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FRAUDULENT FINANCIAL REPORTING: DO RED FLAGS REALLY HELP?

Mohamed Abd El Aziz Hegazy¹, Rasha Kassem²

¹Professor of Accounting and Auditing, American University in Cairo (AUC)

²Assistant Lecturer in Accounting and Auditing, E-Learning officer, Faculty of Business Administration, Economics, and Political Science, British University in Egypt (EGYPT)
E-mails: mahegaz@aucegypt.edu, Rasha.Kassem@Bue.edu.eg

ABSTRACT

Purpose – Aims to determine whether red flags can be helpful for external auditors in detecting fraudulent financial reporting. The research explores whether external auditors demographic factors affect external auditors' perception about the ability of red flags to detect fraudulent financial reporting in Egypt.

Design/methodology/approach – Data was collected using a questionnaire that was pretested by a pilot study. A questionnaire was then distributed to a sample of 100 external auditors working in different audit firms in Egypt and having different years of experience. The sample of external auditors was randomly selected.

Findings – According to external auditors' opinion, red flags are helpful in detecting fraud. Our research didn't support the effect of external auditors' experience and type of audit office on auditors' perception about red flags ability to detect fraudulent financial reporting.

Research Limitations – two external auditors from the big 4 international audit firms filled in the questionnaire, thus our results can't be generalized to all audit firms in Egypt. There can also be other red flags in the literature that aren't mentioned in the research study.

Originality/value - Our research included a list of specific red flags for fraudulent financial reporting that were highly accepted by the sample of external auditors in our study. These specific red flags can be used in conjunction with SAS 99 red flags to enhance external auditors' ability in detecting fraudulent financial reporting. The research also ranked all red flags for fraudulent financial reporting according to their relative importance based on external auditor opinion which can help auditors to focus their efforts more on high quality red flags during brainstorming sessions which will in turn facilitate fraud detection. Future research should be more directed toward listing other red flags for fraudulent financial reporting in the literature and should test them using other methods like experiments or interviews. The list of red flags presented in our research can for a good base for future researchers.

Key words: fraud, fraud detection, fraudulent financial reporting, red flags, auditing standards

1. INTRODUCTION

Over the past decade, there were numerous examples of fraud cases and alleged auditor negligence such as the case of Enron/Arthur Andersen, Xerox/KPMG, and WorldCom/Arthur Andersen. For many people, scandals taking place in companies such as Enron and WorldCom in the USA are synonymous with "fraudulent financial reporting". In many cases against auditors, the auditors failed to obtain appropriate evidence or failed to recognize and follow up on red flags during the audits (Kalbers; 2007; P.1). Historically, external auditors have counted on internal control as the main defense against fraud, but this cannot only work by itself as managers themselves can override controls. Fraud can be divided into three main categories as mentioned by (ACFE: 2008, P.5): Asset misappropriation, fraudulent financial reporting, and corruption. However, in our research the focus will be on fraudulent financial reporting because as stated by the ACFE report (2008; P.6), financial statement fraud is the most costly type of fraud where it caused a median loss of \$2 million. Besides, fraudulent financial reports can have a substantial negative impact on a company's existence as well as market value.

This study has several objectives. First, it seeks to determine whether red flags listed by SAS 99 can help external auditors in detecting fraudulent financial reporting. Second, it seeks to determine whether red flags that were not mentioned in SAS 99 but mentioned in the audit literature can also be helpful in detecting financial statement fraud. Third, identifying the most important red flags as perceived by external auditors in Egypt, and finally, it explores whether auditors demographic factors (e.g. type of audit office and auditors experience) might affect auditors' perception of the relative importance of red flags in general. Our research paper is organized as follows; the first section includes the review of the literature along with the development of the research hypotheses, then research method and data collection are described in the second section while the research data analysis and results are presented in the third section and finally the research summary and conclusion are included in the fourth section.

2. LITERATURE REVIEW AND HYPOTHESES DEVELOPMENT

To serve as the cornerstone of its anti-fraud program, the Auditing Standards Board of the American Institute of Certified Public Accountants (AICPA) issued SAS No.82: *consideration of fraud in a financial statements audit* that was then superseded by SAS No.99: *consideration of fraud in a financial statements audit*.

