AUDIT MATERIALITY AND RISK: BENCHMARKS AND THE IMPACT ON THE AUDIT PROCESS

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ABBREVIATIONS USED

AICPA = American Institute of CPAs

APA = Auditing Professions Act 2005

GLOSS = Glossary of Terms as per SAICA Handbook 2011/2012, Auditing Volume 2

IAASB = International Auditing Assurances Standards Board

IASs = International Accounting Standards

IASB = International Accounting Standards Board

ICAEW = Institute of Chartered Accountants for England and Wales

IFAC = International Federation of Accountants

IOD = Institute of Directors Southern Africa

IRBA = Independent Regulatory Board for Auditors

ISAs = International Standards on Auditing

JSE = Johannesburg Stock Exchange

PAAB = Public Accountants and Auditors Board

PCAOB = Public Company Accounting Oversight Board

SOX = Sarbanes-Oxley Act 2002

SAAS = South African Auditing Standards

SAICA = South African Institute of Chartered Accountants

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ABSTRACT

The objective of this study is to address the gap that exists in the literature regarding quantifiable guidelines, benchmarks and consistency of applications. During the research acceptable benchmarks for the calculation or quantification of the elements linked to materiality and audit risk were found. The benchmarks are in compliance with the practices and the requirements of the ISAs and regulations. Models and benchmarks based on literature were used as a basis and modified for application in the auditing environment. The combination of literature, responses from public practitioners and experience based on best practices resulted in the development of a modified risk-based assessment model.

The conclusion from the empirical study indicated that there are no defined rules or basis for calculating materiality and audit risk. The inconsistencies in responses indicate that audit firms and developer of key concepts interpret and apply the above-mentioned term different in practice. The interpretations of the relevant ISAs, appear to be conceptually correct as no major non-compliances were identified. Various instances indicated that there is a lack of guidance with regard to the quantification or qualification of benchmarks.

The implementation of the Sarbanes-Oxley Act (2002) was an event that leads to the consideration of more conservative benchmarks. The most consistent benchmark that stood the test of time was Discussion paper 6 (1984). The 30 years since the development of these benchmarks indicate that little attention has been given to one of the most complex issues in auditing. Companies within different industries are not generic and exceptions will occur where the auditor needs to apply professional judgment to accommodate the deviations.

Further research is required to assist the audit professionals and students in the development of consistent benchmarks to increase the reputation of the profession.

The conclusion drawn from this study is that audit materiality and audit risk has a significant impact on the audit process as even the audit report is influenced by proper audit planning and guidelines to support the auditor in audits.

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AUDIT MATERIALITY AND RISK: BENCHMARKS AND THE IMPACT ON THE AUDIT PROCESS

TABLE OF CONTENTS FIGURES

TABLE OF CONTENTS TABLES

TABLE OF CONTENTS EQUATIONS

1 CHAPTER 1: INTRODUCTION, PROBLEM STATEMENT AND OBJECTIVE OF THE STUDY

1.1 INTRODUCTION

Research articles published by Azzopardi and Baldacchino (2009:13), Badertscher and Burks (2010:2-6) and Budesco *et al.* (2012: 20) indicate that audit materiality and audit risk are current and relevant research subjects, but new consistent benchmarks are not forthcoming. The professional bodies are also reluctant to commit themselves to supplying rules and quantifying specific norms (Kuene, 2010:11). The objective of this study is to address the gap that exists in the literature regarding quantifiable guidelines, benchmarks and consistency of auditing applications of the given literature and theory. During the research acceptable benchmarks for the calculation or quantification of the elements linked to audit materiality and audit risk will be investigated.

The International Federation of Accountants (IFAC) (2011) is the international body for the governance of the global accounting profession. The purpose of IFAC is to maintain standards and it is the standard setter for the International Accounting Standards Board (IASB) and the International Auditing Assurances Standards Board (IAASB).

According to Landsman *et al.* (2009:539) and Cahan *et al.* (2013:34-35), the corporate failure of companies like Enron and Worldcom, and the implosion of Arthur Anderson and the possible litigation an auditor may be involved in, resulted in auditors becoming cautious. This may be the reason for auditors becoming more secretive about their methodology and benchmarks because of the risks from an audit, as well as from a reputational risk point of view. In the modern auditing profession, auditors are regulated and required to comply with various international auditing standards, laws and regulations, and international accounting standards. South Africa became a member of IFAC through the South African Institute for Chartered Accountants (SAICA). South African regulators and auditors previously applied South African Auditing Standards (SAAS) in their audits. Since 1 January 2005, the SAAS were replaced by the International Auditing Standards (IASs). B1/2004, issued by the Public Accountants and Auditor's Board (PAAB, the South

African audit regulator), now the Independent Regulatory Board for Auditors (IRBA), adopted ISAs issued by the International Federation of Accountants (IFAC) since 2005. Professional judgement and scepticism form fundamental requirements in any modern audit. The standards are written in such a manner that they indicate that an auditor should apply his professional judgement according to ISA200 (2012), but should also be aware of the need to perform his/her duties with professional scepticism. The Institute of Chartered Accountants for England and Wales (ICAEW 2006: 20, 22-23) reported that the International Accounting and Auditing Standards (ISAs) were drafted in such a manner that principles take precedence over rules. Agoglia *et al.* (2011:749,751) argue that there are benefits for and against rules based and principles based standards.

1.1.1 Audit process

According to Colbert (1996:34) and Azzopardi and Baldacchino (2009:14), the audit process is reliant on a proper basis being established at the planning stage. It would therefore be detrimental to an audit if it is found that the materiality and risk assessment is rejected during the gathering of audit evidence stage. Cullinan (2004:854) is of the opinion that fraud and audit failure can be contributed to non-adherence to proper audit processes. Experiments performed by Agoglia *et al.* (2011:761-765) indicated that the audit committee might influence the financial statement preparation and thus the process according to which the auditor would perform his audit. The impact is that the audit process would need to be revised if the initial planning, including the determination of audit materiality and assessment of risk, is rejected at the gathering of evidence stage (Cullinan, 2004:863; Agoglia *et al.,* 2011:761-765).

Barron (2005) (a) defines the auditing process as steps performed by auditors in a specific order to examine the records of clients. The nature, type and level of assurance of the audit engagement required will influence the audit process. The auditor should obtain an understanding of the specific client's environment, evaluate the evidence gathered and report the results to the different stakeholders. This definition is supported by Cullinan (2004:854) who suggests that the purpose of current changes to the standards and legislation is to strengthen auditor independence. This definition suggests that every step of the audit process

influences the result of the final audit objective to issue an audit report that reflects the real situation of an entity at a specific date and for a specific period.

The first step in the audit process is the pre-engagement activity while the planning stage is the second step in the audit process. The research will focus on the planning stage and specifically on the determination of audit materiality and assessment of risk as two of the important and underlying constructs of audit planning and the audit process. The research will focus on the auditing process with emphasis on two elements of audit planning, namely: audit materiality and risk assessment benchmarks.

The terminology and benchmarks associated with materiality through the audit process will also form part of the research. The associated terminologies include significant, pervasive, trivial and audit differences. The research will also include the history of development of auditing terminology benchmarking over the past decades. The decision on the type of audit report to be issued based on material misstatement is closely linked to the research topics as part of the audit process and will be incorporated in the research.

1.1.2 Materiality

According to Brennan and Gray (2005:1-2), materiality is a critical construct in the financial reporting and auditing environment. The authors further state that, notwithstanding its importance, there is a lack of understanding and application of materiality.

To understand the search for an appropriate materiality benchmark, the history of the prior research has to be explained. The search for quantification of benchmarks for materiality benchmarks started in 1952 and has been a source of literature which appears to be unresolved, for example (Messier *et al.,* 2005; Rotaru, 2006 & Kuene, 2010) Discussion Paper 6 (DP6) was issued by SAICA in 1984 and is still quoted by Marx (2009:8-26) as a relevant benchmark in the South African Auditing environment. Rotaru (2006:2) indicates in his article that the search for materiality benchmarks started with Plumhoff (cited by Rotaru, 2006:2). The article compared various benchmarks by different authors and the conclusion that can be drawn is that the benchmarks are not within acceptable levels. The search for the ideal

benchmarks is still continuing and will be a bone of contention unless the standard setters and regulators commit themselves to publishing proper guidelines. The current application of DP 6 in the South African Auditing environment indicated that little progress or development has been made.

Keune (2010:13-14) referred to researchers of which Holstrum and Messier (1982) and Messier *et al.* (2005) serve as examples. The prior researches did not commit to a consistent materiality benchmark. Reference is, however, made to the "rule of thumb" Figures which have evolved from practice. The guidance is lacking, although the International Standards of Auditing ISA320 (2012) par 2 requires an auditor to "*determine an appropriate materiality level or levels"* which will assist in the planning and performance of the audit. ISA 320 (2012) indicates that no specific guidelines exist in the standards with regard to quantifying materiality. The questions which can be raised that need further clarification are the following:

- what should the benchmarks or levels be;
- should the guidelines be given or;
- should benchmarks or levels be developed by public practice?

Elder *et al.* (2010:57) and Arens *et al.* (2012:250) are of the opinion that the application of materiality is a difficult judgement. The authors further state that no simple or well-defined guidelines exist. The fact that the evaluation of materiality depends on qualitative and qualitative factors further complicates the problem of consistency. Although literature is available which addresses materiality, risk, significant, pervasive and trivial a theoretical point of view, there are no consistent benchmarks available to guide the auditor and this creates the gap between literature and practice. According to Bu-Peow and Hun-Tong (2007:1187), qualitative materiality is a factor that influences the determination of audit benchmarks.

1.1.3 Audit risk and significant

Google Internet searches on the terms "materiality", "risk" and "significant" revealed that there are approximately 2 318 000 instances dealing with materiality and risk, and 24 300 000 instances dealing with 'significant'. However, there are no

standardized benchmarks in the International Standards of Auditing to guide an auditor. The question may be raised as to whether auditors need benchmarks, as they should use their professional judgement according to ISA 200 (2012) to apply the guidance given. To the contrary, the auditors request their professional bodies to supply guidance. In the literature there are no clearly defined rules or bases to calculate materiality and audit risk and related items. This is where the inconsistencies originate, as each audit firm or developer of auditing and accounting software, interprets the concepts listed and defined in this study differently. There are different interpretations in the market, which are conceptually correct when compared to the requirements of ISA 200, ISA 300, ISA 315, ISA 320, ISA 330, ISA 450, ISA 510, ISA 700, ISA 705 and ISA 706.

According to Elder *et al.* (2010:55-56) and Arens *et al.* (2012:250) knowledge of a misstatement that may affect the *"reasonable user's decision"* can be classified as material. In order to determine the type of opinion, "*three levels of materiality are used:*

- *Amounts are immaterial.*
- *Amounts are material, but do not overshadow the financial statements as a whole.*
- *Amounts are so material or so pervasive that the overall fairness of the financial statements is questioned".*

1.1.4 Audit report and pervasive

When the definition of materiality is compared to the requirements of ISA 700, ISA 705 and ISA 706 it is suggested that the auditor should consider the impact of a misstatement on the audit opinion. Materiality and the audit opinion are thus related and are independent constructs that should be considered. To illustrate this relationship and comparison the following table is constructed:

Table 1.1 Type of audit opinions

Impact of the misstatement on the financial statements Elder *et al.* (2010:55-56) Arens *et al.* (2012:250)	**Resulting impact of audit difference on audit opinion** ISA 700, 705 and 706
Immaterial	An unqualified opinion can be expressed
Material but not pervasive	Requires an auditor to qualify his audit opinion
Amounts material and pervasive	Requires an auditor to disclaim or withhold his opinion

Source: Elder *et al.* (2010:55-56), Arens *et al.* (2012:250), ISA 700 (2012), ISA 705 (2012) and ISA 706 (2012).

Based on the above, the study will be extended to investigate whether the term "pervasive" can be quantified. The difference between material and pervasive may be the difference between a qualified opinion and a possible disclaimer of or an adverse opinion. It is thus of the utmost importance to understand the difference between material and pervasive. Internet searches on Google reveal 603 000 instances dealing with 'pervasive'.

The conclusion that can be drawn from this introduction is that materiality and risk impact the audit process from planning to completion. Risk and responses to risk are a constant that should be considered throughout the audit process. The auditor is always concerned about risk and reducing the risk to an acceptable level. The auditor also needs to apply his professional judgement in issuing an audit opinion.

1.2 PROBLEM STATEMENT

From the introduction above Rotaru (2006); Acito *et al.* (2007) and Keune and Johnstone (2012:1657) accentuated the lack of guidelines by standard setters and auditing regulators on benchmarks in the auditing profession. The aim of this study is

to identify the gaps in existence in literature and the application in public practice of a consistent and quantifiable benchmark for materiality and risk and associated terms. There are no guidelines. The auditor should apply professional judgment and skeptism in determining specific benchmarks. The benchmarks where the audit profession requires guidance are the following:

- Materiality
- Materiality benchmark
- Materiality threshold
- Audit risk
- Associated terminology
- Significant
- Pervasive
- Trivial
- Audit differences

The problem appears to be a lack of consistent guidance and benchmarks to be applied during the audit process. Current research is lacking with regard to development of new benchmarks. Research published from 2008 to 2013 indicates that audit materiality and audit risk are current and relevant research subjects, but lack the commitment for new benchmarks. The majority of researchers quote the benchmarks applied since Plumhoff (1952) and no new updated benchmarks were identified during the past decades.

1.3 OBJECTIVES

The aim of this study is to assist audit practitioners with a clearer understanding of the important, though vague, terminology used for which no consistent and current benchmarks exist. The following objectives are formulated for the study:

1.3.1 Primary objectives

The primary objective of this study is to conceptualize audit materiality and risk benchmarks and the impact on the audit process. This will include investigating, recommending, providing and developing guidance for audit benchmarks, based on an understanding of the literature and responses received from respondents. The objectives are to:

- determine the relationship between materiality, risk and benchmarks in the audit process; and
- to determine the extent to which materiality, risks and benchmarks can overcome the gap between practice and literature.

1.3.2 Secondary objectives

The following secondary objectives following the primary objective are to:

- assist the auditing profession and students to understand;
    - the theory and the practical application of audit benchmarks;
    - materiality, risk and associated terms in order to assist in the effective and efficient planning of an audit, based on the benchmarks; and
    - how to reduce auditor's risk to an acceptable level.

The plan concerning how to achieve the objectives, fill the gap and resolve the research problem, the research design and methodology, will be the next step in the research process to be dealt with.

1.4 RESEARCH DESIGN AND METHODOLOGY

1.4.1 Research design

According to Mouton (2011:56), the research design is the logic of the research and research methodology is the process including the collection of data. The implication is thus that the literature review will be the first step in the search of the solution for

the problem statement. The empirical review will be the second step in the collection and interpretation of data.

1.4.2 Research methodology

According to Welman *et al.* (2012:8) and Mouton (2011:161), qualitative research can be classified as a "descriptive" research. The study will include numeric data which will be analysed and based on information available in literature and obtained from the questionnaire and can thus also be classified as a primary qualitative research combined with limited quantitative research. Mouton (2011:144-145) distinguishes between primary data and secondary data and empirical and non-empirical studies in Figure 10.1:144 and the degree of control in Figure 10.2:145. Based on these explanations, the following is relevant to this research:

- Primary data will be obtained from the questionnaires and analysed according to the hybrid mixed method described by Mouton (2011:145):
    - A comparative study will be performed on the responses received, analysing the numerical values, empirical and non-empirical.
    - Discourse analysis will be used to analyse the response compared to the statements made and responses received analysing the contextual interpretation of the text, non–empirical.
    - The statements will be coded according to the following categories:
        - Guidance
        - Interpretation of requirements
        - Compliance
        - Lack of guidance
        - Lack of benchmarks
- Secondary or existing data will be obtained from the academic literature which will be summarized, analysed and compared to primary data as part of the empirical study.

The research methodology for this study will include a literature and empirical review which will be discussed below.

1.4.3 Literature review

A literature review will primarily be conducted on primary and secondary sources. The literature review will include a comparison of the literature with the requirements of the standards. Different benchmarks and models will be compared and investigated. Where no subject specific models are available, the models will be adapted from other academic disciplines based on the circumstances applicable to the auditing profession and interpretations, which are founded on best practices. This include research, creating or developing an acceptable benchmark for the calculation or quantification of the elements linked to materiality, and audit risk for the market. The research will be based on academic literature, standards supported by the ISAs and regulations that are acceptable in the auditing environment.

From this literature study, definitions, International Auditing Standards, will be measured, and mathematical benchmarks will be linked to respond to the theoretical requirements. A step-by- step comparison and evaluation will be performed between the standards, benchmarks found in literature and observations.

1.4.4 Empirical review

The empirical review will be conducted in a way that will determine the gap between literature, empirical literature reviews and responses from auditors in public practice. The empirical study will be based on primary data collected by email of questionnaires to the Audit Technical Departments of registered auditing firms with listed clients. Interviews will be performed to support the empirical study. The population consisted of all auditors with listed companies, as audit engagements were used as the basis for selection as “research subjects”. The number of auditors on the JSE listing at 28 February 2010 amounted to 27 firms of which only 24 firms has listed audit engagements as part of their client lists.

A statistical analysis will be performed by the Statistical specialists at the North West University, Vaal Campus. The conclusions drawn from the results will be compared

to the requirements of the ISAs to determine the deviation or interpretation of the ISAs and the practical implementation thereof by auditing firms.

1.5 LAYOUT OF THE STUDY

The study is divided into six chapters, which are summarized below:

Following on Chapter 1, Chapter 2 reviews will be performed on academic journals, international standards of auditing and other available sources relating to the audit process.

In Chapter 3 the Academic journals, international standards of auditing and text books relating to materiality will be reviewed.

In Chapter 4 Academic journals, international standards of auditing and text books relating to audit risk and risk management processes will be researched.

In Chapter 5 the development of the questionnaire, discussion methods and sampling methods will be described. The reasons for the questions used in the questionnaire will be explained.

In Chapter 6 recommendations will be made. In this chapter, which is the closing chapter, the conclusions and recommendations of the previous chapters will be summarized.

2 CHAPTER 2: AUDIT PROCESS

2.1 INTRODUCTION

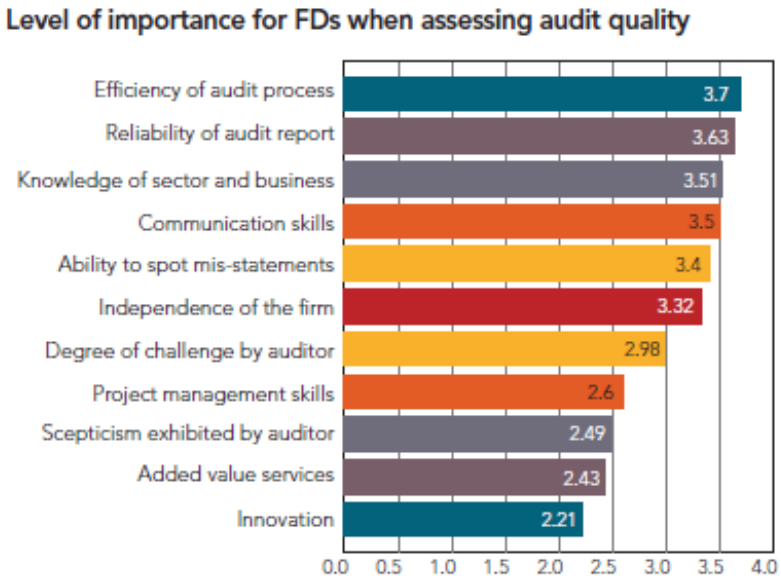
Francis and Yu (2011:127-129) states that audit quality is a complex issue and the main objective is to issue an appropriate audit report at an appropriate audit risk level. Poor audit quality results in audit failures. The pendulum shifts from low to high quality audits which indirectly impact on “audit failure’’ or ‘‘no audit failure”. Audit failure is the result of the auditor not being independent. Brown (2009:21-22) argues that the audit failures of Enron, Waste Management and Sunbeam, to name a few, had one common theme: the incorrect application of materiality. The appropriate application of the audit process is fundamental to the success and the quality of an audit.

Crump (2013:31) performed an audit survey which indicated that the efficiency of an audit process was ranked the highest (3.7 out of a possible 4) of FTSE 350 companies in the United Kingdom by Financial Directors. The ranking indicates that the Financial Directors rate the efficiency of the audit process highest when audit quality is assessed. The survey was performed on audit fees disclosed in company’s 2011/2012 annual reports of the FTSE 350 companies.

Francis (2011:126) argues that audit process quality is relevant to the performance of the audit. The argument is further extended to the motives for audit process quality. The motive is the gaining of new business from existing as well as prospective clients (Curtis & Turley, 2007:443). The audit risk model is still a significant tool in audit planning and audit quality (Peecher *et al.,* 2007:464). The conclusion from the survey below in Figure 2-1 is that the efficiency of the audit process is of significant importance to perform a quality audit. Fraser and Pong (2009:106) argue that auditors changed from one audit approach or methodology to the next, due to changing circumstances and regulation and expectations from clients (Albrecht, 1977:48). The most common method discussed is the “business risk auditing” methodology (Knechel, 2007:13, Peecher *et al*., 2007:465), as discussed in 2.2 below.

The audit process consists of various logical steps, as indicated in Figure 2.2. Collectively, these steps are known as the audit process. An audit contains elements, processes and steps that an auditor should perform to obtain the audit objective of issuing a relevant audit report. Figure 2.1 provides the ranking of important factors when assessing audit quality.

Figure 2-1 Levels of importance on audit quality assessment



Source: Crump (2013:31)

The audit process is applied globally and is regulated by the various professional bodies through ISAs and SAS in the United States of America. The AICPA (2013) of the United States of America is implementing clarified standards with effect from 15 December 2012. A comparison between ISA 320 (IFAC 2012) and AU-C Section 320 (AICPA 2012) indicated similarities in the requirements and applications. Lasage and Wechtler (2012:497) performed an inductive typology research on 3143 articles in auditing journals, and 62 out of 684 articles published from 2001 to 2005 relate to International regulation. The audit should be performed by the auditor in compliance with the laid-down auditing standards that are published by the International Auditing Assurances Standards Board (IAASB) under the control of the International Federation of Accountants (IFAC). The external auditor is required by law to follow certain guidelines as discussed in Chapter 1, which are called

International Standards of Auditing, also commonly referred to as ISAs. Each auditing standard deals with a specific underlying requirement of the audit process that an auditor should follow to comply with the requirements of the combined ISAs. Although the audit process is divided into various ISAs, each ISA should be read in conjunction with the others and all the ISAs should be complied with as a whole. The standards are accepted and applied internationally and in 2011 the countries and jurisdictions associated with IFAC amounted to 164 members and associates in 125 countries and jurisdictions. These requirements are thus taken seriously as the primary membership consists of national professional bodies, representing 2.5 million accountants employed in all areas of accounting.

The audit report contains the term “free of material misstatement”. The audit report is the final product and stage in the audit process and is issued after all material differences were considered. The link between materiality and the audit report exists for the audit process as a whole. Lasage and Wechtler’s (2012:497) research further indicated that 41 out of 684 articles published from 2001 to 2005 relate to the audit market. The importance of an audit is highlighted in ISA 200 (2012) par 3 which describes the main purpose of an audit as the increase of the confidence level or reliance that users may have on the audit report of the audited financial statements. There is a relationship between requirements of ISA 200 (2012), ISA 700 (2012) and Figure 2.1. The relationship is that the reliability of the audit report as an element of audit quality was ranked to be the second highest rating with a score of 3.63 out of a possible 4. Fraser and Pong (2009:105) question the future of the external audit and specifically the form of audit reporting based on the “diversity of shareholders, stakeholders’ needs and alternative sources of channels and assurance”. The current format used is prescribe by the professional bodies and regulators and should be complied with.

In order to express an opinion, *“the auditor has to obtain reasonable assurance that the financial statements as a whole are free from material misstatement”,* as stipulated in ISA 200 (2012) par 5. ISA 200 (2012) par 13(m) defines reasonable assurance as a *“high, but not absolute, level of assurance”*, which can be achieved when sufficient and appropriate evidence is obtained. The audit risk is reduced to a lower level which is accepted if evidence was sufficient and appropriate. ISA 700

(2012) par 30 deals with the audit report and the requirements as discussed above as well as required by ISA 200 (2012) par 3. As part of the audit report, the auditor needs to state that the audit was in compliance with auditing standards and compliance with ethical standards is one of the requirements. ISQC1 (2012) requires an *"auditor to comply with ethical requirements"* and this is further indicated in ISA 700 (2012) par 30. Of those requirements in ISQC1, there are 30 instances that require compliance with ethical requirements.

The improvement of audit quality is achieved when auditors are questioning their own judgement and judgment process. The concepts of judgment are also referred to as professional skepticism (Toba, 2011:84-85). Research revealed that there is a relationship between skepticism compared to ethical concepts, as the terms characteristics, audit firm culture, individual traits and independence are used in the same context (Hurtt, 2010:152-153).

Auditors should act independently and with skepticism and should not be involved in clients' business goals. Contrary to the accounting scandals in the first part of the century, the auditors were not blamed for the financial crisis in 2007 to 2009, but management and regulators were blamed, due to their lost skepticism. He further commented is that an auditor's duty is to hold on to skepticism and independence as "counterweights" to the forces. The forces are policing on the one hand, and advancing their profession by keeping clients happy on the other hand (Doty, 2011:1-2). The question is whether the above indicate relationships between skepticism and ethics.

Ethical compliance, as referred to in the paragraphs above, is difficult to measure as it is highly subjective or judgemental, and it is important to reiterate that compliance with ethical standards is fundamental to the auditing profession's reputation and future survival. The following paragraphs explain the different ethical requirements that should be evident during the whole audit process.

Therefore it may be concluded that the auditor's main responsibility is to express an opinion that is consistent with the evidence gathered and circumstances encountered by the auditor during the audit, including considering any ethical issues, as discussed above. Although the reporting section of the audit process is the final

activity in the audit process, the auditor should always keep it in mind throughout the audit process (Crous *et al.* 2012:128).

As noted in the above paragraph, the audit process may differ, based on circumstances and on the fact that human intervention is required to apply the steps in the audit process in logical steps to obtain the objective of expressing the audit opinion. The audit process is explained based on the requirements of the auditing standards. Figure 2.1 serves as a schematic presentation that is based on the sequence of auditing standards and serves to illustrate the steps and four different activities required to complete the audit process. Francis (2011:1.03) explains the audit process as the testing of transactions by competent and independent audit team members, which includes the duty of an auditor to determine procedures as required by acceptable practices. The final objective of an audit is to express an opinion. Business dictionary (2012) defines audit: *"as a systematic examination and verification of books of accounts and documentation*."

From the above it can be concluded that the audit process consists of the following elements and behaviours:

- Systematic or methodical process or steps
    - An independent party
    - reviews the financial statements
        - objectively
        - for underlying information
        - concludes on fair presentation
        - of sufficiently corroborative evidence and
        - supports an appropriate opinion.
    - Compliance with all statutory, legal and professional requirements.

The above mentioned audit process is also referred to as an audit methodology.

