

A Practical Flowcharts Approach for Educating Youngsters the Auditor's Opinion: An Experimental Study

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Abstract

The auditor's opinion on financial statements is a key element in keeping trust for people in our economic world. The composition of such an opinion is a difficult task which has to be learned over the years. Experience is a good teacher in this respect. So, education guided by experience may be expected to be fruitful in short term. This paper presents the results of using a practical flowcharts (PFs) approach to help educating the formulation of the auditor's opinion. The main research questions are: (1) how can the PFs be developed to present the auditor's opinion? And (2) to what extent is using PFs effective as a tool to improve the education of the auditor's opinion? To answer these questions a field work was adequately performed. From the validation process the researcher may conclude that using a PFs approach is an effective tool to improve the education of the auditor's opinion, i.e., the learning performance of students significantly improved via the PFs assignment.

المخلص

نجد أن رأى المراجع على القوائم المالية هو عنصر رئيسى فى توفير الثقة للمتعاملين فى مجتمع الأعمال. ونجد أن إصدار رأى المراجع على القوائم المالية ليس بالمهمة اليسيرة ولكنه يحتاج الى الكثير من التعلم والتدريب والخبرة. فالتعليم والتدريب الموجه بالعلم والخبرة معا ربما يؤتى ثماره فى وقت قصير. فالمراجعون ذوى الخبرة وأساتذة المراجعة بالجامعات ذوى المهارات يمكنهم القيام بتعليم وتدريب المراجعين الجدد والطلاب باستخدام وسائل مساعدة مثل خرائط التدفق. هذا البحث يقدم نتائج استخدام منهج خرائط التدفق التطبيقية فى المساعدة على تعلم كيفية إصدار رأى المراجع على القوائم المالية. وتتمثل الأسئلة الرئيسية للبحث فى (١) كيف تطور خرائط التدفق التطبيقية لتمكن من إصدار رأى المراجع على القوائم المالية، (٢) إلى أى مدى يعتبر استخدام خرائط التدفق التطبيقية فعال كأداة لتحسين عملية تعلم كيفية إصدار رأى المراجع على القوائم المالية؟ وإجابة هذه الأسئلة تم القيام بدراسة ميدانية وإختبارية ومن نتائجها إتمام تصميم خرائط التدفق التطبيقية بناء على أسس علمية وخبرات عملية بالتعاون مع المراجعين فى المكاتب الكبرى وأساتذة الجامعات فى مصر. ومن عملية تقرير صلاحية الخرائط بواسطة المراجعين وأساتذة الجامعات وإجراء دراسة إختبارية مع الطلاب يتضح أن خرائط التدفق التطبيقية تعتبر وسيلة فعالة لتحسين تعلم إصدار رأى المراجع على القوائم المالية، فعلى سبيل المثال نجد أن أداء الطلاب فى التجربة تحسن بصورة جوهرية باستخدام خرائط التدفق.

1. Introduction

The accounting world needs experienced auditor for adequately reasoning on the world of business, financial affairs, and international trade. Heⁱ takes care of the checks and balances in the national and international activities of the business firms, the bonds, and the public offices. An auditor should be skilled and trained in formulating an auditor's opinion.

All users of financial statements rely upon the auditor's opinion in decision-making concerning an enterprise. International efforts to harmonise the auditor's report are of utmost importance. In 2002, the IFAC issued the International Standard on Auditing (ISA) 700 "The auditor's Report on Financial Statements". The ISA 700 requires the auditor to express an opinion on whether the financial statements give a fair view of the financial position of the company (IFAC, 2010). The ISA 700 also describes five types of the auditor's opinion that can be expressed by an auditor.

Currently, it is the standard that IFAC members are expected to follow, as it best meets the needs of the international users of financial statements (Gangolly & Hussein & Seow & Tam, 2002; IFAC, 2010).

This paper aims at (1) developing practical flowcharts (abbreviated as PFs) to facilitate (i) training by professors and experienced auditors in formulating the auditor's opinion and (ii) the learning process of students in formulating the auditor's opinion, and (2) investigating whether PFs approach is an effective tool to improve the education of the auditor's report. This paper discusses how experiential learning can be an effective approach in educating the auditor's opinion (cf. Bruton & Bradley, 1992). Of course, the knowledge in the PFs (that are applicable in practice) should be in accordance with ISA 700 and with common practice. The training materials should focus on the audit assessments and relevant procedures that help in formulating the auditor's opinion. Two main research questions examined in this paper are: (1) how can the PFs be developed to present the auditor's opinion? and (2) to what extent is using PFs effective as a tool to improve the education of the auditor's opinion?

Groomer and Heintz (1999) were the first to propose the use of flowcharts in teaching students many types of the audit reports and the formulation of the auditor's opinion. However, they based their course materials only on GAAS and ignored the ISA and also the common practice. They focused on the changes in some Statements of Auditing Standards (SAS No. 79 and SAS No. 82) that deal with the reporting issues. Since the

auditing standards provide only guidelines to apply the standards in practice, The author believes that the knowledge required to build adequate PFs should be acquired not only from GAAS and ISA, but also from the literature (auditing textbooks) as well as from experienced auditors (who know how the auditing standards can be applied in practice) through a questionnaire and interviews. The PFs developed in this paper have their origins in both, i.e., theoretical and practical settings. Yet, the goal is to use them for teaching purposes. The researcher focuses on the education of students to a qualified level and he believes that the use of PFs will help the education process in many ways. Six of them are as follows (Wahdan, 2011).

- (1) PFs will help reduce the time required for students to acquire the experiences needed to formulate their opinion on financial statements.
- (2) PFs will support the training of students. It will provide them with structured knowledge on the formulation of the auditor's opinion on financial statements.
- (3) PFs will improve the education in such a way that the auditor's opinion on financial statements complies with the ISA and the practical auditing settings (which differ from country to country).
- (4) PFs will properly encode and arrange all the knowledge associated with the auditor's opinion on financial statements; it organises personal judgements and improves decision consensus and audit quality.
- (5) PFs can be considered as a foundation to design software such as knowledge-based system to help students and new auditors formulate their opinions on financial statements and to support the experienced auditors as a second opinion (cf. Wahdan, 2006).
- (6) PFs can be considered as an efficient technique being more readily and understandable than other techniques, such as textbooks, and tabular presentation (cf. Groomer and Heintz, 1999).

The conceptual model of PFs focuses on the final stage of the audit process. This stage consists of four activities: (1) accumulating the final audit evidence, (2) reviewing the subsequent events that have happened after the year-end, (3) evaluating the auditor's findings, and (4) issuing the auditor's report (cf. Arens & Elder & Beasley, 2011). In this stage the conceptual model should also (a) test the completeness of the prior auditing stages according to ISA (see activity 1) and (b) collect all results of these

stages (see activities 2 and 3) in advance to formulate the opinion on the financial statements (see activity 4). The full model consists of five submodels that directly lead to the structure of the approach using PFs (as presented in section 3).

