hours, on a per-house basis.

More general financial KPIs could also be used at the company level, such as the following:

- Return on investment (ROI): This ratio could be calculated and monitored using two possible definitions of invested capital—including the cost of undeveloped land, and excluding it. It is important from a strategic perspective for IHC to identify potentially valuable land and purchase it while it is still available. It might take a few years before a return is generated (when a house is ultimately built on it, and subsequently sold), and the benchmarking of the ROI ratio should take this into account.

- Debt-to-equity ratio: Considering the magnitude of IHC's projected growth, a close monitoring of the capital structure is in order. Fixing a cap on this ratio, and closely monitoring it, will ensure that IHC's projected growth is sustainable. This control will help signal the need for IHC to consider bringing in additional shareholders or seeking investment from venture capital firms, for example.

Non-financial measures

The following KPIs could be tracked, and used to monitor buyer satisfaction:
- Day-to-day project completion ratio – actual versus baseline: The buyer often considers timeliness of delivery a key element when purchasing a new house. This KPI would be an advanced indicator of buyer satisfaction.
- Average construction time per home: This KPI would be linked to buyer satisfaction as well, but would also be an advanced indicator of project profitability; delays generally mean cost overruns.
- Buyer satisfaction: This could be measured as a score received on satisfaction surveys, or by the number of complaints received.
- Average time needed to rectify defects or to respond to buyers' queries: This is especially important because of the potential technical issues associated with the "intelligent" nature of the homes. Defects and queries are expected, as buyers are not necessarily familiar with the technology, especially in the months following the sale.

Broader Governance Issues

Mission, vision, and strategy

It is important that the three shareholders spend some time determining what IHC's mission and vision are, and most importantly, what the company's strategy for the future should be.

It seems that you want to build affordable smart homes, but it is not clear if sufficient research on the market has been done to determine whether the current price is a good price point for the market being targeted (currently, price is based on the margin wanted). Also, IHC must determine which type of customer it will be targeting, which will help orient important decisions such as the purchase of land in specific neighbourhoods, more targeted marketing incentives, or the size of the houses being built.

It also seems that the three of you are making short-term decisions rather than planning ahead by, for example, signing a big contract for electrical services and signing an offer to purchase five pieces of land, which will use up funds, while at the same time planning to borrow money to buy land and build 55 new houses in a three-year span. Important decisions are being made without consultation with each other. The three shareholders need to go through a strategic planning process, to discuss where they want to take IHC in the future and make IHC's trajectory clearer. After that, any new project should be analyzed to determine if it fits into IHC's vision and strategy.

This will help determine whether the project is a good fit for IHC or if the vision and/or strategy need amendment. Going from five completed houses in a year (and two started) to an average of 18 a year (55 houses in three years) is ambitious, and you need to take time to consider what this involves and whether it is the best growth strategy.

Accountability structure for shareholders

There should also be a proper accountability structure, to ensure that each shareholder understands their responsibilities and carries them out accordingly. Molly and Benjy seem overwhelmed with their supervisory duties, which risks leading to additional costs in terms of payroll or subcontractor costs. IHC is also at risk of equipment theft without proper supervision of the site.

Basic governance policies should be put in place to ensure that all decisions are properly approved, and to avoid conflict between the three shareholders. Such policies would include the following:

- Create precise job descriptions, detailing the types of operational decisions that each shareholder can take without formal approval from the others. The job descriptions should reflect each shareholder's area of expertise. Routine day-to-day decisions within the area of expertise could be made without approval of the others, while more important decisions, either in terms of dollar amounts or of strategic implications, would have to be approved by all shareholders.
- Schedule regular meetings, to discuss important decisions and to report to the others on the issues each is dealing with that could affect IHC overall.

For Assessment Opportunity #5 (Strategy and Governance), the candidate must be ranked in one of the following five categories:

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

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

Reaching competence – The candidate discusses some of the areas for improvement, or key performance indicators, or overarching strategy and governance issues.

Competent – The candidate discusses some of the issues within the areas for improvement, the key performance indicators, and the overarching strategy and governance issues.

Competent with distinction – The candidate discusses several of the issues within the areas for improvement, the key performance indicators, and the overarching strategy and governance issues.

COMMON FINAL EXAMINATION
MAY 27, 2022 – DAY 3

Case #2 **(Suggested time: 85 minutes)**

Aisha Louis grew up on a farm in Western Canada and created Agro-Share Inc. (ASI), a company that facilitates the sharing of farm equipment. She is the CEO and sole shareholder. ASI offers an app that allows farmers to locate needed equipment within a specified distance and rent it for a short period. In turn, farmers can generate extra income by renting out their idle equipment on the app. ASI was the first to market with this type of app.

Today is March 17, 2022, and you, CPA, are ASI's new controller. Theo Floyd, CFO, enters your office and begins: "ASI wants to grow its operations over the next two years and is considering two options (Appendix I). Please analyze each option from both a quantitative and a qualitative perspective.

"I would also like you to prepare a SWOT analysis of ASI for review at our next board meeting.

"ASI is considering an initial public offering (IPO) in the next year, and the Board of Directors would, therefore, like a preliminary business valuation. An expert has confirmed that technology companies such as ASI are typically valued at six times normalized EBITDA. Here is the draft income statement for the year ended December 31, 2021, and related notes (Appendix II).

"Also, we need to improve our internal controls before the IPO. I want you to review our revenue cycle, discuss the control weaknesses you identify, and recommend improvements (Appendix III).

"In addition, here are the Board of Directors' terms of reference (Appendix IV). Given the potential IPO, please review our governance practices and let me know what we are doing well and how we could improve.

"Finally, ASI is preparing for the 2021 year-end audit, its first since inception. The board has asked for a discussion of materiality, including performance materiality, and of the audit approach that the auditors are likely to take."

Later, Theo sends you an email with some additional requests (Appendix V).

APPENDIX I
THEO'S NOTES ON THE GROWTH OPTIONS

Option 1 – Lease and Share Equipment

In addition to facilitating equipment-sharing between farmers, ASI would lease equipment that is in high demand in order to increase the amount of equipment available for rent on the app. It would lease the equipment from OGI, a farm equipment dealer in Western Canada, and would pay OGI $330,000 per year, for two years, to lease 12 pieces of equipment.

ASI spent $100,000 on market research, which determined the following annual anticipated revenue:

	High Season	Low Season
Number of days	70	295
Revenue per piece of equipment per day	$1,000	$300
Utilization rate (days in use)	100%	20%

As part of the lease agreement, ASI would pay OGI an additional $150,000 per year to maintain the equipment. Insurance would be $5,000 per year per piece of equipment. Transportation of the pieces of equipment between farms would cost $200,000 per year.

Option 2 –Expansion into the Orchard Market

ASI would expand the app's service to the orchard market in Ontario and British Columbia. It would cost an additional one-time $500,000 for app upgrades, which ASI could fund itself.

Marketing the app in these provinces would cost $100,000 per year, and ASI would use its current business model, in which fruit producers could sign up and share equipment between them. Research shows that ASI would likely earn $850,000 in annual revenue, increasing by 10% per year. A one-time, upfront provincial business licence is required, which costs $5,000 per province.

I am worried about expanding into new geographical areas. We also do not know much about orchards. Farm-4-U, a competitor, is gaining market share in our existing market, but there are no competitors in the orchard market. The fruit-growing season differs from the farming season, which would increase the number of high-season weeks.

APPENDIX II
DRAFT INCOME STATEMENT

Agro-Share Inc.
For the year ended December 31, 2021
(in thousands of Canadian dollars)

		Note
Revenue	$ 2,975	
Expenses		
General and administrative	800	1
Salaries and wages	775	2, 3
Bad debt	150	
Interest	110	
Amortization	75	
Total expenses	1,910	
Other income	250	4
Net income	$ 1,315	5

Notes:

1. ASI incurred costs of $35,000 moving its offices this year. ASI anticipates staying at the new location for several years.
2. Aisha and Theo agreed to take salaries of $50,000 each. The CEO and CFO salaries of comparable companies are $350,000 and $300,000, respectively.
3. In 2021, ASI paid a total of $250,000 in bonuses to its senior employees. Ordinarily, bonuses are closer to $100,000 per year.
4. This year, ASI received the Tech Entrepreneur of the Year award, which has a cash prize of $250,000.
5. Income taxes are zero, as ASI is still using up losses incurred during its start-up phase.

APPENDIX III
REVENUE CYCLE DESCRIPTION

Customers download ASI's app, create an account, and enter their personal and payment information. This data is then transmitted to a local server. There have been several attempted cybersecurity breaches.

Customers can pay by credit card or "purchase on account." The accounts receivable clerk, Betty, receives the account creation request, reviews the account information to ensure that it is complete, and adds the customer to the app. No other validation is completed.

Nightly, the revenue generated and new customer information from the app is automatically loaded into the General Ledger (GL). Betty is advised, via a system email, whether the upload is successful. If unsuccessful, Betty reviews the information in the app and manually corrects whatever caused the problem, which is typically duplicate customers or rounding errors. She then reruns the upload process.

The credit card companies deposit funds directly into ASI's bank account and send a statement listing the amounts, by credit card number, on a weekly basis. Betty reconciles the statements to the transactions uploaded from the app. Customers who have not paid by credit card are identified and invoiced. All cheques are received by Betty, who records the receipts in the GL, applying each receipt against the different customer accounts, and then deposits the cheques.

Quarterly, ASI's financial clerk, Genevieve, reconciles the bank balance to the GL. Genevieve sends the reconciliation to the controller for review. The previous controller usually had several questions for her, resulting in Genevieve making various correcting entries.

Farming has good years and bad years, which increases ASI's credit risk. Betty generates the accounts receivable aging report monthly and follows up with customers who have overdue balances. If, after three phone calls, they do not pay, Betty writes off the balance to bad debts. There is no communication back to the IT team to suspend the account.

APPENDIX IV
BOARD OF DIRECTORS' TERMS OF REFERENCE

Composition of the Board

The board shall be composed of at least three individuals, one of whom shall be independent from the company.

Roles and Responsibilities

Strategic direction: Strategies and goals shall be set and implemented by senior management and subsequently sent to the board for information purposes.

Management oversight: The CEO reports to the board, and the day-to-day management is formally delegated to the CEO. The CEO's compensation shall be approved by the board.

Policies: Annually, the board shall approve its only existing policy, the board's terms of reference.

Meetings: Meetings of the board, and of subcommittees, shall be held at least annually.

Ethics hotline: Calls to the company's ethics hotline go directly to the board chair.

Subcommittees

Audit committee: This committee shall have an independent chair and be composed of no fewer than three individuals. The audit committee is responsible for reviewing financial statements, appointing auditors, and overseeing internal controls.

Notes

As at December 31, 2021, membership of the board consisted of

- Aisha Louis, CEO and chair of the board;
- Theo Floyd, CFO, secretary of the board, and designated financial expert; and
- Benz Louis, independent director.

Benz Louis is Aisha's uncle, who lives in Ontario. He started as an apple producer and later became a grain farmer.

The audit committee members are the same as the board members.

APPENDIX V
EMAIL FROM THEO

From: Theo Floyd
To: CPA
Subject: Tax matters

Good morning, CPA.

I forgot to mention that we are expanding our workforce next year. My preference would be for the new workers to be contractors for tax purposes. Please explain the factors that determine whether workers are viewed as employees or contractors for tax purposes.

Also, as two of our four senior developers recently left, we want to increase employee retention by offering the following benefits:

1. Company-run daycare
2. RRSP contribution by ASI to match employee contributions
3. Allowing staff to bring their spouse to the annual "IT for Agriculture" convention in Las Vegas

Please explain the personal tax implications of each benefit from our employees' perspective.

Thanks!

MARKING GUIDE 3-2
AGRO-SHARE INC. (ASI)
ASSESSMENT OPPORTUNITIES

To: Theo Floyd, CFO, ASI
From: CPA, controller, ASI
Subject: Various matters

Assessment Opportunity #1 (Depth and Breadth Opportunity)

The candidate analyzes the two business growth options.

The candidate demonstrates competence in Management Accounting.

CPA Map Technical Competencies:		**Core**
3.2.2	Prepares, analyzes, or evaluates operational plans, budgets, and forecasts	**A**
3.4.1	Evaluates sources and drivers of revenue growth	**B**

CPA Map Enabling Competencies:
6.1.2 Uses qualitative and quantitative techniques to clarify the nature of problems
6.2.4 Completes thorough quantitative and qualitative analyses to identify and evaluate potentially viable alternatives
6.3.1 Uses evidence and judgment to recommend and justify solutions or conclusions
6.3.3 Applies decision criteria to choose among viable alternatives

Option 1 – Lease and Share Equipment

	Year 1	**Year 2**	**Note**
Revenue:			
High season	$ 840,000	$ 840,000	1
Low season	212,400	212,400	2
Total revenue	1,052,400	1,052,400	
Costs:			
Maintenance	150,000	150,000	
Insurance	60,000	60,000	3
Transportation	200,000	200,000	
Lease payments	330,000	330,000	
Total costs	740,000	740,000	
Net	$ 312,400	$ 312,400	

Notes:

1. 70 days × $1,000 per piece × 12 pieces of equipment × 100% utilization rate = $840,000.
2. 295 days × $300 per piece × 12 pieces of equipment × 20% utilization rate = $212,400.
3. $5,000 × 12 pieces of equipment = $60,000.

The $100,000 of market research is a sunk cost and does not impact the future contributions of this option.

Option 2: Expansion into the Orchard Market

	Year 1	Year 2	Note
Total revenue	$ 850,000	$ 935,000	1
Costs:			
App upgrades	500,000		
Marketing	100,000	100,000	
Provincial business licence	10,000		2
Total costs	610,000	100,000	
Net	$ 240,000	$ 835,000	

Notes:

1. Year 2: $850,000 × 110% = $935,000.
2. $5,000 × 2 licences = $10,000.

Overall Comments

The lease and share option has a higher contribution than the orchard option for the first year, but has a lower contribution in the second year. This occurs because the app upgrades for the orchard project are a one-time cost that only affect the first year's contribution. Once the app upgrade costs are incurred, the orchard option clearly outperforms the lease and share option in the following year.

We should also consider some qualitative factors in our assessment.

<u>Lease and share equipment:</u>

- The market for this option is the Western provinces. This is a geographical area that we are familiar with, which makes this option attractive. Aisha grew up in Western Canada, and has experience in this geographical area.
- We would need no major changes to our app, which is a positive factor, as we have recently lost two of our four senior developers.
- There is increased competition in the lease and share equipment market, with Farm-4-U gaining market.

- We would be leasing equipment and renting it out to farmers, which is something we have not done before. There are risks related to this activity, such as insurance, that should be considered before proceeding.
- The contract is only for two years, so if this option is successful and ASI wants to continue for a third year, there is a risk that the lessor increases its prices.
- However, if this option is not successful, the risk is lower than for the orchard option, because the leasing contract is limited to two years and there are no upfront costs (other than the market research, which is a sunk cost).

<u>Expansion into the orchard market:</u>

- This is a new market for us; however, our board member Benz started as an apple producer, which is experience that we can draw upon.
- This option is closer to our existing business model of acting as an agent for farmers to “share” equipment.
- We would need to enhance the app, which could be difficult without our full team of senior developers, and with employee retention appearing to be an issue.
- There is no current competition, which means that we could have the advantage of being first to market in this area.
- The difference between the fruit growing season and the farming season will help spread the work over the year, and will likely allow for the quality of service throughout the year to remain high.
- The difference between the fruit growing season and the farming season will also allow the business to be less seasonal, therefore providing more stable returns throughout the year.
- No market research seems to have been done on this option, as compared to the lease and share option, so the revenue and cost estimates might not be as reliable.
- The $500,000 one-time app upgrade is a large outlay of funds, which increases the risk of this option if things do not go as planned.

As these are all estimates, we should question the assumptions used and consider performing a sensitivity analysis. The research on the potential annual revenue for the expansion into the orchard market, in particular, may not be accurate. Assuming further research confirms the assumptions made in this analysis, I recommend pursuing the orchard option as it has the larger financial contribution and appears to offer the greatest future potential. Although it is a new market for ASI, Benz has experience in the orchard market, and we have experience in this business model. The difference in the growing seasons will also make it more manageable.

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

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

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

Reaching competence – The candidate attempts to prepare a quantitative and qualitative analysis of the two growth options.

Competent – The candidate prepares a quantitative and qualitative analysis of the two growth options.

Competent with distinction – The candidate prepares a thorough quantitative and qualitative analysis of the two growth options.

Assessment Opportunity #2 (Breadth Opportunity)

The candidate prepares a SWOT analysis.

The candidate demonstrates competence in Strategy and Governance.

CPA Map Technical Competencies:		**Core**
2.3.2	Evaluates the entity's internal and external environment and its impact on strategy development	**B**

CPA Map Enabling Competencies:
5.1.1 Applies general business knowledge to enhance work performed
5.1.2 Recognizes the interrelationships among departmental and functional areas within the organization
5.1.3 Develops and uses knowledge of the organization, industry and stakeholders
6.3.1 Uses evidence and judgment to recommend and justify solutions or conclusions

Strengths (Internal)

- ASI is a solid business idea, as evidenced by winning the Tech Entrepreneur of the Year award.
- Aisha Louis, the CEO and sole shareholder, has significant experience in the farming industry. This will increase the likeliness of sound business decisions being made, and the contacts she has in the industry will likely increase the success of the expansion plan.

- Board member Benz Louis has experience in both farming and orchards, as he started as an apple producer and later became a grain farmer. This will also likely improve the relevance of the business decisions being made.
- Despite incurring losses in the past, ASI is now profitable, which is evidenced by positive net income of 1.3 million in 2021.
- ASI has first-to-market advantages, being the first ones in the farm equipment sharing market. Once clients have a good working relationship with their current supplier, they are unlikely to change suppliers. This will facilitate client retention going forward.

Weaknesses (Internal)

- Internal control weaknesses were identified in the revenue cycle, which could cause financial loss. There could be weaknesses in other cycles as well.
- Many improvements are required in the board governance structure, as per my recommendations.
- There has been high staff turnover lately, as half of the senior developers have left. This might indicate a weakness with staff retention, and can also create a weakness in future development, as these are key positions for ASI.

Opportunities (External)

- There are growth opportunities being considered, such as the leasing and sharing of equipment and entering the orchard market.
- There are no competitors in the orchard market, which would allow ASI to be first-to-market in that market.
- Going public will provide more capital to use for further expansion. With enough capital, we could perhaps pursue both options, as they are both profitable.
- There is an opportunity to bring on more expertise, through employees (with the replacement of the two senior developers) and board members (following my recommendation to add members), to help operate the business better.
- The potential to enter the orchard market allows for less seasonal business for ASI.

Threats (External)

- Cybersecurity threats could immobilize our business, which could happen, given the several attempted cybersecurity breaches.
- Farm-4-U is gaining market share in the existing market, and there may be other entrants, if they notice that ASI is profitable, which could reduce ASI's market share or profit margin in its existing business.
- There is a credit risk that exists due to the highs and lows of the farming industry, which could cause financial loss.
- The current business is seasonal. This can create cash flow issues during the slower months, and the necessity to monitor working capital closely.

- There is a risk that natural disasters, which are worsening due to climate change, will disrupt the business, which is mainly agricultural.

For Assessment Opportunity #2 (Strategy and Governance), the candidate must be ranked in one of the following five categories:

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

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

Reaching competence – The candidate identifies some of the SWOT factors impacting ASI**.**

Competent – The candidate discusses some of the SWOT factors impacting ASI.

Competent with distinction – The candidate discusses several of the SWOT factors impacting ASI.

Assessment Opportunity #3 (Breadth Opportunity)

The candidate prepares a preliminary business valuation of ASI.

The candidate demonstrates competence in Finance.

CPA Map Technical Competencies:		**Core**
5.4.2	Applies appropriate methods to estimate the value of a business	**B**

CPA Map Enabling Competencies:
6.2.1 Maintains an objective and questioning mindset to avoid biased analyses
6.2.4 Completes thorough quantitative and qualitative analyses to identify and evaluate potentially viable alternatives

The expert stated that we should value ASI based on a six times normalized EBITDA multiple. We must first calculate EBITDA, adjust for normalizing items as required, and then apply the multiplier.

Business Valuation

			Note
Net income	$	1,315,000	1
Interest		110,000	
Amortization		75,000	
Taxes		0	
EBITDA		1,500,000	
Normalization adjustments:			
Award		(250,000)	2
Salaries		(550,000)	3
Bonus		150,000	4
Moving costs		35,000	5
Normalized EBITDA	$	885,000	
Multiplier		6	
Valuation	$	5,310,000	

Notes:

1. Net income, per financial statements.
2. The one-time award has been removed from income, as it is not recurring.
3. The additional salary expense for the CEO and CFO has been deducted, to arrive at an average salary ($350,000 + $300,000 - $50,000 - $50,000) for a CEO and a CFO in comparable companies.
4. Add back the bonus paid that is above the ordinary amount ($250,000 - $100,000).
5. Add back the one-time moving costs, as they are non-recurring.

Conclusion

The business is valued at approximately $5.31 million. This valuation could change if one of the growth options is pursued.

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

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

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

Reaching competence – The candidate attempts to calculate the value of ASI.

Competent – The candidate calculates the value of ASI.

Competent with distinction – The candidate provides a thorough calculation of the value of ASI.

Assessment Opportunity #4 (Breadth Opportunity)

The candidate discusses the control weaknesses in the revenue cycle and provides recommendations for addressing them.

The candidate demonstrates competence in Audit and Assurance.

CPA Map Technical Competencies:		**Core**
4.1.1	Assesses the entity's risk assessment processes	**A**
4.1.2	Evaluates the information system, including the related processes, using knowledge of data requirements and risk exposures	**B**

CPA Map Enabling Competencies:
6.1.3 Demonstrates skepticism, objectivity, due care and persistence when identifying issues
6.2.1 Maintains an objective and questioning mindset to avoid biased analyses
6.2.4 Completes thorough quantitative and qualitative analyses to identify and evaluate potentially viable alternatives
6.3.1 Uses evidence and judgment to recommend and justify solutions or conclusions

Data Security

<u>Weakness:</u> Personal and sensitive data is hosted on a local server, and there have been several attempted security breaches.

Implication: If personal data is breached, it could lead to negative reputational risks, which could reduce revenue and cause increased costs in order to remedy breaches. Further, if customer data is tampered with, ASI may not be able to provide its services when requested, potentially disrupting operations.

Recommendation: As ASI has only a few employees (based on salaries), and probably does not have the information-system security expertise necessary for providing the security internally, it should consider cloud-based data hosting, as it typically includes multiple backups and added security.

Credit Policy

Weakness: Customers can purchase "on account," meaning that they have been extended credit with no validations to ensure that they are creditworthy.

Implication: This could increase the risk of bad debts, which would reduce net income.

Recommendation: A credit check should be performed for all customers purchasing on account. Alternatively, ASI could offer payment through direct debit services that are not linked to credit cards, to provide another payment option for those customers who dislike paying by credit card or do not have a credit card.

Weakness: Customers whose bad debts have been written off are still allowed to purchase on account.

Implication: Customers who have defaulted once are likely to default again. This will result in additional cost to ASI, and reduce net income.

Recommendation: Accounts should be suspended until all amounts due are paid by the customer.

Write-offs of Bad Debts

Weakness: Bad debts write-offs are not being approved by anyone other than the accounts receivable clerk, and bad debts are written off after only three phone calls.

Implication: Bad debts were $150,000 last year, which seems high. The fact that the write-offs are not approved by the CFO or the board, or followed up on, could leave room for more bad debts to occur in the future, which would lead to increased bad debt expenses.

Recommendation: In addition to phone calls, more escalation techniques (e.g., written communication from the company, in-person visit to collect the cash, or use of a debt collection agency) should be applied to late accounts receivables before they are written off. If reasonable follow-up has occurred but not been successful, write-offs should be approved by the CFO and potentially the board, particularly given the lack of segregation of duties in accounts receivable (discussed below).

Segregation of Duties – Upload of Data

Weakness: The auto upload can be manually adjusted to correct errors. These corrections are not reviewed.

Implication: This provides the opportunity to manipulate the data and affect the accuracy of the revenue data due to fraud or error.

Recommendation: An individual who does not have access to the accounting system should be correcting the errors. In addition, someone should review the changes made to the upload file, to ensure that they are valid.

Segregation of Duties – Accounts Receivable Clerk

Weakness: Betty, the accounts receivable clerk, is performing too many incompatible duties. She can enter data into the accounting system and has access to the cheques received. She is also in charge of writing off bad debts.