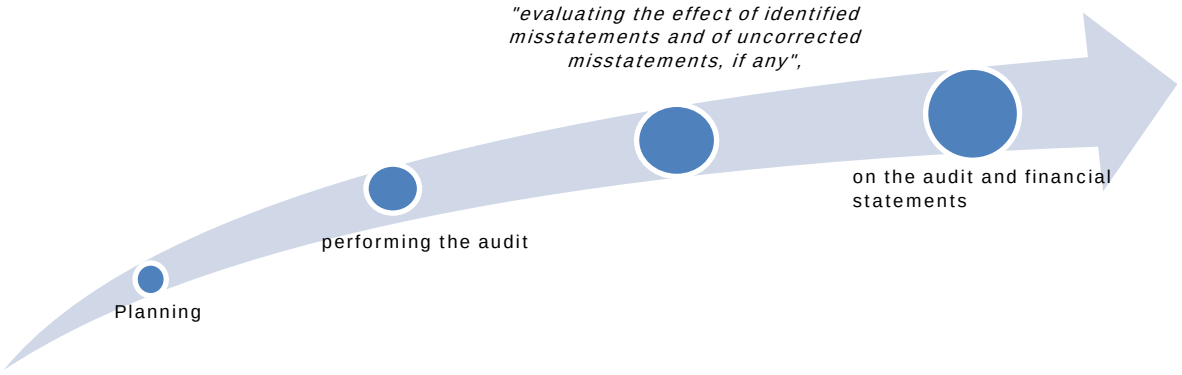
2.2 BUSINESS RISK MODEL

Research for the past ten years constantly refers back to the audit risk model and business risk model. Houston *et al*. (1999:282) posits that there is a relationship between audit and business risk. Auditors will behave differently, based on underlying factors affecting the audit risk and business risk. According to Curtis and Turley (2007:439-440), Knechel (2007:385), and Frazer and Pong (2009:106), business risk auditing is the current model that is applied in audits. Curtis and Turley (2007:439), Abdullatif and Al-Khadash (2009:14), and Knechel *et al*. (2007:384) are of the opinion that the Business Risk Audit (BRA) was developed in the mid 1990's. The scholars proposing this model, are of the opinion that the audit effectiveness will be improved by a business risk approach. Curtis and Turley (2007:439) state that the auditor needs to obtain an "*understanding of the environment, business process and identification of management fraud and business failure risk*".

2.2.1 Elements of the audit process

The importance of audit materiality, risk and related topics in the audit process is discussed in chapter 1. ISA 200 (2012) in paragraph 6 discusses the concepts as part of the audit process. The following concepts or elements in Figure 2-2 are highlighted as having the most significant combined impact on the audit process, strategy and planning.

Figure 2-2 Stages when materiality should be applied are graphically explained below:



Source: ISA 320 (2012)

A term that will be widely used and which is also associated with materiality determination is 'professional judgement', which is defined in ISA 200 par 13(k) as *"the application of the auditor's relevant training, knowledge and experience within all areas"* related to auditing, including accounting and ethics. The auditor needs to make informed decisions based on the circumstances.

The paragraph above again highlights the fact that an audit is not a template that can be used for every circumstance. A decision based on judgement is subjective and becomes difficult to justify. The audit should be adjusted, within the constraints of the requirements, to be applied in the specific audit engagement.

ISA 200 (2012) par A23 suggests that professional judgment is required to perform a proper audit. The auditor needs to apply his/her professional judgement in the following cases or stages of the audit and audit process:

- *"Materiality and audit risk.*
- *The nature, timing and extent of audit procedures.*
- *Gathering of audit evidence.*
- *Evaluating the sufficiency and appropriateness of the audit evidence obtained"* to support the audit opinion.
- *"The evaluation of management's judgements.*
- *Assessing the reasonableness of the estimates made by management in preparing the financial statements".*

Another term that is closely associated with materiality, risk and gathering of evidence is "professional skepticism" and is defined in ISA 200 par 13(l) as including at least the following criteria:

- A mind that "*questions*" the situation and not always accepts everything on face value.
- "*Being alert to conditions.*

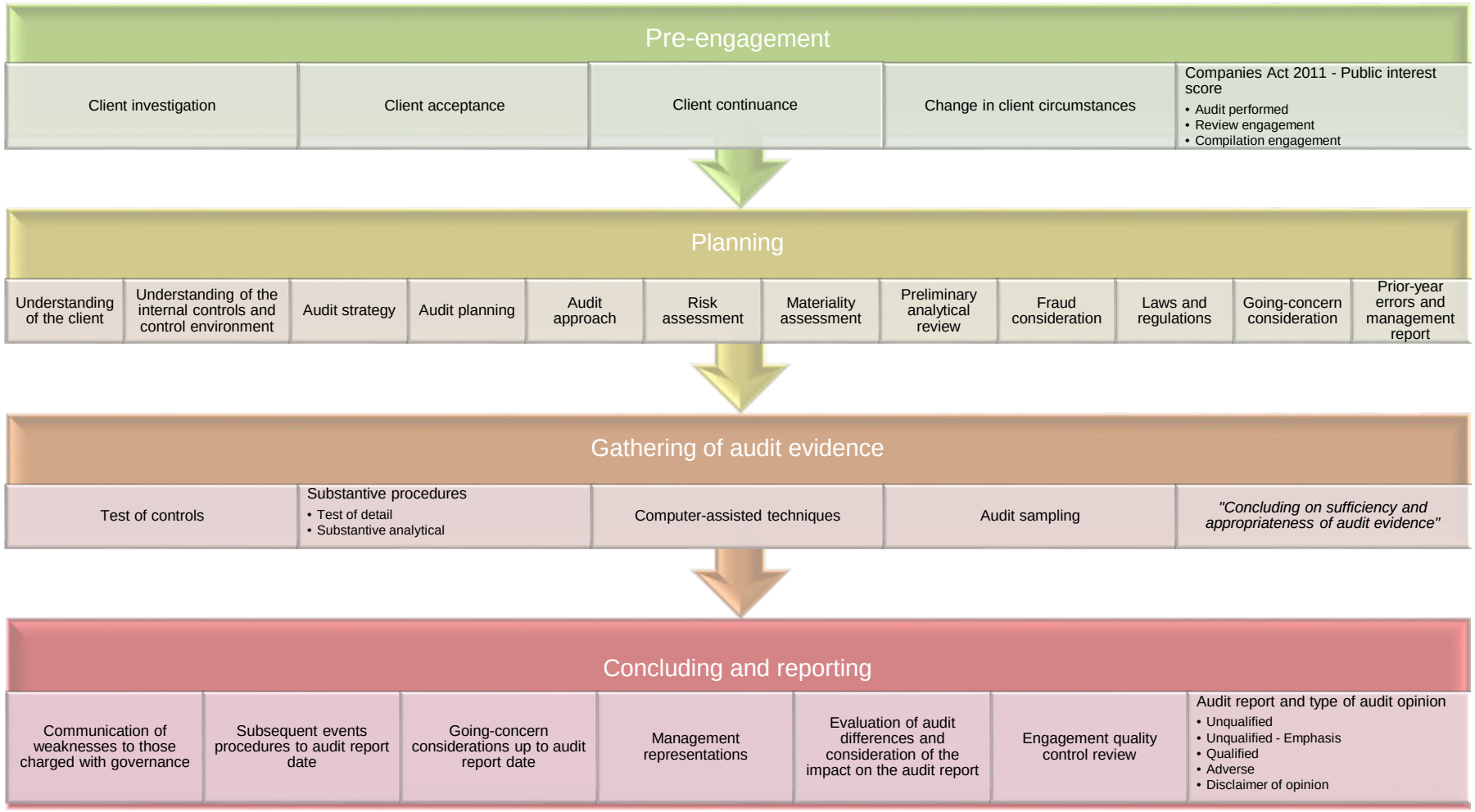
- *Critical assessment of audit evidence*".

The following researchers (detail quoted below) concluded that professional skepticism should at least be applied in the following steps of the audit process:

- Materiality consideration (Francis, 2011:136)
- Risk assessment (Francis, 2011:137, Hurtt, 2010:150).
- Expressing an appropriate audit opinion that is supported by the evidence gathered during the audit (Doty, 2011:3).

From the definitions and suggestion above, it is evident that an audit or audit process consists of various elements of professional judgement, skepticism and interpretation of various auditing standards and terminology that may give rise to differences of opinion and audit results, as no clear standards with guidelines are given. The auditor is required to apply principles rather than rules, which further complicates the consistency of audits. In Figure 2-3, the audit process is presented as a schematic diagram based on the headings of the relevant auditing standards.

Figure 2-3 Schematic diagram of the audit process



(Own presentation, based on index of ISAs 2011)

Although the audit process is indicated as a process in Figure 2.3, various international standards of auditing require the auditor to revisit or revise previous stages in the process or reconsider the planning stage and adjust the audit approach, materiality and risk assessment, based on information that the auditor becomes aware of as he/she progresses through the audit. This reconsideration or revision will have an impact on the gathering of information, as the sample sizes or method for gathering information may be changed or adjusted.

2.3 AUDITING POSTULATES

Lubbe (1981:142-143) explains that the auditor's objectives and outlooks on life form an integral part of the auditor's mission and moral values when performing the audit. This statement is based on a comparison of the various postulates and the conclusions drawn on their importance. According to Dunn (1996:13), postulates are *"fundamental assumptions that can be challenged".* The postulates are further supported by the introduction of IRBA's (2005) corporate mission on their websites, which is as follows*: "To protect the financial interest of the South African public and international investors in South Africa through the effective regulation of audits conducted by registered auditors, in accordance with internationally recognised standards and processes".*

It may be indirectly concluded from the above that the responsibility of any auditor should be to protect his/her client from claims, himself/herself from litigation, and the public (including employees, bankers and the tax authority) by not issuing falsified statements. The postulates fit into the auditor's duties, logic and moral responsibilities. The postulates below are implied, but are not specifically stated as a requirement in the standards. However, the auditor should take cognisance of these postulates. Mautz and Sharaf (1961:42) list eight postulates of auditing. The postulates or assumptions that should be present for an audit are as follows:

1. *"Financial statements and financial data are verifiable.*
2. *No conflict of interest exists between the auditor and audited management.*
3. *Financial statements submitted to the auditors are free from collusive and other unusual irregularities.*

4. *The effectiveness of an internal control system eliminates the chances for irregularities to occur.*

5. *Consistent application of GAAP results in fair presentation.*

6. *The absence of clear evidence to the contrary in the past will hold true in the future.*

7. *When expressing an opinion the auditor acts exclusively in his appointed capacity.*

8. *The status of a professional independent auditor imposes obligations".*

Recognition is given to some of the postulates based on the introduction of various measures in:

- IFAC Code
- ISA 240

As far as the postulates in the past might have been true, these cannot be assumed still to be applicable on their own in the current business climate. It is suggested that these postulates are currently supported by the implementation of the various requirements and the establishment of various boards and regulatory bodies that serve to oversee auditors. The first giant step that followed the accounting and auditing scandals of Enron etc. was the establishment of the Public Company Accounting Oversight Board in the United States of America (PCAOB). The objectives of the introduction of Oversight Boards were there to ensure compliance to auditing and accounting standards, which relate to the requirements of the postulates discussed above. Although the PCAOB does not refer to auditing, the PCAOB is there to ensure compliance on the engagement file level, as well as on the firm level. Public reports are anonymously issued after reviews are performed to protect the status of the auditor as discussed in Postulate 8.

The PCAOB website indicates the purpose of the PCAOB as being enforced due to the proclamation of the Sarbanes-Oxley Act of 2002 and to *"establish auditing and*

related professional practice standards for registered public accounting firms to follow in the preparation and issuance of audit reports".

2.4 CONCLUSION

The postulates may be applicable in a perfect world and where there are not as many scandals as have occurred in the last decade. Although the postulates are criticised, they are valid and the auditor should strive to comply with each and every one of them and, where not possible, adjust the audit methodology to compensate for their shortcomings. Lubbe (1981:139, 143-144) concludes that further research is required on the postulates concept. He further concludes that two of Flint's postulates refer to social auditing and that the purposes of the financial audit and the social audit may be different. It appears from the conclusion that it is not possible to develop postulates for both types of audits.

The audit process has been adjusted with the implementation of different measures to align the current climate to the original spirit of the postulates. The changing environment and accounting frauds opened up a new concern with regard to probability and risk of audit procedures performed. The intention of the postulates is to give credibility to the auditing profession.

2.5 STATUTORY OR OTHER OBLIGATIONS TO PERFORM AN AUDIT

ISA 250 (2011) requires from the auditor to consider the laws and regulations as part of the audit process. The requirements of the Companies Regulations, 2011, were published and came into effect on 1 May 2011, the same date on which the Companies Act 2011 came into effect. As the Companies Act forms a significant part of the decision to accept a client, the risk of accepting or retaining a client should be investigated and considered during the pre-engagement activities of the audit. The Companies Act as a legal requirement will now be discussed as part of the audit process. In terms of Section 28 the following categories of companies listed are required to be audited:

(1) "Exempt from audits in terms of Section 30 (2) A of the Companies Act.

(2) Public companies and state-owned companies and any other company that falls within the following categories:

(a) Non-profit or profit company – whose primary activities include holding assets in a fiduciary capacity exceeding R5m for not-related persons.

(b) Any non-profit company incorporated under the following entities:

(i) Directly or indirectly by the state (an organ of the state, a state-owned company, an international entity, a foreign company).

(ii) Primarily performing statutory or regulating functions in terms of any regulations, or to carry out a public function at the direct or indirect imitation or direction.

(c) Any other company whose Public Interest Score in that financial year is calculated in accordance with Regulation 26(2), and

(i) is 350 and more; or

(ii) is at least 100 and financial statements were internally compiled".

It can be concluded from the above, that an auditor also has other obligations to consider, other than issues that are not closely related to financial statements, but may impact on the auditor's risk when planning and performing an audit.

2.5.1 Independent reviews

The scope of the research does not include independent reviews as such, but they should be addressed from the perspective of the audit and the Companies Act (2008).

a. Independent reviews – probable impact on audit opinion

The impact of the performance of an audit in the one year and an independent review in the next year may have certain complications for the audit procedures and the type of audit report issued. Changes to ownership or the public interest score may result in a change in the company's circumstances from year to year and may warrant the auditor to perform an audit in the current year, but not in the prior year. This would constitute an audit where the auditor did not perform an audit in the prior year and thus the engagement can be classified as an initial engagement as defined in ISA 510 par 4 (a)(i), which states that the following terms can be defined as:

(a) "Initial audit engagement – an engagement in which either:

(b) the financial statements for the prior period were not audited; or

(c) the financial statements for the prior period were audited by a predecessor auditor".

ISA 510 par 4 (b) states that "*opening balances are those account balances that exist at the beginning of the period. Opening balances are based upon the closing balances of the prior period and reflect the effect of transactions and events of prior periods and accounting policies applied in the prior period. Opening balances also include matters requiring disclosure that existed at the beginning of the period, such as contingencies and commitments".* ISA 510 in paragraph 6 states that *"an auditor should obtain sufficient and appropriate evidence regarding the opening balances"*. The conclusion that can be drawn from the paragraphs above is that an initial engagement indicates that an audit was not performed and, thus, as suggested in ISA 510 par 10: *"If the auditor is unable to obtain sufficient appropriate audit evidence regarding the opening balances, the auditor shall express a qualified opinion or a disclaimer of opinion, as appropriate, in accordance with ISA 705"*.

As discussed in the previous paragraphs the auditor may be in a position not to obtain sufficient and appropriate evidence. This will increase the auditor's risk. The following modified opinions are the only alternative for the auditor if he does not re-do the audit for the prior year:

- Material, but not pervasive – Qualified opinion,
- Pervasive – Disclaimer of opinion.

ISA 705 (2011) par 5 (b) defines "modified opinion" as:

"A qualified opinion, an adverse opinion or a disclaimer of opinion."

ISA 705 (2011) par 5 defines 'pervasive' as:

"*A term used, in the context of misstatements, to describe the effects on the financial statements of misstatements or the possible effects on the financial statements of misstatements, if any, that are undetected due to an inability to obtain sufficient*

appropriate audit evidence. Pervasive effects on the financial statements are those that, in the auditor's judgement:

- *are not confined to specific elements, accounts or items of the financial statements;*
- *if so confined, represent or could represent a substantial proportion of the financial statements; or*
- *in relation to disclosures, are fundamental to users' understanding of the financial statements".*

Table 2-1 and ISA 705 (2011) par A1 suggest that the following modified opinions are applicable, based on the nature of the modification if the circumstances changed as per discussion above:

Table 2-1 Types of modified opinions

Nature of Matter Giving Rise to the Modification	Auditor's Judgement about the Pervasiveness of the Effects or Possible Effects on the Financial Statements	
	Material but not pervasive	Material and pervasive
Financial statements are materially misstated	Qualified opinion	Adverse opinion
Inability to obtain sufficient appropriate audit evidence	Qualified opinion	Disclaimer of opinion

Source: ISA 705 (2011) par A1

ISA 200 (2011) par A23 suggests that an auditor should exercise *"professional judgement"* in the consideration of matters that would affect the audit. Pervasive is one of the issues that require professional judgement and thus it was included in the questionnaire to determine what the benchmarks should be. Chapter 5 will deal with

the benchmarks indicated by the qualitative research performed on the questionnaires.

Benchmarks for the term “pervasive” are subjective rather than a guideline, which could impact significantly on the risk the auditor faces when issuing an audit opinion, as ISA 705 and 706 require from the auditor to consider whether specific issues may result in being pervasive. Pervasive issues may result in an audit opinion being adverse or a disclaimer of opinion, based on the circumstances. An incorrect opinion may result in a reputational risk for the auditor and thus the auditor should apply the principle with due care. Audit Glossary (2012) defines pervasive risk as *“the type of risk found throughout the environment”*. Gloss-12 (SAICA 2012) defines ‘pervasive’ as *“a term used, in the context of misstatements, to describe the effects on the financial statements of misstatements or the possible effects on the financial statements of misstatements, if any are undetected due to an inability to obtain sufficient appropriate audit evidence. Pervasive effects on the financial statements are those that, in the auditor’s judgement:*

a) are not confined to specific elements, accounts or items;

b) are confined and are a substantial proportion; or

c) in relation to disclosures, are fundamental to users’ understanding”.

b. Further research required on independent reviews

It is suggested that the independent reviews should be a separate research topic as there is currently a difference of opinion on interpretation between SAICA and IRBA on the independent reviews that should be resolved. There is currently no history and it would not be wise to comment on the implementation of the independent reviews, which the approved practitioners are in the process of performing for the first time, and no background and statistics are currently available.

2.6 EXPECTATION GAP

As discussed in the previous paragraphs, the audit process consists of logical steps to be followed and should be based on professional judgement, skepticism and

materiality, and risk considerations which make the audit difficult for the user to understand.

The user may have an expectation that an auditor would detect all fraud and misstatements. The auditor's procedures are namely developed to reduce fraud and misstatements to an acceptable risk level**.** However, Budescu *et al*. (2012:37) warn that the increase of evidence may not always reduce the audit risk to an acceptable low level. Bias which is greater than quantitative materiality may even increase the audit risk with an increase of audit evidence. There is thus a misunderstanding among users of financials statements that the auditor should detect and correct all errors that may impact on materiality and risk assessment. The above mentioned understanding is called the expectation gap, which is created between the users and the auditor regarding the auditor's role and duties. The research survey discussed below indicates the risk that an auditor may have due to incorrect audit planning. The risk of determination of wrong materiality relates to the expectation gap and the risk of an auditor. There have been a number of suggestions that the users of audit reports do not fully understand the nature and purpose of an audit and the extent of the auditor's duties. Porter *et al.* (2012(a):103) is of the opinion that there may be an expectation from society on the responsibilities of an auditor, which may seem unreasonable. The performance expectation can be split between poor performance and deficient standards. If the auditor performs the audit with the utmost care, the society's expectation may probably be met as the fraud may not always be identified.

Since 1990 up to 2012 the debate of the auditor's responsibility and the expectation is a continuing research topic (Porter *et al*., 2012(a): Porter *et al*., 2012 (b)). As early as 1993 Gloeck and De Jager (1993:6) concluded in their research report that the *"exact role of the auditor is no longer clear".* The remarks regarding focus on the three main issues in the above-mentioned research report has since been proven to be a major issue and table 2.3 below is a summary of improvements or adjustments made in the auditing profession:

Table 2.2 Improvements made since the issue of the research report

Remarks	Improvements or actions taken	
	South Africa	**Globally**
Lack of independence of auditors.	Companies Act 2008.	IFAC requirements on independence were introduced. ISA 700 Audit Report was changed to include ethical compliance.
Uncertainties regarding the role of the auditor.	Companies Act 2008.	IFAC requirements were introduced. Clarity project of IFAC to improve ISAs. Sarbanes Oxley Act.
Dissatisfaction with compulsory audit of small-owner managed companies.	Independent reviews according to the Companies Act 2008 and exemptions from audits.	United Kingdom exempted certain companies with a threshold below specific criteria.

Source: Gloeck and De Jager (1993:22), IFAC (2011), Porter *et al.* (2010(b):219) and Companies Act (2008).

2.7 RELATIONSHIP BETWEEN MATERIALITY AND RISK

Colbert (1996:31) suggests that, *"the concepts of audit risk and materiality" are "critical to planning and performing the audit". Audit risk and materiality, after being set at appropriate levels, determine the nature, timing and extent of testing".*

2.8 CONCLUSION

The audit process consists of various requirements and steps that should be complied with during the various stages of the process. These requirements and steps, as a whole, form a reliable set that the user of financial statements can rely on. The reliance is expected by the user based on the type of audit report issued, balances disclosed in the various statements, as well as the disclosure and notes in the complete financial statement. The expectations of the users differ from the auditor's responsibility and that is the reason why auditors are blamed for major company failures.

Certain controls should be put in place by the auditor to ensure that the audit process was completed according to IFRS, IASs, ISAs and other laws, rules and regulations. The auditor is always at risk for a material misstatement occurring which they did not identify. Two of the elements that are related to the risk of material misstatement are materiality and risk.

The auditor is expected to comply with various requirements, regulations and public expectations. The quality of the audit process and thus the success of the audit is of fundamental importance. The planning stage of the audit, and specifically materiality and audit risk, form a significant part of the success of an audit. The importance of materiality, materiality benchmarks and the impact materiality might have restatements is discussed in chapter 3. The business risk approach and quantification of risk, which is relevant to and impacts significantly on the audit process, is discussed in chapter 4.

3 CHAPTER 3: AUDIT MATERIALITY

3.1 INTRODUCTION

Von Wielligh (2005:190) highlights the significance of materiality to the audit process and audit reporting. The link between the audit process, reporting and materiality has been established in his research. In the light of this, materiality forms part of the planning process as illustrated in Figure 2-1. Materiality is fundamental in all decisions regarding risk associated with account balances, gathering of audit evidence, conclusion on errors and impact on the audit opinion and financial reporting. Materiality should thus be considered at each step of the audit process.

Azzopardi and Baldacchino (2009:15-16) state that materiality is crucial for the audit and that auditors in public practice find it very difficult to determine materiality. Von Wielligh (2005:190) supports the concept of the complexity of materiality. Materiality is also an indicator of the quality of an audit. The conclusion was drawn that materiality is important for the directors and auditors of the company. Azzopardi and Baldacchino (2011:15-16) further emphasize that there is an inverse relationship between materiality levels and the scope of the audit, as the materiality judgements influence the nature, timing and extent of the audit procedures. According to Hanks (2012:18-20), materiality is a significant concept in integrated reporting and fundamental to the financial reporting process. Less experience on assessing materiality, in as far as it is related to integrated reporting, is available to draw from. The author further comments that materiality is difficult to assess, for sustainability reporting as greater judgment is required over vast issues. The conclusion is that materiality is a complex issue that should be considered carefully.

Materiality is related to the size of the balance or account and thus to the risk of material misstatement (AU-C Section 320 and ISA 320 par 12 to 14). According to Hanks (2012:18) and the International Accounting Standards Board's Committee's "Framework for the Preparation and Presentation of Financial Statements" (2012), materiality is defined in the following terms: *"Information is material if its omission or misstatement could influence the economic decisions of users taken on the basis of the financial statements. Materiality depends on the size of the item or error judged*

in the particular circumstances of its omission or misstatement. Thus, materiality provides a threshold or cut-off point rather than being a primary qualitative characteristic which information must have if it is to be useful."

The objective of performance materiality is to reduce the probability of aggregated errors. The conclusion that can be drawn from the requirements of ISA 320 (2012) par A12 and the paragraphs above is that there is always a risk that an auditor may not detect all errors or misstatements that are individually less than overall materiality, but if aggregated, might exceed overall materiality. It would thus be left to the specific auditor's professional judgement, and based on his knowledge and understanding of the client, to determine whether performance materiality should also be applied.

In the law of evidence, according to Garner (2004:1), *"an item of evidence is said to be material if it has some logical correlation to a fact of consequence to the outcome of a case. Materiality, along with probative value, is one of the two characteristics that make a given item of evidence relevant"* (Fisher, 2002:385).

According to Garner (2004:1), *"The objective of an audit of financial statements is to enable the auditor to express an opinion on whether the financial statements are prepared, in all material respects, in conformity with an identified financial reporting framework* (Heitzman *et al.,* 2009:128). The assessment of what is material is a matter of professional judgement." Garner (2004:1) posits that inconsistency may be caused as different means are applied to determine materiality thresholds. Keune and Johnstone (2012:1641) refer to the lack of proper guidance as the "absence of bright-line criteria" for materiality assessment. The lack of guidance places more responsibility to resolve misstatements through judgement (Acito *et al*., 2009:660).

The audit pronouncement on auditing benchmarks guidance issued in South Africa (Botha, 1999:35) was Discussion Paper 6 (DP6) (1984), which still serves as a benchmark in the text books used by students (Marx, 2009:8-26). Marx (2009:8-24) admits that the document is old, but still provides guidance on materiality assessment. DP6 was the first known guidance issued by a South African professional Body (SAICA, 1984). DP6 has since been withdrawn and is used as a

rule of thumb by South African practitioners (Probe, 2011:2-11). Comparison between Probe (2011:2-11) and DP6 (1984) revealed that, all except gross profit which is not included, benchmarks in the audit manual for South African practitioners are the same.

The nature and circumstances related to uncorrected misstatements will not always classify any amount as immaterial if the amount is below planning materiality. Indirectly, ISA 200 (2012) and ISA 320 (2012) call on the auditor's professional judgement to consider qualitative measures as well as quantitative measures when considering the materiality of uncorrected misstatements individually and in aggregate.

Colbert (1996:34) concludes that professional judgement is used during the assessment of audit risk and materiality levels (Keune, 2010:7). Colbert (1996:34) and Azzopardi and Baldacchino (2007:15) state that low audit risk would result in higher materiality assessment, which is contradicted by Budescu *et al*. (2012:31). The contradiction stems from the fact that audit risk may not be reduced by more audit evidence when fraud risk or other circumstances are present, but not known. It is the researcher's opinion that Budesco *et al*. (2012:31) has a more substantiated argument, as qualitative considerations should also be taken into account when assessing materiality. This paragraph highlights the need for guidance on concepts where judgment is applied to ensure better consistency in application in practice (Woods *et al.,* 2009:121).

Von Wielligh (2005:124) emphasizes the significance of materiality for auditors and directors. Materiality is concerned with the facts that are significant to the matter at hand which appear to indicate that there is a possible relationship between materiality and significant. The definitions of the terms 'significant' and 'significant influence' is thus important. Merriam-Webster (2012) defines 'significant' as being *"important, essential, distinctive or of sufficient nature to warrant special notice relative to a standard or norm. The deviation may be of such a magnitude that its occurrence is probably not due to chance. Significant events often require disclosure in the financial statements".* A 'significant influence' is defined by IAS 28

(2012) par 2 as *"the power to participate in the financial and policy decisions of the investee but is not control or joint control over those policies".*

IAS 28 (2012) committed to a benchmark for significant influence by stating that, *"If an investee holds, directly and indirectly 20 percent or more of the voting power of the investee, it is presumed that the investor has significant influence".* The 20 percent is of great value for accounting but if this benchmark were used in the auditing context, it would be a disaster, as any amount greater than 20 percent of equity should thus be classified as being significant. This benchmark would not be acceptable and the benchmark for 'significant' will be investigated further during the study.