The outline of the paper is as follows. Section 2 deals with the research methodology. Section 3 presents the conceptual model to design PFs. Section 4 provides the results of an empirical study carried out within two state universities in Egypt. Section 5 provides the main conclusion and points at future work.

2. The Research Methodology

To achieve the research goal, a research methodology consisting of six phases was developed: (1) reviewing the literature, (2) designing a questionnaire, (3) validating the acquired knowledge, (4) designing the PFs, (5) revision of the PFs, and (6) applying and testing the PFs in the auditing education at two state universities. In this research, the researcher solicited the participation of 32 experienced auditors in seventeen audit firms in Egypt (note: several international audit firms are included and two auditors are from the Central Auditing Organization in Egypt). They cooperated with us in exploring the auditing tasks to a large extent, in so far as they are required to formulate the auditor's opinion on financial statements. Below the six phases are described in more details.

- (1) A thorough literature review was performed for acquiring knowledge to formulate the auditor's report.
- (2) The questionnaire coupled with in-depth interviews was used to elicit the knowledge from 32 experienced auditors in audit firms; the knowledge that the researcher would like to capture focused on how the auditor performs the task of formulating the opinion on financial statements in practice (the questionnaire was made by the author).
- (3) The acquired knowledge was validated by letting the auditors review the results of the knowledge-acquisition process. Disagreements among auditors were solved. The researcher chooses a sample of experienced auditors to decrease the disagreements among the auditor's points of view. The researcher interviewed them individually. Then, if there was still any disagreement, the leading expert made a final decision.
- (4) PFs were constructed based upon the knowledge collected and elicited in the three phases above. It may happen that there are more questions in one box (see, e.g. Figure 3, Submodel 2). This means that if the answers of all

- questions in the box are yes, we will follow the normal direction, if one answer is no, the other direction will be followed.
- (5) Revision of the PFs was carried out by the auditors (academic and practitioners) to check the validation of the PFs as a tool for educating the formulation of the auditor's opinion.
 - (6) Based upon the results of the revision and validation process in step 5, PFs were enhanced. Subsequently, the PFs were tested in the auditing classes using 15 test cases (see appendix). Two state universities (40 students from Menoufia University and 44 students from Suez Canal University) participated. Finally, findings, conclusions, and suggestions for future research were established.

Below the researcher elaborates on phase no. 2, in order to acquire the audit assessments needed to issue the auditor's opinion and to answer the first research question. The questionnaire consisted mainly of questions requiring a response on a five-point Likert-scale (always, often, sometimes, rarely, never). The revised questionnaire was divided into five parts (based upon preliminary interviews), each covering one submodel of the proposed flowcharts. Furthermore, when performing structured interviews, the questionnaire was sent to auditors before the interviews. The five main domains of questions that cover the procedures required to assess the five audit settings are presented below (most of the detailed questions and procedures, which have a high weighted Means are presented in PFs).

1. What do the audit procedures require to issue the proper auditor's opinion on financial statements based on the outputs of all models? In addition, how can auditors assess the materiality of (i) an intended scope restriction, (ii) a non-compliance with accounting principles, (iii) an unfair presentation, and (iv) a going-concern uncertainty?
2. What do the audit procedures require to assess whether auditors have collected adequate evidence required to complete the audit process, and whether an audit complies with ISA?
3. What do the audit procedures require to assess whether financial statements are prepared in accordance with the accounting principles?
4. What do the audit procedures require to assess whether financial statements are fairly presented?
5. What do the audit procedures require to assess whether the company has the ability to continue as a going concern and whether management plans are effective?

The outcomes of the survey are integrated in the PFs; they are reviewed and presented in section 3.

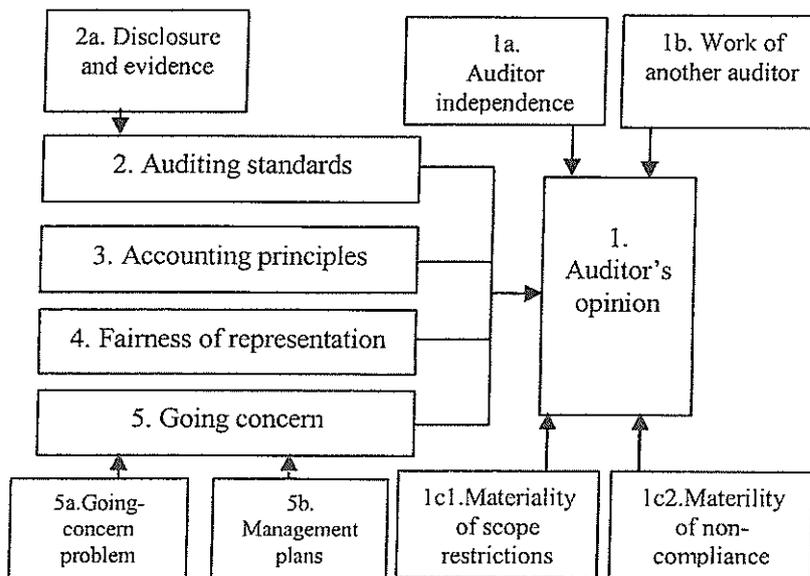
3. The Conceptual Model for PFs

The conceptual model of using PFs is illustrated in Figure 1. Submodel 1 of the auditor’s opinion is considered as the output of four submodels. The other submodels are (2) the auditing standards, (3) the accounting principles, (4) the fairness of presentation, and (5) the going concern (cf. Wahdan, Aly, & Van den Herik, 2009).

3.1 The Submodel of the Auditor’s Opinion

The submodel of the auditor’s opinion aims at helping the students to learn (and professors to teach) how the proper auditor’s opinion can be formulated according to the output of all submodels. The researcher remarks that the submodel of the auditor’s opinion is supported by four submodel procedures (abbreviated as MP): (a) tests the auditor’s independence, after that (b) checks the work of another auditor, then (c) focuses on the materiality of the auditor’s findings of all submodels, and finally (d) formulates the auditor’s opinion. With all knowledge given Figure 2 illustrating submodel 1 of the auditor’s opinion may now be introduced

Figure 1: The conceptual model for PFs



3.1.1 The auditor's independence (MP 1a)

The auditor should be independent in the mental attitude. Auditors might not provide value by adding to the reliability and credibility of financial statements if their independence is impaired (Hudaib and Haniffa, 2005). Without auditor independence, the audit process cannot be completed in accordance with auditing standards, so a disclaimer of opinion is required (Lousteau and Ried, 2003). The auditor's independence may be affected by four distinct issues: (1) the requirements imposed on the auditor qualifications to perform the audit, (2) the rules of how to appoint and change an auditor, (3) the assessment of the audit fee, and (4) the separation of the audit service and other services offered by the auditor to auditee (cf. Sobhey, 2001; Boynton and Johnson, 2006; Wahdan *et al.*, 2009). The upper part of figure 2 (submodel 1) illustrates the test of the auditor's independence (major question) and the answer of the major question can be obtained from MP 1a (available from the author).