Implication: There is inappropriate segregation of duties. The accounts receivable clerk could divert cheques to her own accounts and then create entries in the system to hide errors, including writing off accounts.

Recommendation: The accounts receivable clerk should not have access to the cheques received. The receptionist or another individual should receive the cheques, log them, and provide the log to the accounts receivable clerk, to record the receipts. The deposits should be made by someone who does not have access to the accounting records.

Also, someone (perhaps CPA) should be reviewing the journal entries and posting them to the general ledger.

Bank Reconciliation

Weakness: Bank reconciliations are performed only quarterly.

Implication: There are various correcting entries that result from review of the bank reconciliation, affecting the accuracy of monthly data, as those adjustments are not done each month, but after the fact. In addition, bank reconciliations are a good anti-fraud control. Completing and reviewing quarterly would not detect fraud in as timely a fashion.

Recommendation: Bank reconciliations should be prepared more frequently, likely monthly.

For Assessment Opportunity #4 (Audit and Assurance), the candidate must be ranked in one of the following five categories:

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

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

Reaching competence – The candidate identifies some of the control weaknesses in the revenue cycle and provides recommendations for addressing them.

Competent – The candidate discusses some of the control weaknesses in the revenue cycle and provides recommendations for addressing them.

Competent with distinction – The candidate discusses several control weaknesses in the revenue cycle and provides recommendations for addressing them.

Assessment Opportunity #5 (Breadth Opportunity)

The candidate assesses ASI's current Board of Directors' governance practices, and provides recommendations.

The candidate demonstrates competence in Strategy and Governance.

CPA Map Technical Competencies:		**Core**
2.1.1	Evaluates the entity's governance structure (policies, processes, codes)	**B**
2.1.2	Evaluates the specific role of the audit committee in governance	**B**

CPA Map Enabling Competencies:
5.1.1 Applies general business knowledge to enhance work performed
5.1.2 Recognizes the interrelationships among departmental and functional areas within the organization
5.1.3 Develops and uses knowledge of the organization, industry and stakeholders
6.3.1 Uses evidence and judgment to recommend and justify solutions or conclusions

Board of Directors – Weaknesses

Number of board members

Weakness: The number of board members is low, at only three.

Explanation: A board is expected to provide proper oversight and governance, which is best achieved by more members, who can present varying points of view.

Recommendation: ASI should increase its number of board members (see next point).

Independence of board members

Weakness: Board members are not independent of management.

Explanation: The board should be able to constructively challenge and oversee management, which is difficult to do if the board consists mostly of members of management and their relatives. The board also approves the CEO's compensation, but the board's chair is the CEO, which results in a lack of independence.

Recommendation: The CFO should not be on the board. As the sole shareholder, the CEO is expected to remain on the board, and additional independent members should be added so that the company can benefit from their expertise.

Weakness: Benz is Aisha's uncle, which could impair his objectivity.

Explanation: Objectivity for oversight of management could be impaired. However, Benz can add valuable insight to the company based on his experience as a farmer and with orchards, which would help support one of our expansion opportunities.

Recommendation: If Benz is going to remain, additional board members should be added to provide more clearly independent members.

Additional board members with expertise in operating public companies, obtaining financing, the use of technology in the farming industry, and with an understanding of different provinces and future markets for expansion could be valuable to ASI.

<u>Independence of audit committee members</u>

Weakness: The audit committee is composed of non-independent individuals.

Explanation: The audit committee is charged with financial oversight and should therefore be composed of unbiased individuals.

Recommendation: The audit committee should have more independent directors. In addition, after Theo is removed, ASI will have to seek out another financial expert for its audit committee.

<u>Strategic direction</u>

Weakness: Senior management sets the strategic direction, implements it, and only informs the board subsequently. The board is left out of the discussion regarding the strategic direction process.

Explanation: The board's role is to set the strategic direction of the company as management has a bias to set policies that benefit them and not the company as a whole.

Recommendation: The board and senior management should complete joint strategic planning sessions in order to set the company's direction. Management should ensure that the direction set by the board is being followed, and that progress on strategies and related actions are reported periodically to the board.

<u>Policy review</u>

Weakness: The board only approves one policy: their own terms of reference.

Explanation: Approving the terms of reference is important; however, other policies are important to develop, to help set the tone and direction of the company.

Recommendation: The board should develop other important policies, such as a code of conduct policy, a conflict-of-interest policy, a whistleblower policy, and the subcommittee terms of reference. These should all be approved by the board on a regular basis.

<u>Meeting frequency</u>

Weakness: The board meets at least annually.

Explanation: This frequency is not sufficient, especially should ASI proceed with the IPO, as a public company must provide quarterly financial updates to shareholders and users (at a minimum).

Recommendation: The board should meet at least quarterly.

<u>Ethics hotline</u>

Weakness: It is good that the company has an ethics hotline; however, the calls go directly to the board chair, who is the CEO.

Explanation: If ethics complaints are about the CEO, there would be a conflict of interest in investigating complaints. Additionally, this will reduce the likelihood that individuals lodge complaints on the hotline, for fear of losing their jobs.

Recommendation: The calls should go to an independent director, typically the audit committee chairperson.

<u>Subcommittees</u>

Weakness: It is good that there is an audit committee; however, there should be additional subcommittees.

Explanation: If the board is overseeing all areas of the organization, members can become overwhelmed; therefore, subcommittees are a good practice, to ensure effective oversight.

Recommendation: ASI should add additional subcommittees as needed, including a nominating and governance committee, a compensation committee, and other committees that make sense for ASI.

Board of Directors – Strengths

<u>Number of board members</u>

Strength: There is an odd number of members on the board.

Explanation: Having an odd number of members is appropriate, to eliminate the possibility of a tie when voting.

Recommendation: While we recommend increasing the number of board members, maintaining an odd number is appropriate.

<u>Benz Louis' experience</u>

Strength: Benz Louis has experience in farming and orchards.

Explanation: This experience is helpful for guiding the board with the existing business in farming, and if ASI decides to proceed with the expansion into the orchard market.

Recommendation: If board members can be added as suggested above, it is recommended that Benz Louis remains on the board, as his experience will be helpful.

Board's role

Strength: The board oversees the CEO, who oversees the rest of management.

Explanation: This is an appropriate structure; the board should not be tasked with day-to-day management, and should retain its oversight role.

Recommendation: No changes required.

List of roles and responsibilities

Strength: The responsibilities of the audit committee are appropriate.

Explanation: Having a list of roles and responsibilities provides clarity, and allows the committee to understand expectations and what needs to be done in order to be effective in their role.

Recommendation: ASI should continue to provide clear roles and responsibilities, and develop specific terms of reference for the audit committee and other subcommittees that it creates.

For Assessment Opportunity #5 (Strategy and Governance), the candidate must be ranked in one of the following five categories:

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

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

Reaching competence – The candidate attempts to assess ASI's current board of directors' governance practices, or provides recommendations.

Competent – The candidate assesses ASI's current board of directors' governance practices and provides recommendations.

Competent with distinction – The candidate thoroughly assesses ASI's current board of directors' governance practices and provides recommendations.

Assessment Opportunity #6 (Breadth Opportunity)

The candidate discusses what the estimated audit materiality will likely be, and the audit approach that the auditors are expected to take.

The candidate demonstrates competence in Audit and Assurance.

CPA Map Technical Competencies:		**Core**
4.3.4	Assesses materiality for the assurance engagement or project	**B**
4.3.6	Develops appropriate procedures, including Audit Data Analytics (ADA), based on the identified risk of material misstatement	**B**

CPA Map Enabling Competencies:
6.2.1 Maintains an objective and questioning mindset to avoid biased analyses
6.2.4 Completes thorough quantitative and qualitative analyses to identify and evaluate potentially viable alternatives
6.3.1 Uses evidence and judgment to recommend and justify solutions or conclusions

Audit Materiality

The auditors will determine audit materiality based on their assessment of the users of the financial statements and their sensitivity to misstatements.

There are several users, as follows:

- Aisha Louis, the sole shareholder of ASI, will use the financial statements to assess the performance of ASI.
- ASI is considering an initial public offering (IPO) in the next year. Therefore, there will be potential investors, who will use the financial statements to assess performance, financial health, and the likely return on investment of ASI.
- ASI has interest expense, and therefore has debt. The current lender will use the financial statements to assess whether ASI can repay any outstanding loans.
- Management will also use the financial statements to assess achievement of their objectives, as there do not seem to be other reports produced for management of the company.

According to the Application and Other Explanatory Material in CAS 320:

> *"A4 Determining materiality involves the exercise of professional judgment. A percentage is often applied to a chosen benchmark as a starting point in determining materiality for the financial statements as a whole…*

A5 Examples of benchmarks that may be appropriate, depending on the circumstances of the entity, include categories of reported income such as profit before tax, total revenue, gross profit and total expenses, total equity or net asset value. Profit before tax from continuing operations is often used for profit-oriented entities…

A8 Determining a percentage to be applied to a chosen benchmark involves the exercise of professional judgment. There is a relationship between the percentage and the chosen benchmark, such that a percentage applied to profit before tax from continuing operations will normally be higher than a percentage applied to total revenue. For example, the auditor may consider five percent of profit before tax from continuing operations to be appropriate for a profit-oriented entity in a manufacturing industry, while the auditor may consider one percent of total revenue or total expenses to be appropriate for a not-for-profit entity. Higher or lower percentages, however, may be deemed appropriate in the circumstances."

Therefore, given the users' focus on performance (i.e., return on investment and ability to repay), income from continuing operations before income taxes would be an appropriate basis upon which to determine materiality. Given the users of ASI's financial statements and their high sensitivity to misstatements (mainly given the upcoming IPO), it is likely that the external auditors would use professional judgment in setting materiality at lower than the typical 5%. My estimate is that they would set materiality at 3% of income before tax. The income-before-tax figure would also be adjusted for non-recurring items, which would not reflect the normal course of operations.

The calculation is as follows:

Net income (same as income before tax)	$	1,315,000
Less: Tech Entrepreneur of the Year award		(250,000)
Plus: Bonus above ordinary amount ($250,000 - $100,000)		150,000
Plus: One-time moving costs		35,000
Adjusted net income		1,250,000
Percentage		3%
Planning audit materiality	$	37,500

As such, planning audit materiality is likely to be set at $37,000.

The auditors will also calculate performance materiality. Per CAS 320.A13, performance materiality is "*set to reduce to an appropriately low level the probability that the aggregate of uncorrected and undetected misstatements in the financial statements exceed materiality for the financial statements as a whole*." Although it is also a matter of professional judgment, the acceptable range for performance materiality is 50% to 90% of overall materiality. Given that the risk of material misstatement will likely be assessed as high, due to this being a first-year audit, the control weaknesses that have been identified, and the possible motivation to misstate the financial statements, given the upcoming IPO, the auditors will likely select the lower end of the range, perhaps 60%, or $22,200 ($37,000 × 0.6).

Audit Approach

The auditors will select either a substantive approach, in which all audit evidence obtained will be through substantive testing, or a combined approach, in which the audit evidence obtained will be through a combination of controls testing and substantive testing. A combined approach will reduce the overall amount of audit work required to be performed, but it requires that control risk be assessed at less than maximum.

The auditors will consider the various areas of the financial statement separately. For the revenue cycle (revenue, accounts receivable, etc.), the auditors will be unlikely to take a combined approach. There have been many weaknesses noted in the controls in this cycle (see above); therefore, the control risk will be assessed at maximum. The auditor will take a substantive approach in this case. In particular, the auditor will likely need to test the functionality of the app and the reliability of the data to ensure that the data from the app can be relied upon, as revenue is recorded on this basis, and will likely be used as audit evidence.

For the other areas, such as the purchase cycle and other expenses, the auditors will also likely take a substantive approach, given that there are low volumes of transactions in these areas. For example, for salaries and wages, total salaries are only $775,000, with $250,000 of that being bonus payments and another $100,000 representing management salaries, so there are likely approximately only six to eight employees in the company, assuming average salaries of approximately $60,000. The auditors would likely find it more efficient to take a fully substantive approach for this account. Similarly, for an account such as interest expense, it would be straightforward to audit using a substantive approach, and control testing would be unnecessary. As the company develops software apps, it may have significant research and development costs; these would also be easiest to audit substantively.

As this is ASI's first audit, the auditors will also have to perform procedures over the prior year ending balances of the balance sheet accounts, so that they have evidence over the opening balances. The auditors will have to plan for this, as it will require additional work for them.

Given the typical requirement to include at least three years of balance sheets and two years of income statements in an IPO, the auditor may have to go back another year to perform an audit on the preceding year. Failing that, ASI may have to defer its IPO for one year, until it has the requisite number of years of audited financial information.

For Assessment Opportunity #6 (Audit and Assurance), the candidate must be ranked in one of the following five categories:

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

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

Reaching competence – The candidate attempts to discuss materiality and the audit approach.

Competent – The candidate discusses materiality and the audit approach.

Competent with distinction – The candidate thoroughly discusses materiality and the audit approach.

Assessment Opportunity #7 (Breadth Opportunity)

The candidate explains the difference between employees and contractors for tax purposes and explains the personal tax implications of the proposed benefits.

The candidate demonstrates competence in Taxation.

CPA Map Technical Competencies:		**Core**
6.3.2	Evaluates income taxes payable for an individual	**B**
6.3.3	Analyzes specific tax-planning opportunities for individuals	**B**

CPA Map Enabling Competencies:
6.1.1 Identifies and articulates issues within areas of work responsibility
6.2.4 Completes thorough quantitative and qualitative analyses to identify and evaluate potentially viable alternatives
6.3.1 Uses evidence and judgment to recommend and justify solutions or conclusions
6.3.3 Applies decision criteria to choose among viable alternatives

Employee versus Contractor

When determining whether an individual is an employee or a self-employed worker, the Canada Revenue Agency (CRA) states that you should consider the following.

- The level of control that ASI has over the worker's activities: Can ASI tell the worker how to do the work, or what specific work will be done? The more control that is given to the worker over the work being done, the more this factor will lean toward the workers being contractors.
- Whether the worker or ASI provides the tools and equipment: Tools that might be relevant for ASI would be computers or laptops. This does not just include who supplies the computer, but also who supplies software, IT support, etc. Having workers use their own tools would lean this factor in the direction of the workers being contractors.
- Whether the worker can subcontract the work or hire assistants: Can the worker we are considering hiring decide to subcontract out a portion of work? Letting them subcontract out a portion of the work would be an indication that they might be a contractor.
- The degree of financial risk that the worker takes: If we hire an individual for a defined scope of work, will we compensate them extra if they go over budget? Placing more financial risk with the workers would help indicate that they are contractors.
- The degree of responsibility for investment and management that the worker holds: The CRA will consider the type of additional costs that are incurred, even if work is not ongoing. For example, the contractor may have their own office where they perform some of the work. The more responsibility the worker has for these costs, the more indication that the worker is a contractor for tax purposes.
- The worker's opportunity for profit and risk of loss: Contractors will often have an ability to make a variable level of profit from a contract, whereas employees are paid a fixed amount and incur fewer costs. If you prefer for the workers to be contractors, it would be beneficial to give them more of the risk of profit or loss on the jobs they are working on.
- Any other relevant factors, such as written contracts: If ASI wishes for the workers to be contractors rather than employees, the terms of the contract should say so explicitly. This is not sufficient on its own to put a worker into the category of contractor, but it will be a contributing factor should it ever be disputed.

Taxable Benefits

I have reviewed the list of benefits you suggested and explained the tax implications from the point of view of the employee receiving the benefits.

<u>Company-run daycare</u>

This would be a taxable benefit unless all of the following are met:

- The services are provided by ASI.
- ASI manages the daycare.
- It must be provided to all employees at little or no cost.
- The daycare is only available to ASI employees.

A company-run daycare would also reduce the amount that an employee could deduct for childcare expenses on their tax return, as they would not be incurring the costs.

RRSP contribution by ASI to match employee contributions

Contributions that ASI makes to an employee's RRSP are a taxable benefit. The amount of contribution will be added to the employee's employment income for the year, but they will be able to deduct the contribution made on their income tax return.

However, if we offer a company-managed RRSP and employees choose to make contributions, employees will be able to contribute to this RRSP without having taxes withheld from the portion of their pay that they contribute directly to this RRSP. In addition, taxes will not be withheld from the employer-matching portion of the contributions if the contributions are made directly to the plan. The matching contribution will be taxable income, and the employees will claim the RRSP contribution (both their own contribution and the contribution funded by the employer) as a deduction on their tax return.

Any fees that we pay on behalf of the employee for administration of an RRSP would also be taxable to the employee.

Spouses at the convention

The amount that we pay for the spouse's airfare, hotel, meals and entertainment, etc., would be considered a taxable benefit to the employee unless the spouses were mostly engaged in business activities for the trip.

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

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

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

Reaching competence – The candidate attempts to explain the difference between employees and self-employed workers for tax purposes, or the personal tax implications of some of the proposed benefits.

Competent – The candidate explains the difference between employees and self-employed workers for tax purposes, and the personal tax implications of some of the proposed benefits.

Competent with distinction – The candidate thoroughly explains the difference between employees and self-employed workers for tax purposes, and the personal tax implications of several company benefits.

COMMON FINAL EXAMINATION
MAY 27, 2022 – DAY 3

Case #3 **(Suggested time: 80 minutes)**

Waste to Chemicals Inc. (W2C) was incorporated by Canadian residents Fred and Aurel Aquilas in 2011, with a focus on environmental sustainability. W2C uses technology to chemically convert waste into renewable biofuels, such as methanol and ethanol. In September 2017, after years of research, W2C started operating its Edmonton facility.

Today is April 10, 2022. The December 31, 2021, year-end financial statements have been prepared in accordance with IFRS and authorized for issuance by the Board of Directors. You, CPA, are a financial analyst at W2C.

Aurel calls you to her office and says, "We considered building our own headquarters, and the bank was ready to lend the necessary amount at 8% annual interest, but we opted to lease instead (Appendix I). We also entered into an agreement with a government agency (the Agency) (Appendix II). How will these two transactions be accounted for, and what are their tax implications for 2022? Also, what audit procedures are the auditors likely to perform on these transactions?

"Instead of our annual employee golf day, our social committee is proposing an outdoor adventure day, where employees can go canoeing, rafting, or hiking. The day will cost W2C $200 per employee, which is more expensive than our golf day. Before we decide, can you explain the tax implications of this change?

"We are currently building a new plant in Ontario, and management is debating whether to use it to produce methanol or ethanol. I have provided information on the production process (Appendix III). Please prepare a quantitative and qualitative analysis, and provide a recommendation.

"Chemicon, a global asset management corporation, has recently approached us about investing in W2C. As we have no immediate plans to do an initial public offering (IPO), we are considering Chemicon's two proposals (Appendix IV). I am not interested in their accounting treatment, but rather the factors we should consider in our decision and which proposal you recommend."

APPENDIX I
OFFICE LEASE

W2C signed a five-year, non-cancellable lease that started on January 1, 2022. W2C pays the market rate of $150,000, at the end of each month, to rent three floors of a building. The lease includes a three-year renewal option at the same rate plus inflation.

At the beginning of January 2022, W2C paid $1 million for leasehold improvements to the building, which are expected to last 10 years. The weighted average cost of capital for W2C in December 2021 was 12%.

APPENDIX II
AGREEMENT WITH THE AGENCY

The agreement was signed on January 31, 2022.

W2C received $6 million from the Agency on April 1, 2022, to put towards construction of the Ontario plant. The funds are provided interest-free and are repayable in 60 monthly instalments, commencing on April 1, 2023.

The agreement includes the following conditions:
- The funds must be used for engineering, construction, or equipment costs.
- W2C is not allowed to change its current ownership without the Agency's authorization.
- W2C must disclose to the Agency any close relationships with vendors used for the plant's construction.
- W2C must disclose to the Agency any other government assistance received.

If W2C does not comply with these conditions, the Agency has the right to request full repayment at any time.

Aurel mentioned that W2C is interested in entering more agreements of this type, mostly because the loan renewal for the Edmonton plant built in 2017 bore a higher interest rate and had to be guaranteed by all of W2C's assets.

APPENDIX III
METHANOL AND ETHANOL PRODUCTION

Methanol

Methanol is toxic in its pure form but is present in thousands of everyday products, such as windshield washer fluid and adhesives. It is also used as an engine fuel in high-performance cars, such as stunt cars.

Ethanol

Ethanol is the principal alcohol found in alcoholic beverages and can be consumed in its pure form or used as an antiseptic, such as in hand sanitizer. However, with the automotive industry moving towards the use of less fossil fuel, the most common use of ethanol is as vehicle fuel, and most gasoline available in North America is now blended with 10% to 15% ethanol. Major car racing circuits are also starting to move towards using ethanol. In 2020, ethanol consumption reached an all-time high and is expected to continue increasing.

Production Process

W2C uses non-recyclable municipal waste as its raw material. Municipalities pay W2C $200 per tonne to accept this waste, and they even deliver it to W2C's plant free of charge.

One tonne of waste yields 3 kilolitres (kl) of methanol or 2 kl of ethanol.

Methanol is sold for $1,500 per kl, and ethanol is sold for $2,200 per kl.

The main production costs associated with producing methanol are as follows:

	Cost	Quantity per kl of Methanol
Electricity	$0.10 per kilowatt-hour (kWh)	5,000 kWh
Water	$1.50 per cubic metre ($m^3$)	100 m^3
Oxygen	$50 per kl	3.5 kl
Natural gas	$3 per gigajoule (GJ)	85 GJ
Consumables	$200 per unit	1 unit

Given its toxicity, there is a government-imposed environmental fee of $100 per kl of methanol produced.

To produce 1 kl of ethanol, it takes 25% more electricity and water, 30% more oxygen and natural gas, and 100% more consumables than it takes to produce 1 kl of methanol.

When ethanol is produced, W2C uses alumina to clear the toxicity. Alumina costs $400 per tonne. One tonne of alumina produces 2.5 kl of ethanol.

Ethanol production requires one additional supervisor than methanol production, at an annual salary of $65,000. At full capacity, a plant can annually produce up to either 3,500 kl of methanol or 2,000 kl of ethanol.

APPENDIX IV
CHEMICON PROPOSALS AND OTHER INFORMATION

Proposal 1: Preferred Shares

Chemicon would buy $30 million of Class B non-voting preferred shares of W2C. Each Class B preferred share would be issued at $150. Cumulative annual dividends of 5% would be paid in either cash or additional Class B preferred shares, for a period of five years. As part of the agreement, W2C would be required to spend at least 25% of the funds on Canadian goods and services within a five-year period, commencing from the date of signature. If that requirement is not met, Chemicon can charge penalties of up to $1.5 million annually. After five years, Chemicon will have the right to require W2C to repurchase the preferred shares, at a price equal to the original issue price plus 10%.

Proposal 2: Convertible Debt

Chemicon would loan W2C $40 million, at an annual interest rate of 15%, payable quarterly. The principal would be repayable at the end of four years. The first year of interest could be deferred and added to the principal.

In the case of an initial public offering or a change of control of W2C, the loan would be convertible by Chemicon into common shares of W2C, at a fixed conversion price of $115 per common share.

Other Information:

Current Ownership of W2C

	Number of Common Shares
Aurel Aquilas	300,000
Canada Investment Institute	250,000
Fred Aquilas	150,000
Renewable Energy Foundation	100,000
Total	800,000

COMMON FINAL EXAMINATION
MAY 27, 2022 – DAY 3

Case #3 **(Suggested time: 80 minutes)**

Waste to Chemicals Inc. (W2C) was incorporated by Canadian residents Fred and Aurel Aquilas in 2011, with a focus on environmental sustainability. W2C uses technology to chemically convert waste into renewable biofuels, such as methanol and ethanol. In September 2017, after years of research, W2C started operating its Edmonton facility.

Today is April 10, 2022. The December 31, 2021, year-end financial statements have been prepared in accordance with IFRS and authorized for issuance by the Board of Directors. You, CPA, are a financial analyst at W2C.

Aurel calls you to her office and says, “We considered building our own headquarters, and the bank was ready to lend the necessary amount at 8% annual interest, but we opted to lease instead (Appendix I). We also entered into an agreement with a government agency (the Agency) (Appendix II). How will these two transactions be accounted for, and what are their tax implications for 2022? Also, what audit procedures are the auditors likely to perform on these transactions?

“Instead of our annual employee golf day, our social committee is proposing an outdoor adventure day, where employees can go canoeing, rafting, or hiking. The day will cost W2C $200 per employee, which is more expensive than our golf day. Before we decide, can you explain the tax implications of this change?