The term for numerical materiality is *'quantitative materiality'*. Materiality is also based on not only the numerical value but also the specific characteristics of an account. The term for this materiality is *'qualitative materiality'* (Keune, 2010:21,31). The differences between quantitative and qualitative materiality are indicated in the next section.

3.2 QUANTITATIVE MATERIALITY

In Chapter 1 the problem statement indicated that there are no laid-down benchmarks to guide the auditor to determine materiality although it is required for the auditor to determine materiality. As the courts would always use the test of a reasonable auditor in court cases, the auditor may be liable for negligence if the expert witness would indicate that the materiality was not appropriate. It should be mentioned that negligence is not easy to prove but court cases in the United States of America were successful on materiality issues.

3.2.1 Determining materiality and performance materiality when planning the audit

Performance materiality relates to a lower materiality level consideration for the following:

- Particular class of transactions

- Account balance or disclosure.

3.2.2 Use of benchmarks in determining materiality for the financial statements as a whole

In Chapter 1 it was noted that the search for benchmarks started in 1952 and is not yet resolved. The search for the ideal benchmarks is still continuing and will be a bone of contention unless the standard setters and regulators commit themselves to publish proper guidelines. The following illustrate the lack of quantitative benchmarks.

ISA 320 (2012) par A4 refers to the following as examples of benchmarks that can be applied, based on the relevant circumstances:

- "*Equity*
- *Categories of reported income such as:*
    - *profit before tax*
    - *total revenue*
    - *gross profit*
    - *total expenses*
- *Total equity*
- *Net asset value*"

Profit before tax from continuing operations is often used for profit-oriented entities. The volatility of profit before tax from continuing operations may result in the auditor deciding to use a more appropriate benchmark (Keune 2010:39). It is suggested that benchmarks should be available for auditors as guidance to support them because personal experience indicates that a benchmark can be seen as a consistency tool for network and international firms. The following benchmarks are suggested as examples for public practitioners according to ISA 320 (2012) par A9, although no value is associated with the following :

- *"Programmes: Expenses less revenues or expenditure less receipts.*
- *Assets: Where the entity has custody of public assets".*

Libby and Brown (2013:649) interviewed office partners and found that 5% of net income before tax was the most commonly materiality benchmarks which is contrary to the examples used in the paragraph above. Table 3-1 below illustrates the benchmarks that are widely accepted among medium to small practitioners in South Africa to determine quantitative audit materiality.

Table 3-1 Quantitative indicators of materiality

	Low		High	Multiplier
Turnover (Gross Revenue)	½ %	-	1 %	2
Gross profit	1 %	-	2 %	2
Net income	5 %	-	10 %	2
Total assets	1 %	-	2 %	2
Equity	2 %	-	5 %	2.5

Source: Marx *et al*, 2009: 8-26 (DP6), adjusted with multiplier.

Multiplier is the high materiality level divided by the low materiality. In all-but-one instance as indicated in Table 3-1 above, the high indicators are twice the value of the low indicator. The following basis or benchmarks are used in determining quantitative materiality:

- Gliding scale source (Azzopardi and Balducchino, 2009:16)
- Percentage based on financial statement items
- Average of various financial statement items calculations
- DP 6 based on various parameters
- The most appropriate materiality is the best driver for the company. Ask without what can the company not survive? Assets, income or net profit? (Keune, 2010:39)

The most appropriate materiality which will be termed “materiality driver” will be further investigated as the auditor should use professional judgement, which includes other factors than just the numerical, which is called “qualitative materiality”.

3.3 QUALITATIVE MATERIALITY

Acito *et al.* (2007:10) is of the opinion that qualitative materiality includes illegal transactions, fraud or non-compliance to IFRS or laws, irrespective of the numeric value. The quantitative and qualitative materiality should not be considered in isolation, but rather together.

Brown (2009:33) illustrates that the following considerations can be described as qualitative materiality and inherent risks which is considered when making a decision on the materiality driver to be selected:

- Distributable income to the public
- Public interest in terms of shares, investments and dividends
- Economic factors
- Complexity of accounting processes and judgements to be made
- Legislation to be passed

According to Bu-Peow and Hun-Tong (2007:1188-1189) It can be concluded that quantitative materiality could not always account for the different objectives and interests of the following parties:

- Board of directors
- Auditor

The following stakeholders may be influenced by different indicators:

- Users
- Investors
- Tax authorities
- Creditors

The considerations above, as well as qualitative measures, should be considered to determine the risk of the audit client on a rating scale, which might be influenced by the following indicators or circumstances:

- Prior-year experience with client
- First engagement or recurring engagement
- Cooperation of management
- Management attitude towards controls
- Aggressive disclosure requirement
- Commitment to laws and regulations
- Reputation in the media (bad publicity versus good publicity)
- Good standing with the regulators and tax authorities

Brown (2009:33) list the following external factors that may have an impact on the risk of material financial misstatements. The following examples, of other considerations although the list is not exhaustive, may be more relevant to the risk of material misstatement:

- Bonuses paid to senior management, which would rather alert the auditor to consider net profit before tax.
- Clients wanting to expand their operations and requiring additional finance may indicate to the auditor that net profit and total asset value should be considered.

- The company is in the process of selling the business or parts of the operation. (For example: Asset value and total liabilities, as well as revenue.)
- Client is experiencing cash flow or going-concern problems. (For example: Assets value, Expenses and Completeness of Revenue and Liabilities)
- Ratio of revenue to assets may suggest that a specific materiality should be considered in specific circumstances:
    - Taxation and VAT implications
    - Listed companies where shareholders seek returns on their investments and thus interest or dividend income
    - Directors' strategy differs from the user or shareholders' objectives.

It can also be concluded that the qualitative considerations and other information that come to the auditor's attention, of which there are too many to mention, may justify the auditor in to selecting another materiality driver.

3.4 DISTINCTION BETWEEN ACCOUNTING AND AUDIT MATERIALITY

Accounting materiality determines the tolerable errors and disclosure in financial statements. Audit materiality impacts on the audit process. Puttick and Van Esch (2007:255) question whether *'accounting materiality'* is the same as *'auditing materiality*'. According to Accounting Requirements IAS1: The objectives of financial statements according to IAS 1.9 are to provide *"useful information to a wide range of users in making economic decisions"*. The implication of the above mentioned objective is that financial statements and information should be free from material misstatement so that the users can make a decision that is not biased and fairly present [IAS 1.15] the following information of the company at a specific date or accounting period:

- Financial position
- Financial performance
- Cash flows

The user might not make an informed decision if the financial information is tainted, which ties in with the definition of materiality according to ISA 320 (2012). IAS 1.29 (2012) requires that each material class of similar items should be presented separately and in the financial statements. Accounting materiality refers to a Figure where the differences or non-compliance is such that fair presentation of the financial statement could not be obtained and requires adjustments to the Figures or disclosure in the financial statements or information. Auditing materiality relates to the extent of audit evidence gathered to support the audit opinion. According to ISA 700 the audit opinion will include that "the financial statements are free of material misstatement". Puttick and Van Esch (2007:255) state that the determination of nature, timing and extent of audit procedures are directly influenced by auditing materiality to *"obtain satisfaction"* that the errors in the financial statements do not exceed accounting materiality. They further conclude that *"the two materialities are the same".*

3.5 RELEVANCE OF MATERIALITY AND NUMBER OF INSTANCES

A Google search was performed in September 2010 to illustrate how many opinions, articles or documents are available on the internet in respect of the keywords listed in Table 3-2 below. The following keywords form a vital role in the study. The results are highlighted in Table 3.2 below:

Table 3-2 Number of Instances identified on the internet "Google" search

Materiality	1 220 000 results
Accounting materiality	502 000 results
Audit materiality	228 000 results
Materiality and audit risk	168 000 results
Materiality calculations audit	94 000 results
Significant	24 300 000 results

The ratio between materiality and materiality calculations audit in Table 3-2 is 1220 to 94, which indicates that the search for benchmarks is justified and more research should be done on these contentious issues.

The following keywords were used and the count was extended to the auditing standards. The results are significant enough for the justification of the study and the search for benchmarks as it is required, but no specific guidance is given in the standards. Table 3-3 below is a summary obtained from audit standards:

Table 3-3 Number of instances in ISAs

Concepts	Instances ISA 2010	Instances ISA 320 (2012), 450 revised and redrafted	Instances ISA 530 revised and redrafted
Risk	1395	26	42
Significant	662	7	0
Material	1303	118	22
Consideration	501	18	5
Misstatement	1178	178	43
Material misstatement	592	19	12
Materiality	195	86	5
Documentation	331	11	2
Conclusion	217	5	19
Threshold/Benchmark	37	4	0

Source: ISAs listed above

The determination of a more appropriate benchmark will be discussed further as part of materiality drivers later in this chapter.

3.6 PROFESSIONAL JUDGEMENT AND DETERMINATION OF THE APPROPRIATE PERCENTAGE

As can be concluded from literature of which Marx (2009:8-25 – 8-27) and Rotaru (2006:1-7) serve as examples, and requirements of ISA 320 (2012), the science of determining materiality has various variables and obstacles to overcome. Materiality consideration is a matter of professional judgement and the tests that can be applied are to ask the following questions (each of which leads to the next):

- What would a reasonable auditor have done in these circumstances?
- What is a definition of a reasonable auditor?
- From which perspective do we need to judge the actions of a reasonable auditor?

The questions can become infinite and still we would not have an exact answer as the answers are based on the following:

- Interpretation of the auditor, courts
- Perspective of an independent person that might have had more insight afterwards
- User and his/her objectives
- Sympathy for the aggrieved party

The following Table 3-4 serve as an example to illustrate the relationship between benchmark and percentage:

Table 3-4 Relationship between benchmark and percentage

Benchmark	Percentage compared to second benchmark	Relationship to second benchmark	Industry	Percentage applied to benchmark in column 1
Profit before tax	Higher than relationship to second benchmark	Revenue	Manufacturing	Five percent
Revenue	Less than second relationship to benchmark	Profit before tax	Not-for-profit entity	One percent of total revenue or expenses

Source: Own research

ISA 320 (2012) par A12 highlights that professional judgement includes the following aspects and considerations before determining materiality:

- *"Understanding of the entity*
- *Updating during performance of risk assessment procedures.*
- *Nature and extent of misstatements in prior audits.*
- *Auditor's expectations in relation to misstatements".*

3.7 AUDIT DIFFERENCES AND ADJUSTMENTS

Apart from ISA 320 (2012) par A12, ISA 450 also requires from the auditor to consider the impact of audit differences, individually and in aggregate, on the audit and audit opinion. The responses of the empirical research will assist in further guidance on this matter. The quotes from ISA 320 and 450 are of significance, based on new research published on materiality and misstatements. The list of authors and summaries indicate the importance of the appropriate audit materiality assessment

to reduce misstatements. The summary of research indicated in Table 3-5 below relates to the title, but is not the full title of the article.

Table 3-5 Materiality and misstatement research titles

Authors	Year	Summary of research
Keune and Johnstone	2012	Materiality judgements and resolution of detected misstatements
Budescu *et al.*	2012	Influence of materiality thresholds, misstatements type on achieved risk
Acito *et al.*	2008	Materiality decisions and correction of accounting errors
Badertscher and Burks	2011	Accounting restatements and timeliness of disclosures
Keune	2010	Misstatement, materiality judgments Post Sarbanes-Oxley Act

Source: Authors listed above.

Badertscher and Burks (2011:611) indicates in his research that the number of restatements increased due to auditors being more conservative. The following quotes illustrate the difficulty of professional judgement and how the auditor would have done it differently if he had hindsight:

Hindsight is of little value in the decision-making process. It distorts our memory of events that occurred at the time of the decision so that the actual consequence seems to have been a "foregone conclusion." Thus, it may be difficult to learn from our mistakes.

Thought and Knowledge: Diane F. Halpern,

Hindsight is an exact science.

Guy Bellamy: The Sinner's Congregation

Hindsight is not only clearer than perception-at-the-moment, but also unfair to those who actually lived through the moment.

Edwin S. Shneidman: Autopsy of a Suicidal Mind

Hindsight is not necessarily the best guide to understanding what really happened. The past is often as distorted by hindsight as it is clarified by it.

Amos Elon: The Pity of It All

Hindsight plays tricks on our minds.

Jeremy J. Siegel: Stocks for the Long Run

3.7.1 Prior periods

ISA 320 (2012) par A5 implies that the following information can also be used as benchmarks for the consistent application and appropriateness of the chosen benchmark:

- *"Prior periods' financial results and financial positions*
- *The period-to-date financial results and financial position. Budgets or forecasts for the current period, adjusted for significant changes in the circumstances of the entity (for example, a significant business acquisition) and relevant changes of conditions in the industry or economic environment in which the entity operates.*
- *Examples are the following:*
    - *Co A used a percentage of profit before tax from continuing operations.*
- *In the current year the profit increased or decreased and the normalised profit before tax from continuing operations from prior years".*

3.7.2 Trivial errors

Azzopardi and Balducchino (2009:17) conclude that misstatements classified as immaterial should be “clearly inconsequential”. ISA 450 (2012) par A2 states that “clearly trivial” is not a synonym for “not material”. The difference should be clearly insignificant based on nature and size, and if the auditor is in any doubt, classified as not “clearly trivial”. The explanation above is vague and could lead to more confusion in the auditing profession. Guidance on the quantification of the benchmarks is not evident in the ISAs. The Big Four firms disregard the “clearly trivial” misstatements and record any amount above the threshold as part of their audit differences.

The one benchmark found in 25 different sources is suggested to be 2% or between 2 to 5% of materiality (Azzorpardi & Baldacchino, 2009:2 and 17 respectively). The conclusion on the magnitude of misstatement is left to the auditor’s professional judgement. In the empirical research the respondents had to answer if the aggregate of all trivial errors may become not trivial or even material. The statement indicated that 78% of respondents agreed with this statement. The issue is so significant that the benchmarks and interpretation for trivial was included in the questionnaire as part of the empirical research. The respondents indicated that ‘trivial’ can be expected to be between 0.01% and 0.5% of materiality, but the definition should also be taken into account.

3.8 BENCHMARKS IN THE WORLD

The Financial Accounting Standards Board (FASB) has refrained from giving quantitative guidelines for determining materiality. This has resulted in confusion in the use of Auditing Standards No 47, *"Audit Risk and Materiality in Conducting the Audit"*. Several common rules that have appeared in literature in practice and academia to quantify materiality include the following:

i. *“Percentage of pre-tax income or net income (i.e. 5% of average pre-tax income); (ISA 320 ,2012 par ;* Rotaru, 2006:2; McKee & Eilifsen, 2000 (a):54-55; McKee & Eilifsen, 2000 (b):4).
ii. *“Percentage of gross profit”* (McKee & Eilifsen, 2000 (a):54-55; McKee & Eilifsen, 2000 (b):4).

iii. *"Percentage of total assets (i.e. 0.5 to 2% of total assets)"*, (McKee & Eilifsen, 2000 (a):54-55; McKee & Eilifsen, 2000 (b):4).

iv. *"Percentage of total revenue (1/2% of total revenues)"*; (McKee & Eilifsen, 2000 (a):54-55; McKee & Eilifsen, 2000 (b):4).

v. *"Percentage of equity (i.e. 2 % of total equity)"* (Marx *et al*., 2009:8-26).

vi. *"Blended methods involving some or all of these definitions (e.g., use a mix of the above and find an average)"*, (McKee & Eilifsen 2000:54-55).

vii. *"Sliding scale"* methods, which vary with the size of the entity. (i.e., 2 to 5% of gross profit if between $0 and $20,000; 1 to 2% if between $20,000 and $1,000,000; 0.5 to 1 % if between $1,000,000 and $100,000,000; 1/2% if over $100,000,000), (McKee & Eilifsen, 2000:56).

3.8.1 Different benchmarks listed in literature

Research indicated that 25 different articles listed 69 different benchmarks, which was categorized into eight different categories. The benchmarks date from as far back as 1952 up to 2013. The benchmarks found in academic literature were constructed per category, author and year of publication in Annexures 1 to 8. Libby and Brown (2013:647) highlight the issue that auditors waived immaterial errors with specific reference is made of the effect of Sarbanes- Oxley Act of 2002 on audit error, misstatements and adjustments (Keune 2010:2 and table 3-5 for additional sources).

The summation of the secondary data gathered from the 25 articles revealed that there is a distinctive difference between the benchmarks before and after Sarbanes-Oxley period. The accounting scandals in the early 21st century may attribute to this divide and conservative approach. The benchmarks became more conservative as indicated in Annexures 1 to 8. Azzopardi and Baldacchino (2007:18) posit in their research that, based on the responses, larger firms uses higher materiality benchmarks than smaller firms. The frequency of benchmarks mentioned in literature is as follows:

Table 3-6 Frequency of benchmarks found in literature

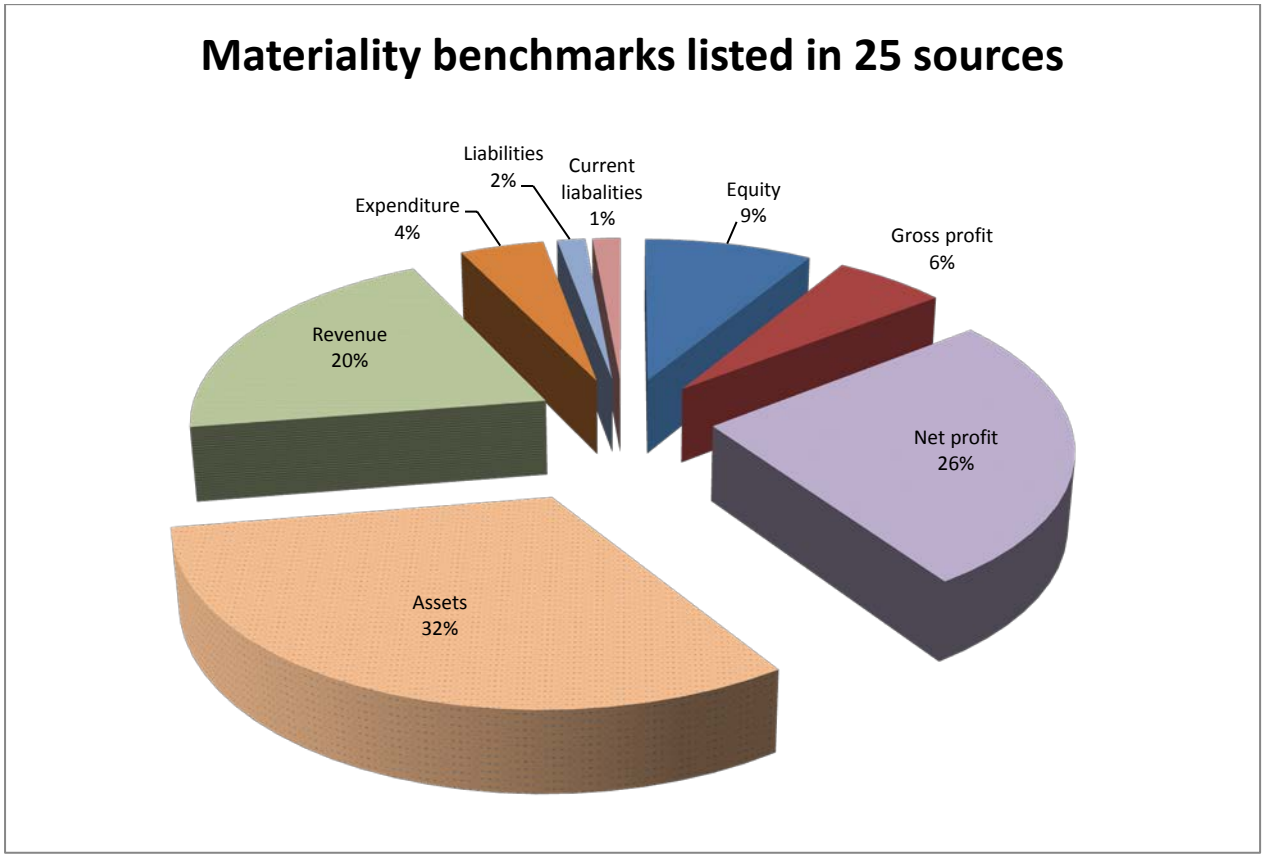
Benchmarks	Total assets	Net profit before tax	Revenue	Equity	Gross profit	Expenditure	Current liabilities	Total liabilities
Before Sarbanes-Oxley	12	6	5	1	1			1
After Sarbanes-Oxley	10	12	9	5	3	3	1	
Total	22	18	14	6	4	3	1	1

Sources: Refer to Annexures 1 to 8 attached after the references section.

The following chart indicates the total number of benchmarks found in literature as part of this research. Keywords were used to find recent articles and the frequence summary was extracted from the relevant articles found. Keywords were:

- “materiality benchmarks”
- “Audit materiality thresholds”
- “Audit materiality quantification”

Figure 3-1 Materiality benchmarks listed in 25 sources



Sources: Refer to Annexures 1 to 8.

The comments for Table 3-6 and Figure 3-1 is combined below. The three most prominent benchmarks mentioned are ranked as follows:

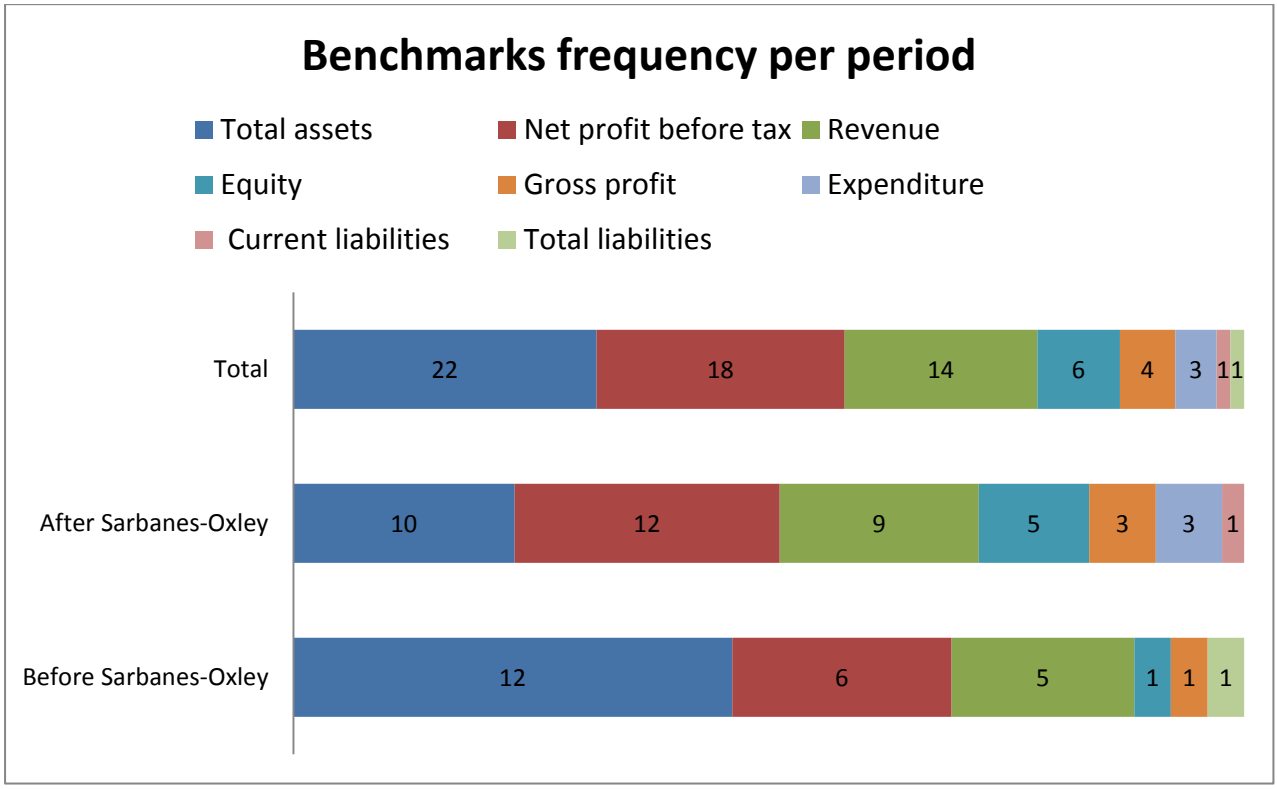
1. Total assets

2. Net profit before tax

3. Revenue

The expectation was that net income before tax would be most prominent, but it is only ranked second after total assets.

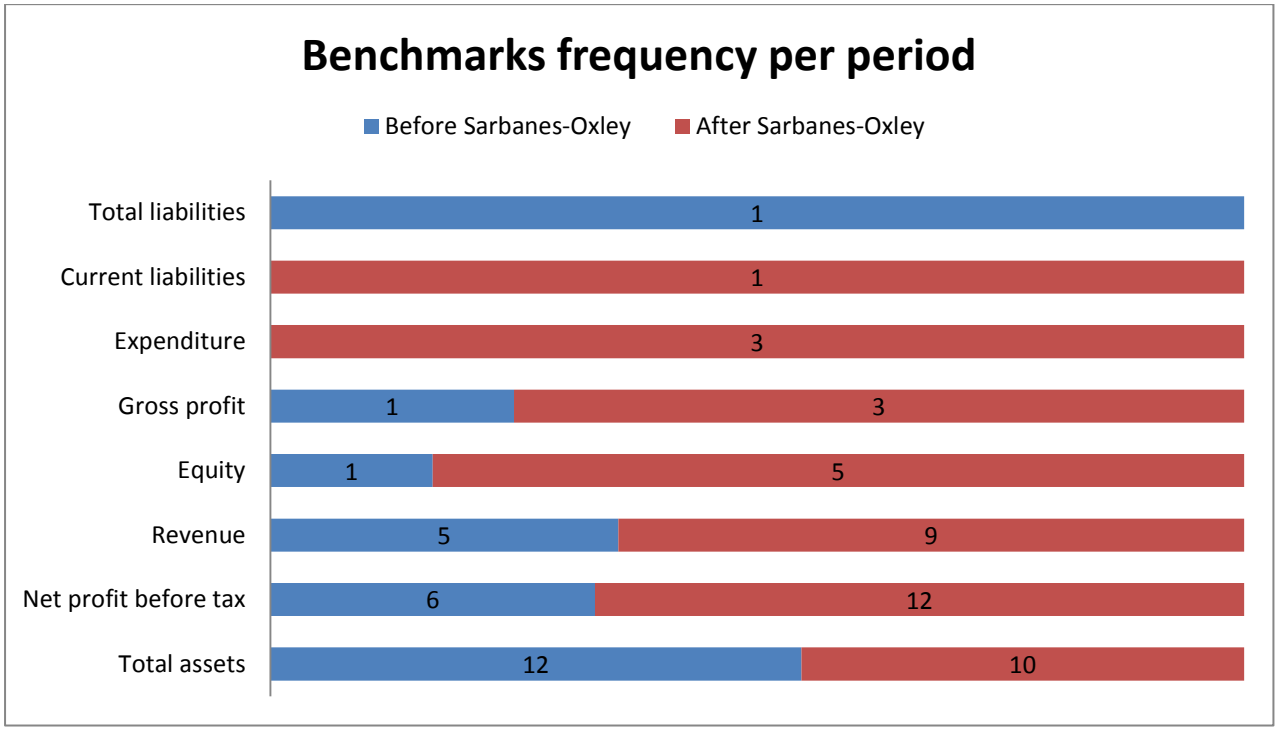
Figure 3-2 Benchmarks frequency per period



Sources: Refer to Annexures 1 to 8.