3.1.2 The work of another auditor (MP 1b)

The auditor should determine how the work of another auditor would affect the audit (ISA 600). According to IFAC (2010), the principal auditor would consider three factors: (1) the materiality of the portion of the financial statements audited by another auditor, (2) the principal auditor's degree of knowledge regarding the business of the portion involved, and (3) the risk of material misstatements in the financial statements of the portion audited by the other auditor.

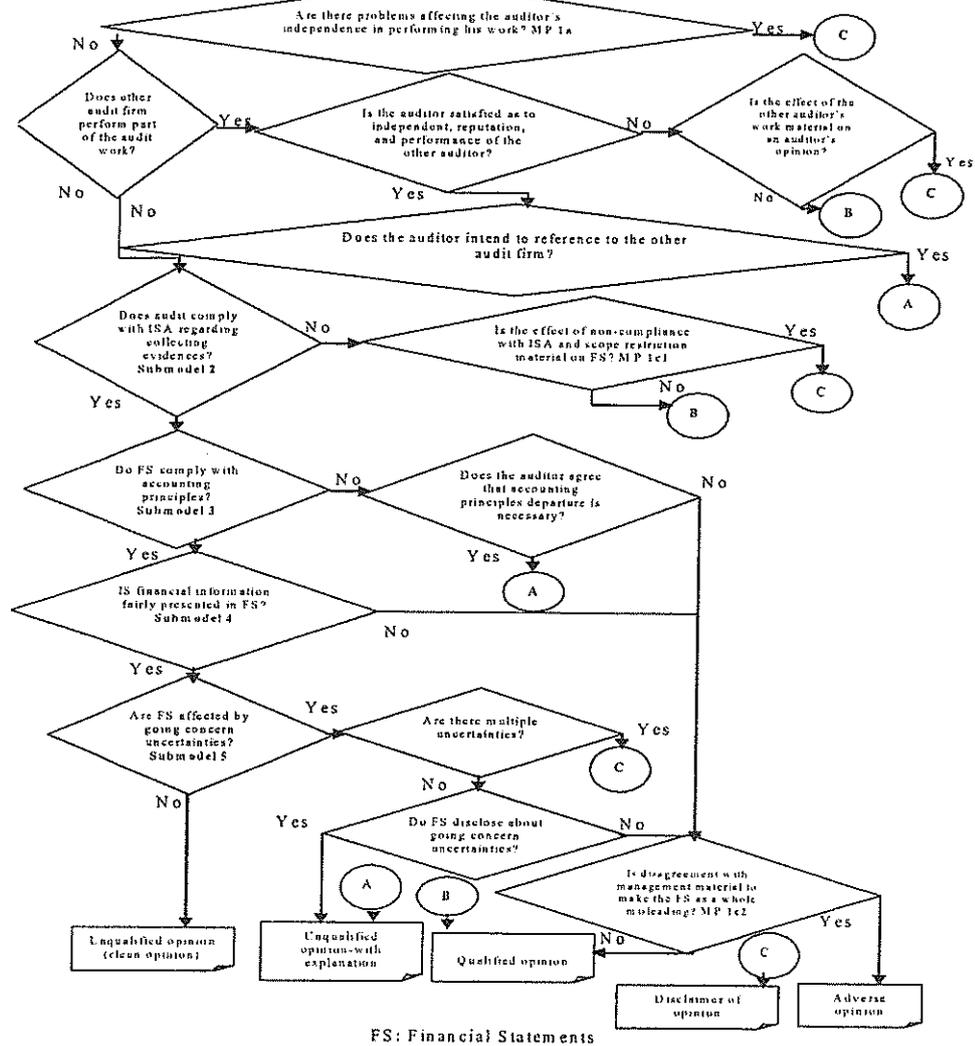
The principal auditor should obtain sufficient evidence that the work of the other auditor is adequate for the principal auditor's purposes in the context of the specific engagement. He should assess the significant findings of the other auditor. When the principal auditor concludes that (1) the work of the other auditor is unreliable and (2) the principal auditor himself cannot perform additional procedures regarding the audit, a qualified opinion or disclaimer of opinion should be formulated because of the presence of a scope restriction of the audit (IFAC, 2010) (see MP 1b after MP 1a in the upper part of figure 2).

3.1.3 The materiality of the auditor's findings (MP 1c)

In the audit planning, the auditor selects a proper materiality base and assesses the preliminary materiality. Here the research deal with 2 MPs: (1) assessing the materiality of the scope restriction (Mp 1c1), and (2) non-compliance with accounting principles together with

unfair presentation during the stage of evaluating the auditor's findings (Mp 1c2).

Figure 2: Submodel 1: The auditor's opinion



Scope restrictions (MP 1c1)

The materiality judgements of scope restrictions are influenced by (1) whether the auditee imposes the scope restrictions, and (2) whether the unavailable information (2a) affects the market reaction, (2b) conceals an

illegal act, (2c) relates to management judgements, (2d) relates to suspense accounts, (2e) relates to related party transactions, (2f) relates to large accounts size, and/or (2g) has pervasive effects (cf. Gist and Shastri, 2003; Boynton and Johnson, 2006). MP 1c1 provides the answer of the general question of figure 2 (MP 1c1 is available from the author).

Non-compliance and unfair presentation (MP 1c2)

In fact, the auditing literature provides number of rules of thumb for materiality, which form a quantitative threshold. For example, misstatements that are less than 5 percent of the income from continuing operations [or less than a preliminary materiality (PM)] are immaterial, while misstatements that are greater than 10 percent of the income from continuing operations (or greater than PM) are material. The materiality of misstatements in the intermediate range depends on the specific factors, in particular qualitative factors (Vorhies, 2005). MP 1c2 provides these factors that include whether misstatements reflect a failure to meet regulatory requirements, relate to the management' compensations, conceal unlawful transactions, reflect a failure to comply with loan covenants, and/or change a loss into income or vice versa (Gist and Shastri, 2003; Arens *et al.* 2011) (MP 1c2 is available from the author).