“We are currently building a new plant in Ontario, and management is debating whether to use it to produce methanol or ethanol. I have provided information on the production process (Appendix III). Please prepare a quantitative and qualitative analysis, and provide a recommendation.

“Chemicon, a global asset management corporation, has recently approached us about investing in W2C. As we have no immediate plans to do an initial public offering (IPO), we are considering Chemicon’s two proposals (Appendix IV). I am not interested in their accounting treatment, but rather the factors we should consider in our decision and which proposal you recommend.”

APPENDIX I
OFFICE LEASE

W2C signed a five-year, non-cancellable lease that started on January 1, 2022. W2C pays the market rate of $150,000, at the end of each month, to rent three floors of a building. The lease includes a three-year renewal option at the same rate plus inflation.

At the beginning of January 2022, W2C paid $1 million for leasehold improvements to the building, which are expected to last 10 years. The weighted average cost of capital for W2C in December 2021 was 12%.

APPENDIX II
AGREEMENT WITH THE AGENCY

The agreement was signed on January 31, 2022.

W2C received $6 million from the Agency on April 1, 2022, to put towards construction of the Ontario plant. The funds are provided interest-free and are repayable in 60 monthly instalments, commencing on April 1, 2023.

The agreement includes the following conditions:

- The funds must be used for engineering, construction, or equipment costs.
- W2C is not allowed to change its current ownership without the Agency's authorization.
- W2C must disclose to the Agency any close relationships with vendors used for the plant's construction.
- W2C must disclose to the Agency any other government assistance received.

If W2C does not comply with these conditions, the Agency has the right to request full repayment at any time.

Aurel mentioned that W2C is interested in entering more agreements of this type, mostly because the loan renewal for the Edmonton plant built in 2017 bore a higher interest rate and had to be guaranteed by all of W2C's assets.

APPENDIX III
METHANOL AND ETHANOL PRODUCTION

Methanol

Methanol is toxic in its pure form but is present in thousands of everyday products, such as windshield washer fluid and adhesives. It is also used as an engine fuel in high-performance cars, such as stunt cars.

Ethanol

Ethanol is the principal alcohol found in alcoholic beverages and can be consumed in its pure form or used as an antiseptic, such as in hand sanitizer. However, with the automotive industry moving towards the use of less fossil fuel, the most common use of ethanol is as vehicle fuel, and most gasoline available in North America is now blended with 10% to 15% ethanol. Major car racing circuits are also starting to move towards using ethanol. In 2020, ethanol consumption reached an all-time high and is expected to continue increasing.

Production Process

W2C uses non-recyclable municipal waste as its raw material. Municipalities pay W2C $200 per tonne to accept this waste, and they even deliver it to W2C's plant free of charge.

One tonne of waste yields 3 kilolitres (kl) of methanol or 2 kl of ethanol.

Methanol is sold for $1,500 per kl, and ethanol is sold for $2,200 per kl.

The main production costs associated with producing methanol are as follows:

	Cost	Quantity per kl of Methanol
Electricity	$0.10 per kilowatt-hour (kWh)	5,000 kWh
Water	$1.50 per cubic metre ($m^3$)	100 m^3
Oxygen	$50 per kl	3.5 kl
Natural gas	$3 per gigajoule (GJ)	85 GJ
Consumables	$200 per unit	1 unit

Given its toxicity, there is a government-imposed environmental fee of $100 per kl of methanol produced.

To produce 1 kl of ethanol, it takes 25% more electricity and water, 30% more oxygen and natural gas, and 100% more consumables than it takes to produce 1 kl of methanol.

When ethanol is produced, W2C uses alumina to clear the toxicity. Alumina costs $400 per tonne. One tonne of alumina produces 2.5 kl of ethanol.

Ethanol production requires one additional supervisor than methanol production, at an annual salary of $65,000. At full capacity, a plant can annually produce up to either 3,500 kl of methanol or 2,000 kl of ethanol.

APPENDIX IV
CHEMICON PROPOSALS AND OTHER INFORMATION

Proposal 1: Preferred Shares

Chemicon would buy $30 million of Class B non-voting preferred shares of W2C. Each Class B preferred share would be issued at $150. Cumulative annual dividends of 5% would be paid in either cash or additional Class B preferred shares, for a period of five years. As part of the agreement, W2C would be required to spend at least 25% of the funds on Canadian goods and services within a five-year period, commencing from the date of signature. If that requirement is not met, Chemicon can charge penalties of up to $1.5 million annually. After five years, Chemicon will have the right to require W2C to repurchase the preferred shares, at a price equal to the original issue price plus 10%.

Proposal 2: Convertible Debt

Chemicon would loan W2C $40 million, at an annual interest rate of 15%, payable quarterly. The principal would be repayable at the end of four years. The first year of interest could be deferred and added to the principal.

In the case of an initial public offering or a change of control of W2C, the loan would be convertible by Chemicon into common shares of W2C, at a fixed conversion price of $115 per common share.

Other Information:

Current Ownership of W2C

	Number of Common Shares
Aurel Aquilas	300,000
Canada Investment Institute	250,000
Fred Aquilas	150,000
Renewable Energy Foundation	100,000
Total	800,000

MARKING GUIDE 3-3
WASTE TO CHEMICALS INC. (W2C)
ASSESSMENT OPPORTUNITIES

To: Aurel Aquilas
From: CPA
Subject: Analysis requested

Assessment Opportunity #1 (Depth and Breadth Opportunity)

The candidate discusses the accounting treatment for the lease.

The candidate demonstrates competence in Financial Reporting.

CPA Map Technical Competencies:		**Core**
1.2.2	Evaluates treatment for routine transactions	**A**

CPA Map Enabling Competencies:
6.2.1 Maintains an objective and questioning mindset to avoid biased analyses
6.2.4 Completes thorough quantitative and qualitative analyses to identify and evaluate potentially viable alternatives
6.3.1 Uses evidence and judgment to recommend and justify solutions or conclusions

Accounting Treatment for the Lease

Identify if there is a lease

Per IFRS 16 Leases, paragraph 9, "*a contract is, or contains, a lease if it conveys the right to control the use of an identified asset for a period of time in exchange for consideration.*" As per paragraph B9, control is conveyed when the customer has both the right to direct the identified asset's use and to obtain substantially all the economic benefits from that use.

As W2C has rented three floors of the building, it has the right to obtain all the economic benefits from the use of the office space over the rental period. W2C can also determine how to use the office space, which is evidenced by the fact that material leasehold improvements were done within the building right after the start of the lease.

Conclusion: The contract signed for the office space contains a lease.

<u>Identify and separate the lease components</u>

The lease only includes the rental of the building; there are no other components.

<u>Determine the commencement date of the lease</u>

The contract starts from the date that the building was available for use, i.e., on January 1, 2022.

<u>Determine the lease term</u>

Per IFRS 16, paragraph 18, "*An entity shall determine the lease term as the non-cancellable period of a lease together with both:*

a) periods covered by an option to extend the lease if the lessee is reasonably certain to exercise that option; and

b) periods covered by an option to terminate the lease if the lessee is reasonably certain not to exercise that option."

The contract is a five-year term with a three-year renewal option. W2C has incurred a significant amount of money ($1 million) for the leasehold improvements to the building. The leasehold improvements are expected to last 10 years. As per paragraph B37:

> "*At the commencement date, an entity assesses whether the lessee is reasonably certain to exercise an option to extend the lease or to purchase the underlying asset, or not to exercise an option to terminate the lease. The entity considers all relevant facts and circumstances that create an economic incentive for the lessee to exercise, or not to exercise, the option, including any expected changes in facts and circumstances from the commencement date until the exercise date of the option. Examples of factors to consider include, but are not limited to:*
>
> *[…]*
>
> *(b) significant leasehold improvements undertaken (or expected to be undertaken) over the term of the contract that are expected to have significant economic benefit for the lessee when the option to extend or terminate the lease, or to purchase the underlying asset, becomes exercisable;*
>
> *[…]"*

It therefore seems reasonably certain that W2C will exercise the extension option.

Conclusion: The lease term for the building is eight years (five years + three years extension option).

<u>Determine the discount rate</u>

As per IFRS 16, paragraph 26, *"At the commencement date, a lessee shall measure the lease liability at the present value of the lease payments that are not paid at that date. The lease payments shall be discounted using the interest rate implicit in the lease, if that rate can be readily determined. If that rate cannot be readily determined, the lessee shall use the lessee's incremental borrowing rate."*

Since the implicit rate cannot be readily determined for this contract, W2C's incremental borrowing rate should be used. The latter is defined as *"the rate of interest that a lessee would have to pay to borrow over a similar term, and with a similar security, the funds necessary to obtain an asset of a similar value to the right-of-use asset in a similar economic environment."*

The incremental borrowing rate for W2C would be 8% per year, which is the rate at which the bank was ready to lend money for W2C to build its own headquarters. The WACC of 12% cannot be considered as a valid incremental borrowing rate, as it is the blended rate of obtaining capital for the company and cannot be linked to an asset of similar value to the building rented.

Conclusion: The discount rate should be 8% per year.

<u>Initial measurement</u>

Per paragraph 22 of IFRS 16, *"At the commencement date, a lessee shall recognise a right-of-use asset and a lease liability."*

Paragraph 24 of IFRS 16 provides the following guidance in the initial measurement of the right-of-use asset:

> *"The cost of the right-of-use asset shall comprise:*
> *(a) the amount of the initial measurement of the lease liability, as described in paragraph 26;*
> *(b) any lease payments made at or before the commencement date, less any lease incentives received;*
> *(c) any initial direct costs incurred by the lessee; and*
> *(d) an estimate of costs to be incurred by the lessee in dismantling and removing the underlying asset, restoring the site on which it is located or restoring the underlying asset to the condition required by the terms and conditions of the lease, unless those costs are incurred to produce inventories. The lessee incurs the obligation for those costs either at the commencement date or as a consequence of having used the underlying asset during a particular period."*

As discussed above, at the commencement date, the lessee shall measure the lease liability at the present value of the lease payments that are not paid at that date, discounted using the incremental borrowing rate. Paragraph 27 defines what should be included in the lease liability:

> *"At the commencement date, the lease payments included in the measurement of the lease liability comprise the following payments for the right to use the underlying asset during the lease term that are not paid at the commencement date:*
>
> *(a) fixed payments (including in-substance fixed payments as described in paragraph B42), less any lease incentives receivable;*
> *(b) variable lease payments that depend on an index or a rate, initially measured using the index or rate as at the commencement date (as described in paragraph 28);*
> *(c) amounts expected to be payable by the lessee under residual value guarantees;*
> *(d) the exercise price of a purchase option if the lessee is reasonably certain to exercise that option (assessed considering the factors described in paragraphs B37–B40); and*
> *(e) payments of penalties for terminating the lease, if the lease term reflects the lessee exercising an option to terminate the lease."*

Therefore, the lease liability and the right-of-use asset for the building should be measured as follows on January 1, 2022:

Lease liability

Fixed payments, end of month	$	150,000
Number of months		96
Annual discount rate		8%
Present value – today	$	10,610,696

Right-of-use asset

Initial measurement of lease liability	$	10,610,696
Total right-of-use asset	$	10,610,696

Subsequent measurement

Following are the calculations of the lease liability and lease asset for each month, from the beginning of the lease until now.

Lease liability

	Opening Balance	Interest	Payment	Ending Balance
Jan. 2022	$ 10,610,696	70,738	(150,000)	$ 10,531,434
Feb. 2022	$ 10,531,434	70,210	(150,000)	$ 10,451,644
Mar. 2022	$ 10,451,644	69,678	(150,000)	$ 10,371,322
Total interest to March 31, 2022		$210,626		

Lease asset

Per the standard, after lease commencement, W2C will measure the right-of-use asset using a cost model, unless the revaluation model for that class of asset is already being used by W2C and W2C elects to apply the revaluation model. As for depreciation, per paragraph 32 of IFRS 16:

> *"If the lease transfers ownership of the underlying asset to the lessee by the end of the lease term or if the cost of the right-of-use asset reflects that the lessee will exercise a purchase option, the lessee shall depreciate the right-of-use asset from the commencement date to the end of the useful life of the underlying asset. Otherwise, the lessee shall depreciate the right-of-use asset from the commencement date to the earlier of the end of the useful life of the right-of-use asset or the end of the lease term."*

Therefore, since there is no transfer of ownership planned, the right-of-use asset will be depreciated from January 1, 2022, to the end of the lease term, which is December 31, 2029 (eight years after the commencement of the lease, as determined above).

Amortization from January to March 2022 = $10,610,696 ÷ 96 × 3 = $331,584.

Leasehold improvements

As per IFRS 16, the definition of initial direct costs to be included in the right-of-use asset are "*incremental costs of obtaining a lease that would not have been incurred if the lease had not been obtained, except for such costs incurred by a manufacturer or dealer lessor in connection with a finance lease*."

As the leasehold improvements were not a cost of obtaining the lease, they are not to be included in the right-of-use asset, and are to be treated as per IAS 16 – Property, plant and equipment. The leasehold improvements need to be initially recognized at the cost incurred of $1 million and subsequently measured following the current accounting policy, either the cost model or the revaluation model.

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

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

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

Reaching competence – The candidate attempts to discuss the accounting treatment for the lease.

Competent – The candidate discusses the accounting treatment for the lease.

Competent with distinction – The candidate thoroughly discusses the accounting treatment for the lease.

Assessment Opportunity #2 (Depth and Breadth Opportunity)

The candidate discusses the accounting treatment for the agreement with the Agency.

The candidate demonstrates competence in Financial Reporting.

CPA Map Technical Competencies:		**Core**
1.2.2	Evaluates treatment for routine transactions	**A**

CPA Map Technical Competencies:
6.2.1 Maintains an objective and questioning mindset to avoid biased analyses
6.2.4 Completes thorough quantitative and qualitative analyses to identify and evaluate potentially viable alternatives
6.3.1 Uses evidence and judgment to recommend and justify solutions or conclusions

The agreement with the Agency is a government loan. The fact that the funds are provided interest-free, i.e., a below-market rate of interest, indicates that there is a form of government grant or government assistance embedded within the loan.

Per IAS 20, paragraph 10A: *"The benefit of a government loan at a below-market rate of interest is treated as a government grant. The loan shall be recognised and measured in accordance with IFRS 9 Financial Instruments. The benefit of the below-market rate of interest shall be measured as the difference between the initial carrying value of the loan determined in accordance with IFRS 9 and the proceeds received."*

Loan

Per IFRS 9, paragraph 4.2.1, financial liabilities held for trading are measured at fair value through profit or loss, and all other financial liabilities are measured at amortized cost unless the fair value option is applied. This means that the loan is to be measured at amortized cost, assuming that the fair value option is not utilized.

IFRS 9 requires that amortized cost be calculated using the effective interest method, which allocates interest expense at a constant rate over the term of the instrument. The effective interest rate of a financial liability is calculated at initial recognition and is the rate that exactly discounts the estimated future cash flows through the expected life of the financial liability to the amortized cost of a financial liability.

Since this is a non-interest-bearing loan, the effective interest rate would be the rate that would otherwise be available to W2C if this loan were made by another party on the market. The interest rate that the bank was ready to offer on the purchase of an office building is 8%. This is an appropriate interest rate to be used for the calculation of the present value of the debt.

Calculation of the PV on April 1, 2023

Fixed payments	$ 100,000
Number of months	60
Annual discount rate	8%
Value on April 1, 2023	$ 4,964,722

Calculation of the PV on April 1, 2022

Fixed payment	$ 4,964,722
Number of months	12
Annual discount rate	8%
Present value	$ 4,584,233

The present value of the debt is therefore $4,584,233.

Government Grant

This means that the government grant portion is $1,415,767 ($6,000,000 - $4,584,233).

Per IAS 20, paragraph 7: "*Government grants, including non-monetary grants at fair value, shall not be recognised until there is reasonable assurance that:*

(a) the entity will comply with the conditions attaching to them; and
(b) the grants will be received."

The agreement includes the following conditions:

- The funds must be used for engineering, construction, or equipment costs.
  - W2C is planning to use the funds for the construction of the Ontario plant, so this condition is likely to be met.

- W2C is not allowed to change its current ownership without the Agency's authorization.
  - W2C should consider the impact of its proposed financing options with Chemicon and the impact this may have on its ownership structure. However, assuming that any ownership changes will be properly disclosed to the Agency and authorization is received, this condition is likely to be met.

- W2C must disclose to the Agency any close relationships with vendors used for the plant's construction.
  - There is nothing to indicate that W2C would not be able to make this disclosure.

- W2C must disclose to the Agency any other government assistance received.
  - There do not appear to be any other forms of government assistance received at the moment, but Aurel has mentioned that W2C is interested in entering into more agreements of this type. There is nothing to indicate that W2C would not be able to make this disclosure.

Based on the information provided, it appears likely that W2C will be able to comply with the Agency's conditions. Given that W2C is interested in entering into more agreements of this type, it is in W2C's best interest to comply with all conditions relating to disclosures, so criterion (a) is assumed to be met.

W2C has already received the Agency's funding, on April 1, 2022, so criterion (b) is met.

As both criteria (a) and (b) are met, the government grant should be recognised in the financial statements.

As per paragraph 24 of IAS20, *"Government grants related to assets, including non-monetary grants at fair value, shall be presented in the statement of financial position either by setting up the grant as deferred income or by deducting the grant in arriving at the carrying amount of the asset."*

Since the grant is related to the Ontario plant, it can be presented either:

1. as a deferred income liability
   or
2. as a reduction of the plant's carrying amount.

In accordance with paragraph 26 and 27 of IAS 20, whether accounted for as deferred income or as a reduction of the plant's carrying amount, the grant is recognized in profit or loss over the useful life of the asset as revenue or a reduction of depreciation expense, respectively.

I recommend that the deferred credit of $1,415,767 be recorded as a deferred income liability. The total amount will be amortized over the economic life of the plant. For consistency, future grants of this nature need to be recorded in the same manner.

Grant Repayment

In the event that the grant would have to be repaid, we would have to follow the guidance in IAS 20, paragraph 32:

> *"A government grant that becomes repayable shall be accounted for as a change in accounting estimate (see IAS 8 Accounting Policies, Changes in Accounting Estimates and Errors). Repayment of a grant related to income shall be applied first against any unamortised deferred credit recognised in respect of the grant. To the extent that the repayment exceeds any such deferred credit, or when no deferred credit exists, the repayment shall be recognised immediately in profit or loss.* ***Repayment of a grant related to an asset shall be recognised by increasing the carrying amount of the asset or reducing the deferred income balance by the amount repayable. The cumulative additional depreciation that would have been recognised in profit or loss to date in the absence of the grant shall be recognised immediately in profit or loss."***

Therefore, any repayments will either reduce the deferred income liability or increase the carrying value of the plant, depending on the presentation policy choice selected.

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

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

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

Reaching competence – The candidate attempts to discuss the accounting treatment for the agreement with the Agency.

Competent – The candidate discusses the accounting treatment for the agreement with the Agency.

Competent with distinction – The candidate thoroughly discusses the accounting treatment for the agreement with the Agency.

Assessment Opportunity #3 (Breadth Opportunity)
The candidate provides audit procedures for the lease contract and the agreement with the Agency.
The candidate demonstrates competence in Audit and Assurance.

CPA Map Technical Competencies:		**Core**
4.3.6	Develops appropriate procedures, including Audit Data Analytics (ADA), based on the identified risk of material misstatement	**B**

CPA Map Technical Competencies:
6.1.3 Demonstrates skepticism, objectivity, due care and persistence when identifying issues
6.2.1 Maintains an objective and questioning mindset to avoid biased analyses
6.2.4 Completes thorough quantitative and qualitative analyses to identify and evaluate potentially viable alternatives
6.3.1 Uses evidence and judgment to recommend and justify solutions or conclusions

Lease Contract

Obtain the agreement and review it for:

- terms relating to W2C's ability to control the building (e.g., ability to make leasehold improvements, etc.), to determine whether W2C has entered into a lease.
- the commencement date and the length of the lease (that the contract is a five-year term and has a three-year renewal option), to determine the appropriate lease term.
- the amount of the contract, to ensure that it is $150,000 per month.

Obtain supporting documentation for the discount rate used, such as vouching to the documents from the bank offering an 8% loan for the construction of a new building.

Re-perform the present value computations for the lease liability and the right-of-use asset, using the 8%, to determine the appropriateness of the amounts recorded.

Obtain a listing of costs incurred for leasehold improvements, select a sample, and vouch amounts back to supporting documentation such as timesheets, invoices, etc., to ensure that leasehold improvements were made and that the amounts capitalized are appropriate.

Discuss with management to determine whether the 10-year estimated useful life assigned to leasehold improvements is reasonable. Corroborate the discussion with board meeting minutes, or the estimated useful lives of other leasehold improvements made in the past.

Agreement with the Agency

Obtain the agreement and review it for:

- the amount of the funds, to ensure that it is for $6 million, that the loan is interest-free, and review the repayment terms, including the amount, number of payments, start date of the payments (one year deferral), and frequency, to ensure the accuracy of the recorded debt and the government grant amount calculated.
- the fact that funds are solely related to the Ontario plant, to ensure that the grant can be recorded against amounts capitalized for the plant.

Obtain support for the interest rate of 8% and vouch significant inputs to supporting documentation (e.g., agree market rate for debt to recent loan documents).

Re-perform the present value computations for the debt, using the rate, to determine the appropriateness of the amounts recorded.

To ensure that W2C does not have to record the full amount as payable, we should ensure that W2C complies with the agreement conditions:

- Obtain the list of costs incurred with the funds received, ensure its completeness by comparing the total amount of the listing to the total amount recorded in the general ledger, and select a sample of costs to vouch to supporting documentation (e.g., timesheets, invoices, etc.), to ensure that they are all engineering, construction, or equipment costs.
- Obtain W2C's shareholders listing provided to the Agency and the current shareholders listing per their corporate records (i.e., the share register), and compare the two, to determine whether the company's ownership has changed. Alternatively, review the minutes for any changes in share ownership.
- Obtain the listing of vendors used for the Ontario plant construction. Review the listing to see, based on our understanding of the entity, whether any vendors would be considered to have "close relationship" to W2C. It is not clear what "close relationship" means, so we may have to review the agreement to determine whether this is defined, or contact the Agency to determine what qualifies as close relationship (e.g., does regular purchase from the vendor meet the requirement?). Assuming that it refers to related parties, we can compare the vendor listing to any listings of W2C investments, review board meeting minutes to determine whether there is any indication that any of the vendors may be related parties, etc. For the institutional investors (Canada Investment Institute and Renewable Energy Foundation), W2C may need to obtain a listing of related parties from them, to compare to the vendor listing. As most of the vendors will be companies, you may need to determine if any of W2C's shareholders have invested in those companies. Consider asking all of W2C's shareholders, to confirm that they are not related to anyone on the list of vendors.
- Obtain a listing of all government grants or government assistance received by W2C. Ensure completeness of the listing by reviewing bank statements for large deposits and determining whether the deposits relate to a grant, and if so, whether it was included on the list. Ensure that all these grants have been disclosed in a timely manner to the Agency by reviewing proof of communication, such as emails sent.

For Assessment Opportunity #3 (Audit and Assurance), the candidate must be ranked in one of the following five categories:

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

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

Reaching competence – The candidate provides a few audit procedures for the lease contract or the agreement with the Agency.

Competent – The candidate provides some audit procedures for the lease contract and the agreement with the Agency.

Competent with distinction – The candidate provides several audit procedures for the lease contract and the agreement with the Agency.

Assessment Opportunity #4 (Breadth Opportunity)

The candidate discusses the tax implications of the lease, the agreement with the Agency, and the summer activity.

The candidate demonstrates competence in Taxation.

CPA Map Technical Competencies:		**Core**
6.2.2	Advises on taxes payable for a corporation	**B**
6.3.2	Evaluates income taxes payable for an individual	**B**

CPA Map Enabling Competencies:
6.1.1 Identifies and articulates issues within areas of work responsibility
6.2.4 Completes thorough quantitative and qualitative analyses to identify and evaluate potentially viable alternatives
6.3.1 Uses evidence and judgment to recommend and justify solutions or conclusions
6.3.3 Applies decision criteria to choose among viable alternatives

Lease Contract

As they are an expense laid out for the purpose of earning business income, the monthly lease payments will be deducted from W2C's business income for tax purposes. Therefore, all the accounting entries recorded for depreciation and interest expense will be reversed for tax purposes, as items on account of capital.

The leasehold improvements are capital assets for tax purposes, and will therefore be considered as a depreciable property from a tax perspective. Leasehold improvements are categorized as Class 13 on the tax return. They are amortized straight-line over the length of the lease plus one renewal (not declining balance method, like most CCA classes), being five years plus the three-year renewal period. Leasehold improvements are eligible for the accelerated investment incentive of one-and-one-half times normal depreciation in the first year. The CCA taken on the leasehold improvements in 2022 would be $187,500 ($1 million ÷ 8 years × 1.5).