Figure 3-3 was constructed for Annexure 1 to 8 to illustrate the frequency of balances divided per period.

Figure 3-3 Benchmarks frequency balance



Sources: Refer to Annexures 1 to 8.

Based on the frequencies of discussions of benchmarks in literature, the Figures 3-2 and 3-3 above indicates that after the Sarbanes-Oxley, the most prominent benchmarks remains total assets and net profit, with growth of 63% and 100% respectively, as ranked first and second. Revenue, which has grown with 64%, is the third most listed benchmark. The growth of 500% in equity benchmarks is unexpected. The benchmarks are available in research for all balances and types except for liabilities which remain the same and a reduction in total assets.

Using different means to quantify materiality causes inconsistency in materiality thresholds. Since 'planning materiality' should affect the scope of both tests of controls and substantive tests, such differences might be of importance. Two different auditors auditing the same entity might generate differing scopes of audit procedures, solely based on the 'planning materiality' definition used. Rotaru (2006:2) concluded that professional bodies suggest that quantitative measures such as the following should be used to determine the impact of the balance on the audit:

If item/items is/are:	Determination of balance for auditing purposes
Inside of 5% of net profit before tax	immaterial
Between 5% to 10% of net profit before tax	judgemental
Greater than 10% of net profit before tax	material

CICA (cited by Rotaru, 2006:2) suggests that the auditor should consider the following quantitative alternative measures when net income is not applicable, or when 'suitable' is not a suitable measurement, then the auditor should use any one of the following (depending on the nature of the item)

- *"0.5% to 1% of assets*
- *0.5% to 5% of equity*
- *0.5% to 1% of revenue*
- *0.5% to 5% of gross profit*
- *0.5% to 2% of total expenses"*

Rotaru (2006:2) suggested that audit manuals from auditing firms indicated that items greater than 10% of net profit before tax are considered material. The different benchmarks listed below indicate that there is little consensus among researchers on an appropriate benchmark. This highlights the importance of considering materiality drivers. Rotaru (2006:2) further suggested that if the auditor is in doubt concerning the materiality threshold, that the benchmarks which serves as examples of academic research on materiality as indicated in Figures 3.2, 3.3 above and Appendix 1 to 8 attached.

3.8.2 Materiality drivers

Materiality is normally accepted to be one figure. This view is also implied by the ISAs. Different materiality Figures for revenue, assets and liabilities can be considered. This can be the topic of further research. If the principle of one materiality Figure is accepted, the question arises: What forms the basis for determining materiality? What drives materiality?

A search performed in the North West University Library on the Ebscohost Database for the period 2004 to April 2013 was performed. The phrases “Materiality driver” and “driver of materiality” was used and no search results were obtained. The Google scholar search (2013) indicated that there are only two articles of which the title of Heitzman *et al.* (2009) included materiality thresholds and was the most relevant research. Heitzman *et al.* (2009:125) concluded that “*the magnitude of the underlying disclosure is the only significant driver of materiality-based disclosure”.* Libby and Brown’s (2013:659) view is that “pre-tax income is the main driver”. In practice the auditor considers materiality-specific items, which include his/her professional judgement, before deciding on a benchmark or qualitative amount. Materiality driver is the concept that was developed as part of the research and is an implied derivative from publications relevant to this chapter (Keune, 2010:39). Messier *et al.* (2005) infers that the “conventional percentage-of-income-rule-of-thumb” consideration would materially increase the impact on the market. The pre-requisite for this increase is that the classification of transactions should be correct.

There is a possible flaw in the reasoning of the researchers above with regard to pre-tax income. The gap is that the profit may be zero or even negative and that the implication may be there that only income statement balance and transactions may be materiality misstatements. Further concerns that need to be raised are the different type of industries and inherent risk associated with the company under specific circumstances.

3.8.3 Development of the materiality driver matrix

Steps 1 to 6 and Table 3-7 below indicates the summary of the process to develop the materiality matrix.

The research was performed according to the following steps which will be discussed below:

Step 1: Type of industry

Step 2: Primary drivers

Step 3: Secondary drivers

Step 4: Reasons before analysing the financial statements

Step 5: Testing on theory based on financial statements of the relevant company

Step 6: Conclusion

The suggestion was made that the materiality driver should be based on the type of industry and the theory developed was tested against certain assumptions based on own experience and research over the past ten years. Steps 1 to 4 were done on this basis, and then tested against a sample of financial statements of listed companies in the various industries to validate the theory. Step 5 was to list the qualitative factors and factors listed in the directors' reports, as well as key features in the financial statements. A summary was compiled, as indicated in Annexure One to Six. Steps 4 and 5 were compared from a theoretical and a practical perspective and the conclusion was that the result was the same.

A list of JSE companies as at 28 February 2010 was extracted form JSE Limited's website. Comfort sampling was applied and the experiment was based on one large company per industry category. Although the selection was bias, based on the selection of the best known company in the sector, the bias was mitigated by the fact that the qualitative factors and financial statement figures were not known. The responses from the questionnaire also indicated that 90% of respondents agreed with the statement regarding materiality drivers which is supported by literature. The

financial statements were extracted from the relevant company's website and summarized in Table 3-7 below.

Table 3-7 Examples of materiality drivers

Type of industry	Primary driver	Secondary driver	Reasons before taking the analysis of the financial statements into account	Testing of theory on the financial statements of a relevant listed company	Conclusion
Wholesaler/ Retailer Refer to Annexure 9	Cash sales and thus revenue	Inventory thus gross profit margin	Low gross profit margins	Statements refer to revenue, customers and services	Reasons for selection supported by financial statement analysis
		Inventory	High inventory levels and turnover of inventory	Various brands and branches to obtain supplier relationships and ”Art of Service”	Reasons for selection supported by financial statement analysis
Transport Company Refer to Annexure 10	Assets	Revenue and expenses	Assets needed to generate income. Fuel, tyres and labour cost largest component of cost.	Ship sales, capital expenditure, bulk transport business, major transport infrastructure, products, increased revenue and	Reasons for selection supported by financial statement analysis.

				tonnage.	
Construction company Refer to Annexure 11	Income	Total assets	Revenue recognition is complex and includes judgement.	Securing contracts, expanding footprint, group market construction contracts	Reasons for selection supported by financial statement analysis.
Consulting and service company Refer to Annexure 12	Income and quality of staff		Normally few assets as the consultants are the main driver for revenue based on time, skill and expertise	Strong profit, professional services, revenue, invest in people, speed to market maintained in excess of 98%.	Reasons for selection supported by financial statement analysis.

Property companies Refer to Annexure 13	Property	Revenue and expenditure	High-value assets with prospect of growth and revenue a small percentage of total assets. Long- term investments.	Largest listed property company in South Africa, market capitalization, diversified portfolio, return of 18% on capital growth, additional equity raised. Distribution of 63% of revenue in 2011 and 64% 2010.	Reasons for selection supported by financial statement analysis. In this instance there is, however, an exception to the rule due to high distribution to revenue ratio. Refer to bottom of the following page for further discussion.

Manufacturer (Refer to Annexure 14)	Revenue and profit (Based on manufacturing process)	Total asset value	Without income no assets will be profitable. Large investment of capital in assets to produce the product to be sold.	Earnings per share up by 17%; strong cash flow by operating activities. Growing strength in balance sheet; growth projects still as projected; capital projects as an identified key financial risk.	Driver applicable from research, as well as supported by financial statements.
	Inventory valuation based on supply chain management		Complexity of processes and various categories of inventory and valuation methods. Judgement involved in the valuation.	Volumes up by 4%. Net realisable value of inventory write-down was identified as a key risk.	Driver applicable from research as well as supported by financial statements.

Source: Financial statements of listed companies selected as per Annexure 9 to 14.

As illustrated in Table 3-7, the following exception to the rule is applicable for the property company:

The secondary driver should also be considered for the statement of comprehensive income balances for the following reasons:

- Significant percentage of the revenue is distributed.
- Revenue is thus a focus point for the investor, and the auditor should consider applying specific materiality to this company as far as transactions are concerned.
- Revenue may not even be considered, based on the high level of planning materiality based on total assets.
- Distribution to shareholders.
- If revenue is used as the primary driver, the acquisition of the assets in this specific company will be selected numerous times due to the low materiality Figure as indicated in the example 3-1below:

Example 3-1 Combined overall and performance materiality

Materiality based on	Acquisition of Asset R4 850m Sample size = population/ materiality	Number of times selected. (Value of acquisition larger than materiality.)
Revenue R33m	4850/33	147 times
Assets R914m	4 850/914	5 times

It can be concluded that the lowest of performance and overall planning materiality should be applied for income and expenses. This argument is supported by ISA 320 (2012) par 10 to 11 which suggest that, where amounts less than materiality might have an influence on the economic decision of users of the financial statements, the

auditor should determine materiality levels applicable to those classes of transactions.

3.8.4 Conclusion and definition of materiality driver

Based on the research performed and conclusions below, the materiality driver can thus be defined as: *"The part of the operations that drives the entity to achieve its operational objectives and which the auditor should identify to base their assessment of materiality on. The driver can be influenced by the type of entity, external factors that may have a qualitative impact on the entity and the materiality assessment. The materiality drivers should be the most appropriate indicator and will be influenced by the auditors' professional judgement based on the experience and knowledge of the type of industry, the specific clients and inherent risks associated with the specific client, legislation and disclosure requirements, and may differ even within the same type of entity"***.**

3.8.5 Recommendation

The auditor could derive benefit from using a materiality driver and, as highlighted in the previous section, several opportunities can be derived from this in the auditing profession.

Auditors need to keep a competitive edge and increase their effectiveness and efficiency by the same extent as they reduce their overall audit risk and their main cost driver which is human resources cost. There is a clear need to automate and integrate audit processes by using the technology at their disposal and reduce the amount of duplication to reduce overall audit costs and time spent on the computer by concentrating more time on the risks that might have a significant impact on the audit and less time on the lower risk and non-material items. The auditors also need to reduce their risk of liability and litigation to an acceptable extent. Professional indemnity costs should all be lower.

3.9 REPORTING MATERIALITY

Rotaru (2006:4) concludes that benchmarks used for reporting materiality could for example, be the following:

1. "Pre-tax income	*5-10%*
2. Net (or after-tax) income	*5-10%*
3. Gross revenue	*0.5-1%*
4. Equity	*5-10%*
5. Total assets	*0.5-1%"*

The quantification and relationship of tolerable error and reporting will be discussed in the context of audit differences in Chapter 4.

Every acceptance of even a dormant company or audit has risks associated with it and that is why it is important to select the most appropriate and applicable materiality driver for the industry and the underlying circumstances. Puttick and Van Esch (2007:248) state that the auditor should consider the possible relationship and the impact that the type of industry may have on the materiality consideration. The auditor would expect to find the following relevant balances and transactions in the company's financial statements, depending on the type of industry:

- Shareholders
- Directors' loans in an owner-managed private company
- Intercompany loans in an associated or group company
- The number of suppliers and customers identified during the obtaining of knowledge may influence the type complexity and the completeness and existence of accounts receivable and accounts payable.
- Any account balance that would normally not be associated with the type of industry should alert the auditor and should be thoroughly investigated even if there is no material impact on the financial statements.

3.10 SHAREHOLDER'S MATERIALITY

Cho *et al*. (2003:68-75) suggest that stockholder materiality can be measured based on various factors and complex calculations that include the following considerations:

- Stock return
- Sales
- Earnings
- Total assets
- Seasonal
- Firm growth

Cho *et al.* (2003:75) also suggest that, *"Little is known regarding what size of financial statement error a user would view as material"*. They further state that *"an auditor might consider lower materiality levels to avoid misleading investors".*

The Figures quoted were, for example: Earnings response model: Shareholder materiality pre-tax income between 0,1% and 0,2%

- Total assets: 0,01 to .025%
- Sales 0,01 to 0,02%

These thresholds are out of line with the practices and percentages quoted in accounting literature and Cho *et al.* (2003:75-76) suggest in their empirical study that *"the sample of firms was selected out of firms with a broad spectrum of characteristics".*

ISA 320 (2012) par A3 uses the example of the ownership and financing structure to explain the possible claim which users may have against the entity being on:

- *"assets if the entity is solely financed by debt rather than equity; and*
- *not on earnings"*.

This argument will be analysed and the validity thereof tested. From the above example, the contrary then would be that, when the entity is financed by equity, the users may have a claim against the earnings of the company. It is the researcher's opinion that the above arguments are not as easy to interpret as was stated in the previous two paragraphs. More information is required to determine whether the arguments are valid. The following serve as an example:

- Earning potential of the company
- Value of assets and the useful lives and marketability of the assets
- Value of the debt financing compared to asset value
- Net asset value of the company
- The financial results and position and cash flow of the company

ISA 320 (2012) par 4 proposes that the auditor can assume the following with regard to users: "They should...

> *(a) have a reasonable knowledge of business and economic activities and accounting and a willingness to study the information in the financial statements with reasonable diligence;*
>
> *(b) understand that financial statements are prepared, presented and audited to levels of materiality;*
>
> *(c) recognise the uncertainties inherent in the measurement of amounts based on the use of estimates, judgement and the consideration of future events; and*
>
> *(d) make reasonable economic decisions on the basis of the information in the financial statement."*

The implication of the standards is to investigate what is meant by "reasonable" and it is fair to say that the users should not only have a basic understanding of accounting, but should also be knowledgeable in financial statements, materiality and the economic environment.

3.11 IMPACT OF MATERIALITY CONSIDERATIONS ON LITIGATION

The speech of SEC chairman, Arthur Levitt (1998) (cited by Zabel and Benjamin, 2002:1) commented that, the *"integrity of financial reporting is under stress"* due to the "game" played in this type of accounting situation.

Zabel and Benjamin (2002:1) further state that the above frauds *"have emerged as the top enforcement priority".* As discussed in ISA 200 (2012), the auditor should exercise his/her professional judgement, as an audit is a limited-assurance engagement. Zabel and Benjamin (2002:1) further suggest that many auditors traditionally used the benchmark of 5 to 10% impact on the financial statements before it was regarded as material. In court cases discussed in this article courts reject numerical materiality as the sole denominator and have "endorsed the qualitative approach to materiality".

Zabel and Benjamin (2002:1) suggest that auditors should not limit their materiality to numerical thresholds, but must consider the full range of surrounding circumstances. It is suggested that this article, if compared to ISA 320 (2012), has the same requirements and thus the ISA guides the auditor to be cautious of his/her materiality consideration as a threshold, as other circumstances too, should be considered.

3.12 DISCLOSURE OF MATERIALITY

Through interviews with and completion of the questionnaire by members of auditing firms a suggestion was made by a prominent member of a specific firm that materiality should be disclosed in the financial statements This view is based on the fact that the audit opinion states in ISA 700 (2012:30) in the auditor responsibility paragraph that: *"an auditor should express an opinion whether the financial statements are free from material misstatement".*

3.13 CONCLUSION

The auditor can be held liable for his professional judgement if only a numerical exercise, without any other considerations, was used. The materiality driver should include various other factors and thus the materiality driver, where relevant information and a numerical consideration were combined, indicates that it would

comply with ISA 320 (2012) and SAB 99. Further research on the specific industries and relationships between the relevant financial ratios could indicate whether a pattern exists between industry type and materiality drivers.

In the first place materiality is an assumed caution or cut-off point determining user decision-making. By disclosing materiality in the financial statements as part of the audit report, useful information relevant to the user's needs is communicated. The above suggestion is further supported with regard to users by ISA 320 (2012) par 4 (b) which states that the auditor can assume that users, *"understand that financial statements are prepared, presented and audited to levels of materiality".*

Hanks (2012:19) states that stakeholders are questioning the reliability of financial statements for decision-making about the organization's performance and wealth creation if it is assumed that users understand that financial statements are audited to a level of materiality, and if this materiality is disclosed in the financial statements, it elevates the concept of materiality. In this chapter it has been pointed out that there is no consensus on the methodology of materiality calculation. Auditing standards do not provide conclusive guidelines and there are differing views among the big auditing firms. Materiality is, however, a concept that affects not only the audit procedures, but also user perceptions and decisions. It is, therefore, very important to establish guidelines, based on materiality drivers, to move the principle of materiality away from an evasive concept to a verifiable concept.

Inconsistencies between different benchmarks or thresholds indicate that the guidance of the ISA's is lacking and may lead to confusion. The research results of Azzopardi and Baldacchino (2009:18) indicate that the big four firms oppose the issue of guidance by regulators more than their "counterparts" do. The research was limited to the Maltese audit practitioners and it may be suggested that if the big four firms have a global approach, the results would be the same. This may be an incorrect assumption and additional research may indicate differently.

Libby and Brown (2013:661) indicate that the auditor's judgement is based on general and specific materiality guidance. There is a disagreement on materiality interpretation and guidance. This conclusion supports the problem statement as far as the lack of consistency on guidance in auditing is concerned. The most

conservative and constant benchmarks are the benchmarks of Marx (2009:8-26) which were conservative before and after the Sarbanes-Oxley Act of 2002. Compared to others, the benchmarks and multiplier between categories DP6 (1984) are the most consistent guidance. This statement will be extended in Chapter 5 where a comparison between the benchmarks literature and public practice was done.

The conclusion can be drawn that materiality and risk are closely related, as the one may affect the other. The reason for this statement is twofold (1) the audit is performed and there may always be a risk of material misstatement and (2) the auditor may be held liable, due to the materiality judgement that was made.

4 CHAPTER 4: RISK

4.1 INTRODUCTION

In Chapters 2 and 3 the audit process and materiality were discussed, and from the conclusions and literature it is suggested that risk and materiality cannot be understood and interpreted if the relationship between these two concepts is not explained. The term 'risk' can have different meanings to different people, but the issue for an auditor is that every audit has a risk. All the consideration, planning, procedures and final conclusions should be documented and performed in such a manner that risk is reduced to a minimum after completion of the audit and before the audit report is signed. It is suggested that an audit without any risk does not exist, due to the fact that compliance with various laws and regulations, IASs, ISAs and other specific circulars complicates the audit. There is further no guarantee that the client's internal control system is perfect and operated error free throughout the reporting period.

Knechel (2007:384) and Woods *et al.* (2009:126) indicated in their research that the blame for accounting and audit scandals has moved from auditor towards management. This does not mean that the auditor may not be liable or at risk due to an audit failure. The risks that will be dealt with in this chapter include audit risk and business risk auditing and concepts associated with them.

Woods *et al.* (2009:122) stated that the risk-based approach was adopted for accounting estimates on fair values. According to Woods *et al.* (2009:123) a task force developed guidance for this complex accounting issue. Keune and Johnstone (2012:1641) support the issue of guidance on materiality as there is an absence of criteria for materiality assessment. Both statements are linked through the commonalities that guidance on areas of complex judgment may possibly require guidance. Azzopardi and Baldacchino (2009:14) conclude that the large firms in Malta are less in favour of guidance than their fellow practitioners in smaller firms. The context of guidance and risk based approach in this paragraph is to question whether the auditor is not at risk when there is a lack of guidance. Lack of guidance may lead to inconsistent application which in itself holds a risk for the auditor.

4.2 MATERIAL MISSTATEMENT

The following extracts and definitions will further support the statement that a low or no- risk audit does not exist. ISA 200 par 13(c) defines 'audit risk' as *"the risk that the auditor expresses an inappropriate audit opinion when the financial statements are materially misstated. Audit risk is a function of the risks of material misstatement and detection risk".* Gloss (2012) and ISA 200 par 13(n) describe "the two components of the risk of material misstatement at assertion level' as follows:

"(a) Inherent risk – The susceptibility of an assertion to a misstatement that could be material, before consideration of any related controls". The relationship between inherent risk and qualitative materiality considerations is eminent from the definition. Susceptibility can be used in the same sentence as qualitative considerations.

In financial management a distinction is made between business risk and financial risk. Typically, a high business risk will be interpreted by the auditor as high inherent risk.

"(b) Control risk – The risk that a misstatement that could occur that could be material, will not be prevented, or detected and corrected, by the entity's internal control".

ISA 200 par 13(e) defines 'detection risk' as *"The risk that the procedures performed by the auditor to reduce audit risk to an acceptably low level will not detect a misstatement that exists and that could be material".*

From the above definitions it can be concluded that the risk of material misstatement should be considered at various stages of the audit as any misstatement may result in an appropriate error, which may be a risk for the auditor. Directors, managers and employees may hide information that the auditor is supposed to know or should know about. This results in an audit opinion and financial statements containing material misstatement. Gloss (2012) and ISA 200 par 13(n) describes the 'risk of material misstatement' as follows: *"The risk that the financial statements are materially misstated prior to the audit".* The conclusion can be drawn that the term "risk of material misstatement" is one concept and that the implication might be that

there is relationship between materiality and risk. The term is one concept and it is implied that risk and materiality are interdependent.

4.3 SIGNIFICANT RISKS

Significant risks are related to materiality due to the fact that any account that is significant may have a material impact on the audit of financial statements if any misstatements or weaknesses in control exist and are not detected by the auditor. The element of risk that is not thoroughly addressed is significant risk.

Barron (2005) (c) and ISA 315 (2012) par 4(e) defines significant risk as: *"An identified and assessed risk of material misstatement that, in the auditor's judgement, requires special consideration."* ISA 315 (2012) par 27 elaborates on the definition and indicates that the effects of internal control should be excluded. ISA315 par 28 and A119 describe the identification of significant risk as those transactions that relate to *"non-routine transactions or judgmental matters"*. The comparison and summary in Table 4-1 was based on the descriptions as indicated in the ISA paragraphs above:

Table 4-1 Non-routine transactions or judgemental matters

Type of transactions	Processing	Frequency	Certainty of measurement	Internal control and systems developed for transactions
Non-routine	Unusual due to size and nature	Infrequent	Uncertain and difficult to measure	Systems and controls developed for routine transactions
Judgemental matters may include the development of products and services for which there is none.	Accounting estimates	Infrequent. Greater risk of material misstatement	Significant measurement uncertainty	Systems and controls developed for routine transactions
Routine, non-complex	Systematic processing	Frequent	Certain and less likely to be a significant risk	Systems and controls developed for routine transactions

Summary from ISA 315 par 28 and A119.

4.4 DEFINITIONS OF RISK

The following definitions of audit risk elements are relevant in obtaining an understanding of risk. Audit Glossary Birmingham University (2012) defines the term 'risk' as follows:

- *Risk: The chance of something happening that will have an impact on the objectives of the university or those of one of its units. It is measured in terms of impact and likelihood. Importantly, risk can be either positive or negative,*

although most positive risks are also known as opportunities and negative risks are called simply risks.

Audit Glossary Birmingham University (2012) defines the following risk-related terms as follows:

- *"Risk factors: Measurable or observable characteristics of a process that either indicates the presence of risk or tends to increase risk exposure".*

Business Dictionary (2012) defines risk-related terminology as follows:

- *"Risk: A probability or threat of a damage, injury, liability, loss, or other negative occurrence that is caused by external or internal vulnerabilities, and that may be neutralised through pre-emptive action".*
- *"Risk quantification: This refers to the act of attaching a probability to the happening of a negative event. If it is certain that an event cannot occur, it is given a probability of 0; if it is certain that it will occur, it is given a probability of 1. Uncertain risks are assigned between 0 and 1. Maximum risk at maximum uncertainty occurs when its probability is 0.5".*

From the definitions above it can be concluded that risk is subjective in nature and different meanings are associated with risk. Risk is a significant part of an audit and professional judgement is required to assess and to prioritize the risks The risk elements are essential for the understanding of risk and how it will be applied in the auditing profession.

4.5 AUDIT RISK MODEL (ARM)

According to Marx *et al.* (2009:8-19), *"audit risk is a combination of inherent risk, control risk and detection risk".* This suggestion is further supported by Knechel (2007:384), Abdullatif and Al-Khadash (2010:3) and ISA 200 par 13(c). Budesco *et al.* (2012:21) warn that the ARM may "underestimate" the risk of material misstatement. There are thus different interpretations between scholars and the model should be applied with caution in mind. The formula below is known as the audit risk model:

Equation 4.1 Audit risk model

AR=IRxCRxDR (4.1)

ISA 240 par 64 also requires an auditor to assess fraud risk at an assertion level. The implication, therefore, is that fraud risk should also form part of the audit risk model and thus the traditional model should be expanded to extend the equation to the following:

Equation 4.2 Audit risk model including fraud risk

AR=IRxCRxDRxFR (4.2)

The implication of the ISA 200 par 13(e) definition of detection risk is *that "the auditor should reduce the audit risk to an acceptable level and the procedures performed will not detect an existing misstatement".* Fraud risk can be seen as an element of detection risk, as it would be difficult to detect fraud in instances where corroboration between employees, suppliers and customers occurs. An analytical review can also be used to serve as an indicator for possible fraud in the financial statements. The higher the inherent and control risks are that are assessed, the lower the probability of detecting misstatements. The detection risk will thus be assessed as lower and higher or more samples should be selected, or more audit work performed, to reduce the audit risk. The lower the inherent and control risks are that are assessed, the higher the probability of detecting material misstatements. The detection risk will thus be assessed as high and low or fewer samples should be selected for audit work performed to obtain a lower acceptable audit risk or assurance to be able to express an audit opinion.

The conclusion that can be drawn from the definitions above is that there is an indirect relationship between the combination of inherent and control risk on the one hand, and detection risk on the other hand. Most literature suggests that risk should be assessed below 1 and thus as decimals based on impact, probability and frequency. One decimal multiplied by another result in a smaller value than 1. The probabilities have been awarded the following values according to Dunn (1996) and PMBOK (2008:281) in the examples below to explain the multiplication of a value less than 1 and larger than 0:

- High risk = 0.80, Low risk = 0.20. Moderate risk was previously used and would have been the average of 0.80 + 0.20, which is 0.50.

- For project management PMBOK (2008:281) the equation would be High risk = 0.40 and Low risk = 0.10 while moderate is at 0.2 and the average between the two is 0.40 + 0.10 which is 0.25, which is twice smaller than the values used by Dunn (1996). The result of the risk model would then be even lower when these benchmarks are used.

- If the very high and very low project management benchmarks of PMBOK (2008:281) are used, the equation would be Very High risk = 0.80 and Very Low risk = 0.05, while moderate is at 0.20 and the average is between the two 0.80 + 0.05 which is 0.43, and is closer to Dunn's benchmarks.

The decision above is that the first and third paragraph is similar and Dunn's benchmarks will be used in this instance. The following serve as examples on the calculation of risk on the audit risk model:

Example 4-1 Audit risk model calculation with low IR and high CR

IR	CR	DR	AR
= Low	=High	= Low risk of audit detecting errors is low, thus the probability of errors is high	= Moderate risk
0.2	0.8	0.8	0.128

Example 4-2 Audit risk model calculation with high IR and high CR

IR	CR	DR	AR
= High	=High	= Low risk of audit detecting errors is low, thus the probability of errors is high	= High risk
0.8	0.8	0.8	0.512

Example 4-3 Audit risk model calculation with low IR and low CR

IR	CR	DR	AR
= Low	=Low	= High risk of audit detecting errors is high, thus the probability of errors is low	= High risk
0.2	0.2	0.2	0.008

The questions that should be raised is whether the following formulae are not more relevant, and whether they should not be research topics for further investigation.