3.1.4 Formulating the auditor's opinion

According to the ISA, the auditor should provide a clear opinion as to whether the financial statements (1) comply with the statutory requirements (submodel 2), (2) are prepared in accordance with the accounting principles (submodel 3), (3) are fairly presented in all material respects (submodel 4), and (4) are not affected by going-concern uncertainties (submodel 5). There are five outcomes of the auditor's opinion: an unqualified opinion, an unqualified opinion with an explanatory paragraph, a qualified opinion, a disclaimer of opinion, and an adverse opinion. The lower part in figure 2 illustrates the types of the auditor's opinion.

3.2 The Submodel of the Auditing Standards

The submodel of the auditing standards aims at helping the students to learn (and professors to teach) how can they check whether the auditors collect the required evidence and carry out the audit in accordance with the ISA. Figure 3 illustrates submodel 2 of the auditing standards.

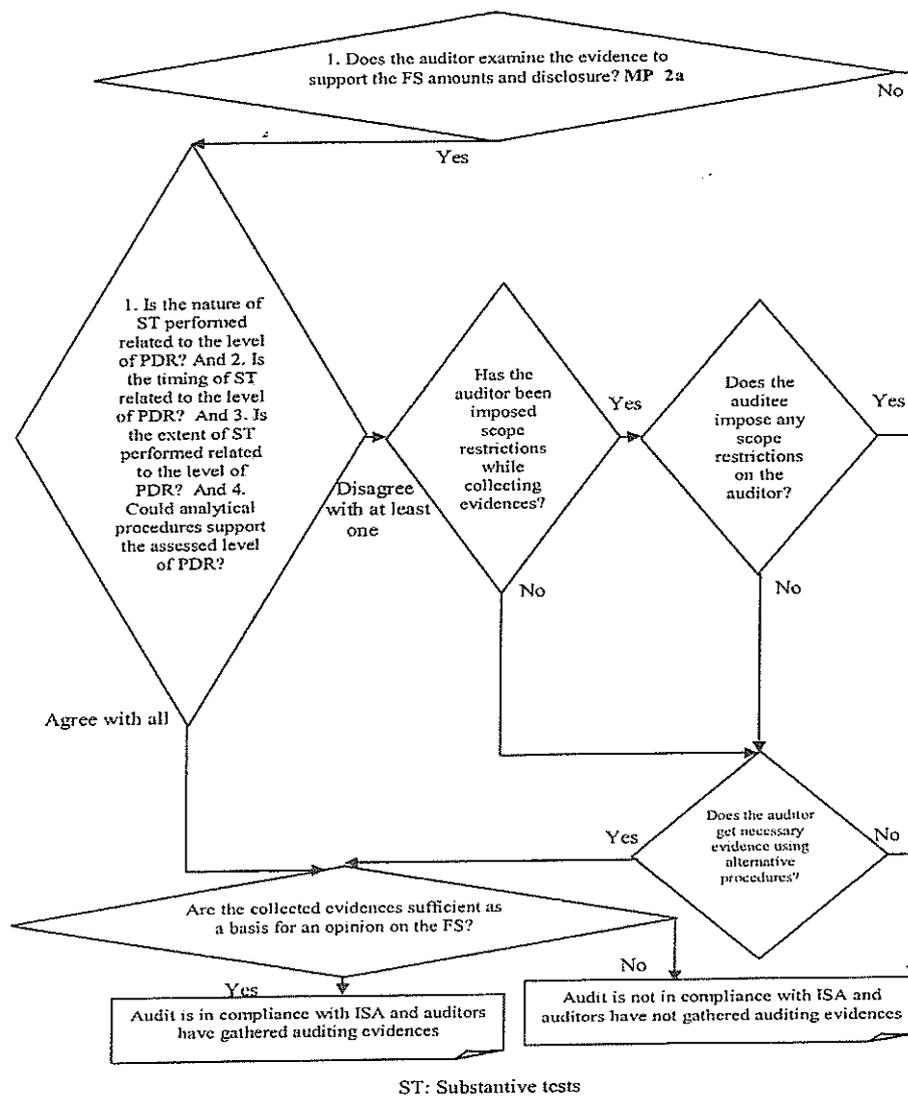
3.2.1 Disclosure and audit evidence (MP 2a)

According to IFAC (2010), the auditors can obtain audit evidence using one or more of the following seven procedures: inspection, observation,

inquiry, confirmation, computation, reperformance, and /or analytical procedures.

The auditors should check the existence, the completeness, the accuracy, and the ownership of the recorded assets, as well as the posting and summarization of assets and transactions, and the presentation and disclosure of assets (PCAOB, 2003; Arens *et al.*, 2011) (these tests are presented in MP 2a, which is available from the author).

Figure 3: Submodel 2: The auditing standards



3.2.2 Performing the substantive procedures

The auditors should carry out the substantive procedures and collect evidence based on the level of planned detection risk (PDR). Substantive procedures contain two types: (1) tests of details of transactions and balances and (2) analytical procedures. Audit evidence can be obtained from tests of controls, substantive procedures or an appropriate mix of them (IFAC, 2010). The auditor may examine a representative sample of the transactions using judgemental or statistical sampling procedures to be able to formulate his opinion (Boynton and Johnson, 2006; Arens *et al.*, 2011).

3.2.3 A scope restriction

When the auditors have a doubt as to a material financial statement assertion, they attempt to obtain sufficient audit evidence to remove such a doubt. If the auditors believe that the financial statements are affected by fraud, and they are unable to assemble sufficient evidence to conclude the magnitude, this inability is considered a scope restriction. The proper response of a scope restriction is to issue a qualified opinion or disclaimer of opinion, based on the materiality of other scope restrictions (Boynton and Johnson, 2006; Arens *et al.*, 2011).

3.3 The Submodel of the Accounting Principles

The submodel of the accounting principles aims at helping the students to learn (and professors to teach) how can auditors test whether financial statements are prepared in accordance with the accounting principles as required by ISA (Grusd and Schuldiner, 1998; Boynton and Johnson, 2006). Figure 4 illustrates the submodel 3 of the accounting principles.