Agreement with the Agency

From a tax perspective, this loan will be treated as a liability. Since there is no interest to be paid, there is nothing to be deducted from net income for tax purposes. Any amounts recorded for accounting purposes will be reversed for tax purposes.

Annual Summer Activity

During the company's annual golf tournament, all expenses incurred by W2C for food, drink, or entertainment offered to the employees are not subject to the 50% limit for meals and entertainment. Rather, they are entirely deductible as they are incurred for an annual employee event.

Expenses incurred to use a golf course are an expressly forbidden deduction in the Income Tax Act. The same restriction also applies to golf tournament registration costs. As this expense was incurred to use a golf course, no amounts were deductible. This means that, in the past, only a limited portion of the expense was deductible from a tax perspective.

If W2C agrees with the idea of an "adventure program," the whole cost of the social event will be deductible from a tax perspective, as this would be like an office party and therefore not subject to the limitation on entertainment expenses. W2C could have up to six of these per year.

If the cost of the event for W2C (excluding transportation home, taxi fare, and overnight accommodation) is less than $150 per employee, there would be no taxable benefit for the employees. If the cost of the event is $200 per employee, which is greater than $150 per person, the entire amount is a taxable benefit. Therefore, there would be a taxable benefit of $200 per employee.

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

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

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

Reaching competence – The candidate attempts to discuss the tax implications of some of the tax issues.

Competent – The candidate discusses the tax implications of some of the tax issues.

Competent with distinction – The candidate discusses the tax implications of all of the tax issues.

Assessment Opportunity #5 (Breadth and Depth Opportunity)

The candidate analyzes whether to produce methanol or ethanol, and provides a recommendation.

The candidate demonstrates competence in Management Accounting.

CPA Map Technical Competencies:		**Core**
3.3.1	Evaluates cost classifications and costing methods for management of ongoing operations	**A**
3.5.2	Evaluates sustainable profit maximization and capacity management performance	**A**

CPA Map Enabling Competencies:
6.1.2 Uses qualitative and quantitative techniques to clarify the nature of problems
6.2.4 Completes thorough quantitative and qualitative analyses to identify and evaluate potentially viable alternatives
6.3.1 Uses evidence and judgment to recommend and justify solutions or conclusions
6.3.2 Articulates limitations to recommendations
6.3.3 Applies decision criteria to choose among viable alternatives
7.1.2 Communicates non-complex financial information logically, clearly, concisely

Quantitative Analysis

Contribution margin per kilolitre (kl) is calculated as follows:

	Methanol	Note	Ethanol	Note
Revenue	$ 1,500.00		$ 2,200.00	
Waste disposal revenue	66.67	1	100.00	7
	1,566.67		2,300.00	
Electricity	500.00	2	625.00	8
Water	150.00	3	187.50	8
Oxygen	175.00	4	227.50	9
Natural gas	255.00	5	331.50	9
Consumables	200.00	6	400.00	10
Disposal costs	100.00		0	
Alumina	0		160.00	11
Additional salary	0		0	12
Total variable costs	1,380.00		1,931.50	
Contribution margin per kl	$ 186.67		$ 368.50	

Notes:

1. \$200 ÷ 3 kl
2. \$0.10 × 5,000 kWh
3. \$1.50 × 100 m^3
4. \$50 × 3.5 kl
5. \$3 × 85 GJ
6. \$200 × 1 unit
7. \$200 ÷ 2 kl
8. Methanol × 1.25
9. Methanol × 1.3
10. Methanol × 2
11. \$400 ÷ 2.5 kl
12. Additional salary is not included, as it is a fixed cost.

Based on the maximum production possible for the plant, the maximum contribution margin that W2C can derive from each biofuel would be:

Methanol = \$186.67 × 3,500 kl = \$653,345.
Ethanol = \$368.50 × 2,000 kl = \$737,000.

Fixed costs associated with the additional work of producing ethanol are \$65,000 for an additional supervisor, leaving the total profit from the production of ethanol at \$672,000.

Qualitative Analysis

As W2C focuses on environmental sustainability, it might negatively impact the company's image to produce methanol, which is toxic and can potentially damage the soil and the environment.

Methanol is used in a variety of everyday products, so we can assume there will always be demand for it on the market. Methanol is also used in high-performance cars, so there is a potential of generating revenue in that niche.

On the other hand, ethanol consumption has been on the rise and is expected to continue increasing. It is also used primarily for the automotive industry, which represents potentially high volumes of sales. Ethanol might soon be able to penetrate the niche market of high-performance cars, making it even more in demand.

Ethanol is also consumable in its pure form, making it less damaging for the environment. There is also a greater potential of diversification with ethanol, because it is also used for alcoholic beverages and medicinal uses.

Recommendation

Overall, I recommend that W2C produce ethanol. Even when considering the maximum production, it is more profitable to produce ethanol, and from a qualitative perspective, it fits better with W2C's vision and desire for sustainable environmental behaviours.

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

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

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

Reaching competence – The candidate attempts to prepare a quantitative and qualitative analysis of the production of methanol and ethanol.

Competent – The candidate prepares a quantitative and qualitative analysis of the production of methanol and ethanol, and provides a recommendation.

Competent with distinction – The candidate prepares a thorough quantitative and qualitative analysis of the production of methanol and ethanol, and provides a recommendation.

Assessment Opportunity #6 (Breadth Opportunity)
The candidate discusses the Chemicon investment proposals.
The candidate demonstrates competence in Finance.

CPA Map Technical Competencies:		**Core**
5.2.3	Evaluates sources of financing	**B**
5.2.4	Evaluates decisions affecting capital structure	**B**

CPA Map Enabling Competencies:
5.1.1 Applies general business knowledge to enhance work performed
6.1.2 Uses qualitative and quantitative techniques to clarify the nature of problems
6.3.1 Uses evidence and judgment to recommend and justify solutions or conclusions
6.3.3 Applies decision criteria to choose among viable alternatives

Preferred Shares

- Because preferred shares do not carry voting rights, you would not lose control over W2C. However, it would change the ownership of the company because Chemicon will own part of W2C through the preferred shares. The Agency's authorization will have to be obtained before this transaction can occur.
- An annual dividend of 5% might be a big financial expense for a start-up such as W2C, but it is significantly less than the 15% interest for the convertible debt.
- Having the option to pay the dividends in shares would avoid disbursement of cash in a situation where W2C would need those liquidities.
- The cumulative feature of the preferred shares allows W2C to choose the timing of the payment of the dividends, if they decide to pay them cash, which allows for more flexibility than the fixed quarterly interest payments of the convertible debt option.
- Repurchase of the preferred shares in five years is potentially more manageable for the company than repaying a larger debt in four years.
- W2C must spend at least 25% of the funds on Canadian goods and services within a five-year period, commencing from the date of signature. If these requirements are not met, penalties of up to $1.5 million per year can be charged by Chemicon. It is important to determine how likely it is for W2C to comply with these criteria (without incurring significant additional costs on their projects); otherwise, this option can quickly become costly for the company, as a $1.5 million expense could represent the equivalent of a 5% annual interest ($1.5 million ÷ $30 million).

Convertible Debt

- The loan is convertible into common shares. It represents 347,827 ($40 million /$115) additional common shares, so Chemicon would hold the most shares in the case of an IPO or a change in control, although it would still own fewer shares than you and Fred combined. It is important to confirm whether this is in line with your vision for the company. Since an IPO is not immediately planned for, W2C will need to evaluate whether it will have enough cash to repay the loan balance in four years.
- This option provides more cash to W2C because it would provide $40 million, compared to $30 million with the first option.
- There is a potential to defer the interest for the first year, which can help W2C finish construction of the Ontario plant and start generating revenue before having to pay interest.
- As this financing option would change the ownership, the authorization of the Agency would also have to be obtained.

Conclusion

To make a financially sound decision, we need to obtain more details, such as: when an IPO is likely to happen, as we know there are no immediate plans; and how realistic is for W2C to be able to spend at least 25% of the funds on Canadian goods and services. However, based on our preliminary analysis, preferred shares would be a better option for W2C. Although the preferred shares option provides less cash to W2C right away, there is less impact on the cash flow in the long term. This option also has less of an impact on the ownership structure since the preferred shares do not carry voting rights.

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

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

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

Reaching competence – The candidate attempts to discuss the Chemicon investment proposals.

Competent – The candidate discusses the Chemicon investment proposals and provides a recommendation.

Competent with distinction – The candidate thoroughly discusses the Chemicon investment proposals and provides a recommendation.

APPENDIX E

RESULTS BY ASSESSMENT OPPORTUNITIES FOR DAY 2 AND DAY 3 (FOR ALL WRITERS)

THE LEVEL 2 DEPTH TEST (DAY 2 and DAY 3)

Financial Reporting:

		NA	NC	RC	C	CD	C+CD
Day 2 Common							
AO5	**Inventory**	3%	6%	32%	56%	3%	**59%**
AO6	**Revenue recognition**	3%	9%	40%	47%	1%	**48%**
Day 3 – Q1 IHC							
AO1	**Revenue recognition**	5%	19%	37%	31%	8%	**39%**
AO2	**Other accounting issues**	19%	17%	37%	21%	6%	**27%**
Day 3 – Q3 W2C							
AO1	**Lease**	4%	41%	25%	23%	7%	**30%**
AO2	**Interest-free loan agreement**	8%	34%	27%	29%	2%	**31%**

Management Accounting:

		NA	NC	RC	C	CD	C+CD
Day 2 Common							
AO1	**Budget revisions**	3%	2%	27%	66%	2%	**68%**
AO2	**Sales variances**	3%	5%	47%	44%	1%	**45%**
AO3	**Pricing strategies – quant**	5%	6%	43%	45%	1%	**46%**
AO4	**Pricing strategies – qual**	8%	12%	34%	45%	1%	**46%**
Day 3 – Q2 Agro-Share							
AO1	**Business expansion options**	2%	16%	29%	45%	8%	**53%**
Day 3 – Q3 W2C							
AO5	**Methanol vs. ethanol**	8%	12%	37%	33%	10%	**43%**

THE LEVEL 3 DEPTH TEST ROLES (DAY 2)

Audit and Assurance		Papers	NA	NC	RC	C	CD	C+CD
AO7	**Joint arrangement**	1282	2%	23%	39%	31%	5%	**36%**
AO8	**Risk assessment**	1282	1%	18%	25%	54%	2%	**56%**
AO9	**Materiality and approach**	1282	1%	15%	41%	41%	2%	**43%**
AO10	**Procedures – accounting issues and warehouse**	1282	1%	19%	19%	56%	5%	**61%**
AO11	**Procedures – sales cycle**	1282	3%	36%	29%	31%	1%	**32%**
AO12	**Reliance on internal audit**	1282	1%	27%	27%	43%	2%	**45%**
AO13	**Internal control weaknesses**	1282	1%	26%	52%	20%	1%	**21%**

Finance		Papers	NA	NC	RC	C	CD	C+CD
AO7	**Chantal Summer NPV**	245	1%	9%	20%	63%	7%	**70%**
AO8	**Sales data and assumptions**	245	1%	18%	34%	43%	4%	**47%**
AO9	**SPH valuation**	245	2%	4%	42%	47%	5%	**52%**
AO10	**Jefferson bonds**	245	3%	12%	42%	39%	4%	**43%**
AO11	**Working capital**	245	7%	32%	38%	19%	4%	**23%**
AO12	**Children's Book Intellectual Property**	245	8%	29%	33%	25%	5%	**30%**
AO13	**Investments**	245	6%	13%	40%	41%	0%	**41%**

THE LEVEL 3 DEPTH TEST ROLES (DAY 2)

Performance Management		Papers	NA	NC	RC	C	CD	C+CD
AO7	**CVP analysis for discount pricing**	830	1%	2%	16%	75%	6%	**81%**
AO8	**Video creation costs**	830	1%	18%	35%	41%	5%	**46%**
AO9	**ProofONE editing program**	830	2%	12%	48%	37%	1%	**38%**
AO10	**AERU pilot project**	830	6%	23%	26%	43%	2%	**45%**
AO11	**AERU incentive program**	830	3%	26%	33%	36%	2%	**38%**
AO12	**Outsourcing sales function**	830	1%	8%	24%	65%	2%	**67%**
AO13	**External factors impacting strategy**	830	7%	18%	33%	39%	3%	**42%**

Taxation		Papers	NA	NC	RC	C	CD	C+CD
AO7	**QSBC share sale**	110	2%	32%	41%	20%	5%	**25%**
AO8	**Acquisition of Control**	110	9%	24%	25%	36%	6%	**42%**
AO9	**Brian/Sarah personal tax**	110	5%	5%	42%	44%	4%	**48%**
AO10	**Replacement property**	110	5%	16%	24%	44%	11%	**55%**
AO11	**Taxable income**	110	5%	5%	25%	61%	4%	**65%**
AO12	**Taxes payable and dividend income**	110	5%	21%	27%	37%	10%	**47%**
AO13	**GST/HST return**	110	7%	27%	31%	34%	1%	**35%**

THE LEVEL 4 BREADTH TEST (DAY 2 AND DAY 3, BY COMPETENCY AREA)

Financial Reporting:

		NA	NC	RC	C	CD	RC+C+CD
Day 2 Common							
AO5	**Inventory**	3%	6%	32%	56%	3%	**91%**
AO6	**Revenue recognition**	3%	9%	40%	47%	1%	**88%**
Day 3 – Q1 IHC							
AO1	**Revenue recognition**	5%	19%	37%	31%	8%	**76%**
AO2	**Other accounting issues**	19%	17%	37%	21%	6%	**64%**
Day 3 – Q3 W2C							
AO1	**Lease**	4%	41%	25%	23%	7%	**55%**
AO2	**Interest-free loan agreement**	8%	34%	27%	29%	2%	**58%**

Management Accounting:

		NA	NC	RC	C	CD	RC+C+CD
Day 2 Common							
AO1	**Budget revisions**	3%	2%	27%	66%	2%	**95%**
AO2	**Sales variances**	3%	5%	47%	44%	1%	**92%**
AO3	**Pricing strategies – quant**	5%	6%	43%	45%	1%	**89%**
AO4	**Pricing strategies – qual**	8%	12%	34%	45%	1%	**80%**
Day 3 – Q2 Agro-Share							
AO1	**Business expansion options**	2%	16%	29%	45%	8%	**82%**
Day 3 – Q3 W2C							
AO5	**Methanol vs. ethanol**	8%	12%	37%	33%	10%	**80%**

THE LEVEL 4 BREADTH TEST (DAY 2 AND DAY 3, BY COMPETENCY AREA)

Strategy and Governance		NA	NC	RC	C	CD	RC+C+CD
III-1 AO5	**KPIs and strategic issues**	4%	17%	25%	46%	8%	**79%**
III-2 AO2	**SWOT**	5%	12%	22%	45%	16%	**83%**
III-2 AO5	**BOD practices**	5%	14%	38%	39%	4%	**81%**

Audit and Assurance		NA	NC	RC	C	CD	RC+C+CD
III-2 AO4	**Control weaknesses**	2%	12%	40%	37%	9%	**86%**
III-2 AO6	**Materiality and approach**	5%	19%	23%	39%	14%	**76%**
III-3 AO3	**Procedures - lease, agency agreement**	14%	23%	29%	30%	4%	**63%**

Finance		NA	NC	RC	C	CD	RC+C+CD
III-1 AO4	**Cash flow projections**	3%	24%	40%	28%	5%	**73%**
III-2 AO3	**Business valuation**	2%	8%	15%	46%	29%	**90%**
III-3 AO6	**Investment proposals**	9%	11%	29%	40%	11%	**80%**

Taxation		NA	NC	RC	C	CD	RC+C+CD
III-1 AO3	**Corporate taxes payable**	3%	10%	31%	51%	5%	**87%**
III-2 AO7	**Employee vs. contractor, benefits**	5%	14%	40%	33%	8%	**81%**
III-3 AO4	**Lease, agency agreement, employee event**	4%	34%	28%	30%	4%	**62%**

APPENDIX F

BOARD OF EXAMINERS' COMMENTS ON DAY 2 AND DAY 3 SIMULATIONS

BOARD OF EXAMINERS' COMMENTS ON DAY 2 SIMULATION

Paper/Simulation:	**Day 2, Common Role (SPH)**
Estimated time to complete:	300 minutes
Simulation difficulty:	Easy to Average
Competency Map coverage:	Management Accounting (4); and Financial Reporting (2)

Evaluators' comments by Assessment Opportunity (AO) for the Common Role

AO#1 (Budget Revision)

Candidates were asked to adjust a divisional budget for a revised marketing strategy proposed by management. Details of SPH's initial budget for its adult non-fiction division, and details of the revised strategy, were provided in Appendix IV (Common). To demonstrate competence, candidates were expected to provide an updated budget, incorporating the relevant adjustments to revenue, variable costs, and fixed costs from the revised strategy.

Candidates performed reasonably well on this AO. The majority of candidates presented a revised budget that incorporated at least one adjustment to each of the categories of revenue, variable costs, and fixed costs, and provided an overall adjusted operating income for the division. In general, candidates demonstrated their understanding of the need to adjust direct variable costs due to the higher number of units produced, and applied the appropriate percentages to one of the incremental costs of commissions or royalty fees. Candidates typically calculated the incremental revenue from the additional books correctly, and provided some notes in their exhibits to explain their calculations.

Strong candidates typically adjusted revenue correctly, and had multiple adjustments in each of the cost categories. For example, these candidates were likely to correctly adjust all three of direct material and labour costs, shipping and fulfillment costs, and other production costs, or adjust for both commissions and royalty fees. These candidates were also more likely to bring in case facts, such as the need to include a salary for the additional salesperson required, or the fact that the costs may increase further due to the use of higher-quality paper.

Weak candidates were less likely to provide correct adjustments to each of the financial statement categories. For example, these candidates often had errors in their calculation of the additional revenue, as many attempted to calculate a weighted-average price for the total books, despite there being no case facts to suggest that this was required. Weak candidates often did not properly use the case facts provided, for example, by applying the price of the new books and the newly negotiated royalty percentage to the entire divisional budget. Other weak candidates did not adjust direct materials and labour, despite the fact that more books were to be produced and sold, demonstrating a lack of understanding of the concept of variable costs.

Weak candidates were also more likely to use the same approach for calculating all of the incremental costs, such as using the percentage of revenue as a basis for calculation, even though this approach was only appropriate for the selling and marketing costs.

AO#2 (Variance Analysis)

Candidates were asked to perform a sales price and sales volume variance analysis for a three-box set, and for single books, in the "Hot Shot" children's series, and to help Jonathan understand whether the strategy adopted in 2021 was effective in increasing profit. In Appendix V (Common), candidates were provided with information regarding actual and budgeted sales prices, variable costs, and volumes sold for the series' two sales options. To demonstrate competence, candidates were expected to calculate both the sales price and sales volume variances with reasonable accuracy for at least one of the products, and to explain what the variances indicate about the impact on SPH's profit.

Candidates performed adequately on this AO. Most candidates provided an appropriate calculation of the sales price and volume variances for at least one of the sales options. Most candidates did not attempt to incorporate variable cost information into their calculations, which only allowed them to conclude on the impact of the strategy adopted on SPH's revenues, despite the requirement to discuss the impact on SPH's profit. However, candidates who calculated the sales price variance and volume variances solely using revenue information were still able to draw a valid conclusion from their findings, and generally interpreted the variances appropriately.

Strong candidates calculated the sales price and sales volume variances for both sales options without error, and interpreted the results of their calculations in order to answer Jonathan's question about whether the strategy adopted in 2021 was effective in increasing profit. Strong candidates often used the decrease in sales price and increase in volume sold to explain the variances for the box set, and concluded that the strategy proposed by Maria in 2021 was effective.

Weak candidates often had errors in their calculations, such as multiplying sales price variances against budgeted volumes, or sales volume variances against the budgeted sales price. Other weak candidates often did not multiply the differences in sales prices or volume against any other variable, leaving them with a variance that could not be compared to any other. These weak candidates were unable to conclude logically on the variances they calculated. When weak candidates were able to calculate the variances with limited errors, they did not provide valuable interpretations of the variances calculated, often simply repeating the results of their calculations or commenting on which variances were favourable or unfavourable. Such interpretations did not directly answer the requirement to comment on the overall impact of the strategy adopted on SPH's profit.

AO#3 (Pricing Options – Quantitative)

Candidates were asked to help set a selling price for a new book under two pricing strategies, full absorption cost-based pricing and demand-based pricing. In Appendix V (Common), candidates were provided with information to be considered under both methods, including per-book costs and the estimated number of books to be sold. To demonstrate competence, candidates were expected to develop a price, under both the full absorption cost-based and demand-based pricing models, and to recommend a selling price based on their quantitative analysis.

Candidate performance on this AO was mixed. Most candidates calculated a price under at least one of the models; however, many candidates appeared to be unfamiliar with at least one of the methods, as evidenced by unconventional approaches that did not lead these candidates to develop a reasonable price for a particular strategy. For example, many candidates did not mark up the costs, to determine a selling price under the full absorption cost-based method, or attempted to calculate an average selling price under the demand-based method. Overall, candidates demonstrated competence equally on the two methods, showing no preference for one over the other, and were generally able to provide a recommended price that was consistent with their analysis.

Strong candidates were more likely to develop a price under both methods, using a logical approach that flowed from the information presented in Appendix V (Common). These candidates were more likely to incorporate both variable and fixed costs in their full absorption cost-based analysis, and to correctly apply the 50% markup stated in the case, to determine an operating profit. These candidates were also more likely to correctly apply the selling price to the estimated number of books sold under the demand-based method, and to determine an operating profit under each price by applying fixed and variable costs to each scenario. For these candidates, selecting a price to recommend was straightforward because their calculations were comparable.

Weak candidates often appeared confused by how to approach the two methods. For example, many candidates attempted to calculate a breakeven price under the demand-based pricing option, despite the fact that the selling price, and number of books that could be sold for this option, was already provided in Appendix V (Common). Other candidates attempted to incorporate the competitor's price of $70 into their calculation under the full absorption cost-based method, despite the fact that the correct approach was to develop a price using SPH's costs. In addition, these candidates often did not provide a recommendation, or suggested a price that was inconsistent with the results of their analysis.

AO#4 (Pricing Options – Qualitative)

Candidates were asked to qualitatively compare the benefits and drawbacks of the two pricing options described in AO#3. Candidates were provided with information relevant to each method in Appendix V (Common), such as the price of a book featuring a better-known photographer published by a competitor, or the fact that demand increases over time. To demonstrate competence, candidates were expected to provide a qualitative discussion of the two methods, providing valid considerations for both methods.

Candidate performance on this AO was mixed, and was similar to candidate performance on AO#3. Some candidates appeared unfamiliar with the two pricing methods, as evidenced by many superficial discussions that simply repeated the approach used to calculate a price under the methods. Other candidates were able to identify the relevant case facts in Appendix V (Common), and provided a reasonable discussion of valid points based on these case facts. Most candidates ensured that they presented a balanced discussion of both the benefits and drawbacks for each method.

Strong candidates used more case facts to support their qualitative discussions of the methods. For example, these candidates were more likely to use the price of the competitor's book as an opportunity to comment on competitiveness of the price determined under the full absorption cost-based model. Strong candidates were also more likely to provide complete thoughts when providing considerations under both methods, by addressing why the consideration was a valid concern. For example, where many candidates noted that the demand-based model was based on market research, stronger candidates typically completed this thought by noting that actual sales might differ from the estimates developed, which would influence the profit realized under the various selling prices.

Weak candidates typically lacked depth in their discussions, opting to provide generic points, such as repeating the definition of each method or commenting on the numbers in their calculations, instead of discussing the pros and cons of the two pricing methods. Other weak candidates lacked breadth in their analysis, choosing to discuss a limited number of points or lacking balance in their discussion. In general, weak candidates were less likely to provide complete thoughts in their discussions. While these candidates were often able to identify valid points, such as the fact that the full absorption cost-based method uses internal data, they failed to link it back to SPH, for example, by commenting on how using internal data may impact the reliability and ease of applying this method.

AO#5 (Inventory)

Candidates were asked to discuss the accounting treatment for SPH's inventory at year-end. Information relevant to SPH's inventory was presented in Appendix VI (Common) and in Appendix VII (Common). To demonstrate competence, candidates were expected to discuss several of the inventory issues in reasonable depth by applying case facts to Handbook guidance, and to conclude appropriately.