Equation 4.3 Addition and subtraction instead of multiplication

AR=IR+CR-DR **(4.3)**

Equation 4.4 Audit risk model divided by fraud risk

AR=(IRxCRxDR/FR) **(4.4)**

Houston *et al.* (1999:285) is of the opinion that the ARM can be adjusted to be associated with the business risk model. Dunn (1996:124) made a further suggestion that an adjustment to the audit risk model in equation 4.1 could be a better equation. The suggestion was to divide the detection risk into two separate factors for the formula to read as follows:

Equation 4.5 Detection risk split (AR x SR)

AR = IR x CR x DR (AR x SR) **(4.5)**

Detection risk is broken up into “analytical risk (AR)” and “substantive risk” (SR)”.

Dunn (1996:124) suggests that detection risk should be replaced and the formulae should read as follows:

Equation 4.6 Detection risk replaced (AR x SR)

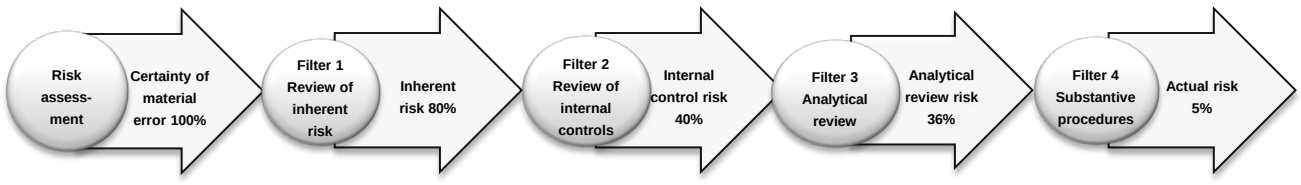
AR = IR x CR x AR x SR **(4.6)**

Dunn (1996:124) suggests that the model corresponds to a different type of review and explanation, and offers the following Figure as explanation. The following assumptions were made in the calculation below and values are for illustrative purposes only:

Inherent risk	80%
Control risk	50%
Analytical review	90%
Substantive risk	x%
Audit risk	5%

In the example above the SR was calculated as being 14%, based on the following formula: (80% x 50%) x 90% = 36% before calculation of SR. If AR should be 5%, then (36% / 5%) = approximately 14%. The example is illustrated as Figure 4-1 below.

Figure 4-1 Links between various types of risks



Source: (Dunn, 1996:125)

Further research required on the risk model:

- Why should decimals be used?
- Is moderate risk a valid risk, or is it just an average of risks, or a prudent or conservative method?

Woodhead (1997:4) suggests that the major accounting firms used a 'simple multiplicative model' as illustrated in Equation 4.1 above. The conclusion that can be drawn from the above is that there are no guidelines for determining the appropriate method of multiplication or addition of values to determine the calculation of risk. The auditor should apply his professional scepticism and judgement to determine the audit risk. The examples above also indicate that any amount less than 1 is not reliable.

4.6 AUDIT APPROACHES

The development of the different audit approaches, methodology and methods forms an integral part concerning how the audit is performed. Risk approach is included in all these methodologies discussed below. This chapter will deal specifically with risk in the business and audit environment, and possible similarities. The history of the development of the different audit approaches and their relevance to the current methodology will be discussed in the following paragraphs.

4.6.1 Risk-based audit approach

Dunn (1996:124) refers to the risk-based audit approach and elaborates on the supports for the assertion-based approach of Taylor and Glezen (1997) as discussed above. Wiegand and Elsas (2012:290) suggested *"integrated model-based auditing"* which included all the relevant concepts associated with the basis for this research.

4.6.2 Assertion-based audit approach

Taylor and Glezen (1997) support the assertion-based audit approach and the following areas will be investigated further as part of the literature study. The methodology included the general relationship between control risk assessment procedures and substantive tests. The approach was based on financial statement

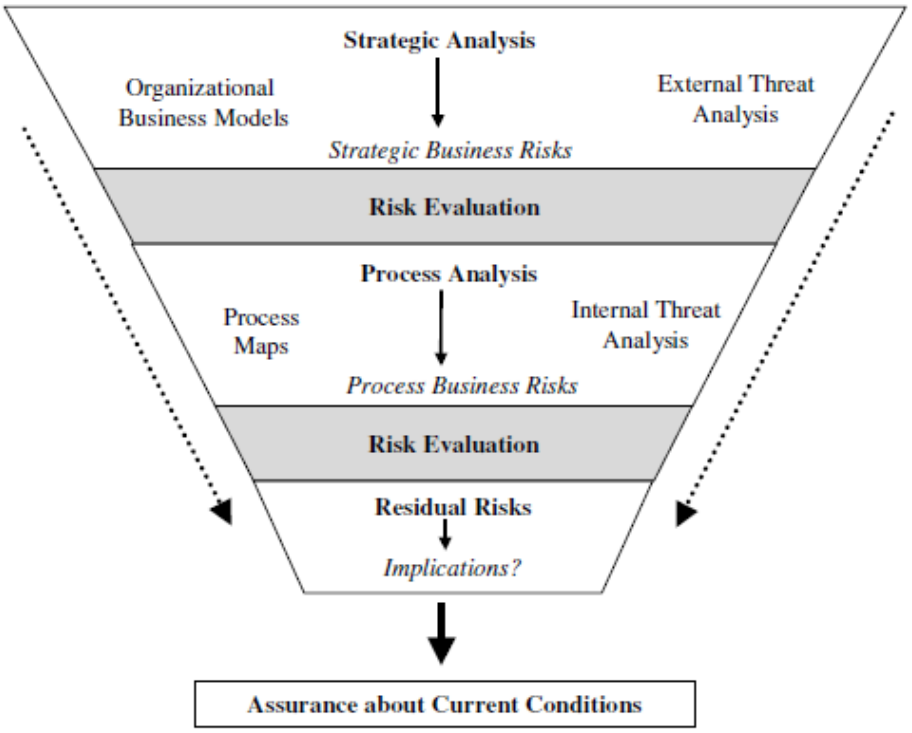
risk and not on the business risk as such. Curtis and Turley (2007:443) stated that any *"methodology should produce a legitimate audit"* file. The legitimacy of the audit should not be driven only by the methodology.

4.6.3 Business risk approach

Curtis and Turley (2007:444) posit that the profession moved away from the audit risk and the assertion based approach to the business risk approach. The conclusion that can be drawn from paragraph 4.5 above is that there is a relationship between the audit risk model and business risk.

Knechel (2007:384) states that the establishment of the risk management practices was the first step towards business risk approach, but also indicated that the BRA is less successful than expected. According to Knechel (2007:385), the effectiveness of the BRA may possibly have laid the foundation for some of the audit failures 10 years later. Knechel (2007:388) maintains that the audit profession has been made aware of the risk and risk management through the identification of numerous dimensions that exists in internal control that might be relevant to the performing of an audit. Coincidental to the awareness of risk management and the parallel set of development in business and audit, focus increased on risk management as a general approach for handling complexities. Knechel (2007:389) suggests that the birth of the business risk model originated from the risk management concepts which are integrated in the BRA. Figure 4-2 below illustrates the business risk approach and the importance of knowledge of the client's business process and internal controls.

Figure 4-2 Overview of business risk audit approach



Source: Knechel (2007:394)

As indicated in the Figure above and according to Curtis and Turley (2007:444), the purpose of the business risk approach is to change focus from financial statement error as part of audit risk to business risks. Business risk translates to risk of material misstatement, as well as the risk that the company may not meet its objectives. Elements of business risk are listed below:

- Understanding the business
- Environment
- Business process

Abdullatif and Al-Khadash (2010:2) supports Curtis and Turley (2007:444) on the purpose of the BRA by stating that the client's risk profile is analysed to assess risk of material misstatement on financial statements. High level entity controls are evaluated and less emphasis is placed on audit of transactions. Abdullatif and Al-

Khadash (2010:2) are of the opinion that the business risk approach will not be as effective in the developing countries as in developed countries. The assessment of high level entity controls and business risk identification and analysis may be more effective in the developed countries while developing countries may have more difficulty to apply the BRA successfully.

Prior research, as indicated above, concluded that the business risk methodology is a relevant risk management process and should be seen as such.

4.6.4 Risk management tools and equations-adjusted tools for auditing

Risks are considered to be based on the auditor's professional judgement. Risk can only be identified judgementally, as there is no statistical method that can be applied.

4.7 RISK AND KING CODE III

In the first place risk is a responsibility of the Board of Directors. Company risk differs from audit risk but the auditor has a responsibility to check compliance with the laws and regulations of which the King Code III is a specific requirement for JSE-listed clients. King III (2009:16) has been established for the governance of companies, and other entities should *"adapt"* the code appropriately. One of their functions or duties is risk management or governance according to the fourth topic of the Code of Governance. These deal with the 'governance of risk' and the following principles are summarized and listed below:

- It can thus be suggested that the board is primarily responsible for risk management and monitoring on a continual basis.

- It can be concluded that the auditors should also have an understanding of the risk management process of the client to develop his/her own strategy. In Chapter 2 the audit process was discussed and it is evident that the audit process should also include a risk management element.

Coetzee and Lubbe (2011:30) indicate that risk management forms an integral part of corporate governance. The internal auditor's duties in the risk management process of the company are to apply "risk-based audit approach". ISA 610 (2012) par 13 to 24 requires from the auditor to consider the degree of reliance that can placed

on the work of the internal auditor. In light of the quoted researchers, suggestions with regard to the business risk approach in auditing the question can be raised concerning whether the risk management process related to both internal and external auditors.

4.8 RISK MANAGEMENT

From the research there might be the view that the risk management might be reserved only for internal audits and company's management. The other point of view is that the external audit is also a risk management process. Based on the published research, the conclusion in this study can be drawn that risk management can be used in the external auditing environment since the development of the business risk approach.

4.8.1 Risk management process

For a clearer understanding of the significant role that risk plays in the risk-based audit approach, an explanation and comparison are required to identify similarities in the different processes. Higgins (2003:1) argues that key areas for operational risk equates to the same matrices used for measurement and auditing.

Norton's (2005:1) "4D" *"approach to managing operational risk provides the initial framework for creating a strategic enterprise risk management initiative in the company".* The "4D" approach comprises the following:

- Deter
- Detect
- Defend
- Document.

The previous two paragraphs can be applied to the audit process and more directly to the relationship between the risk-based audit approach and the operational and management risk process. The risk management process identifies and prioritizes risks and, as has been suggested, forms part of the audit process. Figure 4-3 below illustrates the relationship between probability and impact of risk on a specific

circumstance. The higher the risk, the more action should be taken to apply Norton's (2005:1) "4D" approach as illustrated in Figure 4-3 below.

The Figure below, as illustrated by Olsson (2002:19) is used by many companies when assessing strengths, weaknesess, opportunities and threats, also known as a SWOT analysis. The analysis divides a square into four equal squares, which are called quadrants.

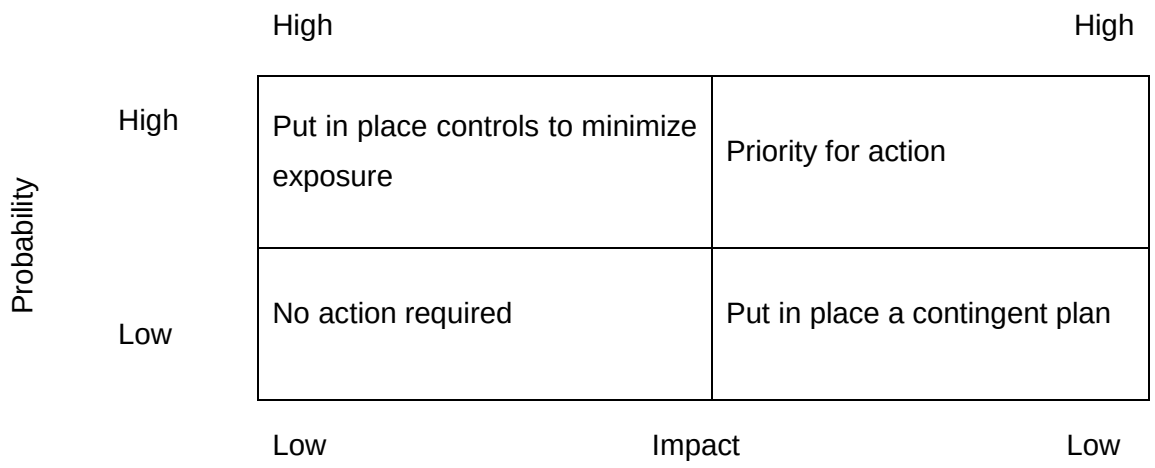
Figure 4-3 Probability/Impact matrix

Probability	Impact: High	Impact: High
High	High impact Low likelihood	High impact High likelihood
Low	Low impact Low likelihood	Low impact High likelihood
	Impact: Low	Impact: Low

Source: Olsson (2002:19)

It can be concluded from the above that the higher the impact and the probability appear to be, the higher the likelihood that an event may occur. The same principle can be applied to the audit. By replacing the probability with risk, and impact with materiality or material balances, the so-called SWOT analysis can be used to categorize balances that attract risk and the balance which is further illustrated in Figure 4-5 to 4-6. Figure 4-4 below illustrate the risk strategies which can be converted into an audit risk strategy as indicated in 4-5 below.

Figure 4-4 Probability/Impact matrix: Risk strategies



Source: Olsson (2002:20)

Explanation of keys used in the explanation below:

HP = High probabability

HI = High impact

LP = Low probability

LI = Low impact

The HP and HI start on the left-hand side of the quadrant and the more right and downwards the consideration is plotted, the lower both the probability and impact become. In Mathematics and Microsoft Excel the positive is on the right-hand side and the negative is on the left-hand side, with the middle line representing the “zero” or “0” line. That is one of the reasons to suggest that a moderate risk does not exist as illustrated in Figure 4-4, as it is on the zero line.

4.8.2 Comparison between different risk management models

Different risk management models are summarized below to determine the commonalities and differences between the models and how they can be applied or adjusted to include or develop an audit risk management model.

PMBOK (2008:274) lists the following steps in the overview of the project risk management:

1. *"Plan risk management*
2. *Identify risk*
3. *Perform qualitative risk analysis*
4. *Perform quantitative risk analysis*
5. *Plan risk responses*
6. *Monitor and control risks*"

These steps above are similar to the risk management steps as indicated in Table 4-2 below. Table 4-2 was constructed from literature and the sources are indicated in the table below.

Table 4-2 Comparison between different risk management models

Author	Durning (2005:17-2)	Jaafari and Anderson (cited by Mills, 2001:245-248)	Banyoppadhay *et al.* (1999:437-438)	Drake and Kerrigan (2011:1-6)
Steps	1. Risk identification and characterization	1. Risk identification	Risk identification	1. Analyse the company and the industry
	1.1. Consequence and content	Question		Major corporate events
	1.2. Initial review – not viable	Discreet features, which might be responsible for failure		Changes in management, ownership and products
	1.3. Board risk review			
	2. Risk description	Risk analysis	2. Risk analysis	2. Analyse the business unit
	2.1. Research viable risks			Gathering data
				Organisational charts

				System flow charts
	2. Risk analysis	Risk response	3.Risk-reducing measures	3. Identify the deliverables
	2.2. Assign category			Regulatory changes impacted on reporting requirements
	2.3. Assign consequence			
	2.4. Assign likelihood low – high			
	2.5. Assign time frame (near – long-term)			
	2.6. Compute severity (likelihood X consequence)			
	3. Risk planning		4.Risk monitoring	4. Identify the audit scope
	3.1. Assign action			Roles and responsibilities
	3.2. Mitigation			Human resources requirements

				Audit procedures and due dates
	4. Risk tracking and control			5. Develop a project plan
	4.1. Monitoring of risk			Schedule due dates
	4.2. Contingency plan			Documentation standards
	4.3. Mitigation plan			Change to plan as needed
	4.4. Risk review			5. Conduct ongoing planning and analysis
				Reviews of performance
				Reviews to evaluate approach scope of audit
				Identify areas for improvement

	Comments:			
	Although the process is illustrated as a flowchart, there are interactions or relationships between the first step in the process and other steps.			

Source: Authors listed in table above.

Conclusion:

Compared to the other risk management steps, the above extract from Drake and Kerrigan (2011:1-6) is in line with the audit steps and requirements of the auditing standards. The other models use different terminology, but essentially the same steps are performed and can be applied to risk management in any type of business and industry, with adjustments based on the nature and circumstances of the specific client. The conclusion that is drawn from the comparison above is that the audit process can also be classified as a risk management process due to the requirements of ISQC1, which require monitoring of the firm and the individual engagement of the firm.

4.8.3 Comparison between different risk assessment and calculation models – (risk categories and classification)

The definitions of risk indicate that a risk assessment should be made, and from the literature the following measures arose, which was analysed to develop a benchmark on risk quantification. Table 4-3 serves as a summary of risk categories and classifications.

Table 4-3 Risk categories and classification

Sources indicated below and own research

Author	Durning (2005:17-3)	Own research (1997 to 2012)	Sheenan (2010:27-36)	Olsson (2002: 19 to 20 & 30-33)	ISA implied requirement
Level 1	High	Significant	High	High	Significant
Level 2	Medium	High	Low	Low	High
Level 3	Low	Low			Low
Clarification for differences			Even in this model the medium is not considered to be a risk.	Even in this model the medium is not considered to be a risk.	No mention is made of moderate risk.
Horizontal line	Impact	Impact or probability	Financial impact	Impact	None

Vertical line	Probability	Material impact or risk of material misstatement .	Likelihood	Probability	None
Classified in number of levels	5 x 5 levels	3 x 2 levels	2 x 2 levels	2 x 2 levels	None
Description of risk classification		Refer to Table A below	Refer to Table B below	Refer to Table C below	
Reason for reliability	Has been used for a number of years and applied constantly.				

Source: Authors listed above.

From the summary in Table 4-3 above and the risk response matrix of Olsson (2002:19-20), the model was adopted for audit risk management. The adoption was necessary to include significant risk and a low and high financial impact in the model. The adopted risk model is now appropriate and applicable to auditing, as illustrated in Figure 4-4 above and 4-5 to 4-6 below.

In Figure 4-5 the “Likelihood/Risk/Material balance” and “financial impact” replaced the “probability” and “impact” as indicated in Figure 4-3 respectively. Figure 4-5 below illustrates the integration of a risk management concept into auditing. The explanation for constructs in Figure 4-5 according to the quadrants is the following:

(1) The risk can only be accepted when limited audit procedures have been performed.

(2) Limited procedure performed, but more than quadrant 1 to mitigate risk.

(3) The balances in quadrant 3 are those where the balance might be low, but the movements or type of transactions may be of high risk. The auditor cannot transfer risk, but should perform more work than is required from him in quadrant 2.

(4)The higher the risk and balance, the more procedures the auditor may have to perform to reduce the risk. The auditor can only attempt to avoid the risk by reducing his risk to an acceptable level.

Figure 4-5 Risk response matrix

<table>
<tr><td>High</td><td colspan="2">Financial impact</td><td>High</td></tr>
<tr><td rowspan="2">Likelihood/Risks/ Material balance</td><td>(2) Mitigate risk – sufficient procedures to reduce risk</td><td>(4) Avoid risk – More audit procedures</td><td rowspan="2">Likelihood/Risks/ Material balance</td></tr>
<tr><td>(1) Accept risk – less audit evidence to reduce risk</td><td>(3) Transfer risk – Caution and more audit procedures than in quadrant (2)</td></tr>
<tr><td>Low</td><td colspan="2">Financial impact</td><td>Low</td></tr>
</table>

Source: Olsson (2002:20) adjusted.

The inclusion of significant risk as a top and third vertical level resulted in a 3x2 matrix as illustrated in Figure 4-6 below.

Figure 4-6 Risk response matrix (Adjusted for auditing and sextant approach)

	Financial impact			High
Likelihood/Risk/ Material balance	Significant	Investigate further and mitigate risk	Investigate further and avoid risk	Likelihood/Risk/ Material balance
	High	Mitigate risk	Avoid risk	
	Low	Accept risk	Transfer risk	
	Financial Impact			Low

Source: Olsson (2002:19) adjusted.

The conclusion that can be drawn from Tables 4-2, 4-3, Figures 4-5 and 4-6 above is that the audit process is also a risk management process, which can apply risk management principles to the risk assessment process. The audit risk assessment process can be applied as a starting point based on the risk management theory. The model can then be adjusted to include variation from the standard four-quadrant model.

The traditional risk matrix as illustrated in Figure 4-5 is based on four areas or quadrants. The impact scales of a project risk management are shown in Figure 4-7 below. Figure 4-7 below further indicates that the risk in this instance can be divided into five different sectors or scales or even a pentagon. The numerical scales are illustrated and each risk is twice as high as the previous scale. The multiplier of 2 for the increase of risk scales below can be described as a coincidence or indicator from different academic disciplines to quantify risk and thus also materiality. The scope and quality explanations in Figure 4-7 below are similar to the explanations for Table 4-3 and Figures 4-5 and 4-6 above and the description of quality in chapter 2 respectively. It appears that project risk management as described below has indirect relationships with auditing, as the same concepts mean the same and the same type of objectives are achieved. The only difference is that there are clear guidelines for project management, while the auditor needs to apply professional judgement with limited quantitative benchmarks or examples for risk assessment.

Figure 4-7 Impact scales of risk as per project risk management

Defined Conditions for Impact Scales of a Risk on Major Project Objectives (Examples are shown for negative impacts only)					
Project Objective	Relative or numerical scales are shown				
	Very low /.05	Low /.10	Moderate /.20	High /.40	Very high /.80
Cost	Insignificant cost increase	<10% cost increase	10-20% cost increase	20-40% cost increase	>40% cost increase
Time	Insignificant time increase	<5% time increase	5-10% time increase	10-20% time increase	>20% time increase
Scope	Scope decrease barely noticeable	Minor areas of scope affected	Major areas of scope affected	Scope reduction unacceptable to sponsor	Project end item is effectively useless
Quality	Quality degradation barely noticeable	Only very demanding applications are affected	Quality reduction requires sponsor approval	Quality reduction unacceptable to sponsor	Project end item is effectively useless
This table presents examples of risk impact definitions for four different project objectives. They should be tailored in the Risk Management Planning process to the individual project and to the organization's risk thresholds. Impact definitions can be developed for opportunities in a similar way.					

Source: PMBOK (2008:281)

4.9 PROBABILITY/IMPACT RISK MATRIX: RISK STRATEGIES

As indicated in Table 4-3, Figures 4-2, 4-3 and 4-5, the audit risk model and risk management matrix should at least consist of a two-dimensional square with four quadrants. The following terms are applicable with regard to the risk management matrix:

- Probability (likelihood)
- Impact

To make these terms above applicable to the audit matrix, the risk management matrix terms were replaced with the following words:

- Probability was replaced by risk
- Impact was replaced by materiality

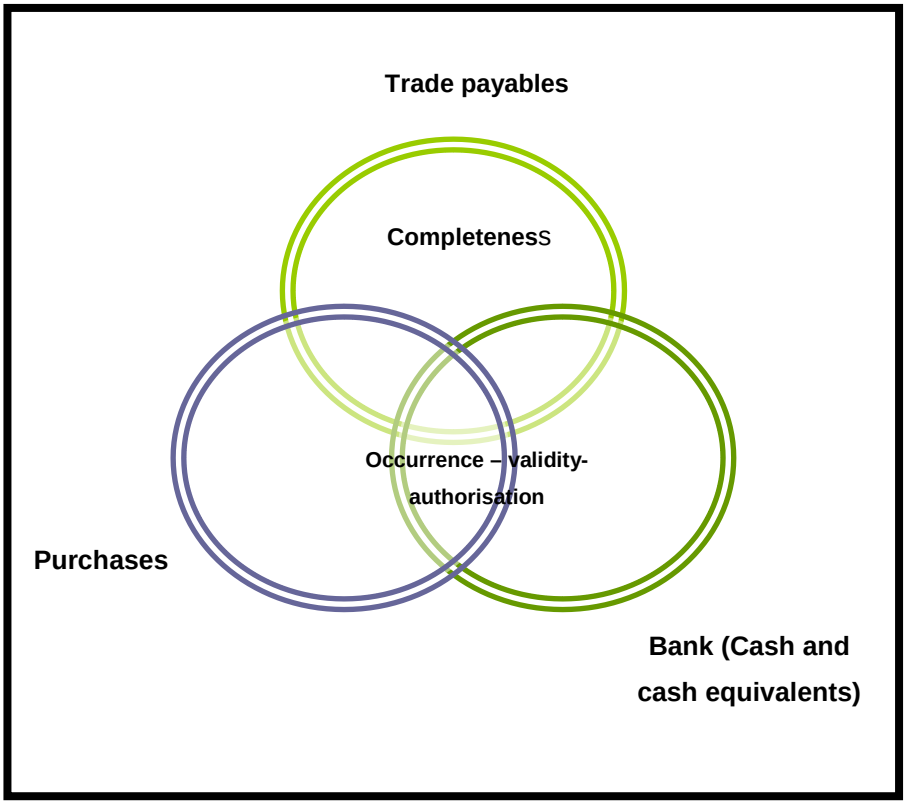
For the purposes of this research, these terms are used as synonyms with regard to the risk management and audit matrixes. The next question that needs to be researched is whether a three-dimensional model should include ‘frequency’. That is: how often does it happen?

An auditor cannot rely on frequency, as the fraud element is so high that it could not be ignored. At the SAICA Fraud Seminar (2011:1) it was indicated that up to 5% of revenue is lost due to fraud in large corporations. Probability and impact should be the relevant benchmarks as suggested above.

4.10 AUDIT ASSERTIONS

It is suggested that assertions form part of the audit risk assessment process as the definitions and assertions can be used to ask: "What can go wrong in classes of transactions or account balances?" The answer to this question can immediately create a risk per assertion. One assertion does not always replace another assertion and, therefore, all assertions should be considered in a cycle. Assertions may be applicable for a specific cycle, e.g. trade payables and purchases, but may involve other cycles as well, as indicated in Example 4-4 below where the purchases system is considered.

Example 4-4 Combined assertions



Source: Interpretation of ISA 315 (2012) adjusted

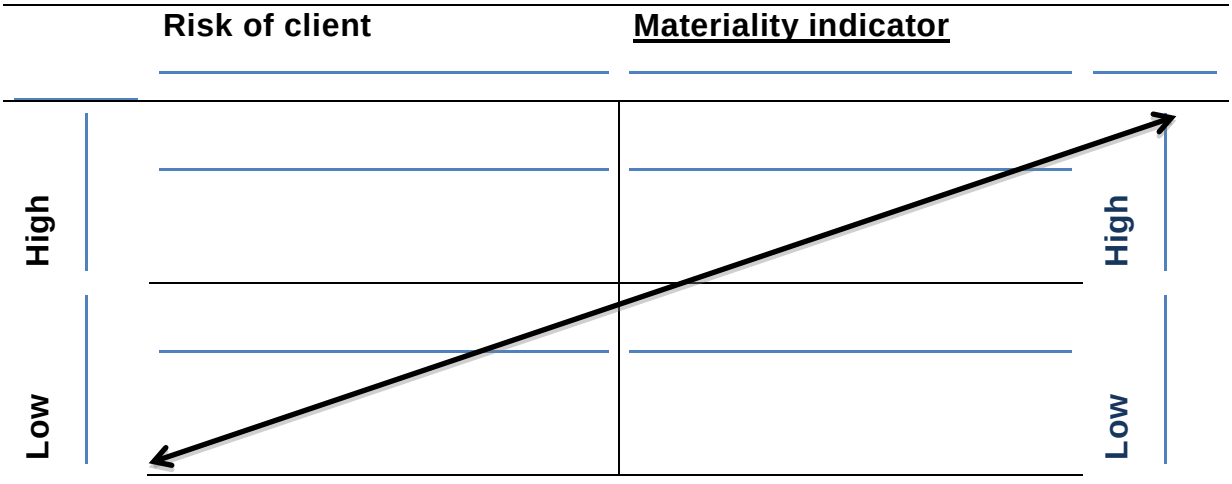
From above, the implication is that an auditor should apply professional judgement when considering the assertions and the impact it may have on other assertions, and that an audit procedure for one assertion may impact on more than one balance. The contrary is also applicable as the audit procedures with regard to the valuation of inventory is not a substitute or any support existence and completeness assertion.