SAS no. 82 requires the auditor to specifically assess the risk of material misstatement of the financial statements due to fraud in every audit. It describes two types of fraud — fraudulent financial reporting and misappropriation of assets. The auditor is not expected to assess the risk of fraud as high, medium or low, as might be the case in assessing control risk. Rather, SAS no. 82 asks the auditor to consider risk factors relating to fraudulent financial reporting and misappropriation of assets. It also provided examples of fraud risk factors that, when present, might indicate the presence of fraudulent financial reporting or misappropriation of assets. However, as stated by the American Institute of Certified Public Accountants (2007; P.6), SAS No. 82 focused on a typical list of fraud risk factors that, in practice, were usually reduced to a checklist that individual auditors completed without practical application and included in their working papers. Thus, SAS 99 superseded SAS 82. Although the auditor's responsibility for detecting fraud has not changed from SAS No.82, as stated by Casabona, and Grego (2003; p.3), SAS No.99 provides more guidance on how the auditor should plan and perform the audit to obtain reasonable assurance about whether or not the financial statements contain material misstatements because of errors or fraud. SAS No. 99 identifies red flags as risk factors and categorizes those risk factors in three conditions for fraud arising from fraudulent financial reporting and misappropriations of assets. These conditions are referred to as the fraud triangle and they are: incentives/pressures, opportunities, and rationalization/attitudes.

SAS 99 introduced a new audit procedure which is a brainstorming session that must be performed on every engagement. In brainstorming sessions, audit team members discuss how and where they believe the entity's financial statements might be susceptible to material misstatement due to fraud. They should also discuss how management could perpetrate and conceal fraudulent financial reporting. The quality of the red flags on the final list produced as a result of the brainstorming session could be more important than the overall quantity of the ideas listed. However, SAS 99 didn't mention how auditors can decide on the quality of red flags for fraud. In our research a list of red flags for financial statement fraud will be presented and arranged according to their likelihood of occurrence thus, reducing the time that auditors would take in brainstorming less important red flags.

Furthermore, the PCAOB was also concerned about the role of auditors in detecting fraud as it requires changing the nature, timing and extent of auditing procedures needed to address identified risks of material misstatement due to fraud. The changes that are described by the PCAOB include; the nature of auditing procedures may require obtaining evidence that is more reliable or verifiable, the timing of substantive tests might need to be adjusted, the extent of the procedures employed should reflect the assessment of the risk of material misstatement due to fraud (PCAOB; 2007; P.2-6). Moreover, Apostolou and Crumbley (2008, PP.1-4) mentioned that, International Standards on Auditing No. 240 provides similar directions to auditors as its American counterpart SAS 99 with respect to fraud. Both present specific requirements for auditors to follow like; considering a company's internal controls and procedures, and how these are actually implemented when planning the audit, designing and conducting audit procedures to respond to the risk that management could override internal controls and procedures, identifying specific risks where fraud may occur, considering whether any misstatement uncovered during the audit may be indicative of fraud, obtaining fraud-related written representations from management, and communicating with appropriate managers and the board if the auditor finds an indication that fraud may have occurred.

In summary, the above standards show that the efforts of standards' setters were directed toward narrowing the expectation gap through increasing auditors' responsibility for detecting fraud, however in fact regardless of these efforts, the expectation gap still exists. This is supported by what Chemuturi (2008, p.20) mentioned in his research where he believes that current professional standards and authoritative guidance require auditors to provide reasonable assurance that financial statements are free from material misstatements, whether caused by errors or fraud. However, the lack of a commonly accepted definition of reasonable assurance along with limitations of audit methods in identifying fraud, cost constraints of audits, and high expectations by investors have widened the expectation gap regarding auditor responsibility for detecting fraud. Also, Albrecht, Albrecht, & Albrecht (2008, PP.2-12) stated that the new standards have helped auditors better detect fraud as they became more proactive in brainstorming possible frauds, working with audit committees and management to assess fraud risks. However, auditors are not trained in determining when people are telling the truth or are being deceptive, when documents are real or forged, whether collusion is taking place, or whether fictitious documents have been created, thus their research showed that auditors still need guidance in the area of fraud detection.

In addition to that, one of the primary criticism of SAS 99 as found in Wikipedia (2010, p.1) is that; Many procedures are suggested rather than required. For example, it is suggested that auditors consider surprise procedures like showing up unannounced for an inventory count. In actual practice auditors often tell clients which inventory locations they are going to 'observe.' Telling clients which locations are going to be audited makes it easy to commit inventory fraud. Another criticism is that SAS 99 doesn't close expectation gaps. The guidelines and suggestions provided in the standard increase expectations on the profession. As a result, auditors must consider the requirements of SAS 99 as the minimum level of work required to detect fraud. They must be prepared to defend any decision not to pursue one of the recommended procedures listed in SAS 99.