Candidates performed adequately on this AO. While there were at least five possible issues to discuss regarding SPH's inventory, candidates generally limited themselves to a discussion of three of them or less. Some candidates chose to only discuss the simpler issues, such as the write-down of the damaged books, which provided limited opportunities for candidates to fully demonstrate their understanding of how to account for inventory. However, most candidates were able to apply the key aspect of *IAS 2 Inventories* to their analysis, understanding that they needed to compare the net realizable value of each book to its cost in order to determine the appropriate amount to record.

Strong candidates discussed the inventory issues in greater depth. For example, while many candidates identified the difference between the net realizable value and cost for the Introduction to Ecology textbooks, strong candidates brought additional case facts into their analysis, such as recognizing that the selling costs would be a reduction to the net realizable value of those books, demonstrating a deeper understanding of the concept of net realizable value. Similarly, strong candidates were more likely to identify more of the inventory issues, for example, by recognizing that the introduction of a new edition of the Biochemistry textbook would render the previous edition obsolete, or that the contracted units for the Ecology textbook would not require a write-down.

Weak candidates discussed the inventory issues in less depth. These candidates typically focused their discussions on the damaged inventory, often simply stating that a write-down was required without clearly linking their discussion to the key concept of comparing the net realizable value to the cost of the inventory. Some weak candidates wrote a lot in their response but appeared confused by the issues at hand, for example, by focusing their discussions on the ownership of inventory, or using unrelated Handbook sections (such as *IAS 36 Impairment of assets*), to attempt to address the inventory issues.

AO#6 (Revenue Recognition)

Candidates were asked to discuss the accounting treatment for the Kingston University textbook contract. Information regarding the Kingston University contract was presented in Appendix VIII (Common). To demonstrate competence, candidates were expected to discuss, in reasonable depth, the performance obligations of the contract and the amount of revenue to recognize, using appropriate guidance from *IFRS 15 Revenue from contracts with customers*.

Candidates performed adequately on this AO. The majority of candidates listed the correct steps for revenue recognition under IFRS 15 and discussed the various steps, including the relevant performance obligations, using case facts. Most candidates provided an appropriate adjustment to revenue, based on the results of their analysis. The majority of candidates did not discuss the contract costs, such as the commissions paid or travel costs, when assessing the accounting treatment of the Kingston University contract.

Strong candidates discussed the accounting treatment for the Kingston University contract in greater depth by providing IFRS 15 guidance and bringing in appropriate case facts to support their analysis. For example, strong candidates used the fact that students must use the textbook in order to complete assignments in the OLRs as support for their conclusion that there is only one performance obligation present in the contract. These candidates were more likely to conclude consistently with their assessment of the performance obligations when discussing the recognition of the revenue, using the price-per-unit as the transaction price, and deferring the revenue related to the remaining months in the semester. Strong candidates were also more likely to discuss the contract costs, typically identifying the commission paid as an incremental cost and stating that it should either be amortized or expensed.

Weak candidates struggled to apply case facts to the performance obligations discussion or concluded inconsistently with their analysis. For example, weak candidates did not recognize Kingston's inability to separate the textbook and OLRs, concluding that there were two performance obligations without providing any case facts to support this. These candidates often went on to suggest that SPH recognize the revenue as if it was only one performance obligation, thus providing a conclusion that was inconsistent with the rest of their analysis. Weak candidates were also unlikely to discuss the contract costs.

Paper/Simulation:	**Day 2, Assurance Role (SPH)**
Estimated time to complete:	300 minutes
Simulation difficulty:	Average
Competency Map coverage:	Financial Reporting (1); and Audit and Assurance (6)

Evaluators' comments by Assessment Opportunity (AO)

AO#7 (Joint Arrangement)

Candidates were asked to assess the accounting treatment for the joint arrangement with AppsWiz. Additional details on the joint arrangement were provided in Appendix IX (Assurance). To demonstrate competence, candidates were expected to discuss the accounting treatment for the joint arrangement and provide a supported conclusion.

Given that it is a more complex financial reporting concept, candidates performed as expected on this AO. Most candidates identified the correct Handbook section to use (*IFRS 11 Joint Arrangement*), attempted to apply the concepts from the Handbook to the case facts presented, and concluded on how to record the transaction in the financial statements.

Strong candidates provided both a discussion of whether the arrangement with AppsWiz met the definition of a joint arrangement, and of whether it was a joint operation or joint venture. Strong candidates were also able to provide a correct conclusion that the arrangement was a joint venture, and supported their conclusion with an explanation of how to record the joint venture in the financial statements.

Weak candidates generally focused their discussion on the case fact that each company obtained 50% of the shares in SmartKids. There were other, more relevant case facts to consider when determining how to record the arrangement, including the fact that all assets purchased, and liabilities incurred, by SmartKids must be approved by both SPH and AppsWiz, and that all assets and liabilities will belong to SmartKids. In addition, some weak candidates did not reference the correct Handbook section, such as using *IAS 28 Investments in Associates and Joint Ventures*, and therefore focused their discussion on whether SPH had significant influence, providing little value.

AO#8 (Risk Assessment)

Candidates were asked to prepare the audit plan for the 2021 year-end audit. As part of the audit plan, candidates were expected to perform a risk assessment. Information relevant to the risk assessment was provided throughout the case, both in the Common and Assurance sections. To demonstrate competence, candidates were expected to provide a reasonable risk assessment, discuss a number of factors affecting the risk of material misstatement at the financial statement level, and conclude on the overall financial statement risk or discuss ways that the auditor can respond to the risks identified.

Candidates performed adequately on this AO. Most candidates provided a reasonable risk discussion that included several relevant risk factors, explained how each factor impacted the risk of material misstatement at the financial statement level, and concluded on the overall financial statement risk. The most commonly discussed risk factors were: the fact that Brian wants to sell his SPH shares to finance his retirement, and would be incentivized to manipulate the financial statements to maximize profits; the new transactions during the year in which errors were found; the fact that the accounting department is currently short-staffed; and the fact that the IT department delayed a planned upgrade of the accounting software, and for the last few weeks of 2021, the program would freeze up unexpectedly. Most candidates considered factors that increased risk as well as ones that decreased risk.

Strong candidates provided more risk factors in their risk assessment and often provided better explanations for the impact of each factor on the risk of material misstatement.

Weak candidates generally did not provide an adequate risk assessment, typically because they simply listed risk factors without explaining how they would impact the overall financial statement risk. Some weak candidates struggled to provide overall financial statement risks, instead focusing their discussion on assertion level risks.

AO#9 (Approach and Materiality)

Candidates were asked to prepare the audit plan for the 2021 year-end audit. As part of the audit plan, candidates were expected to discuss the audit approach and materiality. Information relevant to the audit approach and materiality discussions was provided throughout the case, both in the Common and Assurance sections. To demonstrate competence, candidates were expected to provide a reasonable discussion of both the audit approach and materiality. A reasonable audit approach discussion would consider some of the relevant case facts that would impact control risk, and come to a supported conclusion as to whether a combined or substantive approach would be required in the affected area. A reasonable materiality discussion would include an adequate discussion of the users and their needs, selection of an appropriate basis and percentage to be applied to the basis, and a calculation of materiality, considering the relevant adjustments to the basis that were needed as a result of the financial reporting issues.

Candidates performed adequately on this AO. Many different case facts could have been used in discussing the audit approach. For example, candidates could have discussed: the fact that walkthroughs of the sales, purchases, and payroll cycles were completed as part of interim fieldwork, and the controls were found to be operating effectively; the internal control issues present in the children's books division; that the controller resigned for personal reasons in October 2021 and her role has not yet been filled; or the issues with the accounting software in the last few weeks of 2021. Unfortunately, many candidates struggled to analyze how the case facts impacted the audit approach. Most candidates identified one or two of the case facts that were relevant to the audit approach discussion, but struggled to discuss the impact that the internal control weakness would have on the audit approach.

For some candidates, their discussions made it unclear whether the candidate understood the difference between a combined and a substantive approach. However, most candidates provided a reasonable materiality analysis by discussing multiple users of the financial statements and choosing an appropriate basis that would address their needs, calculating a planning materiality and applying an appropriate percentage, given their selected benchmark. Candidates generally also adjusted their benchmark before calculating materiality, with the adjustments required due to the financial reporting errors noted.

Strong candidates' audit approach discussions were more specific to the case facts presented, and they often understood that the overall audit approach could be combined, with a substantive approach taken in areas or periods of the year where there were internal control weaknesses. In addition, strong candidates' materiality discussions identified more of the relevant users of the financial statements. They discussed each user's needs in greater detail and often justified both the basis they chose, reflecting the users' needs, as well as why they chose a specific percentage within the acceptable range, by linking their choice to the sensitivity of the users. Some strong candidates also provided a discussion and calculation of performance materiality, which helped strengthen their materiality discussions.

Weak candidates did not provide an adequate discussion of materiality, typically because they did not adjust their benchmark before calculating materiality. Some weak candidates based their materiality discussion on the risk of material misstatement at the overall financial statement level, which demonstrated a technical weakness in their analysis. In addition, weak candidates provided a theoretical or generic discussion of the audit approach, without considering any specific case facts.

AO#10 (Procedures – Accounting Issues)

Candidates were asked to recommend audit procedures for the accounting issues discussed (inventory, Kingston University contract, and the joint arrangement), as well as for the newly constructed warehouse. Information on the accounting issues and the newly constructed warehouse was provided throughout the case, both in the Common and Assurance sections. To demonstrate competence, candidates were expected to discuss a number of procedures that would address the specific risks related to the accounting issues identified.

Candidates performed as expected on this AO. Most candidates provided sufficient breadth by providing one or two procedures for each of the four accounting areas. Most candidates were also able to adequately explain their procedures by discussing what audit evidence they would obtain and what they would do with the audit evidence. The procedures that were most often adequately explained, and that addressed the most significant risks, were related to the warehouse and the joint arrangement, as these areas are more straightforward to audit and contained many risks that could be tested.

Strong candidates clearly demonstrated that they understood the significant audit risks of each transaction. For example, for the warehouse, instead of simply verifying the purchase price of the land, strong candidates focused their audit procedures on whether the construction costs were appropriate to be capitalized by obtaining the associated invoices and verifying that the descriptions supported that the items were capital in nature. Strong candidates also provided precise and well-described procedures, clearly noting what external evidence would be obtained and what the auditor should do with that evidence.

Weak candidates tended to provide vague procedures without suggesting what specific audit evidence needed to be obtained and what information needed to be verified to do so, which made it difficult to determine exactly what they were proposing, and what risk they were trying to address. In addition, some weak candidates provided audit procedures that had already been performed. For example, some weak candidates recommended that a floor-to-sheet and sheet-to-floor inventory count be performed; however, the case facts explained that an audit junior attended the December 31, 2021, inventory count at SPH.

AO#11 (Sales Cycle – Risks and Procedures)

Candidates were asked to explain any risks identified in the sales cycle, provide audit procedures for each of these risks, and describe any additional information required. The information on the sales cycle was provided in Appendix IX (Assurance). To demonstrate competence, candidates were expected to discuss some of the risks in the sales cycle and provide audit procedures or additional information for some of these risks.

Candidates struggled with this AO. Most candidates identified some of the case facts that suggested a concern in the sales cycle; however, candidates were often unable to discuss how the case facts presented would suggest an assertion-level risk. Candidates also struggled to provide procedures that were sufficiently specific, and that addressed the identified risk. In addition, many candidates demonstrated technical weaknesses in their analysis, for example, by suggesting that obtaining customer confirmations could be used as a procedure to support the valuation of accounts receivable.

Strong candidates demonstrated an understanding of assertion-level risks, and described the potential risks suggested by the case facts presented. They also provided procedures that adequately addressed the identified risks, and explained the external evidence that would need to be obtained and what the auditor should do with that evidence. Strong candidates also provided thoughtful descriptions of additional information that could be obtained in order to provide more information, to understand the potential risks.

Weak candidates often identified potential issues in accounts receivable at SPH, but they were not in the context of risks. Some of these candidates were focused on internal controls, and provided recommendations for how SPH could better manage accounts receivable going forward. Other weak candidates identified that there was a risk that accounts receivable was overstated, but failed to incorporate the specific case facts to explain why the risk existed. In addition, the procedures they provided were typically not of sufficient quality. For example, some weak candidates provided inquiry procedures or only recommended that the allowance for doubtful accounts be recalculated, which does not provide sufficient appropriate audit evidence.

AO#12 (Internal Audit)

Candidates were asked to discuss whether it would be appropriate to use the work of SPH's internal audit department, and to describe any procedures that will need to be performed in order to be able to use their work. Information on the internal audit department was provided in Appendix IX (Assurance). Candidates were expected to apply the concepts from *CAS 610 Using the Work of Internal Auditors,* to assess the internal audit department in the areas of objectivity, competence, and systematic approach. To demonstrate competence, candidates were expected to discuss some of these areas, determine whether an external auditor would be able to rely on the work of the internal audit department, and provide some procedures to be performed in order to be able to use their work.

Given that this AO was expected to be more challenging for candidates, as this is an area where entry-level CPAs would likely have less exposure, candidates performed adequately. Most candidates understood the areas that would have to be assessed, for an external auditor to rely on the work of the internal audit department, and applied the relevant case facts to their analysis. Most candidates also attempted to provide procedures to be performed. The most commonly discussed criterion was the department's competence, and the most commonly provided procedure was to review the internal audit department's audit files, to assess the nature and extent of the work performed.

Strong candidates were more likely to go through the specific requirements noted in CAS 610 and conclude on whether each requirement was met, using relevant case facts, instead of only drawing an overall conclusion as to the ability to rely on the work. The procedures provided by strong candidates were also typically more detailed and specific. For example, instead of suggesting that the external auditors should review the working papers of the internal audit department in order to assess the nature of the work performed, strong candidates specified that they would look for evidence of Belvin's review and/or re-perform a sample of the testing, to verify the accuracy of the results.

Weak candidates generally identified the requirements in CAS 610 but did not clearly integrate the case facts about SPH's internal audit department. Some weak candidates copied the Handbook guidance from CAS 610 and provided no analysis of the requirements. Weak candidates also often did not provide any procedures to be performed.

AO#13 (Internal Controls)

Candidates were asked to assess the internal controls related to the children's books division for weaknesses, and to recommend improvements. A process description was provided in Appendix IX (Assurance). To demonstrate competence, candidates were expected to identify a number of the internal control weaknesses, explain the implication of each weakness, and provide a reasonable recommendation for addressing each weakness.

Candidates performed poorly on this AO. Most candidates identified many of the weaknesses and provided valid recommendations, but they struggled to explain the implications of the internal control weaknesses identified. For example, candidates struggled to link the control weaknesses to the sales representatives' incentive to increase sales for the purpose of earning higher commissions. It was important to understand why they would authorize inappropriately high credit limits to customers, for example. In addition, many candidates did not describe how the control weaknesses could impact SPH, such as by increasing SPH's bad debt expense, decreasing SPH's profitability, or causing SPH to lose customers.

Strong candidates better explained the implications of each weakness identified. For example, instead of simply stating that the implication of sales representatives determining customer credit limits is that higher credit limits would be authorized, they explained that sales representatives are incentivized to increase sales in order to increase their commissions. Therefore, the sales representatives would be biased to provide higher credit limits to customers, which could lead to an increase in bad debt expense for SPH if the customers are not creditworthy. Strong candidates also often recognized the bigger issue—that there was a segregation-of-duties issue, with the sales representatives being able to set up new, potentially fictitious customers, input a sales order into the system, and subsequently ask the accounts receivable department to write off the amount.

Weak candidates identified and discussed fewer internal control weaknesses. Some weak candidates also spent time discussing case facts that were not problematic, and as a result, provided discussions with limited value to the user. For example, they discussed how the children's books division was without a sales manager from September 15 to November 1; however, the recommendation to always have a sales manager provided little value as SPH had already hired a replacement sales manager on November 1.

Paper/Simulation:	**Day 2, Finance Role (SPH)**
Estimated time to complete:	300 minutes
Simulation difficulty:	Average
Competency Map coverage:	Finance (7)

Evaluators' comments by Assessment Opportunity (AO)

AO#7 (Chantal Summer NPV)

Candidates were asked to determine whether SPH should accept Chantal Summer as a new author, using SPH's new author selection methodology. Details on the new author selection methodology, including assumptions for children's book sales, annual and upfront costs, timing of sales, and information on Chantal Summer were provided in Appendix IX (Finance). To demonstrate competence, candidates were expected to prepare a net present value analysis, incorporating a sufficient number of relevant cash flow items, utilize a reasonable discount rate in calculating the present value of the cash flows, and provide a conclusion as to whether SPH should accept Chantal Summer.

Candidates performed well on this AO. Most candidates applied the net present value technique, using a discount rate of 9% (as provided in the case), and included appropriate items in their analysis. These included one-time costs (such as the editing and design, translation, fixed marketing, and upfront royalty costs), appropriate revenues, production costs, variable costs, and annual taxes. Most candidates provided a conclusion supported by their quantitative analysis.

Strong candidates often incorporated taxes on the upfront costs, recognizing that royalty payments are taxed as the expense is incurred annually, and adjusted the annual taxes to reflect the upfront royalty payment.

Weak candidates did not provide a net present value analysis, sometimes providing a calculation of the annual net income or cash flows without considering the time value of money. Some weak candidates applied an incorrect or unsupported discount rate (with no explanation of the source of the selected discount rate, which did not correlate to the rates provided in the case) to evaluate the new author. Some weak candidates also calculated annual revenues or production costs incorrectly, because they interpreted the case facts incorrectly (for example, by applying incorrect sales volume percentages to each year).

AO#8 (Sales Data and Assumptions)

Candidates were asked to assess the sales data provided, the assumptions that SPH's editors made as part of the new author methodology, and their impact on the Chantal Summer decision. Details on Chantal Summer and sales data for the 10 most recent new authors, including data on their genre, languages, royalty rates, and Instagram followers, were provided in Appendix IX (Finance). To demonstrate competence, candidates were expected to assess the sales data provided, discuss the assumptions in the new author methodology related to the sales data (for example, the genres considered, sales formats, languages, and book sales beyond the first five years), and other factors (such as the royalty rate/payment, and additional books authored by the new author), and discuss their impact on the Chantal Summer decision.

Candidates performed as expected on this AO. Most candidates attempted a discussion of some factors related to the sales data, with the royalty rate being the most frequently discussed factor. Candidates also often discussed the genre of the books, the sales format, and number of Instagram followers. Many candidates provided a qualitative discussion of these factors but did not always analyze the data and calculate average sales. Most candidates discussed other relevant assumptions, such as the upfront royalty payment and additional books that the author could write, but did not always consider the impact of a change in these assumptions on the Chantal Summer decision.

Strong candidates discussed the sales data in more depth, selecting comparable transactions (or the most comparable transaction) based on the factors discussed, and using this data to support different assumptions in the Chantal Summer decision. These new assumptions could then be used to discuss (or calculate) the impact of the differing assumptions on the net present value analysis. Strong candidates also considered the impact of other assumptions (beyond the sales data) on the net present value analysis.

Weak candidates did not discuss the sales data and focused on other assumptions, or discussed sales data at a high level only, by identifying some factors that could impact a new author's sales but not tying it back to Chantal Summer. Weak candidates also often discussed only one or two considerations at a high level, although they were provided with sales data, which showed many different factors that could impact a new author's sales. Weak candidates often did not consider the impact of their analysis on Chantal Summer.

AO#9 (SPH Valuation)

Candidates were asked to value SPH's common shares using the capitalized EBITDA methodology. Details on SPH's draft financial statements were provided in Appendix III (Common). Additional information regarding SPH's historical financial results, balance sheet, and precedent transactions in the industry were provided in Appendix IX (Finance). To demonstrate competence, candidates were expected to utilize the capitalized EBITDA methodology to determine a reasonable valuation of SPH, which would include incorporating a reasonable number of appropriate adjustments (to EBITDA and the resulting enterprise value).

Candidates performed as expected on this AO. Most candidates attempted to utilize the capitalized EBITDA method to value SPH, adjusting net income for interest, taxes, and depreciation to arrive at EBITDA as a starting point. Most candidates attempted to incorporate some normalizations, most often the remuneration and rent, before applying the provided EBITDA multiples. Most candidates also recognized that adjustments needed to be made to the enterprise value derived from multiplying the EBITDA by the EBITDA multiple, with the outstanding long-term debt and redundant property being the most common adjustments attempted.

Strong candidates incorporated additional normalizations in their analysis of EBITDA, including textbook revenues and royalties, to arrive at adjusted EBITDA. Strong candidates also addressed the balance sheet adjustments correctly, incorporating multiple components such as the outstanding long-term debt, redundant property, and bond investment.

Weak candidates did not utilize the capitalized EBITDA methodology (instead applying an income or cash-flow-based method or a balance sheet approach), or applied it incorrectly. Weak candidates sometimes did not consider both 2020 and 2021 EBITDA in determining SPH's valuation, or made incorrect adjustments and/or normalizations (for example, not including all depreciation and amortization line items in the calculation to arrive at EBITDA, or deducting the above market remuneration rather than adding it) in arriving at adjusted EBITDA.

AO#10 (Jefferson Bonds)

Candidates were asked to discuss Jefferson's motivation for replacing its outstanding bonds with a convertible bond, discuss the risks and benefits to SPH, and conclude on whether SPH should accept the proposal. Details on the convertible bond proposed by Jefferson were provided in Appendix IX (Finance). To demonstrate competence, candidates were expected to provide a discussion of Jefferson's motivations, and the risks and benefits to SPH, by considering various terms of the bonds (such as the interest rate or conversion factor) and other relevant considerations (such as Jefferson's past behaviour or ability to offer industry expertise), and to provide a conclusion as to whether SPH should accept Jefferson's proposal.

Candidates performed as expected on this AO. Most candidates discussed either Jefferson's motivations, typically focusing on the conversion rights and ownership benefits, or SPH's risks and opportunities associated with the bond proposal, typically focusing on Jefferson's previous mergers, the interest rate, and competing interest. Most candidates incorporated a calculation of Jefferson's ownership percentage upon conversion, and provided a supported conclusion as to whether SPH should accept the proposal.

Strong candidates addressed both parts of the required, discussing both Jefferson's motivations and SPH's risks and opportunities in order to support their conclusion. Strong candidates provided a correct calculation of Jefferson's ownership percentage after conversion, incorporating the appropriate conversion price on the bonds, and recognizing that these bonds were additive to SPH's equity.

Weak candidates did not address both parts of the required, and provided a superficial discussion of either Jefferson's motivations or SPH's risks and opportunities, often identifying factors without explaining why they were important to Jefferson or SPH (for example, identifying Jefferson's history of buying companies to merge without explaining why this might not be optimal for SPH).

AO#11 (Working Capital)

Candidates were asked to assess the impact on SPH's bank covenant and cash flow of a 5% discount offered by a major supplier for invoices paid within 10 days, and to recommend whether SPH should take the discount. Details on SPH's quarterly net working capital forecast, with a supporting accounts payable schedule, and the expected impact of the discount on SPH's payment timing were provided in Appendix IX (Finance). To demonstrate competence, candidates were expected to revise SPH's current ratio, taking into consideration the revised payables and cash balances based on the revised timing of cash flows with the discount, and to conclude on whether SPH should accept the discount.

Candidates struggled with this AO. Most candidates attempted to revise the current ratio, but often incorporated a limited number of adjustments to cash and payables related to the discount. Most candidates instead discussed some factors that would impact the timing of cash flows, such as the need to pay a quarter early in order to receive the discount, or the need to make payments for two quarters' worth of payables in Q1. Most candidates provided a conclusion as to whether SPH should accept the discount based on their analysis.

Strong candidates attempted to adjust payables and cash to revise the current ratio, often incorporating the double payment in Q1, the timing difference, or the discount, which impacts cash only.

Weak candidates did not attempt this AO, or provided a superficial discussion of the impact of the discount (for example, by stating that the discount improved cash flows without further explanation, or calculating the discount without the context of the current ratio or cash flow), sometimes without attempting to quantify the impact on the current ratio or the cash flows.

AO#12 (Children's Book Intellectual Property)

Candidates were asked to recommend whether SPH should acquire the intellectual property rights for a collection of children's books, based on an analysis of the proposed purchase price and qualitative decision factors. Details on the content library and precedent transactions were provided in Appendix IX (Finance). To demonstrate competence, candidates were expected to provide a reasonable analysis of both the purchase price and the qualitative factors to consider. A reasonable purchase price analysis generally required the candidate to discuss whether the transactions provided were comparable to the proposed transaction, and to compare the implied net income yield of 10% on the proposed transaction to the comparable transactions, taking into account any factors (for example, Legacy being in a distressed situation) that would impact the price.