3.3.1 Disclosure of the accounting principles

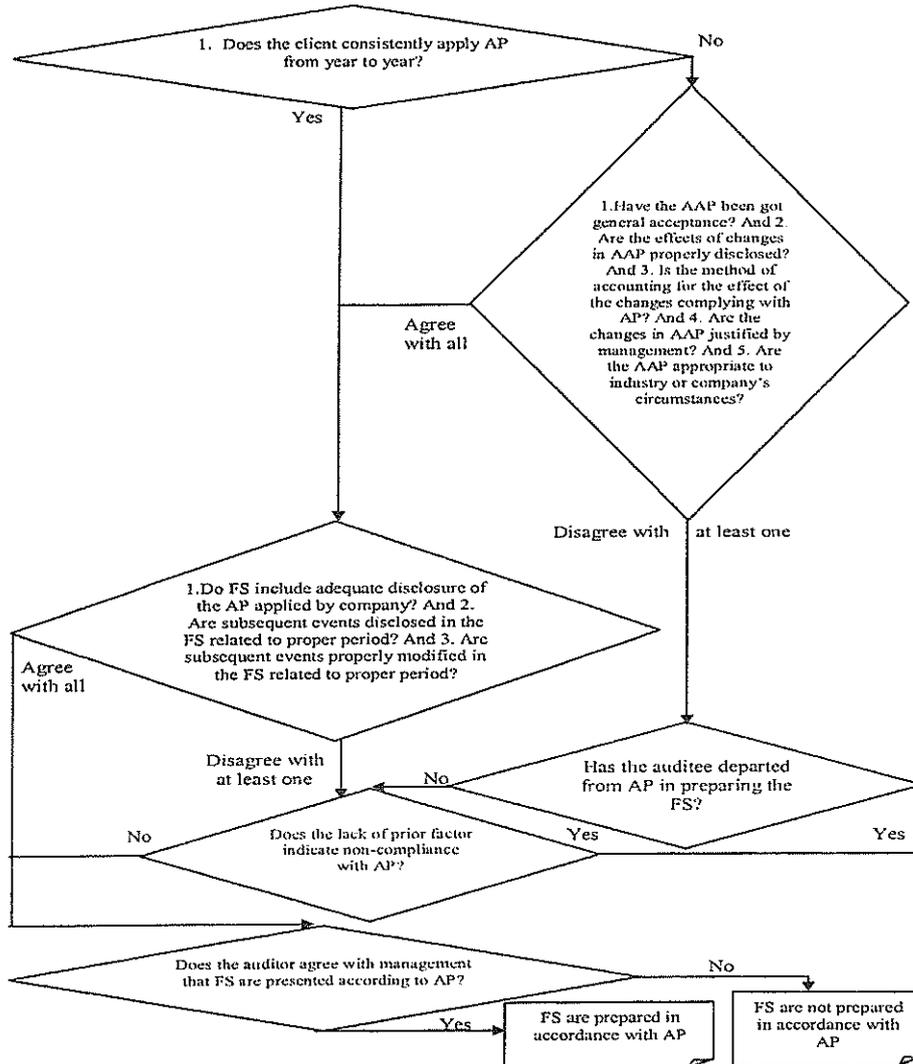
Disclosure is associated with an accounting-policies footnote that particularly states whether the financial statements are prepared in accordance with International Accounting Standards (IAS). The auditor's opinion should state whether accounting principles were applied when carrying out the audit (Street and Gray, 2002). Adequate disclosure should be achieved in the footnotes when information in the financial statements is inadequate to achieve that objective.

3.3.2 Inconsistency

When management has selected a specific accounting method, the auditor evaluates whether the company has consistently applied this method. A change of the accounting principle to a more favoured method is acceptable,

if the change and its effect are disclosed (Delaney & Nach, & Epstein & Badax, 2003). If an inconsistency in the accounting principles exists, the auditor should evaluate whether: (1) management has appropriately applied the criteria provided in the accounting principles to support the selected method and (2) the accounting method is appropriate for the company's business, industry, and environment.

Figure 4: Submodel 3: The accounting principles



AP: Accounting Principles AAP: Adapted Accounting Principles

3.3.3 Subsequent events

According to ISA 560, the auditor should obtain sufficient evidence that subsequent events have been identified, accounted for, and disclosed. The procedures to identify subsequent events would be performed as near as practicable to the date of the auditor's report. The auditor should consider the effect of the subsequent events on both the financial statements and his opinion (Boynton and Johnson, 2006).

3.3.4 Departure from accounting principles

If the change in accounting principles is not properly accounted for, or management does not provide an adequate justification for the change, it will be considered as a departure from the accounting principles (Groomer and Heintz, 1999; Boynton and Johnson, 2006).

3.4 The Submodel of Fairness of Presentation

The submodel of fairness of presentation aims at helping the students to learn (and professors to teach) how can auditors test the fair presentation of the financial statements. An audit includes reviewing the significant estimates made by management and the overall financial-statements presentation. Figure 5 illustrates submodel 4 of fairness of presentation.

3.4.1 Financial-statements presentation

According to ISA 315, the auditors are responsible for identifying various types of material misstatements in the financial statements, including errors, irregularities, and those caused by illegal acts (IFAC, 2010) (see figures 5).

The auditors can review a representative sample of the accounts to ascertain the fairness of the presentation (such as the assets' existence, completeness, accuracy, posting & summarization, valuation, and presentation & disclosure (Arens *et al.*, 2011)). If the findings of the sample do not support that the financial statements are fairly presented, the auditors should enlarge the sample size. If the financial statements are fairly presented, the auditors will conclude that information presented in the financial statements gives a fair view as a whole.