On the Other hand, fraud in general and financial statement fraud in particular was a priority in most of the academic research. The ACFE (2008, p.2) classified fraudulent financial reporting into five main categories which are; revenue recognition, timing difference, concealed liabilities and expenses, improper disclosure, and improper asset valuation. Some researchers talked about the different types of fraudulent financial reporting and red flags that can be associated with such scheme such as Albrecht (2006; P.3) where the main findings showed that the most common accounts manipulated when perpetrating financial statement fraud are revenues or accounts receivable. He introduced a number of specific revenue-related exposures that need to be considered by external auditors while auditing their clients because these exposures are the various fraud schemes that can be used to misstate the financial statements. Examples for such fraud schemes are; Recording fictitious sales, recognize revenues too early, or overstate real sales, or understating allowance for doubtful accounts, thus overstating

receivables, or not recording returned goods from customers or recording returned goods after the end of the period. Besides, not writing off uncollectible receivables or write off uncollectible receivables in later periods or record bank transfers as cash received from customers or manipulating cash received from related parties, and not recognizing discounts given to customers.

Besides, the Committee of Sponsored Organization of the Treadway Committee sponsored a study in 1997 and found that over half of all financial statement frauds involved revenues or accounts receivable accounts and that recording fictitious revenues was the most common way to manipulate revenue accounts. It also reported that recording revenues prematurely was the second most common type of revenue-related financial statement fraud. In addition to that, Hogan et al (2008; P.242 as cited in Beasley et al 2000) stated that, "common revenue fraud techniques include sham sales, false confirmations, premature revenue recognition before the terms of the sale are completed, modified terms through side letters, improper cutoff, unauthorized shipments, and consignment sales".

Moreover, the American Institute of Certified Public Accountants (2007; P.3) has found that, the third type of fraudulent financial reporting which is concealed liabilities and expenses, is much easier to commit than falsifying many sales transactions. Missing transactions are generally harder for auditors to detect than improperly recorded ones because there is no audit trail and that there are three common methods for concealing liabilities and expenses which are: Liability/expense omissions, capitalized expenses, and Failure to disclose warranty costs and liabilities. It gives examples of fraud schemes involving concealed liabilities like; record payable in subsequent period, or not recording purchases, or overstating purchase returns & purchase discounts, not accruing liabilities or Record accruals in later period, not recording warranty liabilities or under-record liabilities or recording deposits as revenues or Not record repurchase agreements and commitments. Besides, borrowing from related parties or not recording contingent liabilities or recording contingent liabilities at too low an amount.

Also, Wells (2005, P. 119) mentioned how improper disclosure scheme can take place as a form of fraudulent financial reporting and provided examples of this scheme. He mentioned that improper disclosure involves liability omissions, subsequent events, management fraud, related party transaction, and accounting changes. Examples for liability omissions include failure to disclose loan covenants or contingent liabilities. On the other hand, Hogan et al (2008; P. 244 as cited by Gordon et al; 2007) provided a summary of research on related party transactions and find that the mere presence of related party transactions does not appear to increase auditor risk assessments; however the research also suggests that related party transactions is one of the top reasons cited for audit failure when a fraud does occur. Besides, Beasley et al (2001; P.4) investigated 56 firms whose auditors were subject to actions by the SEC, for their association with fraudulent financial statements and found that 27 percent of their sample firms had instances where the auditor had either failed to recognize or disclose related party transactions which in turn translated into reporting of inflated asset values.

Improper asset valuations, however, as stated by Wells; (2005, P.89) usually fall into one of the following categories: inventory valuation, accounts receivable, business combinations (such as mergers and acquisitions), and fixed assets. He included some examples of fraud schemes involving misstating assets accounts such as; Overstating asset costs with related parties or not recording depreciation or collusion with outside parties to overstate assets e.g.; allocating inventory costs to fixed assets or Using market values rather than book values to record assets or having the wrong entity is the purchaser or allocating costs among assets in inappropriate ways or recording fictitious assets or inflating the value of assets in intercompany accounts or transactions, or Misstating marketable securities with the aid of related parties or misappropriation of cash resulting in misstated financial statements without management's knowledge, or Covering thefts of cash or other assets by overstating receivables or inventory. One of the major forms of assets misstatements is inventory fraud that has been such a significant problem historically in many companies because if cost of goods sold is understated, net income will be overstated by an equal amount. As stated by Albrecht et al (2006; P.8);

Cost of goods sold can be understated by understate purchase returns, overstate purchase returns, understate purchase discounts, or overstate ending inventory. Among these alternatives, overstating end-of-period inventory tends to be the most common because it not only increases net income, but also increases recorded assets and makes the balance sheet look better.