Candidates struggled with this AO. Most candidates attempted to compare the net income yield of 10% on the Legacy transaction to the precedent transactions, but did not always explain why each transaction was comparable or not comparable. Most candidates focused on discussing the risks and opportunities of the transaction, often discussing the opportunities to monetize the portfolio through different mediums and the age of the content, to support their conclusion as to whether SPH should pursue the transaction.

Strong candidates discussed each of the precedent transactions and explained why they were comparable or not comparable, based on the type of asset underlying the intellectual property and the potential use cases for the asset. Strong candidates discussed why the net income yield of 10% could differ from the precedent transactions, recognizing that Legacy is being wound down, and that the transaction could therefore be considered a distressed sale.

Weak candidates did not attempt this AO, or did not attempt to assess the net income yield. Weak candidates focused on the risks and opportunities, but provided a superficial analysis that did not explain why the identified factors were relevant to SPH, such as stating that the price was reasonable without context of the net income yield analysis, or stating that SPH could use this content without explaining how and why this would be beneficial to SPH.

AO#13 (Investments)

Candidates were asked to discuss various investment options, considering SPH's investment objectives, and to recommend one or more options in order for SPH to invest its existing cash surplus and any cash surplus generated in the coming year. On the role requirements page, candidates were provided with SPH's investment objectives and a list of investment options available to SPH. To demonstrate competence, candidates were expected to discuss the investments provided, taking into consideration SPH's objectives of generating capital growth and maintaining liquidity, and to recommend which investment(s) SPH should pursue.

Candidates performed as expected on this AO. Most candidates discussed most of the investment options presented, explained why each option met or did not meet SPH's investment objectives, and provided a recommendation as to which investment(s) SPH should pursue.

Strong candidates discussed all of the investment options thoroughly, considered both management objectives of generating capital growth and maintaining liquidity in their analysis, and provided a conclusion that was consistent with SPH's investment objectives.

Weak candidates provided a superficial discussion of some of the investment options, sometimes focusing on risk and reward as opposed to SPH's investment objectives. Weak candidates sometimes also provided a recommendation inconsistent with SPH's investment objectives (for example, suggesting that SPH make an illiquid investment even though SPH's objective is to maintain liquidity).

Paper/Simulation:	**Day 2, Performance Management Role (SPH)**
Estimated time to complete:	300 minutes
Simulation difficulty:	Average
Competency Map coverage:	Performance Management (7)

Evaluators' comments by Assessment Opportunity (AO)

AO#7 (CVP Analysis for Pricing Discount)

Candidates were asked by Michel to review a proposal by Maria to produce e-books, and to determine which percentage price reduction would produce the highest profitability, based on the estimated sales volumes. Information on Maria's proposal, including information on price sensitivity and on the fixed and variables costs associated with the e-book, was provided in Appendix IX (Performance Management). To demonstrate competence, candidates were expected to adequately calculate the contribution margin or the operating income generated by the e-books under each of the pricing scenarios suggested by Maria (which included correctly calculating the new sales volume and determining the variable costs and fixed costs under each scenario), and to identify the most profitable one.

Candidates performed very well on this AO. Most candidates understood the required, and performed the required calculation with very few errors.

Strong candidates accurately calculated the sales volumes associated with each pricing scenario and calculated the sales revenue, based on this sales volume. They then correctly used this sales volume to quantify the variable costs associated with each scenario (royalties, variable selling costs, and variable general and administration costs). Some of them excluded the fixed costs altogether, correctly stating that they were not relevant, as they were identical for all the scenarios. Others correctly calculated them, incorporating the 20% reduction mentioned in the case, and deducted them for all of the scenarios considered.

Weak candidates often made mistakes in quantifying the sales volume associated with each scenario and in identifying the scenarios required. They also either did not conclude on their analysis, or made errors in calculating fixed costs, for example, by taking the same amount, despite the case fact that stated that some fixed costs would be reduced by 20%. Some weak candidates used an entirely wrong approach to answer the required, for example, by basing their analysis on revenues only and ignoring costs altogether.

AO#8 (Video Creation Costs)

Candidates were asked by Michel to determine the incremental cost of producing videos, to be used as an additional resource for students attending courses, and to recommend whether the project should be pursued, considering the targeted cost per student. Information on the various costs of producing the videos was provided in Appendix IX (Performance Management). To demonstrate competence, candidates were expected to analyze the costs provided to determine whether they were relevant to the analysis (i.e., identify the costs that were genuinely incremental to the project). Many of the costs presented in the case were not relevant to the calculation, either because they were sunk costs already incurred in the past, or because they were future costs that would be incurred regardless of whether the videos were produced. Candidates were then expected to calculate the incremental cost, compare it to the targeted cost of $125 per student, and conclude as to whether the project should be pursued.

Candidates performed adequately on this AO. Most candidates attempted the required cost calculation, and correctly compared the calculated cost to the target of $125 per student. Most candidates made some errors in their calculation, either by including non-relevant costs, or by making an error in quantifying a relevant cost. The most common mistakes were the calculation of the cost related to the technical experts (forgetting to include the recording time in the cost), as well as including a fraction of the cost of existing cameras and recording equipment in the calculation.

Strong candidates performed a calculation that contained only a few minor errors. They generally clearly explained the thought process behind the exclusion of non-relevant costs, and made a clear conclusion as to the total cost compared to the target cost.

Weak candidates made numerous mistakes in their calculation by including several non-relevant costs, or by making errors in quantifying the relevant costs. For example, many weak candidates included the entire capital cost of cameras and recording equipment rather than allocating them to each course, based on recording time. This error significantly inflated the cost of producing the videos. Many weak candidates appeared to make no attempt to identify the relevant/incremental costs, and merely listed and added the various costs mentioned in the case, with no explanation or additional analysis, and without attempting to exclude certain costs.

AO#9 (ProofONE Editing Program)

Candidates were asked by Michel to assess the effectiveness of the ProofONE editing program recently tested on six books, and to suggest key performance indicators (KPIs) that would enable SPH to assess the program's effectiveness if the program is adopted. Information on the quantitative data from a test run performed on six books, the followup work performed by editors following the test run, and the main objectives of ProofONE, were provided in Appendix IX (Performance Management). To demonstrate competence, candidates were expected to use the data from the test run to assess the software's performance, considering the main ProofONE objectives (reduce lead time, reduce editing time, and increase accuracy of the editing process). Candidates were also expected to develop several KPIs, to be used to assess the software's performance going forward, considering the objectives.

Candidate performance was as expected, given the unusual nature of the AO. Candidates generally attempted to both assess the software's performance based on the test run, and to develop KPIs to be used in the future. However, candidates were generally more comfortable responding to the second part of the required (KPIs), and had more difficulty assessing the software's performance. Generally, candidates were able to use the data to adequately assess the reduction in lead time, but had more difficulty assessing ProofONE's performance in detecting errors or reducing editing time. For example, in assessing the program's performance in reducing editing time, many candidates compared the current time spent by the editors to either the time that these editors spent reviewing the software's work, or to the time spent by the software itself. They failed to realize that the sum of the editor and software times was the relevant metric to compare to the current editing time without the software. Candidates also generally provided adequate KPIs linked with the objectives of using the software.

Strong candidates more often used the data to correctly assess the objective of reducing editing time (the most challenging of the three objectives to assess), as they compared the current editing time of 60 seconds per page (human only) to the editing time when using the software (human + software). Strong candidates also created a useful metric for assessing the performance of the software in detecting errors, and adequately measured the reduction in lead times seen for the six books. They also suggested valid KPIs, often using as KPIs the same metrics they had used to evaluate the performance of the software.

Weak candidates had difficulty structuring a response that addressed the two components of the required. They either failed to use the quantitative information provided to assess the software's performance, or used it to create metrics that made little or no sense, considering the three objectives mentioned. Many of them seem to misunderstand the case facts presented, and mistakenly thought that the software would replace the human editors entirely. For the first part of the required, they generally only reasonably attempted to assess the reduction in lead time, as it was the most straightforward objective. For the second part of the required, they generally attempted a list of KPIs, but they were typically not explained, or not linked to the three objectives of the software. For example, some candidates suggested as a KPI the number of errors detected per book. This was considered weaker, since the number of errors detected is strongly related to the number of errors present in the original book, and is not an adequate metric for measuring the software's capacity to detect errors.

AO#10 (AERU Pilot Project)

Candidates were asked by Michel to assess the performance of the autonomous editorial resource unit (AERU) pilot project, compared to the levels of production and profitability under SPH's current structure. Candidates were provided with a description of the pilot project, as well as objectives and targets related to improvements anticipated through this project, in Appendix IX (Performance Management). They were also provided with some relevant data related to the performance of the team of employees involved in the pilot project, as well as comparable information for the rest of the division for the duration of the project. To demonstrate competence, candidates were expected to assess the performance of the team against most of the objectives and targets provided. Candidates were specifically directed to three performance metrics, while a fourth metric (number of reprints needed) could also have been assessed.

Candidate performance on this AO was disappointing. Candidates seemed to have been surprised by the context of AERUs, and generally had difficulty assessing the performance of the AERU, compared to the rest of the division, for the three directed metrics. Most candidates correctly calculated only one or two of the three metrics mentioned, and did not use the fourth metric that they were less directed to.

Strong candidates correctly calculated all three directed metrics, both for the AERU and the rest of the adult non-fiction division, and assessed the performance of the pilot project accordingly. Strong candidates also incorporated the number of reprints in their analysis, despite not being directed to do so. These candidates demonstrated that they understood the nature of the pilot project, and could link the information provided for both populations (the AERU and the rest of the division) to the calculation of the metrics proposed.

Weak candidates' responses were generally unstructured and disorganized. Instead of using the targets and objectives that SPH had set for this project, many weak candidates instead performed a more traditional qualitative analysis of the project, using a "pros and cons" format, only occasionally incorporating some of the various statistics mentioned in the case. Those candidates therefore chose to respond to a different required that they were more comfortable with. Some other weak candidates understood the required correctly and tried to respond to it, but made numerous errors in their calculations, and ignored the less directed one altogether. For example, they calculated the total number of books sold rather than the number of books per title, or they calculated the total number of books published rather than the number of books published per employee.

AO#11 (AERU Incentive Program)

Candidates were asked by Michel to identify the concerns related to the current incentive plan for those in the AERU project, and to suggest changes that would make it better suited to them. They were also asked to identify the risks associated with implementing the incentive plan that they were suggesting for these employees. A description of the current incentive plan in place for the employees of the adult non-fiction division who were not included in the AERU, as well as some information on how this plan was applied to the AERU employees, was provided in Appendix IX (Performance Management). To demonstrate competence, candidates were expected to recognize that the current plan was more suited to a departmental structure, and less to a structure based on small teams that included many different types of employees (publicists, editors, support staff), and to explain why the current plan was not appropriate. They were also expected to create new incentives better suited to this new structure, and to explain the risks associated with implementing these new incentives.

Candidates performed poorly on this AO. Most candidates struggled with the scenario in which AERUs were small teams that included many types of employees, and instead provided responses that were consistent with assessing performance incentives for a typical departmental structure. Most addressed all three components of the required, but did it outside of the context of the AERU employees. Instead, they responded to the three components of the required for the other employees of the division, only mentioning AERUs once or twice, rather than making the AERU employees the centerpiece of their discussion. This often led to generic discussions about the need to evaluate employees based on what they controlled, and to a critique of the current incentive plan, on the basis of these generic attributes of a good incentive plan.

Strong candidates focused their discussion on AERU employees only, and explained that the good performance of the AERU pilot project that they had identified in AO#10 was not properly rewarded under the current plan, where all employees were rewarded based on the performance of their individual department. They often mentioned that this would negate the purpose of the AERUs, which was to create a leaner structure whose performance would be improved by the daily cooperation of employees of different departments, and noted that the AERU employees would be blamed for elements entirely out of their control, i.e, the performance of their original departments. They often suggested incentives for the AERU employees that aligned with the objectives of the creation of the AERU (reduction in lead time, increase in sales per book title, increase of books published per employee, and reduction in reprints), and explained the risks of implementing this type of structure, often noting dissatisfaction of employees who previously benefitted from the current incentive plan.

Weak candidates' responses were generic and often very short, with no reference at all to the concept of AERUs. They often only responded to the first component of the required, and therefore limited their response to the flaws of the current plan, without recommending improvements to it. As they were not recommending improvements, they could not address the risks associated with their recommendations. Many weak candidates also misunderstood the meaning of the third component of the required, focusing on the risks of implementing the AERU structure in general, rather than the risks associated with implementing a new incentive plan for the AERU employees.

AO#12 (Outsourcing Sales Function)

Candidates were asked by Michel to provide a qualitative assessment of the benefits and risks of a proposal to outsource SPH's entire sales function to a third party who had made an offer to the company. An email received by SPH from a company specializing in taking over the sales function of book publishers, which contained details of the offer, was provided in Appendix IX (Performance Management). To demonstrate competence, candidates were expected to adequately explain several qualitative considerations of the proposed change for SPH, but were not expected to provide a recommendation, since the case provided no information that a candidate could use to perform a quantitative analysis of the proposal.

Candidates performed well on this AO. Most candidates identified a reasonable number of valid qualitative considerations, and explained them adequately. Some considerations were more generic in nature (for example, the impact of outsourcing on employee morale, the reduced control by SPH on its sales function, the added incentive to sell when the payment is based solely on commissions), while others were more case-specific (for example, the fact that the supplier also represented SPH's four large competitors, the shared database and possible confidential information integrity issues, the special relationships SPH had with the bookstores and the authors). Most candidates identified most of the generic considerations, as well as some of the more case-specific ones. However, many candidates attempted to incorporate quantitative considerations in their response, such as the cost savings the proposal would generate, although the case provided no information that would enable the candidates to quantify any aspect of the outsourcing proposal, and although Michel had specifically requested a qualitative analysis only.

Strong candidates not only focused on the more case-specific elements, but also provided more valid elements and better explained them, often making valid links with SPH's strategy and its relatively small size. The case facts were analyzed in depth, and the consequences of the case facts on SPH were clearly explained.

Most weak candidates generally presented a list of case facts in the form of a "pros and cons" list, without explaining why the case facts in question were supporting the outsourcing proposal or making it riskier. Other weak candidates presented an analysis that lacked breadth, as it identified an insufficient number of valid elements, or the analysis was often more generic in nature. These candidates often seemed to have run out of time on this AO, perhaps due to spending too much time on previous AOs.

AO#13 (External Factors Impacting Strategy)

Candidates were asked by Michel to perform an overall assessment of the external risk factors affecting SPH's strategic direction and to explain the impact of these factors on each proposed initiative. For this AO, candidates had to integrate information presented throughout the case. Most of the information required to assess SPH's external risks was provided in Appendices I (industry background) and II (SPH's operations) of the Common section of the case. The information required for the second component of the required—explain the link between the risks identified and the various initiatives considered—was presented throughout Appendix IX (Performance management). To demonstrate competence, candidates were expected to identify a reasonable number of external risk factors, and to then link these factors to the initiatives they had analyzed in the previous AOs (e-book project, video lecture proposal, ProofONE software, creation of AERUs, incentive plan for the AERU employees, and the outsourcing offer for the company's sales function).

Candidate performance on this AO was generally weak, with some doing very well while the majority struggled. Many candidates identified valid external risks, but they struggled to link the risk factors identified to the various initiatives they had analyzed earlier in their response. Most candidates were generally able to identify and briefly explain the risk associated with the presence of four large competitors in the industry, and then attempted to link this risk to one or two initiatives, most frequently the video lectures and the e-books. However, the analysis provided was generally brief, and both the identification of the risk and the links with the initiatives generally lacked depth, as most candidates would mention a risk factor without explaining why or how the element mentioned generated uncertainty for SPH. The other risks that were commonly identified were often internal in nature, such as the issues related to SPH's controller or the declining profits of the adult non-fiction division, which did not address the specific request to address external factors.

Strong candidates identified multiple facets of the competition risk, for example: control of the distribution channels; more advertising capacity; ability to reduce prices; ability to recruit prominent authors. They were then able to make numerous links with the proposed initiatives, and the links they made were explained with more precision and detail.

Weak candidates generally limited their analysis to the first part of the required (risk identification), and made little or no links to the various initiatives. Weak candidates tended to respond as though they were asked to provide ways to mitigate the risks identified, rather than to link them with initiatives being analyzed. For other weak candidates, the risks identified were often internal in nature. Many weak candidates provided an analysis with little depth. For example, they identified an external risk as being the trend for e-books, and then would link it to the e-book proposal by merely stating that this initiative would help mitigate the risk without explaining this any further. Finally, many weak candidates presented an unstructured response that appeared to have been rushed at the end of their paper.

Paper/Simulation:	**Day 2, Taxation Role (SPH)**
Estimated time to complete:	300 minutes
Simulation difficulty:	Average
Competency Map coverage:	Taxation (7)

Evaluators' comments by Assessment Opportunity (AO)

AO#7 (QSBC Share Sale)

Candidates were told, "Brian has asked MC to analyze the tax consequences to him of selling his shares in SPH to Jefferson. Rodney is also considering selling his shares to Jefferson and wants to know his taxes payable if he does so." Information about SPH's shareholders was provided in the background information of the case, and candidates could obtain information about SPH's assets from the statement of financial position in Appendix III (Common). Some additional information about the sale was provided in Appendix IX (Taxation). To demonstrate competence, candidates were expected to identify the QSBC share criteria and apply them to case facts, to determine whether either Brian or Rodney would qualify for the LCGD.

Candidates struggled with this AO. Most candidates identified the need to calculate gains for Brian and Rodney, but they frequently failed to identify the QSBC share criteria or simply assumed the shares qualified, even though Rodney's shares did not. Those who did identify the need to discuss QSBC share criteria often struggled to identify the relevant case facts, most of which were found in the common section of the case.

Strong candidates identified all of the QSBC share criteria and attempted to apply them to case facts. They usually identified the most significant issues, such as the fact that Rodney had not held the shares for 24 months, or that the bonds would not qualify as active business assets.

Weak candidates did not identify the lifetime capital gains deduction or the QSBC share criteria. At best, they attempted a calculation of Brian's and/or Rodney's gain on the sale of shares, often calculating this incorrectly (factoring in the wrong adjusted cost base, or attempting to recalculate proceeds rather than simply taking the share ownership multiplied by the value).

AO#8 (Acquisition of Control)

Candidates were told, "Michel would also like you to outline the tax consequences to SPH of Jefferson acquiring all of Brian's and Rodney's shares." In the background information of the case, it was indicated that Brian and Rodney together owned 55% of the shares, which constitutes control of the corporation. In Appendix IX (Taxation), candidates were provided with other relevant information, such as a capital loss carryforward, fair market value information on some assets, and Jefferson's taxable capital. To demonstrate competence, candidates were expected to identify that there was an acquisition of control, and to discuss some of the implications.

Candidates performed adequately on this AO. Most candidates identified that there was an acquisition of control and provided a summary of the significant consequences of this, although some struggled to integrate relevant case facts into their discussion.

Strong candidates identified that there was an acquisition of control, clearly explaining why this would be the case. They then proceeded to discuss many implications of an acquisition of control, including those specific to SPH (such as the expiry of capital loss carryforwards, the requirement to reduce the cost of Class 8 assets to their (lower) fair value, and the impact of association on Jefferson's small business limit).

Weak candidates often failed to identify that there was an acquisition of control, instead attempting to come up with other implications for SPH (such as impacts on SPH's paid up capital accounts), none of which were relevant, and virtually all of which were technically incorrect. Those who did identify an acquisition of control usually failed to identify any relevant impacts, or only identified simple ones, such as a deemed taxation year end.

AO#9 (Brian and Sarah – Personal Tax)

Candidates were told, "Brian and his wife, Sarah, plan to retire on June 30, 2022. They would like an estimate of their taxes payable for 2022, which they want to minimize." In addition to the information provided for AO#7 on the share sale, Appendix IX (Taxation) provided information on Brian's and Sarah's income for the year, and information on a proposed sale of their home in Toronto, as well as on a secondary home (cottage) that they also owned. To demonstrate competence, candidates were expected to discuss the principal residence exemption (PRE) with respect to the home that Brian and Sarah would sell during the year, and to calculate income taxes payable for the year for Brian and Sarah.

Candidates performed adequately on this AO. Most candidates attempted to analyze the gain on the house held by the couple, to determine which should be claimed as the principal residence, although the quality of responses varied significantly on this aspect and many candidates did not compare the two properties on equal footing by calculating gain per year owned. Most candidates did, however, perform a reasonable calculation of taxes payable, using the income and credit information provided.

Strong candidates performed a clear analysis of the PRE by calculating the gain per year on each property, comparing the two, and concluding that the PRE should be claimed on the house being sold. They also integrated the impact of AO#7 (Brian's taxable capital gain) into their calculation of income, and calculated taxes payable by correctly applying the graduated rates and deducting credits from tax.

Weak candidates often did not address the PRE at all, or only addressed the PRE without attempting a calculation of taxes payable. Those who did attempt calculations frequently made significant technical errors, such as deducting credits from income or misapplying the graduated rates.

AO#10 (Replacement Property)

Candidates were told, "As demand has shifted from print to e-books, SPH is considering selling its Tilly Avenue warehouse and moving to a smaller one. SPH would like to know the tax consequences, for 2022 and subsequent taxation years, of the sale of the Tilly Avenue warehouse and the purchase of the Foster Avenue warehouse." Information on the warehouse move was provided in Appendix IX (Taxation), including purchase and sale prices and relevant dates. To demonstrate competence, candidates were expected to identify the replacement property rules, discuss whether they would apply, and determine the amount of gain to be deferred.

Candidates performed well on this AO. Most candidates identified the replacement property rules and applied some of the criteria to the case facts. Most then correctly calculated the gain to be deferred.

Strong candidates provided a more in-depth discussion of the replacement property rules, applying the specific criteria to more of the case facts in order to better support their conclusions that the rules would apply. In addition to calculating the gains to be deferred, strong candidates also recalculated the adjusted cost base of the new property, to demonstrate how the deferral would work.

Weak candidates often did not identify the replacement property rules, instead simply calculating the gain and the taxable capital gain. Those who did attempt to discuss the replacement property rules often failed to identify any of the criteria, or provided a discussion that showed they did not understand how these rules worked.

AO#11 (Taxable Income for SPH)

Candidates were asked "to calculate net income for tax purposes [and] taxable income … for SPH for its 2021 taxation year." A statement of net income and comprehensive income was included in Appendix III (Common), and more details about the expenses were included in Appendix IX (Taxation). Appendix IX (Taxation) also included information about opening capital cost allowance balances and capital asset additions for the year. Candidates could also integrate the results of their common financial reporting discussions into the impacts on taxable income, since these were for the same fiscal period. To demonstrate competence, candidates were expected to calculate taxable income, adjusting for the various tax items in the case.

Candidates performed worse than expected on this relatively easy AO. Taxable income is typically an easy calculation for candidates, but there were fewer adjustments to make on this case compared to previous cases, to allow candidates the time to provide more depth of discussion on the more significant adjustments. However, most candidates did not address the significant adjustments (which were primarily those resulting from the financial reporting issues), and instead only adjusted for the simpler items (such as depreciation/CCA, meals and entertainment, and golf dues).

Strong candidates adjusted income for all of the simpler tax items, but also attempted to discuss and adjust for some of the more difficult ones, such as the impact of the financial reporting adjustments on the taxable income, or the impact of financial statement reserves from the balance sheet. They clearly communicated their adjustments and provided explanations where appropriate.

Weak candidates attempted to adjust income for some of the simpler adjustments, but frequently made technical errors or made significant omissions. Most commonly, weak candidates started with net income after tax (and did not add back income tax), failed to integrate the impact of any of their financial reporting adjustments into the opening figure, and made errors in calculating capital cost allowance (such as using the half-year rule instead of the accelerated investment incentive, or putting additions into the wrong classes). They rarely explained any of their adjustments.

AO#12 (Taxes Payable for SPH)

Candidates were asked "to calculate … federal taxes payable for SPH for its 2021 taxation year." In addition, they were told, "The shareholders know that earning passive income in a CCPC can have tax implications and want you to explain what the implications would be if SPH earns $150,000 in dividend income from an investment in Canadian public companies. To help illustrate this, Michel asks you to recalculate taxes payable for 2021, as though SPH had earned that additional income." The statement of net income and comprehensive income in Appendix III (Common) included some investment income, and candidates were expected to integrate the work performed in AO#11 into this calculation. To demonstrate competence, candidates were expected to calculate taxes payable for SPH for 2021 using the taxable income they calculated in AO#11, and either reflect the impact of the existing passive income (interest on bonds) on those taxes payable or explain the impact of dividends on taxes payable.