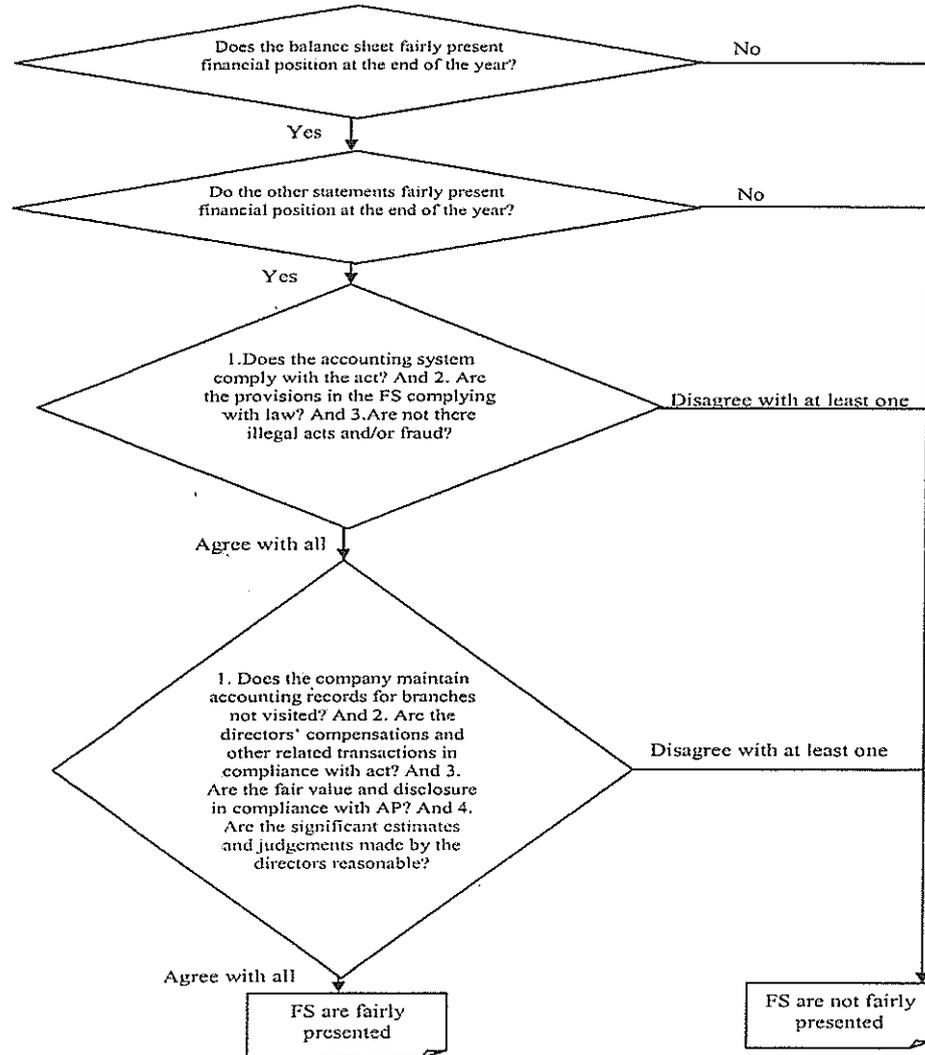
3.4.2 Accounting estimates

According to ISA 540, the auditors should assess the fairness of the estimates based on their experience with the business involved and whether the estimates are consistent with other accumulated audit evidence (Floch and Olson, 2003).

3.4.3 Fair values and disclosures

According to ISA 545, the auditor should evaluate and obtain evidence whether the fair value measurements and the disclosures in the financial statements comply with the applied accounting principles (IFAC, 2010).

Figure 5: Submodel 4: The fairness of presentation.

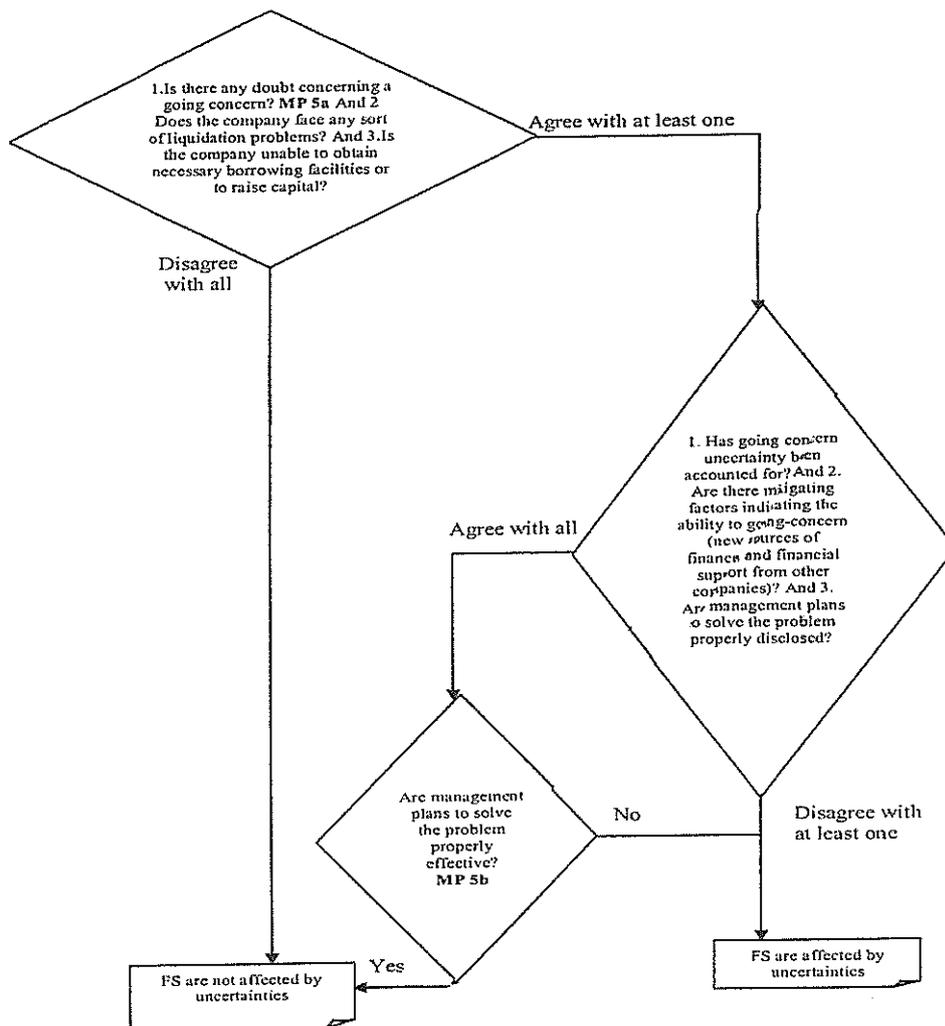


3.5 The Submodel of the Going Concern

The submodel of going concern aims at helping the students to learn (and professors to teach) how can auditors test the company's ability to continue

as a going concern. The auditor's opinion with a going-concern opinion affects the capital-raising activities and market value of stocks (Willenborg and McKeown, 2000). In fact, the going-concern opinion depends on understanding the auditee's business and evaluating the management's plans (Arnold, Collier, Leech, and Sutton, 2001). Figure 6 illustrates the submodel 5 of the going concern.

Figure 6: Submodel 5: The going concern



3.5.1 Recognising the going-concern uncertainties

According to ISA 570, if the financial statements were not prepared on a going-concern basis, that fact should have been disclosed, together with the basis of the preparation and justifications of not considering a going-concern basis (IFAC, 2010).

3.5.2 Understanding the causes of going-concern uncertainties (MP 5a)

According to the IFAC (2010), there are some events or conditions, which individually or collectively may cast significant doubt on the going-concern assumption. These events are presented in MP 5a (which is available from the author). These events include whether there are (1) litigation claims against the company, (2) negative cash flow, (3) any withdrawal of financial support, (4) default on loans agreements, (5) liabilities in excess of its assets, (6) substantial operating losses, and/or (7) adverse key financial ratios.

3.5.3 Evaluating the effectiveness of the management plans (MP 5b)

The going-concern opinion provides useful information to investors and supports the need for the disclosure of the going-concern uncertainties (Citron and Taffler, 2003). Going-concern decisions are associated with the publicly accessible management-plan information. Furthermore, a firm's liquidity position may affect the auditor's opinion on management plans (Behn, Kaplan, and Krumwiede, 2001). The auditors should evaluate whether management plans are appropriately effective. MP 5b checks whether management opens new market, reduces unnecessary expenditures, disposes of unused assets, leases assets rather than buys outright, and/or develops alternative sources of credit facilities (MP 5b is available from the author).