A good number of academic research were also concerned about the effectiveness of red flags in fraud detection such as what Silverstone and Michael stated below:

The most important qualities the accounting professional can bring to any fraud investigation are an investigative mindset and skepticism. The skeptical mindset is something that has long been inherent in forensic accountants and other internal investigators when looking for evidence of fraud. With the emergence of SAS 99 and under increasing scrutiny, the external auditor is now being pushed to think like the forensic accountant which means to think like both a thief and a detective and be constantly looking for the weak links in the accounting system and among the people who staff it. What turns a well-trained and experienced accounting professional into a good financial investigator is the knowledge of human behavior and a sixth sense for red flags for fraud and a good intuitive feel for the significance of evidence. (2007, PP.61-62)

Besides, the ACFE's report to the nation on occupational fraud and abuse that was published in (2008, P.9) included some examples of the top 10 red flags of fraud such as: living beyond the person's means, financial difficulties, control issues and unwillingness to share duties, divorce/family problems, unusually close association with vendor/customer, irritability, suspiciousness or defensiveness, addiction problems, past legal problems, and past employment problems. Another research that was carried by Bossard and Blum (2004; P.2) introduced real life fraud cases such as the case of WorldCom that overstated its reported income by approximately \$9 billion and WorldCom was able to both strengthen its balance sheet and improve its net income through this fraud. The authors mentioned that this fraudulent financial reporting could have been detected using red flags like; journal entries may be recorded without supporting documents or accounting rationale, entries are made in round dollar

amounts and booked late in the closing process. Entries may also be reversed and rebooked for a different amount or posted by unusual personnel.

Moreover, Vicky, B., Hoffman, H., Morgan, K., and Patton, J. (1996) supported the use of red flags in fraud detection where they stated that knowing the most important warning signs should help auditors do a better job of assessing fraud risk. They also mentioned that while current and proposed auditing standards require auditors to make this assessment, they don't provide guidance on the relative importance of particular signs. By seeing which factors other auditors considered to be the most important, practicing auditors can assess the risk of fraud in their own audit engagements more efficiently and consistently. Their paper listed some red flags for fraudulent financial reporting such as managers have lied to the auditors, the auditors' experience with management indicates a degree of dishonesty, management has engaged in frequent disputes with auditors, the client has engaged in opinion shopping and management places undue emphasis on meeting earnings projections or other qualitative targets.

On the other hand, studies examining the use of questionnaires or checklists in assessing fraud risk have found mixed results. In one of the first studies in this area, Pincus (1989; P.1) examines the efficacy of a red flags' questionnaire for assessing the risk of material fraud of a client using 137 auditors as subjects. Her findings suggest that the use of a questionnaire was dysfunctional for the fraud case where questionnaire users assessed the fraud risk to be lower than nonusers. While Glover et al (2003; P.4), find support for the use of questionnaires by comparing pre and post SAS No.82 planning judgments. The authors find that post SAS No.82 judgments are more sensitive to fraud risk factors. For instance post SAS 82 participants are more aware of the need to modify audit plans and are more likely to increase the extent of their audit tests in response to increased fraud risk as compared with the pre SAS 82 participants. Moreover, Saksena, (2010; P4) also supported the use of red flags checklist for fraud detection as her paper included a checklist containing top 25 red flags for fraud and she is convinced that through the use of a potential fraud signals checklist all auditors would be able to review their clients for the top 25 fraud schemes and that for auditors to be effective in their efforts they need to learn from their and other professionals experiences.

This debate about the effectiveness of red flags in fraud detection increased our interest in determining whether red flags associated with fraudulent financial reporting can really help external auditors in detecting such fraud scheme in Egypt. The red flags included in this research paper were obtained from SAS No.99 list of red flags for financial statement fraud and from other academic research in the literature. Thus, the following hypotheses were derived from the literature:

H1: SAS 99 red flags for fraudulent financial reporting can help auditors in identifying this fraud scheme

H2: Other red flags associated with each type of fraudulent financial reporting can help auditors in identifying this fraud scheme.

On the other side, some researchers were interested in knowing whether the existence of other factors affect the perception of external auditors about the ability of red flags to detect fraud such as the research that was carried out by Moyes, G. and Baker, C. (2009; P.3). In this research, they listed the factors influencing the use of red flags to detect fraudulent financial reporting. Those factors were possession of an MBA or MA, external auditing experience, CPA License, prior exposure to red flags, attending conferences on red flags, in house training on red flags, the employer having previously detected fraud using red flags, the size of the firm, gender, position, and income of the auditor. Findings showed that CPA firms seem to be significantly more effective in fraud detection using red flags if their auditors have accumulated more external auditing experience, get graduate degrees, frequently used red flags in fraud detection, and attended red flags conference.

Another research study by Hackenbrack (1993; P.5) who investigated the effect of auditor experience with different-sized clients on auditor evaluations of fraudulent financial reporting indicators using two experiments. He finds that auditors assigned primarily to audits of large companies placed more emphasis on the opportunities to commit fraud rather than auditors assigned to small companies. Reasons for this difference relate to differences in control structures between large and small companies and the effect of such differences on auditor perceptions of the importance of opportunities. One suggestion is that red flag lists need to take into account the effect of client size on different fraud risk factors.