4.11 RISK ASSESSMENT AND QUANTIFICATION OF RISK

The suggestion can be made that materiality has an adverse relationship to audit sample sizes, which is illustrated below. Thus the higher the risk of the client that is being audited, the lower the materiality Figures that will be considered in the calculation of planning materiality. Budescu *et al.* (2007:32) support the phenomenon that the lower the achieved audit risk is, the higher the audit materiality. The conclusion was made that a "tipping point" is reached at a materiality threshold of 2% of revenue. The achieved risk decreases at a faster rate than the materiality threshold is increased after the "tipping point"

According to Marx *et al*. (2009:8-26), *"the auditor needs to base materiality for the entity upon the most appropriate criteria that will provide for a stable basis. It can be a single indicator or a combination thereof. When the client is a low-risk client the highest materiality indicator will be selected and the quantitative materiality Figure will be higher".* The definition is visually represented in Figures 4-8 to 4-10 below.

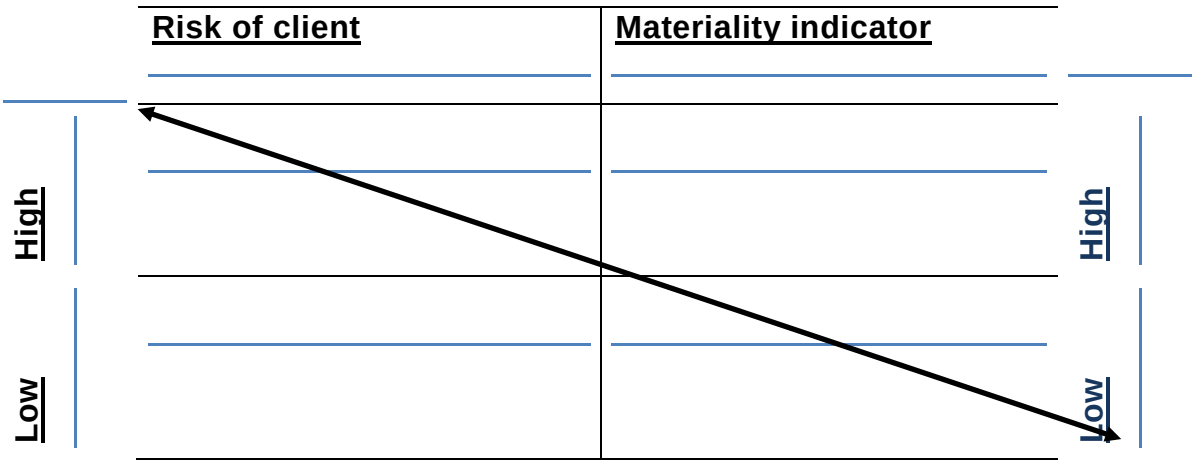
Figure 4-8 Relationship between low-risk client and high-materiality indicator.



Source: Marx (2009:8-25 adjusted)

It can thus be deduced that when the client is a high-risk client, the lowest materiality indicator will be selected and the quantitative materiality Figure will be lower.

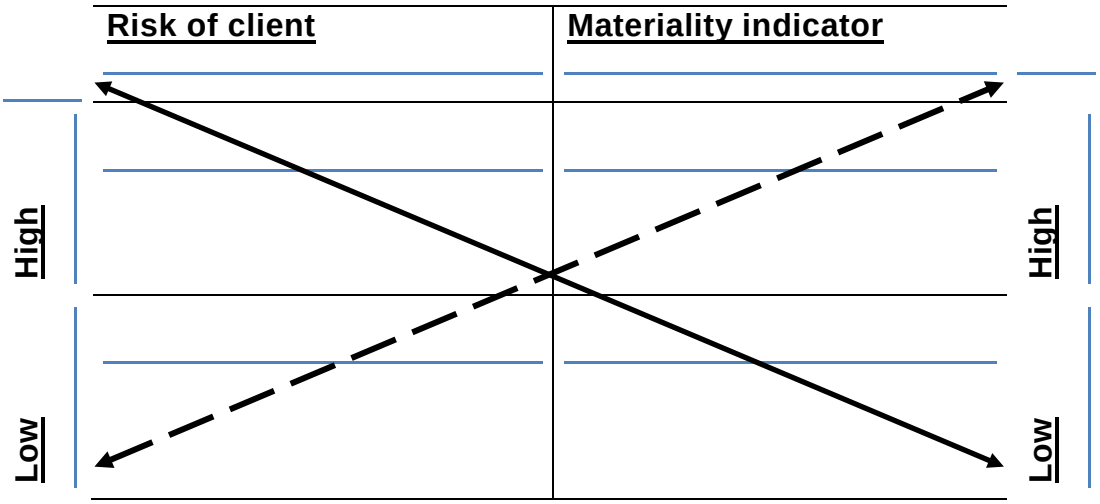
Figure 4-9 Relationship between high-risk client and low-materiality indicator



Source: Marx (2009:8-25 adjusted)

The indicator is that if we take the accounting average of the multiplier according to Figure 4-9 above, the audit tests will be twice as much for a higher-risk client with a lower-quantitative materiality Figure than for a low-risk client with a lower quantitative materiality Figure. The combination of Figure 4-8 and 4-9 resulted in Figure 4-10 below.

Figure 4-10 Combined relationship



Source: Marx (2009:8-25 adjusted)

Table 4-4 illustrates the calculation of the multiplier per classes of transactions and balances by dividing the high benchmark and the low benchmark per class of transaction. The indicators for various companies vary and thus it is not viable to use a probability linked to the different indicators to derive at exact average. The average formula was used to calculate the average for all the different multipliers of the classes of transactions. The result was a value of 2.1 as the average for all multipliers as constructed in Table 4-4 below.

Table 4-4 Risk multiplier

Class of account	Low	High	Multiplier
Turnover (Gross Revenue)	½ %	1%	2
Gross profit	1%	2%	2
Net income	5%	10%	2
Total assets	1%	2%	2
Equity	2%	5%	2.5
Average			2.1

Source: Marx (2009:8-25 adjusted)

The risk factor value, which will be called the “r” factor, was calculated as follows: Risk quadrant (Q) / Multiplier (M) = r.

Table 4-5 “r” factor per quadrant based on multiplier

Quadrant	Risk quadrant/value	Multiplier	Risk factor
X1=6	6	2	3
X=5	5	2	2.5
A=4	4	2	2
B=3	3	2	1.5
C=2	2	2	1
D=1	1	2	.05

Source: Own research based on Table 4-4 above.

4.12 RELATIONSHIP BETWEEN MATERIALITY AND RISK

It is suggested that there is a relationship between materiality and risk. These two concepts cannot be separated. ISA 315 (2012) par 9 suggests that the auditor applies professional judgement to assess the risk of material misstatement based on the understanding obtained in the entity and control environment. According to ISA 330 (2012) par 5, the auditor *"should respond to the audit risk identified to reduce audit risk to an acceptable level".* There is a relationship between materiality, risk and audit procedures. The ISA requirements discussed below, support the existence of a relationship. ISA 315 (2012) par 9 further explains that the judgement of the establishment and the appropriateness of materiality *"as the audit progresses"* assist the auditor in doing the following:

- *"Decide on such questions as what items to examine and whether to use sampling and substantive analytical procedures."*
- *Audit procedures are then selected "to reduce audit risk to an acceptably low level".*

ISA 315 (2012) par 10 suggests that *"there is an inverse relationship between materiality and the level of audit risk, that is, the higher the materiality level, the lower the audit risk, and vice versa".* The statement continues to explain that the relationship between *"materiality and audit risk"* should be taken "*into account when determining the nature, timing and extent of audit procedures". It may be concluded* that the following aspects have an inverse relationship and might impact significantly on the audit approach and audit process:

- Materiality
- Audit risk
- Sampling (nature, timing and extent)

4.12.1 Inverse relationship between qualitative materiality indicators, calculated quantitative materiality Figure and risk assessment

The probability and risk matrix and risk strategies were adjusted for the application in the auditing environment and the result is Figure 4-10 above and Figure 4-11 below.

The same principle was applied and the significant risk was included. The result is Figure 4-11, which indicates that with five quadrants, a pentagram instead of a square should be applied. During discussions with the Technical Director of an auditing firm, a suggestion was made that a significant risk, but low materiality Figure, may occur when specific accounts are taken into account. Share capital serves as an example as the following risks and characteristics can be allocated to the specific balance:

- Compliance to the Companies Act
- Changes in shareholders:
    - Authorised
    - Unauthorised
- Low value can have a significant impact on the ownership of the company if fraudulent share transfers are made.

According to the calculation, moderate or medium risk is an average between high and low as illustrated in Example 4-1. Figures 4-10 and 4-11 below were adopted to apply the principles above in auditing risk management process while taking significant risk into account. Figures 4-10 and 4-11 below are adjustments made to Olsson's (2002:19-20) models to accommodate significant risks in an auditing model.

Figure 4-11 Probability and impact matrix adopted for audit risk assessment

Probability					
		High	**Impact**	**High**	
	Low	**High value (HM)** **Low impact (LR)** Test controls to minimize exposure **2**	**Balance**	**High value (HM)** **High impact (HR)** Priority for action **4**	**High**
		Material		**Balance**	**Low**
	Low	**Low value (LM)** **Low impact (LR)** Less or little action required **1**	**Risk**	**Low value (LM)** **High impact (HR)** Careful evaluation and verification. **3**	**High**
		Low	**Impact**	**Low**	

Source: Olsson (2002:19-20) adjusted

Figure 4-12 Adopted for audit risk assessment including significant risk

Probability					
	High		Impact	High	
	Low	High value (HM) Low impact (LR) Test controls to minimize exposure C = 2		Significant risk High value (HM) Significant impact (SR) X = 5	Significant
				High impact (HR) Priority for action A = 4	High
		Material		Balance	Low
	Low	Low value (LM) Low impact (LR) Less or little action required D = 1	Risk	Low value (LM) High impact (HR) Careful evaluation and verification B = 3	High
	Low		Impact	Low/High	

Source: Olsson (2002:19-20) adjusted.

The Audit Glossary of Birmingham University (2012) defines 'recommendations' as: *"Actions we believe are necessary to correct existing conditions or improve*

operations". The three levels of risks can also be illustrated through the definition of recommendations by the following comparison:

Recommendation category	Risks (Auditing own interpretation)
Fundamental	Significant
Significant	High
Merits attention	Low

The comparison indicates that risk can also be classified into three different categories. The conclusion can further be drawn that there is a relationship between risk and materiality as the level or sextant number increases as the risk and materiality assessment increases. The higher value as indicated in Figure 4-11 to 4-12 increases the audit attention required to reduce the risk and the lower materiality benchmark should be selected.

4.12.2 Other risk assessment models

The previous section illustrates that the norm is to fit all risk models into four different quadrants and the above-mentioned Figure 4-12 illustrates that risk management can be modified to include different categories as indicated above. Risk management models should be flexible enough to adjust to the processes of the four square principle and fit into different shapes. According to published NASA research (Durning 2005:17-3 to 17-4), the author believes that probability and impact of risk can be measured on a five by five point block scale with 5 being the highest and 1 being the lowest. The example is a deviation from the normal four- point scale or four risk squares, which are illustrated in the literature study above. PMBOK (2008:281) indicates that the five levels for risk on project management are quantified as follows:

- Very low at 0.05 or five percent
- Low at 0.10 or ten percent
- Moderate at 0.20 or 20% percent
- High at 0.40 or 40% percent

- Very high 0.80 or 80% percent

The term “very” is not generally used in auditing and it is suggested that the term should be replaced by “significant” for a better understanding in the auditing environment. The benchmarks above have been compared in chapter 3.8 with auditing benchmarks set in 1996 and still appear to be appropriate in the current auditing environment. In addition to the above-mentioned publications and with reference to Figures 4-11 and 4-12, it appears that the theory is a relevant guideline for specific processes and can be adopted to assist the specific fields and sciences to develop and adopt their own models.

4.13 CONCLUSIONS AND LEVELS OF AUDIT RISK

Based on literature and ISAs, the conclusion can be drawn that audit risks should be assessed at various levels. The auditor has a risk on every audit that he performs and expresses an opinion. The risk levels are listed below:

Level 1 Acceptance and continuance and overall risk

- Business entity type overall
- Complex transactions
- Public money
- Susceptibility to fraud
- Electronic transactions without any visible audit trail

Level 2 Financial statement level

Level 3 Risk of material misstatement

Level 4 Risk at assertion level

- Risk per assertion for all material balances and types of transactions
- Significant risks, high risks and low risks
- All control risks default to high, if tests of controls are not performed.

Level 5 Fraud risk

- Fraud risk per assertion level for all material balances and types of transactions

Level 6 Conclusion and reporting

- The risk that appropriate and sufficient evidence was obtained to support the audit opinion
- Risk of an inappropriate opinion
- Risk of going-concern and events after balance sheet was not identified, which may have such an impact on the audit opinion that if all the facts were known and considered, the audit opinion would be rendered to be inappropriate.

4.14 AUDITING STANDARDS

ISA 315 (2012) par 5 supports the concern that risk assessment alone is not sufficient to provide evidence on *"which to base the audit opinion"*. The implication is that the auditor should perform additional procedures to gain sufficient evidence to support the auditor's opinion. This implication will be discussed under the next section, which deals with responses to risk identified. ISA 315 (2012) par 25 to 31 and A105 to A130 explain the requirements that an auditor should follow to identify and assess the risks of material misstatement in the following manner:

- Financial statement level
- Assertion level

ISA 315 (2012) Annexure 2 indicates examples of "*Conditions and events that may indicate risks of material misstatement"* and should be read in conjunction with the requirements discussed above.

4.15 HIGHER ASSESSMENT OF RISK

ISA 330 (2012) par A19 argues that a higher risk requires *"the auditor to obtain more persuasive audit evidence"* to reduce the audit risk to an acceptable audit level. The impact of this requirement indicates that the following should be considered in the obtaining of evidence:

- *"Increase in quantity of evidence*
- *More relevant and reliable by placing more emphasis on:*
    - *third-party evidence; and*
    - *corroborating evidence from various independent sources".*

4.15.1 Importance of risk

Janse van Vuuren (2005:182-183) concluded that the disclosure of risk management, and thus the process, is not a concern that is taken seriously by all listed companies in South Africa. It is suggested that a *"lot of work has to be done to get risk up to an acceptable level. Risks are only a compliance tool and not a valuable management tool".*

Lucouw (2004:38) suggests that: *"A self-renewing system is able to organise and reorganise itself continuously, creating internal order from chaotic input"*. The suggestion is so valid in the financial turmoil after the Enron accounting and audit scandal, as one of the examples, and the liquidation of Lehman Brothers, as the start of the global financial crisis in 2008 to 2009, and the significant impact it had on the global economy."

4.16 POSSIBLE RISK QUANTIFICATION

The following conclusions regarding risk can be drawn:

Risk is difficult to quantify, but there are models that can be applied when the definition of probability is analysed:

Certainty regarding the occurrence of an event:

- Cannot 0
- Uncertain 0 to 1
- Certain 1

As previously concluded, no audit could be seen as having no risk or a probability of 0. According to Businessdictionary.com (2012), the *"maximum risk at maximum uncertainty occurs when its probability is 0.5".* This implies that risk and probability should be calculated as follows:

Equation 4.7 Maximum risk based on probability

$$1 \div 0.5 = 2 \quad (4.7)$$

Budesco *et al.* (2012:33) observed that a movement in materiality thresholds from 0.5 to 1% decreases the achieved audit risk. This movement equates to a multiplier of two (2) which is the same conclusion that is drawn from Equation 4-7 above. The same result for the multiplier and risk of two (2) can be classified as a norm and not as a coincidence. Furthermore, it suggests that there is a strong relationship between materiality and risk, and that benchmarks can be quantified, but that judgement should always be taken into account. Refer to Table 4-7 for the calculation of the quadrant multiplied by 0.5 to quantify the risk factors.

The multiplier is the highest range divided by the lowest range in a specific materiality benchmark percentage on the most commonly used benchmarks. The result of this step as indicated in Table 4-4 returned a value of two. The sextant is the six different sectors to plot the risk and materiality assessment in a graph. The quadrant or sextant, as discussed in Chapter 4.18 below, and the multiplier, as discussed in Chapter 3, forms the major part of the equation below.

Dividing the quadrant or sextant (Q) by the multiplier (M) resulted in the following equation:

"r" factor multiplier

Q ÷ M = "r" factor

Table 4-6 below was compiled based on the above-mentioned formula for each sextant.

Table 4-6 “r” factor

Quadrant/Sextant	Multiplier	r factor
6	÷ 2	3.0
5	÷ 2	2.5
4	÷ 2	2.0
3	÷ 2	1.5
2	÷ 2	1.0
1	÷ 2	0.5

The quadrant/sextant multiplied by the probability resulted in the following equation and the results are summarized in Table 4-7 below to explain the ‘r’ factor per sextant:

“r” factor probability

Q x P = “r” factor

Table 4-7 “r” factor

Quadrant/Sextant	Probability	“r” factor
6	x 0.5	3.0
5	x 0.5	2.5
4	x 0.5	2.0
3	x 0.5	1.5
2	x 0.5	1.0
1	x 0.5	0.5

To apply the quadrant/sextant approach it is suggested that the higher the quadrant/sextant, the higher the number of sampling items to be selected based on the higher number of the quadrant/sextant to create a relationship between risk level and sample size. A higher risk requires more audit attention than a lower risk item and thus larger sample sizes. Dunn (1996:204) suggests in the following example,

as indicated in Table 4-7, regarding the R factor (the reliance factor) and the level of assurance that needs to be obtained. The R factor in Table 4-8 below also consists of six levels and can be related to the "r" factor in Table 4-7 above. The relationship between the R factor in Table 4-8 and 'r" factor in Table 4-7 and 4-8 can be interpreted as sextants. The quadrant approach was extended to a sextant approach, which is illustrated in Figure 4-13 and 4-14.

The general rule of thumb in practice is that a confidence level or level of assurance percentage should be between 90 and 95%. The "r" factor of "2" to "3", as per Table 4-6 and 4-7 above, would then be applicable to "*reduce risk of material misstatement to an acceptable level"* (ISA 315 2012 par 115).

Table 4-8 was constructed to indicate the correlation and comparison between the reliability factor and the risk factor as discussed in the paragraphs above, as follows:

Table 4-8 Comparison of R vs. "r" factor

R factor	Level of assurance (%)	**Quadrant / Sextant**	**"r" factor**	**Coverage** (%)
0.5	39	1	0.5	16
1.0	63	2	1.0	33
1.5	78	3	1.5	49
2.0	86	4	2.0	66
2.5	92	5	2.5	83
3.0	95	6	3.0	99

Source: Own Research compared to Dunn (1996:204)

4.17 RELATIONSHIP BETWEEN MATERIALITY, RISK AND SAMPLE SIZE

Each combination of risk and materiality indicator was plotted on a graph and thus indicates per quadrant how the sample size would be increased or decreased, based on the positive risk and materiality or lower than zero risk and materiality on the horizontal and vertical lines. This does not imply that risk is less than zero and is only used as an example to differentiate between higher and lower assessment. Higher assessments were taken as positive. Lower assessments were taken as negative to be able to create XY lines.

4.18 RISK MANAGEMENT MODELS

An experiment was performed to test the interrelationship of the combination of materiality and risk which included the standard risk model with four quadrants as a basis for plotting the low and high risks. The XY graph was used, the X-axis was renamed to 'risk line' and the Y-axis was renamed to 'material balance'. Figure 4-11 illustrates the new renamed axis, as discussed above. The quadrant names based on the combined risk and material balance axis resulted in the assessments as indicated in Table 4-9 below. The calculation of the values of columns z and m below is explained in the following three sentences. The numbers per quadrant ranging from high to low were allocated to each quadrant as shown in column z. The numbers per quadrant divided by the multiplier as indicated in Chapter 3 returned the value of column m. The value of m multiplied by 1 or -1 resulted in the x and y columns as explained in the reasons column below.

The keys to the abbreviations in Table 4-9 column one (z) below are:

HR = high risk, LR = low risk, HM = high material balance and LM low material balance.

Table 4-9 Risk and materiality data

Quadrant	**Multiplier = 2**	**Horizontal = Risk**	**Vertical = Materiality**	**Reason - HM = High Material balance and LM = Low material balance**
Z	**m = z/2**	**X**	**y**	**R= Risk, M = Material balance**
4 HR/HM	2	2	2	R and M High
3 HR/LM	1.5	2	-1.5	R High and M Low and thus M negative
2 LR/HM	1	-1	2	R Low and thus R negative and M High
1 LR/LM	0.5	-0.5	-0.5	Low R and M and thus both negative

The conclusion from the experiment above and Figure 4-13 below is that the traditional quadrant model can only accommodate four different levels. This model is thus insufficient, as ‘significant’ should be included as a fifth and sixth level. The proposal is that a sextant approach be implemented, based on the discussions above. The development of the sextant approach compared to the quadrant approach is the next step in the integrated model development.

a. Audit risk model

Olsson (2002:19-20) mentions that the risk model only consists of four quadrants, which is a weakness as an auditing risk management model requires that ‘significant’ should be included in the model. Additional quadrants are thus required and result in the sextant approach. The conclusion that can be drawn from the above is that the auditing risk matrix should include significant, high and low as risk levels, as implied in ISA 300 (2012) and ISA 315 (2012). Figure 4-11 below illustrates the development from the traditional risk and responses matrix, as suggested by Olsson (2002:18-20), to the sextant model.The categories can be interpreted as levels of risks and equate the suggestion that risks should be a three-tiered category:

- ‘Significant’ instead of ‘fundamental’ (SR = Significant risk)
- ‘High’ instead of ‘significant’ (HR = High risk)
- ‘Low’ instead of ‘merits attention’. (LR = Low risk)

The second experiment explains, illustrates and includes the standard four quadrants risk model as a basis for plotting the low and high risks, and ‘significant risks’ as a new quadrant above the high quadrant. The XY graph was used. The X- and Y-axis were renamed to ‘risk line’ and ‘material balance’ respectively.

Figure 4-12 indicates the new renamed axis as discussed above. The quadrant names based on the combined risk and material balance axis resulted in the assessments as indicated in Table 4-10 below. The calculation of the values of columns z and m below is explained as follows: The numbers per sextant (ranging from ‘significant’ to low) were allocated to each quadrant as shown in column z. The numbers per quadrant divided by the multiplier as indicated in Chapter 3 returned the

value of column m. The value of m multiplied by 1 or -1 resulted in the x and y columns as explained in the reasons column below.

The elements in the quadrants of Table 4-3 were extended to include quadrant 5 and 6, as well as the combined significant risk and material balances assessment. Also refer to Table 4-4 and Figures 4-11 to 4-12. Risk and materiality data are indicated in Figure 4-13 and 4-14 below. The keys for the abbreviations in Table 4-10 column one (z) below are:

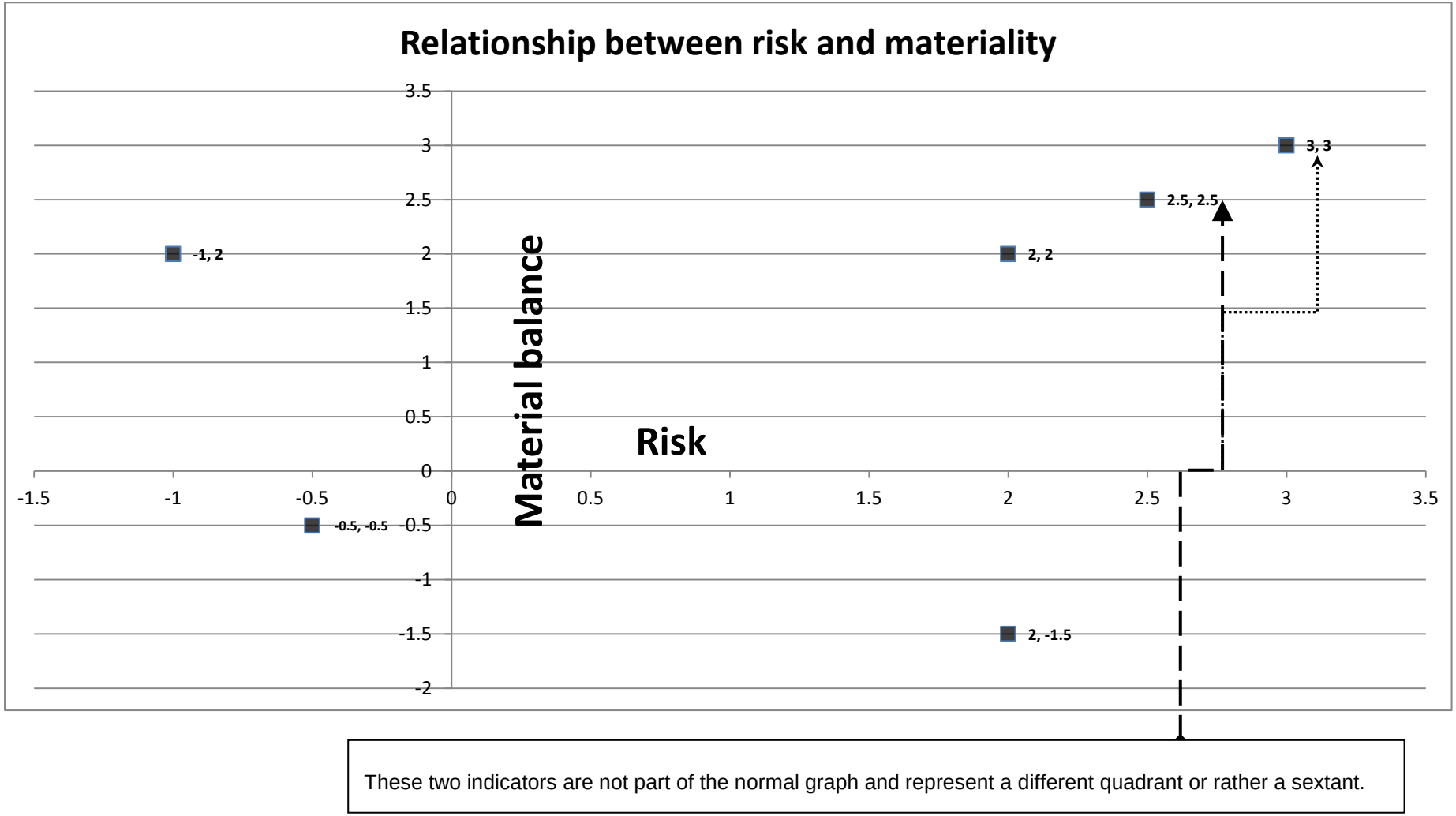
SR = significant risk, HR = high risk, LR = low risk,

HM = high material balance and LM low material balance.