3.5.4 Rendering the going-concern opinion

If an adequate disclosure on going-concern uncertainty is made in the financial statements, the auditor should express an unqualified opinion with an explanatory paragraph that highlights the significant doubt on the company's ability to continue as a going concern. In extreme cases (where multiple significant uncertainties are involved), the auditor may properly prefer to disclaim of opinion instead of adding an explanatory paragraph (IFAC, 2010). If an adequate disclosure is not included in the financial statements, the auditor should formulate a qualified or an adverse opinion

based on the materiality of going-concern uncertainties on financial statements (the lower part in figure 2).

4. Classroom Application

In this section the researcher will answer research question no.2. The experimental setting was as follows. PFs were used in the second level auditing course "Advanced Auditing" at two state universities in Egypt (40 students from Menoufia University and 44 students from Suez Canal University). The topic of the formulation of the auditor's report was covered in the auditing class using textbook, and then using PFs. The students were randomly divided into two groups. One group was provided with PFs, the other was not. Both groups had access to lecture notes and textbook materials related to the formulation of the auditor's report.

Fifteen auditing test cases were designed in cooperation with a group of 32 auditors within seventeen audit firms in Egypt. The auditors also provided the guidelines answers of the fifteen auditing test cases. The assignment of the formulation of the auditor's report was distributed to all 84 students. The group with PFs solved the fifteen test cases using lecture notes and textbook materials as well as PFs, while the other group solved the cases using lecture notes and textbook materials only.

Table 1 provides the results of 40 students from Menoufia University, while table 2 provides those from the 44 students of Suez Canal University. The 20 Menoufia students who did not use PFs faced 300 (20 * 15) test cases; they solved 234 cases correctly resulting in 78%. The students who used PFs solved correctly 288 cases, which are represented by 96%. For the students of the Suez Canal University the percentages are 80% and 97%. Based on the observation and the judgments of the fifteen auditing test cases, the researcher may conclude that the group who used PFs performed better than the other group (see tables 1 and 2). The researcher notice that the students who used PFs made fewer errors in issuing the auditor's opinion. Furthermore, the researcher remark that the students' knowledge in the auditing class was improved as he experienced from a discussion afterwards (see below). Using PFs gives the students a hand-on experience dealing with the formulation of the auditor's report.

Table 1: Impact of PFs on Students' Learning Performance - Menoufia University

	Students who did not use PFs (% Correct) N = 20	Students who used PFs (% Correct) N=20
The Assignment (15 auditing test cases)	78%	96%

Table 2: Impact of PFs on Students' Learning Performance - Suez Canal University

	Students who did not use PFs (% Correct) N = 22	Students who used PFs (% Correct) N=22
The Assignment (15 auditing test cases)	80%	97%

To support the statements above the researcher provide some feedbacks from five students.

Student 1: "PFs are excellent flowcharts. They enable us to understand which type of the auditor's opinion is to be issued when the auditor faces different cases during performing his work (audit). It is the first time that I fully understand auditing in general and the auditor's opinion in particular"

Student 2: "From the first impression, I consider these flowcharts as complex flowcharts, however after I give them my intention and concentration I found that they are high techniques to understand the auditing process"

Student 3: "From my point of view, these flowcharts are very important. They help us to understand the auditor's opinion topic. If we want to improve or have more benefits from these flowcharts, we should: (1) apply flowcharts in practical cases, (2) connect the flowcharts with CPA firms' studies, and (3) use these flowcharts in all of our auditing studies"

Student 4: "The logic of the flowcharts is easy to understand and follow. They are saving time to learn how to reach the proper opinion"

Student 5: "Flowcharts guide us to the required procedures to formulate the auditor's opinion on financial statements"

5. Conclusion and Future Research

This paper aimed at developing and testing the PFs that help educating students in the formulation of the auditor's opinion. The two main research questions are: (1) how can the PFs be developed to present the auditor's opinion? And (2) to what extent is using PFs effective as a tool to improve the education of the auditor's opinion? The knowledge was acquired (a) from the literature and (b) from experienced auditors. The researcher successfully designed a conceptual model consisting of five submodels and eleven PFs. The researcher believes that the conceptual model provides a vital contribution to the literature, and the application of it constitutes a new educating method of auditing. As an aside the researcher would like to mention that from the validation process by the respondents and interviewees as well as from an empirical test, it may be concluded that usage of PFs is an effective tool to improve the audit education. The PFs are logical and easy to follow. Finally, the researcher believes that organizing the training sessions by using the PFs is a good way to prepare students for a successful career in auditing. Hence the researcher may conclude that PFs are beneficial to the students; the students who used PFs outperformed students who did not use them. Moreover, the PFs made the learning process of the formulation of the auditor's report more effective (see the students' feedbacks). Future research should deal with the impact of PFs on the learning process of novice auditors in actual auditing cases. Furthermore, the PFs approach could be applied in the other classroom settings to generalise the results.

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References

- Arens, A.A., Elder, R.J., and Beasley, M.S. (2011). *Auditing and Assurance Services: An Integrated Approach*, 13th Edition, PEARSON, Prentice Hall, New Jersey.

Arnold, V., Collier, P.A., Leech, S.A., and Sutton, S.G. (2001). The Impact of Political Pressure on Novice Decision Makers: Are Auditors Qualified to Make Going concern Judgements? *Critical Perspectives on Accounting*, Vol. 12, pp. 323-338.

Behn, B.K., Kaplan, S.E., and Krumwiede, K.R. (2001). Practice Summaries, *Auditing*, Vol. 20, Iss.1, (March), pp.1-12.

Boynton, W.C. and Johnson, R.N. (2006). Modern Auditing: Assurance Services and the Integrity of Financial Reporting, 8th Edition, John Wiley & Sons Inc., USA.

Bruton C.M. and Bradley, M.P. (1992). The Advantages of Experiential learning in the auditing Curriculum, *Developments in Business Simulation & Experiential Exercises*, Vol. 19, pp: 26-29.

Citron, D.B. and Taffler, R.J. (2003). Disclosure of Going Concern Uncertainties in Company Account: The Impact of a New report Regime, *The British Accounting Review*, Vol. 35, pp. 196-197.

Delaney, P.R., Nach, R., Epstein, B.J., and Badax, S.W. (2003). *GAAP: Interpretation and Application of Generally Accepted Accounting Principles*, John Wiley and Sons, Inc., England.