Moreover, (Hogan et al, (2008, P. 236) cited a research study carried by Knapp and Knapp (2001) where they examined the effects of audit experience on the effectiveness of analytical procedures in detecting financial statement fraud and find that audit managers are more effective than audit seniors in assessing the risk of fraud with analytical procedures. In summary several factors that affect the quality of audits have been found to be associated with the likelihood of client firms reporting fraudulent financial information. Specifically, these are audit firm size, the level of auditor industry specialization, the length of auditor tenure, and the experience of the auditor.

Furthermore, Farber (2005; P.6) finds that fraud firms have poor governance relative to no fraud firms (fewer independent board members, fewer audit committee meetings, fewer financial experts on the audit committee, a smaller percentage of big 4 auditing firms, and a higher percentage of CEOs who are also chairman of the board. Thus, in our research study we were also interested to know whether the type of audit office and years of experience affect external auditors' ability to identify red flags associated with financial statement fraud. However, a research carried out by Smith (2005, P.82) found that gender, auditors years of experience and auditors tenure do not appear to have a significant impact on auditors perception. Neither did the type of audit firms except for the two red flags, namely, presence of aggressive incentive programs and high vulnerability to interest rates. Auditor experience of fraud did not appear to have an impact on auditor's perception except for one red flag which is "high turnover of senior management".

As a result of the above debate, we were also interested in exploring whether demographic factors can affect auditors perception about the ability of red flags to detect financial statement fraud in Egypt. Thus the following hypotheses were developed:

H3: There is a relationship between auditors' experience and their perception about red flags for financial statement fraud

H4: There is a relationship between type of audit office and their perception about red flags for financial statement fraud

3. RESEARCH METHODS

A list of most of the possible red flags that can be associated with fraudulent financial reporting was prepared. These red flags were collected from different sources of literature including SAS No 99 and prior research studies. This list was then used to build a questionnaire that included questions about the ability of the listed red flags to detect each type of fraudulent financial reporting. Data collection was conducted in two phases: a pilot study phase and a questionnaire survey phase. A pilot study was used to pretest the questionnaire and was followed up by interviews. The questionnaire was then refined according to the results of the pilot study performed by more than fifteen audit managers working in one of the leading audit firms with international affiliations. Then a questionnaire was delivered by hand to a number of external auditors working in audit firms in Egypt. The sample was selected randomly from domestic listed audit firms with the Egyptian institute of Accountants in Egypt. Our sample was affected by accessibility to audit offices and external auditors' years of experience because the questionnaire included a number of highly technical questions that may require sufficient years of experience in the audit field. About 100 questionnaires were distributed to external auditors having different years of experience and working in different audit firms and offices in Egypt but only 93 questionnaires were collected.

The questionnaire included 4 main sections where the aim of each section is to test each hypothesis. The first section for instance was testing the first hypothesis, the second section was testing the second hypothesis and the third section was testing the third hypothesis. The questionnaire was about 8 pages including a cover letter which was addressed to the applicants. The questionnaire included the research purpose, its main objective, and a request of cooperation from the part of the applicants in completing the practical part of the research. It also included a statement that ensures the confidentiality in using the responses of the applicants as it will only be for academic research purpose. All the questions were closed ended questions and the research used the nominal scale which provide only two alternative answers that each respondent was requested to choose from (Agree or Disagree). For each variable, a value of "1" was given to respondents who choose "agree" and the value of "0" was given for the "disagree" option.

4. RESULTS AND DATA ANALYSIS

Data from the collected 93 questionnaires was analyzed using the SPSS. Frequency tables, other descriptive statistics such as the mean and standard deviation, along with contingency coefficient were used to test the research hypotheses.

Tables (1) and (2) below show demographic information about the respondents. The respondents in this study have years of experience ranges from 2 years to more than 10 years and the sample of audit offices were from international, national, and local audit offices and firms. From table 1, it is clear we have only 2 external auditors from the big 4 international audit firms because we had difficulty in gaining access to those firms. This is one of the limitations in our study. It is also shown that 75 auditors in our study were from national audit firms with international affiliations, and 16 auditors from local audit firms in Egypt. Table II however shows auditor years of experience. We had 31 auditors with less than 2 years and less than 5 years of experience. We also had 13 auditors with less than 10 years of experience and 18 auditors with more than 10 years of experience in the audit field.