Table 4-10 Risk and materiality data

Sextant	**Multiplier = 2**	**Horizontal = Risk**	**Vertical = Materiality**	**Reason**
Z	**m = z/2**	**X**	**Y**	**R = Risk, M = Material balance**
6 = SR/LM	3	3	3	R significant and M low
5 = SR/HM	2.5	2.5	2.5	R and M significant
4 = HR/HM	2	2	2	R and M high
3 = HR/LM	1.5	2	-1.5	R high and M low and thus M negative
2 = LR/HM	1	-1	2	R low and thus R negative and M high
1 = LR/LM	0.5	-0.5	-0.5	Low R and M and thus both negative

Figure 4-13 Risk and materiality graph



b. Calculation of 'r' factor

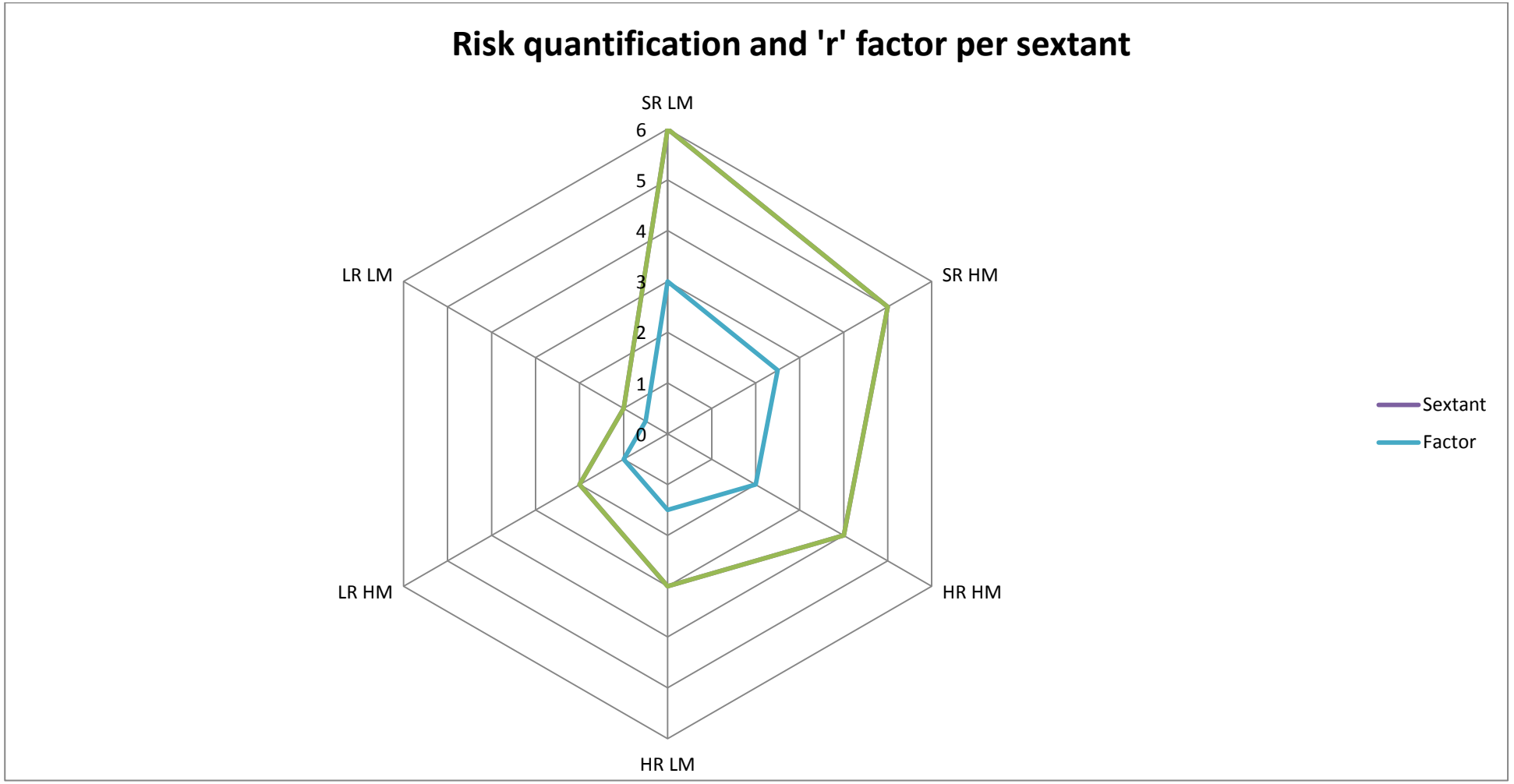
The calculation and justification of the 'r' factor was developed in Table 4-10. The 'r' factor is the next concept that assisted in the progress of the development of the integrated model. According to Figure 4-13, the SR/HM assessment should be allocated to quadrant 5 and SR/LM to quadrant 6. This proposal for allocating SR/LM to quadrant 6 is due to assessing such a balance as 'significant' and balance below materiality might constitute the highest risk for an auditor. This proposal was also supported by interviews with a technical partner of an audit firm during discussions of the questionnaire. As illustrated in Figure 4-13 above and Table 4-11 below, the two significant risks are plotted outside the normal quadrant and thus a sextant graph might be more appropriate. This observation leads to the consideration of another visual representation and the solution was to develop a sextant graph on Microsoft Excel.

Table 4-11 Risk and r factor table.

Risk (Table 4-10)	Balance - Quantitative materiality.(Table 4-10)	Quadrant /Sextant (Table 4-10 "z")	'r' factor (Table 4-10) "m"
SR	LM	6	3.0
SR	HM	5	2.5
HR	HM	4	2.0
HR	LM	3	1.5
LR	HM	2	1.0
LR	LM	1	0.5

The keys for the abbreviations in Table 4-11 above are: SR = significant risk, HR = high risk, LR = low risk, HM = high material balance and LM = low material balance. Figure 4-14 was based on the information summarized in Tables 4-10 and 4-11 to illustrate the relationship between the sextants as well as materiality and risk.

Figure 4-14 Risk quantification and ‘r’ factor per sextant



Source: Table 4-11

4.19 CONCLUSION

As reported above, there are many instances where ISAs do not give any guidance or poor guidance on important issues, Materiality and audit risk are interdependent and the auditor should apply professional judgement when considering all the elements individually and simultaneously. The above-mentioned concepts are of the utmost importance in the audit process, as a misstatement that is not identified may materially impact on the audit report and the type of report issued.

Scholars differ on the value and interpretation of the audit risk model. The plausible reason for the difference in interpretations and preferences is perhaps a lack of guidance on quantitative and qualitative audit risk benchmarks.

The audit desired audit risk may not decrease in the same ratio as the increase of materiality level which might be attributed to the complex accounting environment the auditors are involved in. There is, however, a notable relationship between materiality, audit risk, audit process, business risk approach and risk management.

The business risk approach did not live up to the expectations as the accounting and auditing scandals followed a decade after the implementation of the BRA. The conclusion might be that the auditor has become too involved in the business of the company so that the objectivity may have become tainted.

5 OVERVIEW OF THE DATA-GATHERING AND ANALYSIS PROCESS

5.1 INTRODUCTION

As stated in Chapter 1, the empirical research is based on secondary data obtained from literature and primary data from the questionnaire. The questionnaire was designed, with the aid of a statistical consultant, and with benchmarks, guidance and compliance with the relevant International Auditing Standards (ISAs) in mind. A pilot or pre-test of the questionnaire was undertaken with 30 employees from an auditing firm, who were studying towards their professional qualifications and trained in the auditing profession. The questions and difficulties that were raised regarding the use of terminology and language were taken into account and the questionnaire was updated to correct perceptions and statements. The firm mentioned above was excluded from the final sample as they were part of the pilot test.

After completion of the pilot test, the questionnaire was amended to improve the clarity and eliminate conflicting information. The amended questionnaire, after being approved by the statistical consultant, then served as the final questionnaire.

An empirical study was conducted by way of a discussion and questionnaires with a sample of firms ranked according to the number of listed clients on JSE Limited as on 28 February 2010. Due to the confidential nature, the firm names are not disclosed. The ethical consideration was based on the confidentiality undertaking included in the questionnaire not to disclose firm names. The participating firms agreed on this basis to complete the questionnaire. The firms that participated in the study as discussed in chapter 5.2.4 includes most of the four largest auditing firms, as well as mid-tier auditing firms, with listed clients, in South Africa. Erasmus *et al.* (2012:450) used the large four firms as their “research subjects” as they are rated as the four biggest firms in the world, and Coetzee and Lubbe (2011:45-46, 52) quoted three of the four big four firms in their research. The indication is that researchers are of the opinion that the big four firms are a source of significant information and contributes significantly towards the audit profession. Abdullatif and Al-Khadash (2010:3) and Azzopardi and Baldacchino (2007:14) also refer to the Big Four firms in their research, which further supports the impact they might have on the audit environment.

After consultation with the Manager: Information Technology on the Vaal Triangle Campus of the North-West University on the consistency and appropriateness of the questionnaire, it was sent to the participants who agreed to participate. There were firms and entities that declined to participate and this resulted in the small sample and response rate. The content of the questionnaire includes sensitive information relevant to their methodologies and their confidentiality and non-response should be respected. The small number of firms involved in audits of listed companies in South Africa was one of the main limitations of this research. The other major limitation was the time it took to follow up the responses and record the information. The results from the questionnaire were categorized, coded, analysed and interpreted. The comparison between the frequencies in literature and the responses received from the practitioners were compared to identify any consistencies in materiality, risk and other associated benchmarks

5.2 SAMPLING PROCEDURE

5.2.1 Identifying the target population

The data of all auditors as per Johannesburg Stock Exchange information on 28 February 2010 were obtained and summarized per audit firm. Refer to Table 5-1 for the firms selected, based on their number of listed clients and experience. The above-mentioned firms are the highest-profile firms with regard to their exposure to the market and they were included in the sample as having the largest exposures and being in the public domain.

The selection criteria for the firms were based on two different sampling methods. The population was ranked by highest number of listed audit client engagement to the lowest. The sample was stratified to include all the big four firms. The remainder of the sample was systematically selected. Audit firms with up to 0.5% of the total number of clients based on their audit exposure and the number of listed companies in their portfolios were included in the selection as indicated in Table 5-1.

5.2.2 Data collection method used

The final questionnaire was prepared, based on the Likert scale with a dimension of five dimensions and the ISAs. The data collection method comprised of two phases.

For the first phase an interview was conducted where the questionnaire was discussed and completed by the firm afterwards. For the second phase the questionnaires were sent out and received per e-mail. Outstanding questionnaires were followed up with the relevant firms and e-mailed back. The empirical study was extended and updated in 2013 by requesting three additional firms, based on the number of listed clients, to complete the questionnaire. The results of the adjusted summary did not indicate any significant changes from the prior results. The reason for this can be attributed that most auditing standards were effective since 15 December 2009.

5.2.3 Mixed method approach

Discussions with statistical experts suggested that a sample of less than 30 items would not result in a meaningful quantitative statistical approach. The research should thus be based on quantitative non-parametric and qualitative coding research due to the sample size being less than 30 firms available to respond to the questionnaire. The data collected from the Johannesburg Stock Exchange indicated that only 24 firms were involved in the audit of listed companies.

5.2.4 Sample size and selection

It is believed that the following parties play a vital role in the auditing profession and, as such, were selected for completion of the questionnaire:

- Technically qualified partners/directors/managers of auditing firms with listed companies in their client portfolios (nine participants),
- University lecturers of SAICA-approved universities (three participants).

Due to the fact that the population consisted of only 24 firms with listed clients and the population less than 30, a quantitative non-parametric approach was followed in the empirical research and with the interpretation of results. Firm names were sorted alphabetically and were replaced by a firm number. The results are as follows:

- Questionnaires were sent to 78% of listed company auditors.
- 75.5% directly or indirectly completed a questionnaire.

Firm number 30 was represented by an ex-director now in the Academia at a South African University.

Table 5-1 Sample of audit firms selected by firm number

Ranking	Number of clients	% of listed clients	Cumulative total
1	86	21.20%	21.20%
2	78	19.20%	40.40%
3	66	16.30%	56.70%
4	24	5.90%	62.60%
Systematically selected, every second firm up to a maximum of five, based on number of clients which represent above 0.5% of number of clients			
6.	23	5.70%	68.20%
8	16	3.90%	72.20%
10	9	2.20%	74.40%
12	4	1.00%	75.40%
14	3	0.70%	No response
16	2	0.50%	75.90%
Source: JSE Limited website (Listed companies as on 28 February 2010)		78% of top 16 firms	97.04% of listed clients

It is concluded from the responses and number of firms approached that the sample selected, for auditors responsible for listed companies on the JSE database on 28 February 2010, appears to be sufficient, as the sample is represented as follows:

- Nine out of 24 firms were included, which equates 38% of the number of firms.
- Audit firms responsible for 308 out of 408 listed clients, which equates 75.5% of the auditors with listed audit clients is represented in this sample.

5.3 ANALYSIS OF DATA OBTAINED AND COMMENTS FROM PARTICIPANTS

The results of the questionnaire and responses were accumulated and are attached as Annexure 15 of the dissertation. The responses were analysed, coded and categorized per topic and possible issues in Annexures 16 to 27, Table 5-2 to 5-8 and are also graphically illustrated in Figures 5-1 to 5-62 below.

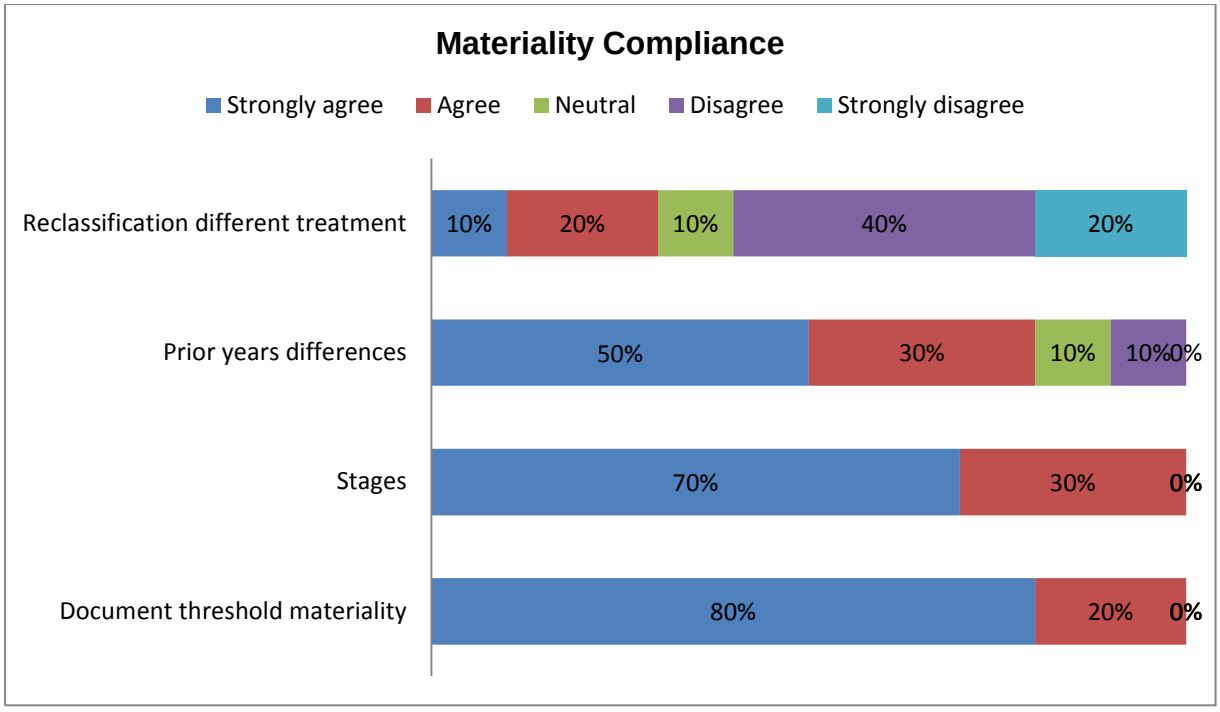
The responses from the questionnaire were categorized per issue on stacked bar charts per the five point scale as listed on the left-hand side below. The individual elements per statement were represented in pie charts to indicate the responses grouped in aggregate as listed on the right-hand side below.

Responses per questionnaire and bar chart	**Aggregate for pie chart**
"Strongly agree"	"Yes".
"Agree"	"Yes".
"Neutral"	"Neutral"
"Disagree"	"No".
"Strongly disagree"	"No".

5.3.1 Materiality compliance – MC Compliance

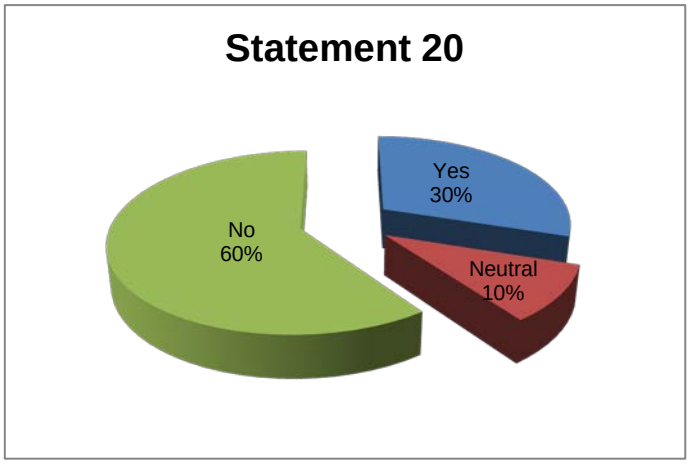
Figure 5-1 is an overview of stacked bar charts as per coding and category, and responses per the Likert 5 point scale regarding the interpretation of materiality compliance. The responses per category and links to the statements are summarized in Annexure 16 attached.

Figure 5-1 Materiality compliance



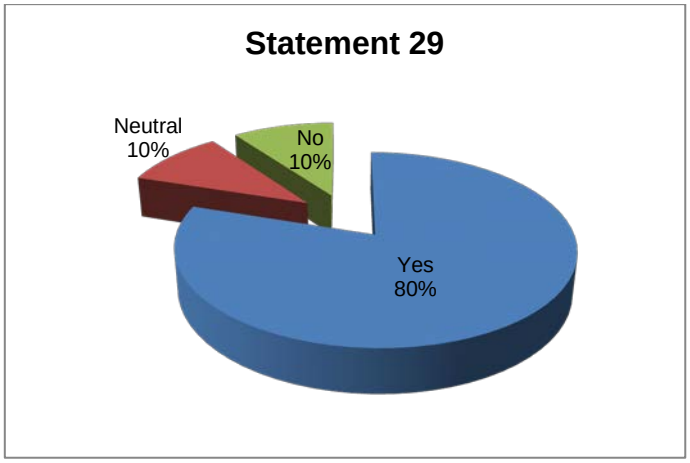
The following pie charts are categorized per responses in 3 scales as aggregated in paragraph 5.3 above. The sequence of the statements and pie charts is based on the sequence of the categories as listed in Figure 5-1 above. The responses per category and links to the statements are summarized in Annexure 17 attached.

Figure 5-2 Statement 20 - Reclassification errors are treated qualitatively



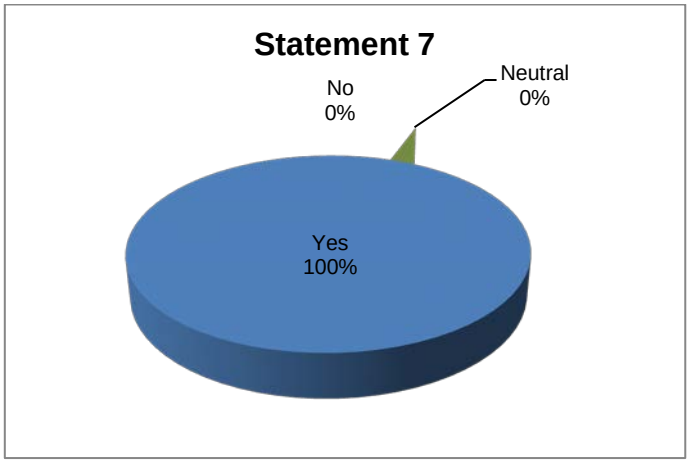
ISA 450 (2012) par A15 – based on the responses and conclusions for statements 16, 17 and 19, reclassification errors are part of qualitative materiality considerations as indicated in Chapter 3 and such factors should be considered. It, appears however, as if many of the respondents were not clear on this matter.

Figure 5-3 Statement 29 - Prior year errors should be considered



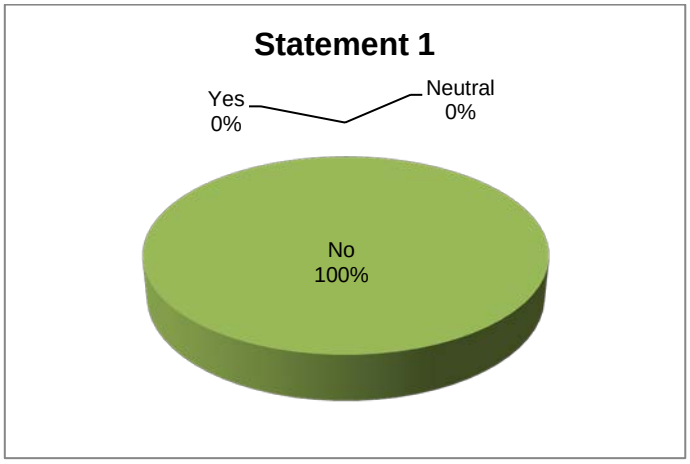
80% of respondents are in compliance with ISA 450 (2012) par 11b.

Figure 5-4 Statement 7 - Materiality should be considered through all stages of the audit.



The responses indicate 100% compliance as suggested by ISA 320 (2012) par 12. The concern is that statement 6 indicated that 50% of the respondents suggested that "materiality should only be considered at financial statement level", while the responses for statement 7 indicate that 100% agreed that "materiality should be considered through all stages of the audit". The responses appeared to contradict one another and indicated that the concern is interpretation of the statement and IASs. The contradiction is further supported by reading the conclusion of statement 25 in combination with this conclusion.

Figure 5-5 Statement 1 - A threshold or cut-off point for materiality calculated but not documented

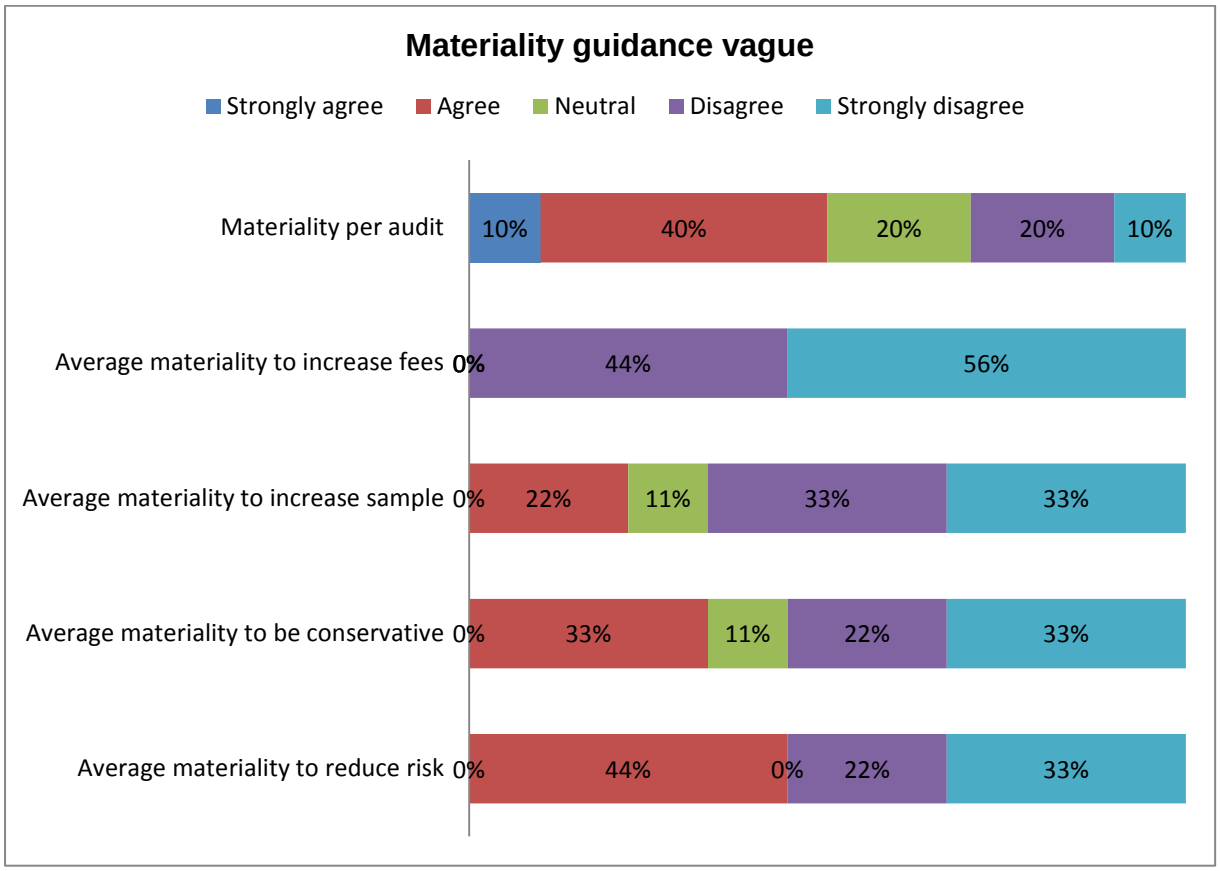


All respondents believed that materiality should be documented. This is 100% compliant with ISA 320 (2012) par 14 and ISA 230 par 8 – 11 and A6 to A8.

5.3.2 Materiality compliance – MC Guidance vague

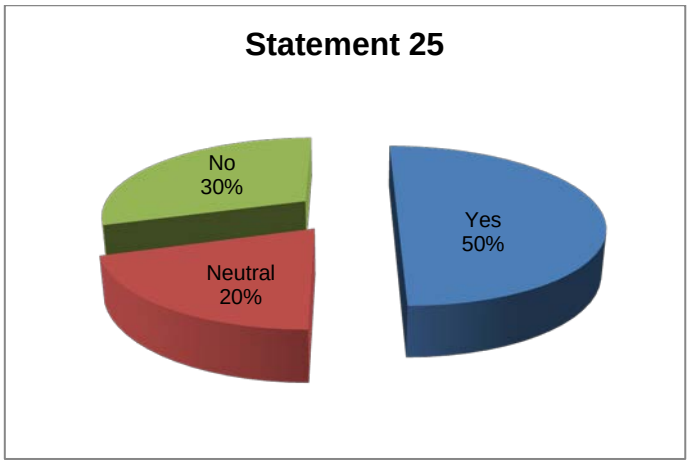
Figure 5-6 is an overview of stacked bar charts as per coding and category, and responses per the Likert 5 point scale regarding the interpretation of materiality compliance. The responses per category and links to the statements are summarized in Annexure 17 attached.

Figure 5-6 Materiality guidance vague



The following pie charts are categorized per responses in 3 scales as aggregated in paragraph 5.3 above. The sequence of the statements and pie charts is based on the sequence of the categories as listed in Figure 5-6 above. The responses per category and links to the statements are summarized in Annexure 17 attached.