Floch, J. and Olson, C.R. (2003). Trust in Not an Internal Control, *The CPA Journal*, (October), pp. 10-11.

Gangolly, J.S., Hussein, M.E., Seow, G.S., and Tam, K. (2002). Harmonization of the Auditor's Report, *The International Journal of Accounting*, Vol. 37, pp. 327-346.

Gist, W.E. and Shastri, T. (2003). Revisiting Materiality, *The CPA Journal Online*, (November).

Groomer, S.M. and Heintz, J.A. (1999). Using Flowcharts to Teach Audit Reports: An Update, *Journal of Accounting Education*, Vol. 17, pp. 391-405.

Grusd, N. and Schuldiner, P.D. (1998). Financial Statement and Auditing Standards Update, *Secured Lender*, Vol. 54, Iss. 1, (Jan/Feb), pp. 62-65.

Hudaib, M. and Haniffa, R., T(2005). Qualified Opinion and Auditor Switching: An Investigation of the Relationships Between Size of Auditee, Audit Fees and Type of Audit Firm, *European Accounting Association, The Proceedings of the 28th Annual Congress*, Goteborg, (May), pp. 18-20.

IFAC (2010). *Handbook of International Auditing, Assurance and Ethics Pronouncements*, International Federation of Accountants. Available at <http://www.ifac.org>

Lousteau, C.L. and Ried, M.E. (2003). Internal Control Systems for Auditor independence, *The CPA Journal*, (January), pp. 37-40.

PCAOB (2003). Proposed Auditing Standard: An Audit of Internal Control over Financial Reporting Performed in Conjunction with an Audit of Financial Statements, *Miller GAAS Update Service*, (November), ASPEN Publishers.

Sobhey, M.H. (2001). Supporting the Auditor's Independence in Egypt under Current Circumstances in Auditing Environment, *Commercial Research and Studies*, Faculty of Commerce, Banha University, Vol. 2, pp. 369- 410.

Street, D.L. and Gray, S.J. (2002). Factors Influencing the Extent of Corporate Compliance with International Accounting Standards: Summary of a Research Monograph, *Journal of International Accounting, Auditing & Taxation*, Vol. 11, Iss 1, pp. 51-75.

Vorhies, J.B. (2005). The New Importance of Materiality: CPAs Can Use this Familiar Concept to Identify Key Control Exceptions, *Journal of Accountancy*, Vol.199, Iss.5, pp. 53-59.

Wahdan, M. (2006). Automatic Formulation of the Auditor's Report, PhD thesis, Maastricht University, The Netherlands.

Wahdan, M.A., Ali, H. F., and Herik, H.J. van den. (2009). Educating Youngsters in the Formulation of the Auditor's Opinion: A Practical Flowcharts Approach. The proceeding of the congress 18th IMDA, Tbilisi, Georgia, pp. 320-327.

Wahdan, M.A. (2011). A Practical Flowcharts Approach for Educating Youngsters the Auditor's Opinion Formulation. New Horizons for Commercial Studies, Faculty of Commerce, Menofia University, Vol., 1 & 2, pp. 59-86.

Willenborg, M. and McKeown, J. (2000). Going-Concern Initial Public Offerings, *Journal of Accounting & Economics*, Vol. 30, Iss. 3, (December), pp. 279-313.

Appendix

The auditor's opinion on financial statements

There are five types of the auditor's opinion on financial statements as follows.

- | | | | | | |
|----------------------------|---------------------|----------------------------|---|----------------------------|-----------------|
| <input type="checkbox"/> 1 | Unqualified opinion | <input type="checkbox"/> 2 | Unqualified opinion with an explanatory paragraph | | |
| <input type="checkbox"/> 3 | Qualified opinion | <input type="checkbox"/> 4 | Disclaimer of opinion | <input type="checkbox"/> 5 | Adverse opinion |

Would you please select your opinion in the next situations? Additionally you can add explanation to justify your opinion

Situation 1. During the audit, the auditor discovered that there are problems affecting his independent in performing the audit.

Type of opinion: 1 2 3 4 5

Situation 2. When another audit firm performs part of the audit work, and the principal auditor is satisfied as to the independence, reputation, and audit performance of the other auditor, and he intends to reference to the other audit firm in the auditor's report.

Type of opinion: 1 2 3 4 5

Situation 3. When the other audit firm performs part of audit work, and the auditor is not satisfied as to the independence, reputation, and audit performance of the other auditor, and the effect of the other auditor's work is material on the auditor's report.

Type of opinion: 1 2 3 4 5

Situation 4. When the audit does not comply with the ISA and there is a scope limitation resulting in immaterial misrepresentation of FS.

Type of opinion: 1 2 3 4 5

Situation 5. When the audit does not comply with the ISA and there is a scope limitation resulting in material misrepresentation of FS.

Type of opinion: 1 2 3 4 5

Situation 6. When FS are not prepared in accordance with accounting principles and the departure is necessary.

Type of opinion: 1 2 3 4 5

Situation 7. When FS are not prepared in accordance with accounting principles, and the departure is not necessary, and the effect of departure is immaterial to make FS misleading.

Type of opinion: 1 2 3 4 5

Situation 8. When FS are not prepared in accordance with accounting principles, and the departure is not necessary, and the effect of departure is material to make FS as a whole misleading.

Type of opinion: 1 2 3 4 5

Situation 9. When FS are not fairly presented, and the effect of unfairly presentation is immaterial to make FS misleading.

Type of opinion: 1 2 3 4 5

Situation 10. When FS are not fairly presented, and the effect of unfairly presentation is material to make FS as a whole misleading.

Type of opinion: 1 2 3 4 5

Situation 11. When FS are affected by going-concern uncertainties and no disclosure about going concern, and the effect of this matter is immaterial to make FS misleading.

Type of opinion: 1 2 3 4 5

Situation 12. When FS are affected by going-concern uncertainties, and no disclosure about going concern, and the effect of is material to make FS as a whole misleading.

Type of opinion: 1 2 3 4 5

Situation 13. In practice, when the going-concern uncertainty has been disclosed in FS.

Type of opinion: 1 2 3 4 5

Situation 14. In practice, when there are significant uncertainties affecting the FS and these uncertainties could not be resolved, even after reviewing management's plans to deal with the going concern problem.

Type of opinion: 1 2 3 4 5

Situation 15. When (1) the auditor collects the evidence required in relation to the level of planned detection risk, (2) the audit is carried out in compliance with ISA, (3) FS are prepared in accordance with accounting principles, (4) financial

information are fairly presented in FS, and (5) FS are not affected by going-concern uncertainties.

Type of opinion:

 1 2 3 4 5

Footnotes

¹ For brevity, we use 'he' and 'his' wherever we mean (he or she) and (his or her).