Table 1. Frequency for the number of external auditors in each audit office

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Big 4	2	2.15	2.15	2.15
	National	75	80.6	80.6	82.79
	Local	16	17.2	17.2	100
	Total	93	100	100	

Table 2. Frequency for the number of external auditors with different years of experience

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	less 2year	31	33.3	33.3	33.3
	less 5 years	31	33.3	33.3	66.6
	less 10 years	13	13.97	13.9	80.64
	more 10 years	18	19.3	19.35	100
	Total	93	100	100	

Test of hypotheses;

The *first hypothesis* predicts that SAS 99 red flags can help external auditors to detect financial statement fraud. The frequency table 3 and the descriptive statistics table 4 below support this hypothesis where the number of external auditors who agree on the ability of SAS 99 red flags for financial statement fraud to detect such fraud scheme was greater than those who disagree. The descriptive statistics table 4 also shows that the average of all means is 86% and this shows a high acceptance rate for SAS 99's red flags for fraudulent financial reporting.

Frequency table (3) for SAS 99 red flags for fraudulent financial reporting

Ranked SAS 99 Red flags for fraudulent financial reporting	External auditors' opinion	
	Agree	Disagree
Formal or informal restrictions on the auditor that limit his access to people or information or to his communication with the board members & audit committee.	90	3
Management displaying a significant disregard for regulatory authorities.	89	4
Domination of management by a single person or small group without compensating controls	89	4
Management changes its accounting policy such as changes in policies of pricing inventories or in valuating investments in order to manipulate the company's financial statements	88	5
Inadequate monitoring of significant controls and Management failure to correct known reportable conditions on a timely basis.	87	6
Ineffective accounting staff, IT or internal audit staff, and Audit committee members have little expertise in financial reporting.	85	8
Known history of law violations or claims against the entity or its senior management alleging fraud	83	10
Failure to record dishonest acts and other disciplinary actions and Lack of key employee training programs.	83	10
Unusually high dependence on debt.	82	11
Unreasonable time constraints on the auditor regarding the completion of the audit or the issuance of the auditor's report	82	11
High turnover of senior management, counsel, board members or key employees may be an attempt to prevent them from learning too much about the firm.	82	11
Many accounts are based on significant estimates or are subject to potential change that may have a financially disruptive effect.	79	14
A failure by management to display and communicate an appropriate attitude regarding internal control and the financial reporting process.	79	14
Tremendous changes in industry conditions such as decreasing demands on company's products, technological changes, fast impairment in company's products.	77	16
Tight credit, high interest rates and reduced ability to acquire credit.	77	16
Management ineffectively communicates and supports the entity's values or ethics or communicates inappropriate values or ethics.	73	20
Management setting aggressive financial targets and expectations for operating personnel.	72	21
Difficulties in collection of accounts receivable from classes of customers who may be experiencing severe economic pressures.	72	21
A large percentage of the organization's board members are not independent of the organization.	72	21
Vague organizational structure to the extent that it is difficult to determine who controls the entity.	70	23
The audit committee members meet infrequently or less than twice annually.	67	26
Rapid growth or unusual profitability especially compared to that of other companies in the same industry		

Table 4. Descriptive statistics for external auditors' opinion on SAS 99 red flags

N	Valid	93
	Missing	0
Average of all means		0.86

Red flags in Table 3 were also ranked according to their relative importance or likelihood of occurrence based on external auditors opinion. The most accepted red flags were; “Formal or informal restrictions on the auditor that limit his access to people or information or to his communication with the board members & audit committee”, followed by ‘management displaying a significant disregard for regulatory authorities’, and “domination of management by a single person or small group without compensating controls”. Which are all from the fraud risk factor group “management influence over the control environment”. While the least important red flags based on auditor opinion were; “The audit committee members meet infrequently or less than twice annually” and the red flag; “Rapid growth or unusual profitability especially compared to that of other companies in the same industry” which belong to the fraud risk group “operating and financial stability characteristics”.

On the other hand, the *second hypothesis* predicts that other red flags for each type of fraudulent financial reporting that were obtained from the literature can help external auditor in detecting each type of such fraud scheme. Results from table “5” below show that the number of external auditors who agree on the red flags associated with each type of financial statement fraud scheme were greater than those who disagree. The average of all means is presented in table “6” and shows high acceptance of those red flags based on external auditor opinion. Red flags listed in table 5 were ranked by importance based on external auditor opinion and the most important red flag in revenue recognition and timing difference scheme was; “The manipulation of accrued revenues realized from the company’s investments using incorrect amounts for expected cash dividends distribution”. while the least important red flag was “An unusual surge in sales by a minority of units within a company or of sales recorded by corporate headquarters”. In concealed liabilities scheme, the most important red flag was “ignoring tax liabilities and claims that are due” while the least important red flag was “unusual decline in the number of days’ purchases in accounts payable”. “Significant related party transactions not in the ordinary course of business without this fact being disclosed” was the most important red flag in improper disclosure scheme. In improper asset valuation scheme, however, the most important red flag was “The existence of assets that are based on significant estimates that involve unusually subjective judgments or uncertainties”. Table “6” also shows that the highest average means were in red flags associated with improper disclosure and this indicates the importance of considering these red flags by external auditors when auditing their clients firms.