Candidates performed adequately on this AO. Most candidates attempted a calculation of taxes payable, showing the various components (basic rate, abatement, additional refundable tax, general rate reduction), although many did not notice that SPH's taxable capital exceeded the threshold for the small business limit grind. Many did not integrate information from the statement of net income and comprehensive income to identify that there was passive income included in the total for the year. While most candidates attempted to determine the impact of dividends, their discussions and calculations were often technically incorrect.

Strong candidates performed a technically correct calculation of taxes payable, including an acknowledgment of the taxable capital grind on the small business limit. They also discussed the impact of dividend income, and calculated the amount of Part IV tax to be paid on receiving $150,000 in dividends, noting that Part I tax would not be changed and/or identifying the impact of the investment income on the small business limit.

Weak candidates usually attempted a calculation of taxes payable and made several technical errors in their calculations; most commonly, they claimed the full amount of the small business deduction, and ignored the passive income in the income statement. They also usually made other errors, such as calculating the provincial abatement as 10% of tax rather than 10% of income, and calculating the general rate reduction without considering the aggregate investment income or income claimed under the small business deduction. Weak candidates often did not attempt the dividend issue, and those who did usually made significant technical errors, such as adjusting Part I tax for dividends received (increasing the additional refundable tax, increasing all the tax for a higher income, or reducing taxes for a dividend refund without recording any Part IV tax or paying a dividend out of SPH), failing to identify Part IV at all, or attempting to make adjustments to the RDTOH and/or GRIP pools that were not consistent with the case facts (for example, increasing an RDTOH pool by the full amount of the dividend).

AO#13 (GST/HST Return)

Candidates were told, "Since Suzanne left, Doris asked Rhea, the accounting clerk, to ensure that SPH is up to date with its GST/HST obligations. The November return was filed on time by MC. Michel asks you to review what Rhea completed for December and perform any incomplete work. Doris is worried that there may be penalties to pay." In Appendix IX (Taxation), candidates were provided with monthly income, expense, and capital purchase information for the last quarter of the year, and were told what work had been completed so far (a payment was made for December based on the November amount, and nothing else). To demonstrate competence, candidates were expected to perform a reasonable calculation of the net tax for December, or to attempt a calculation of the net tax for December and comment on the applicable penalties.

Candidates struggled with this AO. Most candidates attempted a review of the work completed by Rhea, but many did not attempt a calculation of net tax, despite the direction to "perform any incomplete work." Those who did attempt a calculation frequently made significant errors in their calculations (such as including the total of all expenses in their ITC calculations, despite several that clearly did not qualify, or missing the production costs altogether). Most candidates attempted to address the concern about penalties, but often only superficially (for example, suggesting that there "could be" penalties without explaining how or why).

Strong candidates calculated net tax for the period, clearly demonstrating that they understood that not all costs are eligible for ITCs, and that ITCs are usually claimed based on when taxable purchases are made rather than on when the expense is claimed for financial reporting purposes. They also identified that the GST/HST return was due at the end of January and that, with today being February, a late-filing penalty would apply based on the amount owing at that time.

Weak candidates frequently did not attempt any calculation at all. If they provided a discussion of penalties, it was often superficial, and often contained errors (such as identifying the wrong filing deadline). Weak candidates often simply provided irrelevant technical knowledge of GST/HST issues not related to this case (such as the small supplier threshold and quarterly versus monthly filer rules).

APPENDIX G
BOARD OF EXAMINERS' COMMENTS ON DAY 3 SIMULATIONS

Paper/Simulation:	**Day 3, Case 1 (IHC)**
Estimated time to complete:	75 minutes
Simulation difficulty:	Average
Competency Map coverage:	Financial Reporting (2); Taxation (1); Finance (1); and Strategy and Governance (1)

Evaluators' comments by Assessment Opportunity (AO)

AO#1 (Revenue Recognition)

Candidates were asked to discuss any accounting issues they identified and were told that the bank had identified issues with the accounting for sales transactions. The balance sheet, income statement, and footnotes to specific accounts were provided in Appendix I. To demonstrate competence, candidates were expected to discuss the accounting treatment of sales generated from long-term contracts and sales that were subcontracted to Control5, using *Handbook* guidance and case facts to support their conclusions.

Candidates struggled with this AO. While most candidates attempted an analysis of the accounting treatment for both revenue recognition issues, they struggled to provide depth of analysis on both. Candidates struggled to provide depth of analysis more on the Control5 issue than on the long-term contract issue, often concluding that IHC should record the sales on a net basis without providing sufficient support for their conclusion. Some candidates only addressed one issue, skipping the Control5 issue more often than the long-term contract issue. Many candidates used general revenue recognition *Handbook* criteria in their analysis of both revenue recognition issues, instead of the more specific criteria available for each issue, which usually resulted in a weak analysis, and often an incorrect conclusion on the long-term contract issue.

Strong candidates provided a complete discussion of the accounting treatment of the two revenue recognition issues, using appropriate case facts and relevant *Handbook* guidance to support their analysis. For the long-term contracts, most strong candidates used the construction costs incurred compared to the estimated total construction costs as the basis for calculating the amount of revenue to be recognized. These candidates correctly concluded that deposits on the balance sheet should be recognized as revenue, based on the percentage of completion of the contracts, and used the numbers provided in the case to calculate the adjustment needed. Strong candidates used case facts related to the Control5 issue to evaluate IHC's exposure to the significant risks and rewards associated with the sales of the control systems, and correctly concluded that IHC was acting as an agent. Strong candidates recommended adjustments to revenue and cost of sales, correctly concluding that IHC should only record the 15% commission as revenue.

Weak candidates often only addressed one of the revenue recognition issues. When addressing the revenue recognition on the long-term contracts, most weak candidates did not recognize the contracts as being long-term. Instead, they used *Handbook* criteria for general revenue recognition and concluded that, as the homes were not completed at the balance sheet date, performance had not been achieved, the risks and rewards of ownership had not been transferred to the customer, and therefore incorrectly concluded that no revenue should be recognized at year end. Many weak candidates also suggested that an amount of $62,500 should be recognized as revenue to match the $62,500 of costs incurred, instead of using the percentage of completion to calculate the amount of revenue to recognize. Many weak candidates did not refer to the specific *Handbook* guidance to determine whether IHC was acting as a principal or an agent in the transactions involving Control5, and instead attempted to analyze the issue through other *Handbook* guidance, such as the general revenue recognition criteria. Some of these candidates attempted to apply case facts related to the relationship between IHC, Control5, and the customer within their analysis, but not in the context of a principal versus agent discussion, and therefore struggled to provide a relevant and complete analysis. For example, Control5 was analyzed as a contractor to IHC or as a contractor to the customer. These analyses resulted in various recommendations on how to record the transaction, including reversing the revenue and cost of sales IHC had recorded and only recording the contractor expense charged by Control5.

AO#2 (Other Accounting Issues)

Candidates were asked to discuss any accounting issues they identified. They were told that the bank had suggested there may be adjustments required to accounts other than sales, and were provided with IHC's balance sheet, income statement, and footnotes to specific accounts in Appendix I. The footnotes included different accounting issues, including issues with restricted cash, accrual accounting for interest income, and capitalization of the small tools and trailer. To demonstrate competence, candidates were expected to identify and discuss the accounting treatment for some of these issues, using *Handbook* guidance and relevant case facts for each issue addressed to support their conclusion.

Candidates performed poorly on this AO. Candidates were not directed to the specific issues, and struggled to identify them. A significant number of candidates did not address this AO at all. Candidates who addressed this AO most often discussed the capitalization of the small tools and the trailer. Very few candidates identified the issue with the presentation of restricted cash, and those who did showed a lack of technical understanding of the appropriate accounting treatment. For example, many candidates analyzed the issue using the financial instrument *Handbook* guidance, concluding that, because the GIC is a financial instrument, it needed to be presented separately from cash, missing the underlying issue of the restricted nature of these funds. Most candidates did not identify the issue with the interest accrual for the GIC, but most of the candidates who did were able to provide a clear and concise discussion of the issue. Many candidates discussed irrelevant issues, such as whether the house and land were appropriately capitalized, and appeared to have spent a significant amount of time on these irrelevant discussions.

Strong candidates correctly identified most of the accounting issues and provided good discussions, using appropriate *Handbook* criteria. They demonstrated their understanding of the issues they identified by discussing them in depth, using case facts to support their discussion. For example, strong candidates used specific property, plant, and equipment (PP&E) criteria to discuss whether the trailer and small tools met the definition of PP&E, and discussed subsequent depreciation, often calculating the depreciation for 2021. For restricted cash, strong candidates generally recognized that the use of the cash is restricted due to the contractual requirement, and that the amount must be segregated from cash on the face of the balance sheet. Most strong candidates also recognized the need for accrual accounting of the interest income related to the GIC, and provided a calculation to show the impact on 2021 net income.

Weak candidates showed a lack of technical understanding of these financial reporting issues by struggling to identify them, and to provide appropriate recommendations when the issues were identified. For example, most weak candidates who discussed the issue with cash identified the wrong issue, and discussed the need for the amount to be reclassified to investments because the cash had been invested in a GIC, overlooking the underlying issue of the cash being contractually restricted. Weak candidates often copied in sections of the *Handbook* with little to no analysis, or provided a conclusion with no discussion to support it, for example, concluding that the trailer should be capitalized without providing the reasoning behind their conclusion. Most weak candidates did not apply accrual accounting for the interest income, and concluded that, since the interest income was received in 2022, it was correctly recorded in 2022. When addressing the trailer and small tools, weak candidates used the general asset *Handbook* criteria rather than specific PP&E criteria, which provided a weaker analysis. Some weak candidates also concluded that the small tools and the trailer should be capitalized, but then used the CCA to depreciate the assets, instead of the accounting guidance related to depreciation. Given that candidates were not directed to the specific accounting issues, many weak candidates attempted to discuss irrelevant or insignificant points that were included in the footnotes in Appendix I, such as the capitalization of the house and land, when there were no case facts to indicate that the accounting treatment for these was incorrect.

AO#3 (Corporate Taxes Payable)

Candidates were asked to calculate the federal corporate income taxes payable for 2021. The information needed for the calculation was provided in Appendix I, including the meals and entertainment expense included in the income statement, information required for the CCA calculation, and penalties assessed by the CRA that were included in bank charges and interest expense on the income statement. To demonstrate competence, candidates were expected to provide a reasonable calculation of taxable income, including a reasonable calculation of the CCA deduction, and the use of an appropriate tax rate for a Canadian Controlled Private Corporation (CCPC), to calculate federal corporate taxes payable.

Candidates performed well on this AO. Most candidates provided a thorough calculation, identified and explained some of the adjustments required to calculate taxable income, and applied an appropriate corporate rate for a CCPC. Most candidates included accounting adjustments from their accounting discussions, as well as adjustments for meals and entertainment, the CRA penalty, and depreciation, and showed a good technical understanding of these concepts. However, many candidates struggled to calculate CCA, often showing a lack of up-to-date technical knowledge of the Accelerated Investment Incentive (AII) or using inappropriate CCA classes or rates for the assets identified.

Strong candidates demonstrated a good technical understanding of corporate taxes by providing a complete calculation of taxable income, which included many correct accounting adjustments, provided a reasonable calculation of the CCA, and used an appropriate rate that incorporated the small business deduction (SBD). Strong candidates showed a good understanding of the SBD, either through their calculation of taxes payable or by explaining why IHC would be eligible for this lower rate. These candidates also often applied the AII correctly in their CCA calculations.

Weak candidates included only a few adjustments to arrive at taxable income, and often did not provide support to explain these adjustments. Weak candidates generally made several technical errors, most often in their CCA calculations, which was a significant component of this taxable income calculation. In particular, many weak candidates struggled to use the correct CCA class and rates, and failed to apply AII or to use the half-year rule. Some weak candidates neither applied an appropriate tax rate nor identified IHC as eligible for the small business deduction, or stopped their calculation at taxable income, and did not calculate the taxes payable amount, which did not meet the needs of the users, who had to provide the bank with a calculation of the taxes payable.

AO#4 (Cash Flow Projections)

Candidates were asked to assist IHC in providing the bank with a cash flow projection for the next three fiscal years, which was required for determining if IHC can meet the principal and interest repayments from the bank loan. Details of the loan repayment terms, cash flows for the project the loan was intended to fund, as well as multiple other expected cash outflows and inflows were provided in Appendix II. To demonstrate competence, candidates were expected to calculate the cash flows for the next three years, incorporating a sufficient number of elements in their analysis, including consideration of whether the cash flows would be sufficient for meeting the annual loan repayment requirement.

Candidates performed poorly on this AO. Most candidates performed a three-year cash flow forecast and incorporated many of the inflows and outflows. However, candidates struggled with incorporating the effect of the loan into their calculation or discussion in a consistent manner. For example, most candidates incorporated the loan repayments into their calculation or discussion, but many did not take into account the loan interest, or the loan inflow.

As a result, many candidates came up with a shortfall, concluding that there was not enough cash flow to repay the loan. Most candidates started their calculation with the gross margin as provided in the case and included the more straightforward adjustments, for example, road damage deposit and reimbursement, environmental fee, insurance, advertising, salaries for additional hires and the warehouse rental. Other inputs were addressed less often, such as an aggregate of "other expenses," expected annual income taxes payable, and interest income. Very few candidates integrated the adjustments made to net income in their accounting discussions, such as the adjusted gross margin from one of the revenue recognition issues, into their cash flow forecast. Most candidates did not explicitly conclude on whether IHC would be able to meet the principal and interest payment requirements, but some demonstrated their understanding through inclusion of these items within the cash flow, and the resulting positive or negative cash flows each year.

Strong candidates kept in mind the purpose of the cash flow projection, which was to determine if IHC would be able to meet the capital and interest payments, as required in the agreement. These candidates prepared a three-year cash flow forecast that included the initial $1 million cash inflow and the annual principal and interest repayments, along with many other adjustments, and concluded as to whether IHC would be able to make the loan repayments.

Weak candidates lost sight of the purpose of the calculation, often providing a cash flow that excluded the initial $1 million cash inflow and the annual capital and interest repayments. This weakened their analysis, as it did not allow them to conclude on whether the capital and interest payments could be met. Many weak candidates included only some elements of the cash flow related to the loan (loan inflow, capital repayments, interest payments), which significantly affected the accuracy of their analysis. Weak candidates' calculations of the various components often contained errors, for example, calculating the interest expense on the total initial loan rather than on the outstanding loan balance. Many weak candidates also prepared an annual income statement rather than a cash flow projection by including depreciation expense, or calculating some items on an accrual basis, which demonstrated a lack of understanding of the management accounting concepts being tested.

AO#5 (KPIs and Strategic Issues)

Candidates were asked for their thoughts, and proposed solutions, on the strategy and governance areas that one of the owner-managers noted needed improvement. Candidates were directed to Appendix III, where several of his concerns were noted. To demonstrate competence, candidates were expected to discuss several of the areas of improvement, KPIs, and broader governance issues.

Candidates generally performed well on this AO. Most candidates focused on the areas of improvement. They addressed several of the weaknesses presented, explaining what the concern was, and provided a reasonable and practical corresponding mitigation. The issues most frequently discussed were the volume of accounting work, the missed tax filing, the lack of an accounting system, and the lack of job site supervision. Most candidates proposed KPIs, as requested by the client, that were measurable and practical. However, most candidates kept their discussions within the specific day-to-day issues, and failed to discuss the broader governance issues that related to the strategy, mission, vision, and values.

Strong candidates provided discussions across several areas with good depth of analysis. Most strong candidates discussed several operational weaknesses and suggested recommendations, in addition to suggesting several relevant KPIs. Strong candidates included several well-explained KPIs, covering both non-financial indicators, such as customer satisfaction surveys, and financial indicators, such as costs per home built, that were relevant to IHC. Strong candidates provided KPIs that focused on the areas of concern noted by the client. For example, for the complaints received about the contractors, strong candidates provided KPIs to measure progress on solving those issues. Strong candidates were also able to identify pervasive governance issues that were separate from the day-to-day issues, most often addressing the lack of general oversight and accountability within IHC. These candidates suggested relevant solutions, such as scheduling regular management meetings, implementing job descriptions, having board meetings, and developing a code of conduct.

Weak candidates' discussions lacked breadth and only discussed a few of the many issues present at IHC. Weak candidates provided incomplete discussions, as they often did not provide an explanation of the concern identified or lacked the ability to link the concern to a relevant operational impact. Instead, they only identified the issue and proposed a solution. Many weak candidates suggested recommendations that were impractical for the size of the company, such as hiring many employees, or lost sight of who the report was written to, suggesting firing the current shareholders. Some weaker candidates did not provide KPIs as requested. Others included a laundry list of KPIs without explaining why the listed KPIs would be helpful to IHC. Many weak candidates provided KPIs that were not always relevant or practical to IHC. Some examples of irrelevant KPIs included the number of hours to implement an accounting system, and general employee performance reviews. Some examples of impractical KPIs included customer retention/repeat customers, which did not apply very well to IHC's business. Weak candidates focused on specific day-to-day issues and rarely addressed the overarching governance issues.

Paper/Simulation:	**Day 3, Case 2 (ASI)**
Estimated time to complete:	85 minutes
Simulation difficulty:	Average to Hard
Competency Map coverage:	Management Accounting (1);
	Strategy and Governance (2);
	Finance (1);
	Assurance (2); and
	Taxation (1)

Evaluators' comments by Assessment Opportunity (AO)

AO#1 (Business Expansion Options)

Candidates were asked to quantitatively and qualitatively analyze two growth options that ASI is considering. Details regarding the growth options were provided in Appendix I. To demonstrate competence, candidates were expected to prepare a quantitative analysis on a comparable basis of the profit that both options would provide. Candidates were also expected to perform a qualitative analysis that included some of the relevant factors regarding the two options.

Candidates performed adequately on this AO. Most candidates performed a two-year comparable analysis of the profit that each option would generate, and included a few relevant qualitative points to consider. These candidates correctly included both the high and low season revenue in each of the two years for the lease analysis, and provided a reasonable calculation of the revenue related to the orchard option. These candidates were also able to discuss a few qualitative points that should be considered if ASI were to continue with either growth option.

Strong candidates performed a more thorough calculation of the two options, using a comparable basis, and their analysis included most of the elements unique to each option. These candidates also provided more breadth in their qualitative analysis, bringing in many relevant points that were not already considered in their quantitative analysis, more often discussing the increased competition in the current market and the two-year leasing contract that ASI would have to commit to in the lease-and-share option, which left ASI with reduced flexibility.

Weak candidates struggled to find a reasonable approach to the quantitative analysis. For example, many weak candidates calculated the payback period of both options, which was only relevant for the orchard option as it had one-time upfront costs whereas the lease-and-share option did not. Many weak candidates prepared an analysis that did not allow a comparison between the two options. For example, some candidates prepared a one-year analysis only, not realizing that the orchard option was significantly more profitable in the second year due to the non-recurring costs incurred in the first year, which skewed their overall analysis. This generally resulted in a calculation that was not reasonable. Some weak candidates did not understand the business cycles presented in the case, and assumed that the low season and the high season each lasted one year. These candidates applied the yearly costs to each season, effectively doubling up on the yearly costs. Weak candidates' analysis included other technical weaknesses, such as failing to annualize the monthly revenue and insurance cost provided for the lease-and-share option, or not incorporating the utilization rate of 20% into their calculation of the low season revenue in the same option. In addition, weak candidates provided less breadth in their qualitative analysis, and often looked to their quantitative analysis to support their qualitative discussion. For example, many candidates noted that, for the orchard option, the fruit-growing season was different than the farming season, but could only explain the point quantitatively, noting that this would increase ASI's profit, instead of focusing on the qualitative benefits that these differing seasons involved. Other weak candidates struggled to find relevant qualitative points to discuss, and discussed irrelevant points. For example, many candidates attempted to bring in the case fact that the equipment was in high demand, but would use this to say that ASI might not be able to rent the equipment from OGI due to the fact that it might not be available. Many candidates mentioned that the lease-and-share option would be an easy growth option as ASI is familiar with the leasing market. These candidates failed to see that ASI is currently a technology company, and therefore, leasing equipment would be an entirely new business model for ASI. Many weak candidates also mixed up case facts between the lease and the orchard option, often noting that there was a competitor, Farm-4-U, in the orchard market, when the case mentioned that the orchard market currently had no competitors.

AO#2 (SWOT)

Candidates were asked to prepare a SWOT analysis of ASI. Candidates were expected to draw on information from the entire case in order to prepare the analysis. To demonstrate competence, candidates were required to identify several elements of the SWOT, using specific information provided in the case, and to explain those elements, going beyond sorting case facts into the four categories.

Candidates performed well on this AO. Most candidates completed an analysis that was well organized and that included all categories of strengths, weaknesses, opportunities, and threats. The most discussed point in each category was the first-to-market advantage as a strength, the internal control weaknesses as a weakness, the expansion options as an opportunity, and the Farm-4-U competitor as a threat.

Strong candidates addressed all of the areas of a SWOT within their analysis, and provided multiple points in each category. They incorporated the case facts into their analysis and clearly explained why each point was applicable to that category. For example, these candidates would not only list the fact that ASI was first-to-market under the strengths, but also explain that this was a strength because it gave ASI a competitive advantage.

Weak candidates lacked depth in their analysis, organizing case facts into the SWOT categories without providing value-added discussions. Many weak candidates provided a list of case facts sorted between the different categories, without further discussion of the reason why that element belonged in that category. Many weak candidates also did not apply the case facts selected to the appropriate category of the SWOT, for instance, addressing the competition from Farm-4-U as a weakness when it was a threat. Weak candidates tended to struggle the most in providing relevant weaknesses, as this area had fewer case facts provided, and therefore required more integration with the other AOs, such as governance issues or control weaknesses.

AO#3 (Business Valuation)

Candidates were told that the board wanted a preliminary business valuation of ASI, and that an expert had confirmed that technology companies such as ASI are typically valued at six times normalized EBITDA. In Appendix II, candidates were provided with ASI's draft income statement, with notes that provided relevant information for making normalization adjustments. To demonstrate competence, candidates were expected to provide a calculation of ASI's normalized EBITDA, which included a sufficient number of adjustments, and multiply this amount by the industry standard multiplier of six in order to provide a valuation of the business.

Candidates performed very well on this AO. All the information needed to calculate the normalization adjustments was clearly laid out in Appendix II, and most candidates appropriately adjusted net income using the information provided. The most common mistake made by candidates was to start their analysis using net income, and forget to add back the amortization and interest expenses to get to EBITDA. These candidates instead used a normalized net income figure as a basis for their valuation.

Strong candidates correctly incorporated most, if not all, of the normalization adjustments in their analysis. They were correct in the direction of their adjustments, knowing when to add back an expense, such as the moving costs, reduce a one-time income item, such as the award, or adjust for an increase or decrease of an existing expense, such as the bonus and the salaries.

Weak candidates struggled to correctly incorporate the normalization adjustments, usually having difficulty determining which direction to make the adjustment, for example, subtracting adjustments when they should have been added. Candidates were the most confused with the direction of the salary adjustment, with many of them adjusting for it in the opposite way. Weak candidates did not incorporate many adjustments into their calculation, usually only adjusting for a few of the items noted in Appendix II.

AO#4 (Control Weaknesses)

Candidates were asked to review the revenue cycle, discuss the control weaknesses identified, and recommend improvements. A description of the revenue cycle was presented in Appendix III. To demonstrate competence, candidates were expected to identify some of the revenue control weaknesses, explain their implications, and provide recommendations for addressing the control weaknesses identified.

Candidates struggled with this AO. Most candidates identified a sufficient number of control weaknesses, with the most commonly addressed weaknesses being the lack of data security, the issue with the credit policy, and the lack of segregation of duties. However, many candidates recommended controls without first explaining what the weakness was, or without explaining the implication of that weakness to ASI. For example, many candidates identified the fact that the data security was a weakness but struggled to discuss the implication in a way that would be relevant to ASI. These candidates would often note that customers would have their information stolen, but would not state what that meant for ASI, for example, loss of reputation, loss of customers, or potential litigation.

Strong candidates discussed more control weaknesses and showed a greater understanding of the issues, providing complete discussions that included a clear identification of the weakness and implication to ASI, and a reasonable recommendation. Strong candidates did a better job of discussing the implication to ASI so that management would know why the weaknesses needed to be fixed. In addition, strong candidates provided precise recommendations, for example, suggesting that a different member of ASI should receive the cheques, log them, and then provide them to the accounts receivable clerk to record the receipts, rather than just propose to "segregate the duties."