Table 5. Additional red flags for financial statement fraud

Ranked Red flags for fictitious revenues and timing differences	External auditors' opinions	
	Agree	Disagree
The manipulation of accrued revenues realized from the company's investments using incorrect amounts for expected cash dividends distribution.	90	3
Not recognizing discounts given to customers.	90	3
Improper recording of sales using accrued revenue account instead of accounts receivable account & justifying this by claiming that clients didn't receive sales invoices.	89	4
Recording returned goods after the end of the period	88	5
Large, complex, and unusual transactions close to year end	88	5
Tendency to smooth income or manage earnings by either keeping the books open after the period to record revenue or prematurely closing the books in order to shift income to the next period.	87	6
A significant portion of management's compensation represented by bonuses, stock options, or other incentives which can be a good reason for management to manipulate revenues in order to get bonuses.	86	7
Understating allowance for doubtful accounts, thus overstating receivables.	85	8
The company do not record returned goods from customers.	84	9
A significant volume of sales to entities whose substance and ownership is not known.	83	10
The company didn't write off uncollectible receivables.	81	12
Write off uncollectible receivables in a later period.	80	13
Recognizing revenues too early such as billing customers prior to the delivery of goods.	78	15
rapid growth or unusual profitability especially compared to that of other companies in the same industry	76	17
Unusual growth in the number of days' sales in receivables.	75	18
An unusual increase in company's sales from only the main branch of the company or from very few branches.	73	20
Loss of a major customer that has created a pressure to replace lost revenues.	70	23
An unusual surge in sales by a minority of units within a company or of sales recorded by corporate headquarters.	52	41

Ranked Red flags for concealed liabilities		
Ignoring tax liabilities or claims that are due	90	3
No independent checks on bank reconciliations and payments	86	7
Improper or lack of recording sales returns and allowances	85	5
The existence of allowances for sales returns, warranty claims that are shrinking in percentage terms or are otherwise out of line with industry peers.	82	11
Reducing accounts payable while competitors are stretching out payments to vendors	78	15
The existence of expenses that are based on significant estimates that involve unusually subjective judgments or uncertainties.	76	17
Unusual decline in the number of days' purchases in accounts payable	60	33
Ranked Red flags for improper disclosure		
Significant related party transactions not in the ordinary course of business without this fact being disclosed.	92	1
Known history of violations of securities laws or other laws and regulations or claims against the entity, its senior management, or board members alleging fraud or violations of laws and regulations without this fact being disclosed.	92	1
Not disclosing the company's real disputes with banks relating to long term loans and its interests.	89	4
Inadequate disclosure for the company's financial investments.	88	5
Recurring negative cash flows from operations or an inability to generate cash flows from operations while reporting earnings and earnings growth.	89	4
Ranked Red flags for improper asset valuation		
The existence of assets that are based on significant estimates that involve unusually subjective judgments or uncertainties.	92	1
Non financial management's excessive participation in the selection of accounting principles or the determination of significant estimates.	91	2
Unusual change in the relationship between fixed assets and the related depreciation expenses.	86	7
The company's management shows an increase in its long term investment in assets while its competitors are decreasing such investments.	85	8
Inadequate separation of duties among the functions of recording assets on books, keeping those assets, and authorization of these assets inside the company.	85	8
Significant inventories or assets that require special expertise for valuation	75	18
Recording fictitious values in the inventory account with no corresponding payables & liabilities to vendors.	91	2
Reconciling deficits in inventory by recording some inventories which are in good state as scrap or spoiled inventories.	91	2
Excessive or large adjustment after a physical inventory count	91	2
Unexplained fluctuations in any inventory account	89	4
Significant, unexpected, or unexplained increases in cost of goods sold.	89	4
Physically moving inventory during test counts which may cause a fictitious increase in inventory.	89	4
Misapplying lower of cost or market test	88	5
False confirmations of offset inventory held by others.	88	5
Close to physical count period, the store keeper prepares inventory disbursement documents & records them in the books without actually sending them to customers except at the beginning of the following year.	86	7
Placing empty boxes with full boxes of inventory to deceive those performing the inventory physical count.	85	8
Close to physical count period, an employee receives goods purchased and delays its recording in daily journal entries.	85	8
Overstating inventory by including inventory in transit.	75	18
The existence of a large amount of obsolete or slow moving inventory.	69	24