Weak candidates attempted to discuss fewer of the control weaknesses. Weak candidates also provided recommendations that were not practical or did not reasonably address the issue identified. For example, some weak candidates suggested that the entire system be redesigned such that there were no rounding errors or duplicate customers. Although it is reasonable to consider the fact that the system could be improved to not have errors, it did not fix the issue that Betty currently can access the system to make manual adjustments with no review of those corrections. Other weak candidates struggled to discuss the issue that customers could create their own accounts. Many weak candidates stated that the issue was that customers could create multiple accounts, or that there could be duplicate customers in the system. When approaching the issue this way, candidates struggled to identify the underlying weakness of ASI granting credit to its customers with no review of their credit worthiness, which meant that customers could purchase on account and never pay.

AO#5 (BOD Practices)

Candidates were asked to review ASI's governance practices and tell the CFO what ASI was doing well and what could be improved. A description of the board's terms of reference was provided in Appendix IV. To demonstrate competence, candidates were expected to identify some of the strengths and weaknesses in the terms of reference, explain why it was a strength or a weakness, and provide recommendations for addressing the weaknesses identified.

Candidates performed poorly on this AO. Most candidates identified a sufficient number of strengths or weaknesses, with the most commonly addressed deficiencies being the lack of independence of the board members and the meeting frequency, and the most commonly addressed strength being the number of board members. However, many candidates failed to explain the impact on ASI of the strengths or weaknesses they had identified. For example, many candidates identified that the board should set the strategic direction of the company, not management, but failed to discuss why management should not set the strategic direction of the company.

Strong candidates discussed a greater number of deficiencies and showed a better understanding of the issues, providing complete discussions that included a clear identification of the deficiency, a discussion of its impact on ASI, and a recommendation. Strong candidates also saw the requirement to not only discuss deficiencies in the terms of reference, but also to identify strengths, such as the fact that the board had an uneven number of members, which is appropriate for voting purposes, or that the board's role and structure was appropriate, that of overseeing the CEO, who was overseeing the rest of management. Strong candidates also did a better job of discussing the implication to ASI of the weaknesses they identified. In addition, their recommendations were well explained, for example, discussing which members of the board to remove in order for it to be independent, as opposed to just recommending that "board members should be independent."

Weak candidates did not provide sufficient explanation of the impact of the weaknesses found, and often did not even mention the weakness identified, and simply listed recommendations to the terms of reference without any further discussion. Weak candidates often did not discuss any strengths of the governance practices at all, focusing only on the issues for which they could provide recommendations for improvement. Candidates who mentioned strengths often simply stated case facts of what was being done well, without any explanation as to why these were good practices to have in place. While recognizing the deficiencies was an important part of the requirement, candidates were also expected to tell the CFO what the board was doing well.

AO#6 (Materiality and Approach)

Candidates were asked for a discussion of materiality, including performance materiality, and of the audit approach that auditors are likely to take in ASI's upcoming first year-end audit. Information relevant to the materiality and audit approach discussions was provided throughout the case. To demonstrate competence, candidates were expected to provide a reasonable discussion of materiality and approach for ASI, using case facts to support their analysis.

Candidates performed adequately on this AO. Most candidates discussed the users, the basis for the calculation of materiality, provided a reasonable calculation of materiality, and discussed the approach, using relevant case facts. Candidates struggled more to provide support for the percentage chosen, and most did not provide a reasonable calculation for the performance materiality. Most candidates discussed the approach that the auditors were likely to take, most often suggesting a substantive approach, supported by the deficiencies observed in ASI's control environment. Most candidates did not address the considerations related to this being a first-time audit.

Strong candidates provided a well-supported discussion of materiality, including an in-depth discussion of who the users were and what their needs would be, to choose a basis consistent with the users' needs, and to choose a percentage based on users' sensitivity to misstatements in the financial statements. Strong candidates also discussed performance materiality, providing a recommendation based on the overall risk of material misstatement, using case facts, and often incorporated the fact that there were weak controls over the revenue cycle into their discussion of the audit approach, which demonstrated a good integration of issues.

Weak candidates struggled to provide a reasonable discussion of materiality, often providing an unsupported conclusion of what materiality and performance materiality should be. For example, many candidates noted that materiality would be a certain percentage of net income, and performance materiality would be a certain percentage of materiality, without providing support for the chosen basis or percentage. Weak candidates' discussions also contained technical errors, such as basing the choice of materiality percentage on the overall financial statement risk instead of basing it on the sensitivity of the users. Candidates often struggled to discuss the approach, mentioning the fact that this is a first-time audit, and therefore, substantive procedures would be necessary, without further discussion. Other weak candidates provided materiality and audit approach discussions that were generic. For example, in their materiality discussions, weak candidates explained what materiality is and what it is used for, without tying in any case facts. In their approach discussions, weak candidates provided a generic discussion of the two types of audit approaches without relating any of their discussion to ASI. Many weak candidates suggested specific substantive procedures to be performed instead of discussing what approach an auditor would likely take during ASI's upcoming audit, which did not answer the board's question.

AO#7 (Employee vs Contractor and Benefits)

Candidates were asked, in Appendix V, to explain the factors that determine whether workers are viewed as employees or contractors for tax purposes. They were also asked to explain the personal tax implications of specific employee benefits that ASI was considering offering, from the employees' perspective. Candidates were expected to comment on the information provided in Appendix V, which they were directed to on the first page of the case. To demonstrate competence, candidates were expected to explain some of the factors that determine whether workers are viewed as employees or contractors, and some of the personal tax implications of the benefits.

Candidates struggled with this AO. In general, candidates identified some of the factors that would determine if a worker was an employee or contractor; however, many candidates did not explain the tax implication of the proposed benefits in enough depth. Many candidates determined whether a proposed benefit was taxable or not to the employee, but could not explain why, which might have come from a lack of technical knowledge of the specific rules relating to each benefit. For example, when discussing the company-run daycare, many candidates noted that this would be a taxable benefit because it was being offered for free to employees, without further explanation. In this case, candidates did not demonstrate sufficient knowledge of the taxation of the employee benefit.

Strong candidates provided more depth in their discussion of the benefits, not only noting whether the benefit would be taxable to the employees, but also showing additional depth in their response by explaining the specific taxation rules for that benefit. For example, strong candidates identified that, because a spouse would not have a business purpose for attending the IT convention, it would be a taxable benefit to the employee, or that daycare would not be a taxable benefit as long as it was offered to all employees. These candidates also explained the factors to consider when determining if there was an employee or contractor relationship, noting how the rules would apply to each. For example, they would not only mention that the CRA would look at the use of tools, but also explain that employees generally do not provide their own tools, while contractors do.

Weak candidates struggled to support their discussion of the tax treatment of the employee benefits, and many did not provide an explanation of the factors that the CRA uses in order to determine if a worker is an employee or a contractor. For example, many weak candidates noted that daycare is a taxable benefit, with no further discussion, and therefore did not demonstrate their technical knowledge of the specific rules surrounding a company-provided daycare. Weak candidates who did provide support provided wrong tax treatments, demonstrating their lack of taxation knowledge. Other weak candidates lost sight of their role. These candidates commented on the deductibility of an expense for ASI, rather than the taxation of the benefit to the employees. For example, many weak candidates commented on the fact that ASI would only be able to deduct two conventions per year, without commenting on whether it would be a taxable benefit to the employee, and why. Weak candidates also either skipped the employee-versus-contractor issue altogether, or only provided a list of items that the CRA would consider. For example, these candidates noted that the CRA would consider the use of tools or control over the work duties, without noting how these factors relate to either employees or contractors.

Paper/Simulation:	**Day 3, Case 3 (W2C)**
Estimated time to complete:	80 minutes
Simulation difficulty:	Average to Hard
Competency Map coverage:	Financial Reporting (2); Assurance (1); Taxation (1) Management Accounting (1); and Finance (1)

Evaluators' comments by Assessment Opportunity (AO)

AO#1 (Lease)

Candidates were asked to assess the accounting treatment for the building lease that W2C entered into for its headquarters. Details related to the lease were presented in Appendix I, with the company's borrowing rate provided in the required itself. Candidates were also provided with information on leasehold improvements made to the leased building within the appendix. To demonstrate competence, candidates were expected to discuss the accounting treatment for the lease, using IFRS *Handbook* guidance and the case facts provided.

Candidates struggled with this AO. Most candidates provided good breadth of discussion by addressing the financial reporting considerations for both the lease and the leasehold improvements, and attempted calculations, to provide accounting adjustments. However, most candidates did not provide sufficient depth of discussion on either topic. For example, although most candidates identified that a right-of-use asset needed to be recognized, many of them were not able to clearly explain why it needed to be recognized or how to account for it. In addition, candidates rarely provided their rationale for using the inputs they selected in their present value calculations, such as the discount rate and the term used.

Strong candidates explained the initial recognition criteria for identifying a lease, using the case facts that supported W2C having control over the use of the building, and typically used the correct discount rate, W2C's incremental borrowing rate, in their present value calculation. Strong candidates also provided their rationale for selecting the lease term, often supporting their decision with the fact that significant leasehold improvements had been made already. Most strong candidates correctly explained multiple aspects of the subsequent measurement, including the depreciation of the right-of-use asset, the reduction of the lease liability for payments made, or the increase of the lease liability through interest expense. Strong candidates explained why the leasehold improvements qualified as an asset, using *Handbook* guidance to support their analysis, and discussed subsequent depreciation of the capital asset.

Weak candidates struggled to identify the appropriate *Handbook* guidance, and often mistakenly applied lessor criteria or used ASPE guidance, resulting in many candidates concluding that the lease was an operating lease. Many weak candidates performed present value calculations but did not support the inputs they used, despite several of the inputs having multiple potential options in the case facts provided. For example, the weighted average cost of capital (WACC) and the bank's lending rate were both provided, and candidates had to choose the appropriate rate to use. Most weak candidates used the WACC as the discount rate without providing support for their choice. Many weak candidates used the lease term of five years in their calculation of the present value, without supporting their choice and without considering other options, such as using the initial lease term plus an optional renewal period. Many weak candidates addressed the accounting treatment of the leasehold improvements, demonstrating some technical understanding in this area by discussing capitalization or depreciation.

AO#2 (Agency Agreement)

Candidates were asked how to account for the agreement that W2C entered into with a government agency. Information related to the agreement, including the terms and conditions, was provided in Appendix II. To demonstrate competence, candidates were expected to discuss the accounting treatment of the agreement with the Agency, using *Handbook* guidance and case facts to support their discussion.

Candidates performed poorly on this AO. Some candidates did not attempt this AO at all, while others provided only a cursory analysis, and could not demonstrate that they had the technical knowledge to address this financial reporting issue. Few candidates identified the fact that the interest-free benefit resulted in a grant that needed to be analyzed under *IAS 20 – Accounting for Government Grants and Disclosure of Government Assistance*. Most candidates failed to realize that the $6 million was a loan, and not a government grant, and therefore focused on analyzing whether the grant could be recognized. Candidates also struggled with the integration of case facts into their analysis, and many provided generic discussions. As a result, they were unable to support their discussion of whether the criteria to recognize the grant were met, using facts that were specific to W2C.

Strong candidates understood that only the interest-free portion of the $6 million loan was to be treated as a government grant. Most of these candidates analyzed the applicable *Handbook* criteria. Most strong candidates also attempted to calculate the grant component, but struggled to do it correctly, often only adding up what the interest would have been on a $6 million loan instead of comparing the present value of the future payments to the $6 million received. In their discussion of the initial recognition criteria, many strong candidates integrated case facts from various parts of the case, to support whether W2C was likely to meet the conditions attached to the loan. For example, some candidates used the fact that W2C was currently building a new plant to support that the funds will likely be used for engineering, construction, or equipment costs, therefore meeting one of the conditions of the grant. Strong candidates also provided a discussion of the presentation alternatives for the grant, either as a deferred liability or netted against the cost of the plant, within the financial statements.

Weak candidates were unable to identify that the interest-free portion of the loan was a grant. Many weak candidates focused on discussing whether the loan was a liability by addressing whether there was an obligation due to past events that will result in an outflow of economic resources, which provided some value, but did not address the main issue. Many weak candidates thought the loan was a grant, and attempted to discuss the initial recognition of it, but many were unable to support their analysis with case facts, only showing that they understood that the grant had been received. Some weak candidates also used *IFRS 15 – Revenue from contracts with customers* guidance to attempt to analyze the issue, which was irrelevant, and as a result, this discussion provided no value.

AO#3 (Procedures on Lease and Agency Agreement)

Candidates were asked to provide audit procedures that the auditors are likely to perform on the lease and agency agreement transactions. To demonstrate competence, candidates were expected to provide some examples of audit procedures that the auditors would perform on the financial reporting transactions presented.

Candidates performed poorly on this AO. Some candidates skipped this AO altogether or addressed it very briefly after their financial reporting discussions. Most candidates were unable to provide a sufficient number of complete audit procedures over the lease and agency agreement. Candidates provided more procedures related to the agency agreement compared to the lease, as there were many opportunities to identify risk areas around the conditions of the agreement. Some of the conditions were easier for candidates to audit than others. For example, many candidates provided clear and valid procedures to audit whether the grant was used for engineering, construction, or equipment costs. However, many candidates struggled with providing procedures to validate whether W2C had any changes in ownership that had not been communicated to the Agency. Procedures over the lease most often focused on recalculating the present value of the lease, or vouching some information back to the lease agreement, such as the lease term or the monthly cost.

Strong candidates provided valid procedures for both areas, and included procedures that went beyond vouching information back to the lease agreement or the agreement with the Agency, and covered the lease right of use assets or lease liability. Procedures provided by strong candidates were complete and explained not only what should be audited, but also how and why it should be audited. For example, these candidates not only suggested a review of the agreement for the lease term and payments, but also explained that this was to validate the inputs used in the present value calculation.

Weak candidates suggested audit procedures that were incomplete or vague, often suggesting obtaining the lease agreement without explaining what they would look for in the agreement, such as the lease payments or lease term, or simply suggesting to “check for compliance with the agreement conditions” in the case of the Agency agreement. Some weak candidates did not explain what source document they would be using, for example, suggesting that auditors would obtain a list of expenses incurred to validate that the costs were spent on engineering, construction, or equipment costs, without sampling or vouching back to a source document.

Many weak candidates suggested review-type procedures, such as discussing with management whether any other grants were received, to validate whether W2C had disclosed any other grants received to the Agency, when other audit procedures would have been more suitable.

AO#4 (Tax Implications of Lease, Agency Agreement, Employee Event)

Candidates were asked to discuss the tax implications of the lease, the agreement with the Agency, and the change from an annual employee golf day to an outdoor adventure day. Information about the lease was provided in Appendix I, information on the agreement with the Agency was presented in Appendix II, and information regarding the outdoor adventure day was provided in the required on the first page of the case. To demonstrate competence, candidates were expected to discuss some of the tax implications of the two transactions and the summer activity.

Candidates performed poorly on this AO. Many candidates did not address the tax treatment of the two transactions, and only addressed the summer activity. Candidates also struggled technically, either providing the wrong tax treatment, or providing the right treatment but supporting it with inaccurate information. For example, some candidates mentioned that the outdoor adventure day was deductible for W2C because it was within the $200 limit allowed per employee, when there is no such limit that applies. Candidates seemed most comfortable addressing the tax implications of the lease, followed by the summer event. The agreement with the Agency was generally done poorly, showing a lack of technical understanding of this issue. For example, many candidates wrongly concluded that the benefit arising from the interest-free loan would be taxable to W2C.

Strong candidates discussed the tax implications of at least one of the two financial reporting issues, as well as the summer activity, from either the employer or employee perspective. These candidates displayed a good technical understanding of the taxation rules by providing accurate tax implications, with few errors in their advice. For example, they identified that the lease payment was deductible for W2C when paid, or explained the CCA that would be taken on leasehold improvements, and provided additional details, such as the specific class to use or that CCA would be taken straight-line over the term of the lease, including one renewal period. Strong candidates identified the specific rules that apply to the summer activity, for example, stating that the summer event would be fully deductible for W2C if it was for all employees. Strong candidates often provided additional useful information, such as the existence of a limit on the number of these events that would be fully deductible in a tax year for W2C.

Weak candidates generally did not attempt to discuss a sufficient number of issues, often addressing only the summer activity and disregarding the requirement to provide the tax implications of the new lease and Agency agreement. Weak candidates also showed a lack of technical knowledge, many of them mixing up the rules that applied to other circumstances. For example, some candidates noted that there is a $500 limit on gifts to employees, when this rule did not apply to the situation presented as the event is not a gift, and there are different tax rules for events such as the one W2C was planning. Other candidates stated that the employer deduction for the summer activity is limited to $200 per employee, when in fact a limit of $150 applies to the employee, for the cost of the activity not to be a taxable benefit. Some candidates also stated that the meal and entertainment expenses would be subject to the limit of 50% deduction, when this rule did not apply to the outdoor activity.

AO#5 (Ethanol vs Methanol)

Candidates were asked to prepare a quantitative and qualitative analysis, and provide a recommendation as to whether to produce methanol or ethanol at the new plant W2C is building. Information on the uses of methanol and ethanol and the production process was provided in Appendix III. To demonstrate competence, candidates were expected to calculate the profit for each option, provide some qualitative considerations for both options, and recommend which option to choose.

Candidates performed adequately on this AO. Most candidates provided thorough calculations, incorporating the selling price and most variable production costs appropriately. Candidates struggled to incorporate the waste disposal revenue, often excluding it altogether or incorrectly including it as a variable cost rather than revenue. Most candidates provided a brief qualitative analysis, focusing on the demand and environmental impacts of each option. There was some evidence of time constraint in candidates' responses, with some candidates not attempting the quantitative analysis and only providing a qualitative discussion.

Strong candidates provided thorough calculations that incorporated the plant capacity, which allowed them to compare the results of the methanol and ethanol calculations. Strong candidates also included the additional supervisor salary for the methanol production, the only fixed cost, to calculate total profit. Their qualitative discussions on the environmental implications of each alternative were well developed, including implications on employee health and safety, or additional environmental impacts beyond toxicity by linking it to the environmental sustainability values of W2C.

Weak candidates had difficulties with the calculation, often multiplying all costs by the number of kilolitres per tonne of waste, instead of using a basis that would make their calculation of each option comparable. Many weak candidates only considered the variable costs listed in the table in the appendix, excluding the environmental fees and alumina from their analysis, which were provided separately. Many weak candidates ended their calculation at the contribution margin per unit, which meant that they did not consider the different plant capacity for each of methanol and ethanol, making it difficult for them to compare the two options quantitatively. Weak candidates often restated case facts in their qualitative analysis without considering the implication to W2C, or only attempted to discuss a few qualitative considerations.

AO#6 (Investment Proposals)

Candidates were asked to provide the factors that the W2C owners should consider in their decision between two investment proposals, and to provide a recommendation. Details of the two proposals from Chemicon, preferred shares and convertible debt, as well as other information, were provided in Appendix IV. To demonstrate competence, candidates were expected to discuss some of the factors to consider in the two investment proposals, and provide a recommendation.

Candidates performed adequately on this AO. Most candidates discussed the decision factors for both proposals and provided a recommendation. Candidates seemed most comfortable discussing the issues around the potential loss of control of W2C by the owners, the spending requirement on Canadian goods, and the financing cost of each option.

Strong candidates discussed several relevant factors for each option, and clearly explained why each decision factor was relevant to W2C. Strong candidates understood that the convertible debt option would potentially result in a loss of control while the preferred shares would not, which was a significant factor to consider. Many strong candidates provided calculations to support this discussion, and some showed integration within their response, linking the change in ownership to the condition stated in the Agency agreement. Most strong candidates provided a well-supported recommendation that was consistent with their analysis.

Weak candidates repeated case facts with no additional analysis, sometimes only classifying them as pros and cons, provided poor explanation of why a case fact was relevant to the decision, or attempted to address very few of the decision factors. Weak candidates did not identify the loss of control as a decision factor or incorrectly stated that the preferred shares would impact control.

APPENDIX G

CPA COMMON FINAL EXAMINATION REFERENCE SCHEDULE

CPA COMMON FINAL EXAMINATION REFERENCE SCHEDULE

1. PRESENT VALUE OF TAX SHIELD FOR AMORTIZABLE ASSETS

Present value of total tax shield from CCA for a new asset acquired after November 20, 2018

$$= \frac{CdT}{(d+k)}\left(\frac{1+1.5k}{1+k}\right)$$

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

	2021	**2022**
Maximum depreciable cost — Class 10.1	\$30,000 + sales tax	\$34,000 + sales tax
Maximum depreciable cost — Class 54	\$55,000 + sales tax	\$59,000 + sales tax
Maximum monthly deductible lease cost	\$800 + sales tax	\$900 + sales tax
Maximum monthly deductible interest cost	\$300	\$300
Operating cost benefit — employee	27¢ per km of personal use	29¢ per km of personal use
Non-taxable automobile allowance rates		
— first 5,000 kilometres	59¢ per km	61¢ per km
— balance	53¢ per km	55¢ per km

3. INDIVIDUAL FEDERAL INCOME TAX RATES

For 2021

If taxable income is between			Tax on base amount	Tax on excess
\$0	and	\$49,020	\$0	15%
\$49,021	and	\$98,040	\$7,353	20.5%
\$98,041	and	\$151,978	\$17,402	26%
\$151,979	and	\$216,511	\$31,426	29%
\$216,512	and	any amount	\$50,141	33%

For 2022

If taxable income is between			Tax on base amount	Tax on excess
\$0	and	\$50,197	\$0	15%
\$50,198	and	\$100,392	\$7,530	20.5%
\$100,393	and	\$155,625	\$17,820	26%
\$155,626	and	\$221,708	\$32,180	29%
\$221,709	and	any amount	\$51,344	33%

4. SELECTED INDEXED AMOUNTS FOR PURPOSES OF COMPUTING INCOME TAX

Personal tax credits are a maximum of 15% of the following amounts:

	2021	**2022**
Basic personal amount, and spouse, common-law partner, or eligible dependant amount for individuals whose net income for the year is greater than or equal to the amount at which the 33% tax bracket begins	$12,421	$12,719
Basic personal amount, and spouse, common-law partner, or eligible dependant amount for individuals whose net income for the year is less than or equal to the amount at which the 29% tax bracket begins	13,808	14,398
Age amount if 65 or over in the year	7,713	7,898
Net income threshold for age amount	38,893	39,826
Canada employment amount	1,257	1,287
Disability amount	8,662	8,870
Canada caregiver amount for children under age 18, and addition to spouse, common-law partner, or eligible dependant amount with respect to the Canada caregiver amount	2,295	2,350
Canada caregiver amount for other infirm dependants age 18 or older (maximum amount)	7,348	7,525
Net income threshold for Canada caregiver amount	17,256	17,670
Adoption expense credit limit	16,729	17,131

Other indexed amounts are as follows:

	2021	**2022**
Medical expense tax credit — 3% of net income ceiling	$2,421	$2,479
Old age security repayment threshold	79,845	81,761
Annual TFSA dollar limit	6,000	6,000
RRSP dollar limit	27,830	29,210
Lifetime capital gains exemption on qualified small business corporation shares	892,218	913,630

5. PRESCRIBED INTEREST RATES (base rates)

Year	Jan. 1 – Mar. 31	Apr. 1 – June 30	July 1 – Sep. 30	Oct. 1 – Dec. 31
2022	1			
2021	1	1	1	1
2020	2	2	1	1

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 buildings acquired for first use after March 18, 2007 and ≥ 90% of the square footage is used for non-residential activities
Class 1………………………	10%	for buildings acquired for first use after March 18, 2007 and ≥ 90% of the square footage is used for manufacturing and processing activities
Class 8………………………	20%	
Class 10…………………….	30%	
Class 10.1…………………..	30%	
Class 12…………………….	100%	
Class 13…………………….	n/a	Straight line over original lease period plus one renewal period (minimum 5 years and maximum 40 years)
Class 14…………………….	n/a	Straight line over length of life of property
Class 14.1…………………..	5%	For property acquired after December 31, 2016
Class 17…………………….	8%	
Class 29…………………….	50%	Straight-line
Class 43…………………….	30%	
Class 44…………………….	25%	
Class 45…………………….	45%	
Class 50…………………….	55%	
Class 53…………………….	50%	
Class 54…………………….	30%	

The CPA certification program prepares future CPAs to meet the challenges that await them. For more information on the qualification process, the common final examination (CFE), and the specific education requirements for your jurisdiction, contact your provincial/regional CPA body.

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