Table 6. Average of all Means

Red Flags	N	Valid	Missing	Average means
Fictitious revenues and timing differences	93	93	0	0.87
Concealed liabilities	93	93	0	0.86
Improper disclosure	93	93	0	0.97
Improper assets valuation	93	93	0	0.92

The third hypothesis however predicts that there is a relationship between external auditors' years of experience and their ability to identify red flags for fraudulent financial reporting. Contingency coefficient was used to get the relationship between these two qualitative variables. The P-value for each red flag ranges from "0.1 to 1" thus, they were all greater than 0.05. This means that there is no significant difference among the opinions of external auditors having different years of experience about the ability of red flags to detect fraudulent financial reporting. This can be justified by the fact that other factors can be more important than experience in affecting external auditors' ability to detect financial statement fraud such as direct knowledge about red flags for fraud through acquiring professional certificates in fraud detection or attending international conference about fraud.

As for the fourth hypothesis which predicts that there is a relationship between the type of audit office and external auditors' ability to identify red flags for fraudulent financial reporting, the P-value for each red flag was greater than 0.05 except for two red flags where P-value was less than 0.05. the first red flag is; "Unusual surge in sales by a minority of units within a company or of sales recorded by corporate headquarters" (P-value 0.004). this red flag is related to "revenue recognition and timing difference scheme". The second red flag is "management ineffectively communicates and supports the entity's values or ethics or communicates inappropriate values or ethics" (P-value 0.008). this red flag is related to SAS No.99 fraud risk factor group "Management influence over the control environment".

To sum up the research findings, our research supported the use of red flags as a tool for detecting fraudulent financial reporting. This was consistent with the research carried out by (Glover et al, 2003, P4), (Saksena, 2010, p.4), (Bossard and Blum, 2004, p.2), (Silverstone and Michael, 2007, p.61), and (Wells, 2005, p.89). our research also supported the importance of ranking red flags according to their relative importance. This was consistent with the research conducted by (Vicky et al, 1996, p.5) and (Smith, 2005, p.82). However we had different ranks from that included in Smith research as he found that the SAS 99 fraud risk factors in the "operating and financial stability characteristics group" were the most important risk factors based on external auditor opinion. While our research findings showed that risk factors in the "management influence over the control environment group" were the most important red flags for fraudulent financial reporting. Moreover our research found that lack of proper disclosure about related party transactions is the most important red flag in improper disclosure fraud scheme and this is consistent with Hogan et al (2008; P. 244 as cited by Gordon et al; 2007) who stated that related party transactions is one of the top reasons cited for audit failure when a fraud does occur. The effect of demographic factors on auditor perception about red flag for fraud was not supported in our research and this was consistent with Smith research (2005, p.82) where type of auditor years of experience was insignificant and so was type of audit office except for two red flags. However the two red flags that were found significant in our research are different from those found by Smith.

5. CONCLUSION

This research study determines whether red flags for fraudulent financial reporting listed in SAS 99 and in other literature can help external auditors in detecting such fraud scheme. The research also determines whether external auditors experience and the type of audit office affect external auditors' ability to identify red flags for fraudulent financial reporting. This study provides several practical implications that are informative about the quality of red flags to be considered by external auditors and about fraud detection in general. First, results from our questionnaire suggest that SAS 99 red flags and the other red flags for each type of fraudulent financial reporting can be helpful for external auditors. SAS 99 provided a list of red flags related to each fraud factor like incentives, opportunities, and rationalization, but these red flags were too general and aren't specifically related to any of the types of fraudulent financial reporting. Our research included a list of specific red flags that can be most likely associated with each type of fraudulent financial reporting and those red flags were highly accepted by the sample of external auditors in our study. These specific red flags can be used in conjunction with SAS 99 red flags to enhance external auditors' ability in detecting fraudulent financial reporting.

Second, the research also ranked all red flags for fraudulent financial reporting according to their relative importance based on external auditor opinion. Highlighting the red flags that can be most likely to occur will help auditors to focus their efforts more on high quality red flags during brainstorming sessions which will in turn facilitate fraud detection. Third, our research didn't support the effect of demographic factors on external auditors perception about red flag for fraudulent financial reporting which indicates that educating external auditors about red flags will enhance their ability to detect fraud regardless of how different is their demographic factors. However, this study is subject to several limitations. First, we were not able to get more than two external auditors from the big 4 international audit firms to fill in the questionnaire and thus our results can't be generalized to all audit firms in Egypt. Second we tried to list every possible red flag for fraudulent financial reporting but certainly there can be other red flags in the literature that aren't mentioned in the research study. Thus future research should be more directed toward listing other red flags for fraudulent financial reporting in the literature and should test them using other methods like experiments or interviews.

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