Figure 5-7 Statement 25 - Materiality should be one Figure



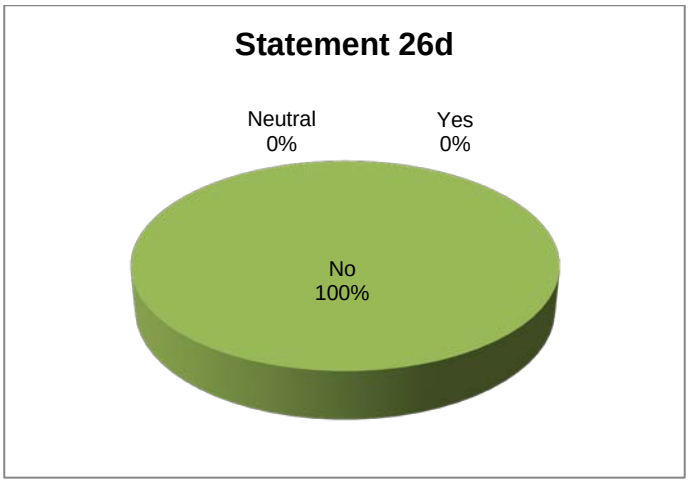
ISA 320 (2012) suggests that overall planning materiality should be considered and thus performance materiality may be used for specific balances and classes of transactions. Statements 6 and 25 indicated that performance materiality was not considered, as suggested in Chapter 3, as materiality is not an absolute amount.

Additional comments relevant to statement 25: “ISA 320 (2012) does allow you to use two different materialities, one for the balance sheet and one for the income statement; it depends on the type of organization”.

Additional comments on statement 25: “One Figure should be given for balance sheet and income statement, unless specific items require a lower materiality due to the nature thereof.” ISA 320 (2012) refers to financial statements and not to balance sheet and income statement as discussed in the comments above.

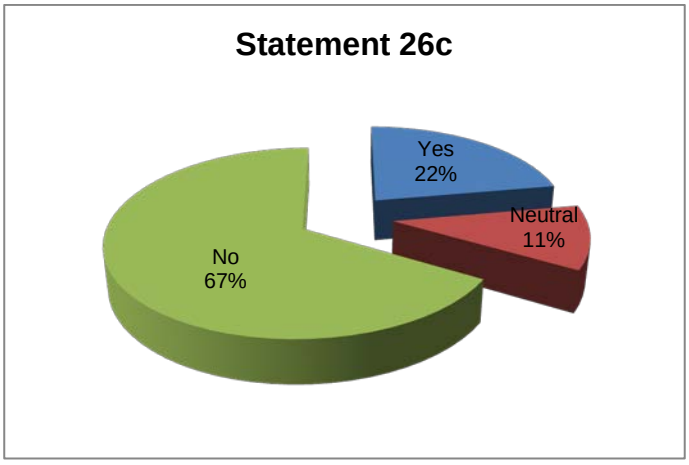
The concern is that the standard allows for these different materiality Figures and the interpretation and additional comments do not address these requirements.

Figure 5-8 Statement 26d - Average materiality – Increase audit fee



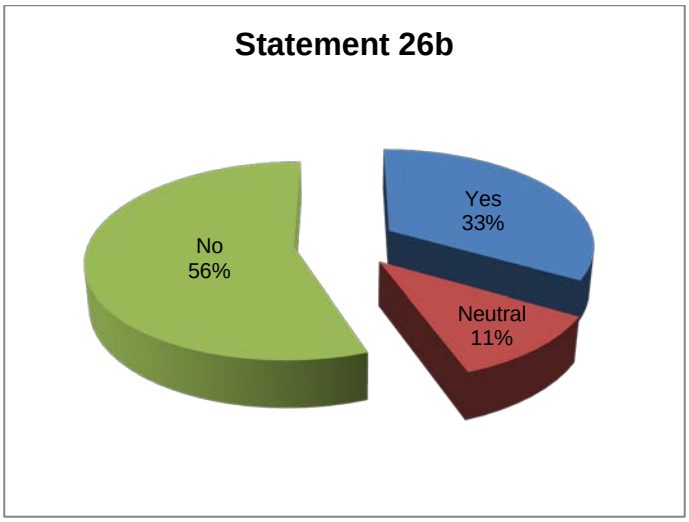
This indicates that a correlation between audit fees and ethics can be drawn, as 100% of respondents gave the ethical answer. The intention of this statement was to test the ethical level of repondents.

Figure 5-9 Statement 26 c - Average materiality – Increase sample



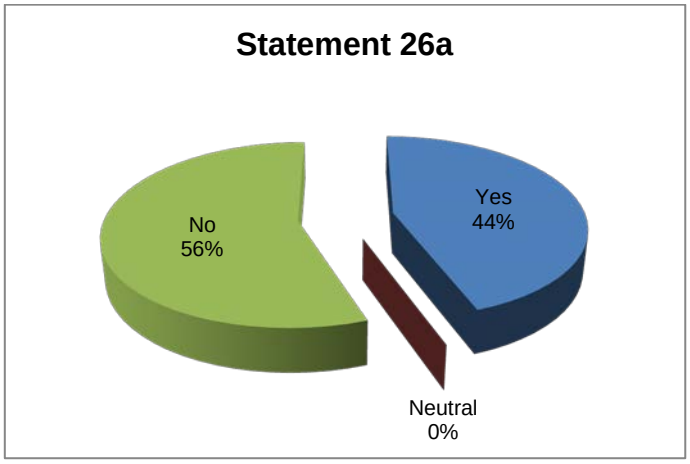
This issue is not specifically addressed in ISA 320 (2012) and thus the different interpretations and a lack of guidance exist. Additional comments on statement 26c: “Sample size should not drive materiality decisions, risk should.”

Figure 5-10 Statement 26b - Average materiality – To be conservative



This issue is not specifically addressed in ISA 320 (2012) and thus the different interpretations and a lack of guidance exist.

Figure 5-11 Statement 26a - Materiality Average of various groups of balances - To reduce risk



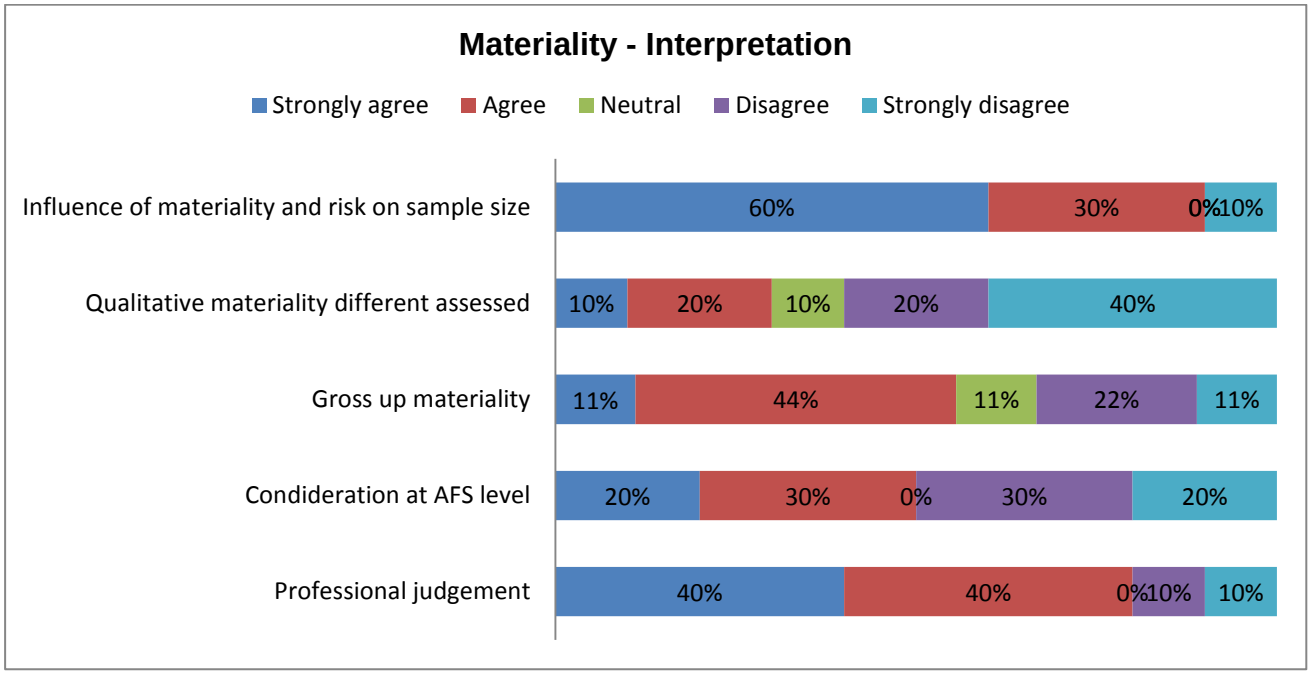
This issue is not specifically addressed in ISA 320 (2012) and thus different interpretations and a lack of guidance exist.

5.3.3 Materiality compliance – MC Interpretation

Figure 5-12 below is an overview of stacked bar charts as per coding and category and responses per the Likert 5 point scale regarding the interpretation of materiality

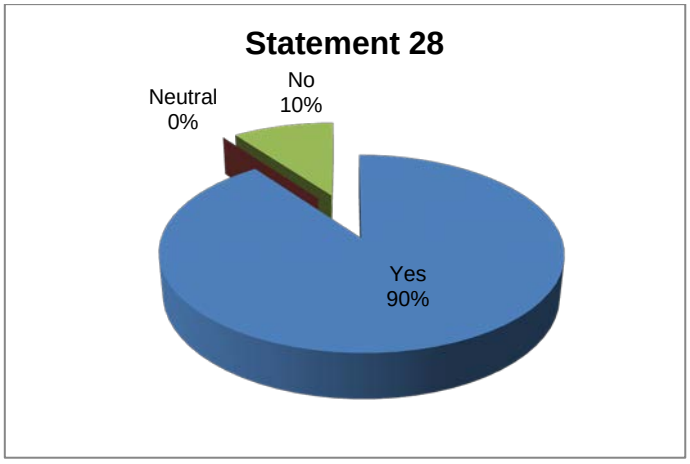
compliance. The responses per category and links to the statements are summarized in Annexure 18 attached.

Figure 5-12 Materiality - Interpretation



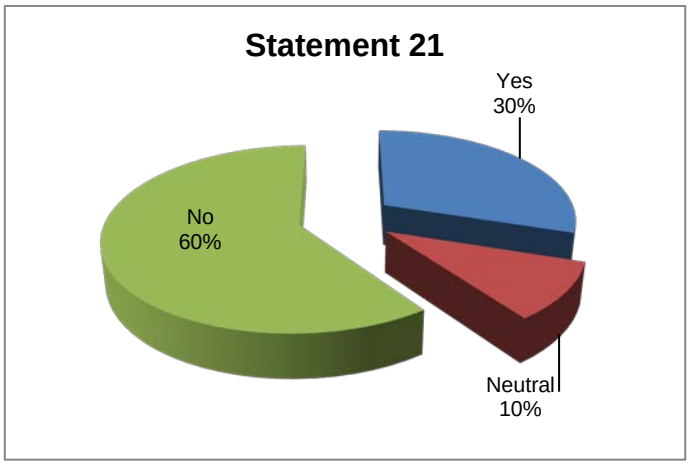
The overview of pie charts below are categorized per responses in 3 scales as aggregated in paragraph 5.3 above. The sequence of the statements and pie charts is based on the sequence of the categories as listed in Figure 5-12 above. The responses per category and links to the statements are summarized in Annexure 18 attached.

Figure 5-13 Statement 28 - Materiality and audit risk/fraud risk influences sample sizes



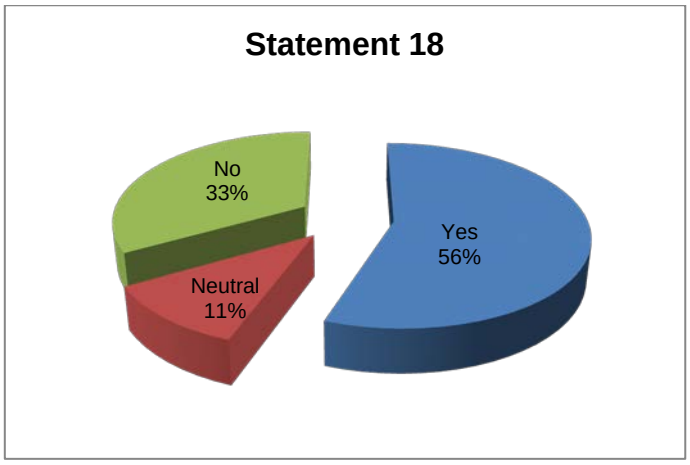
There is a school of thought that considers fraud risk as an element of inherent risk. 90%, however, responded positively to suggest that materiality, risk and sampling are related. Additional comments on statement 28: “Fraud should not be considered when looking at sample sizes. Sample sizes are determined as a result of inherent risk and control risk. Fraud risk is not an element of inherent risk and if there is an indication of fraud, fraud procedures should be performed for the relevant assertion of the account.”

Figure 5-14 Statement 21 - Qualitative materiality is based on different materiality ranges.”



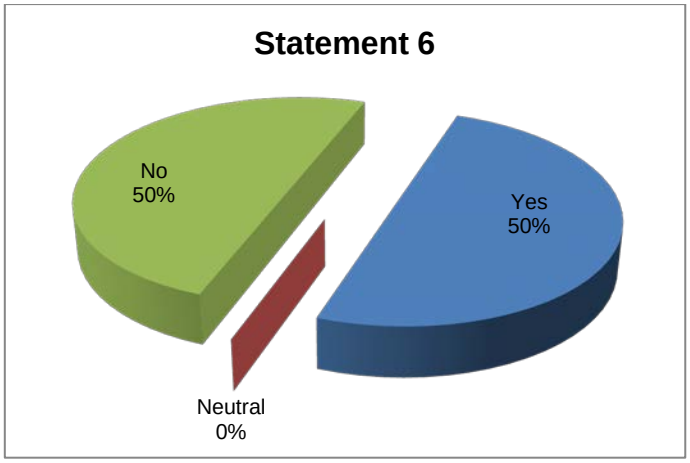
See statement 20 in Figure 5-2 above and ISA 450 (2012) par A15. Based on the responses and conclusions for statements 16, 17 and 19, reclassification errors are part of qualitative materiality considerations as indicated in Chapter 3 and such factors should be considered. It appears, however, as if many of the respondents were not clear on this matter. Responses indicated that different interpretations exist due to a lack of guidance on quantitative benchmarks.

Figure 5-15 Statement 18 - Materiality may be grossed up and annualized



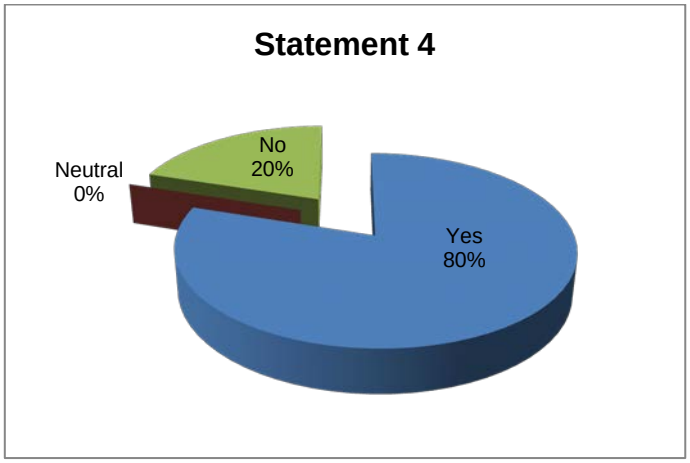
There is a lack of guidance and ISA 320 (2012) does not mention grossing up or annualizing amounts to determine materiality. From the responses, it also appears as if there is uncertainty in the profession regarding the grossing up of materiality.

Figure 5-16 Statement 6 Materiality only considered at financial statement level



ISA 320 (2012) par 2 to 6 refer to the financial statement but par 10 suggests and requires that for specific classes of transactions and account balances or disclosure, the auditor should determine performance materiality. The concern is that the terms “classes of transactions and account balances” are not clearly defined in the ISAs and although the 50% yes-responses indicate non-compliance with the interpretation of the standard, it does not simplify the matter.

Figure 5-17 Statement 4 - Apply professional judgement when determining materiality

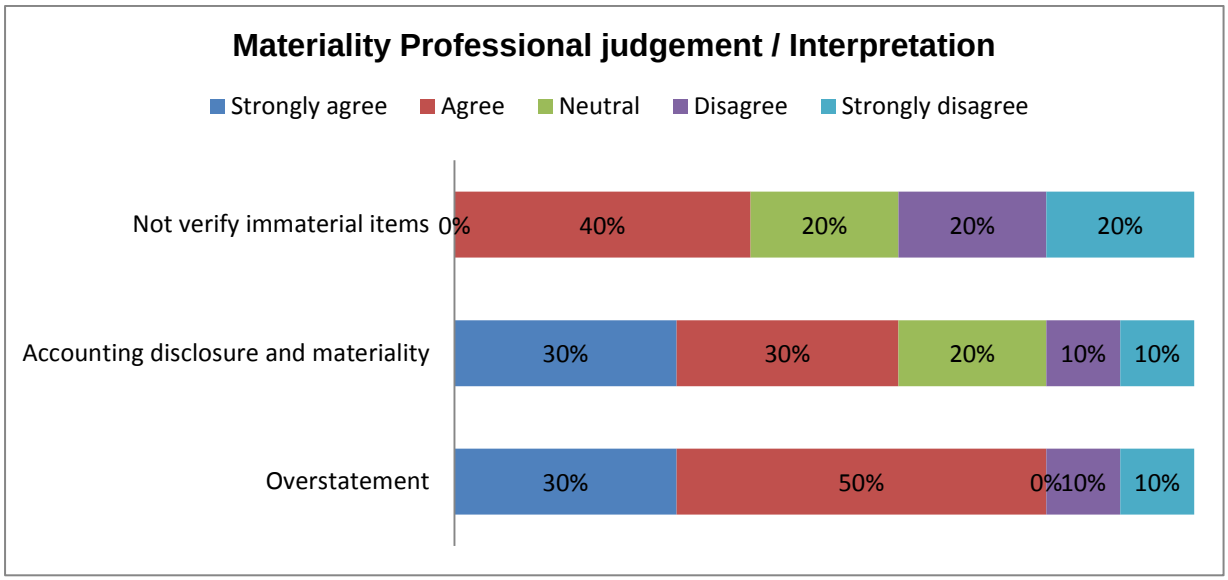


See comments on statement 3 (ISA 320 (2012) par A7).

5.3.4 Materiality compliance – MC Professional judgement/Interpretation

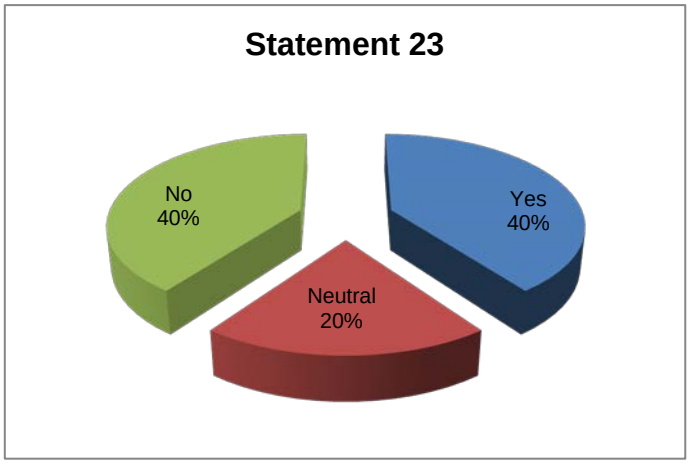
Figure 5-18 is an overview of stacked bar charts as per coding and category and responses per the Likert 5 point scale, regarding the interpretation of materiality compliance. The responses per category and links to the statements are summarized in Annexure 19 attached.

Figure 5-18 Materiality professional judgement / Interpretation



The pie charts below are categorized per responses in 3 scales as aggregated in paragraph 5.3 above. The sequence of the statements and pie charts is based on the sequence of the categories as listed in Figure 5-18 above. The responses per category and links to the statements are summarized in Annexure 19 attached.

Figure 5-19 Statement 23 - All immaterial balances should not be verified



40% of respondents agreed that immaterial items should not be verified, which is a major concern, as the sum of all immaterial balances may add up to amounts greater than materiality. The concern is thus that clarity is required to define or explain what is meant by classes of transactions. This interpretation may result in a risk to the auditor that interpreted all those balances as trivial.

Figure 5-20 Statement 17 – Accounting disclosure and materiality

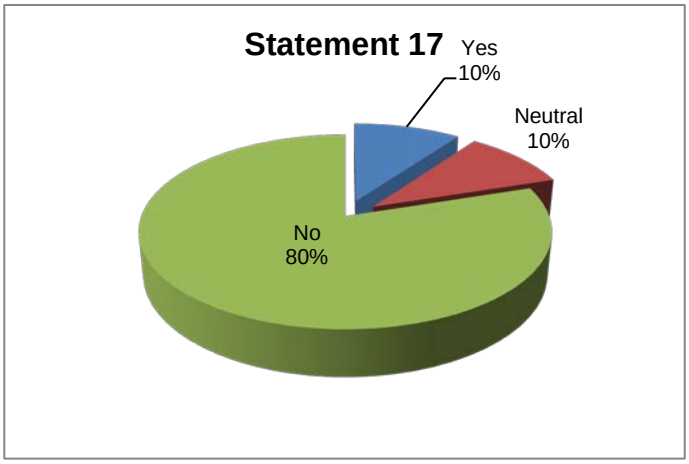
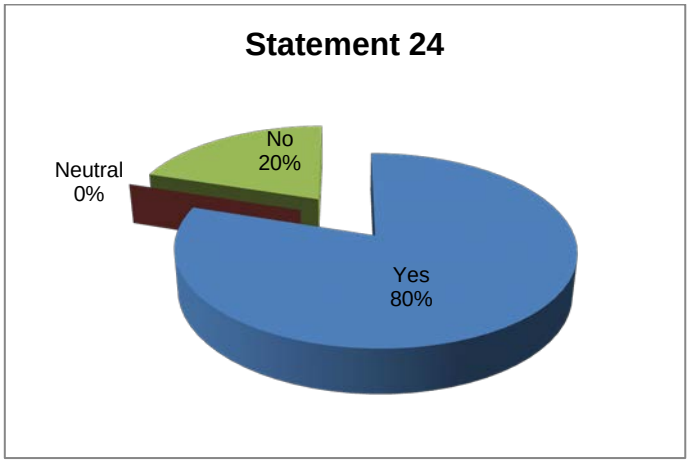


Figure 5-21 Statement 24 - Material misstatement, overstatement and understatement

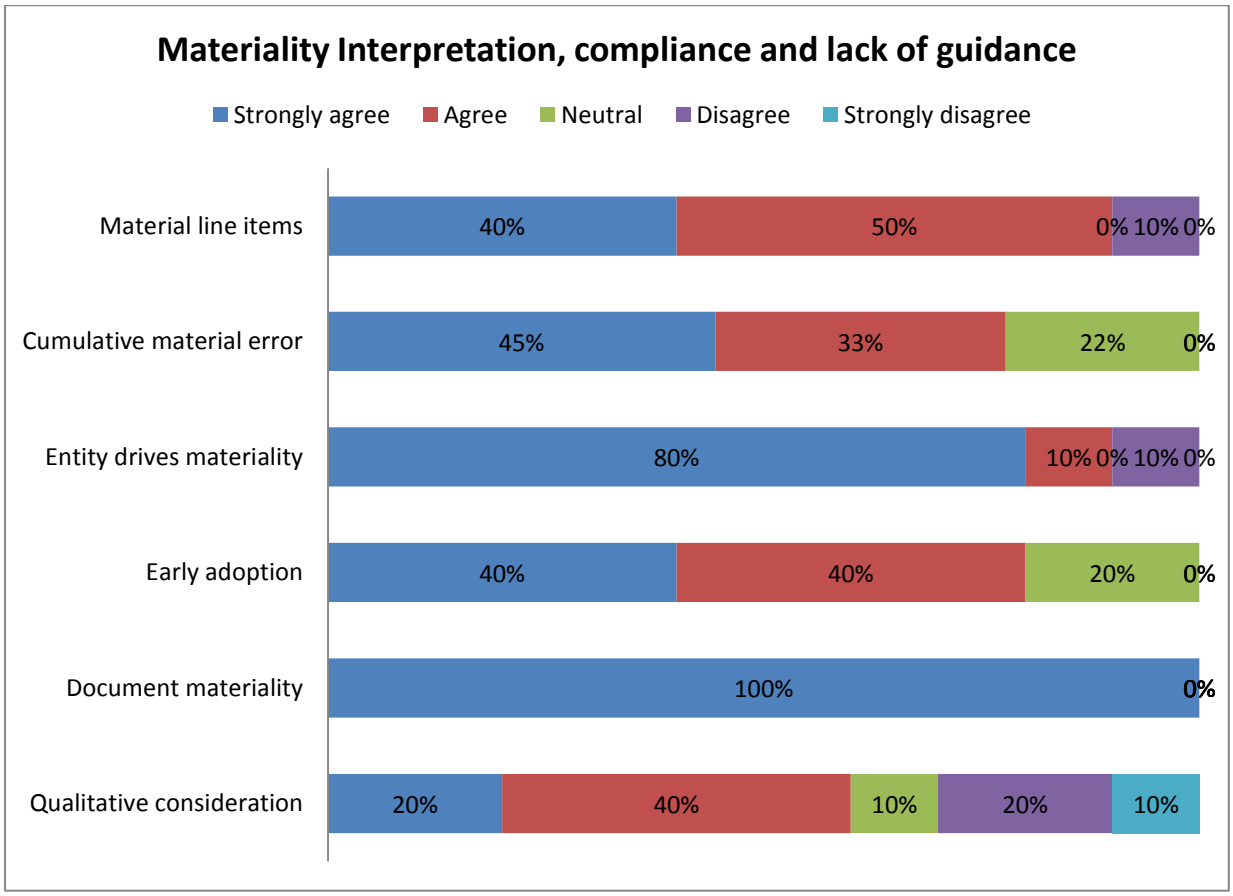


The ISAs refer to material misstatements, and over- and understatements are not recognised in the standards. The principle of the above is due to the direction of testing for assertions. Schools of thought in the accounting profession still apply to this principle. In a specific cycle the over- and understatement theory may be valid as there are different assertions for movements and balances where one audit procedure may compensate for another. The example of completeness of income is a relevant assertion while completeness of accounts receivable is not a relevant assertion. Material misstatement is interpreted in practice as directional testing for overstatement of income and understatement of accounts receivable.

5.3.5 Materiality compliance – MC Interpretation, compliance to standards

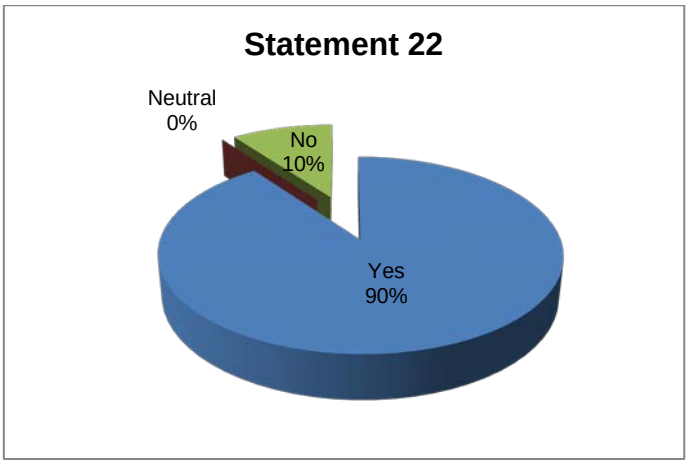
The overview of stacked bar charts in Figure 5-22 below is summarized per coding and category and responses per the Likert 5 point scale, regarding the interpretation of materiality compliance. The responses per category and links to the statements are summarized in Annexure 20, attached.

Figure 5-22 Materiality - Interpretation, compliance to standards



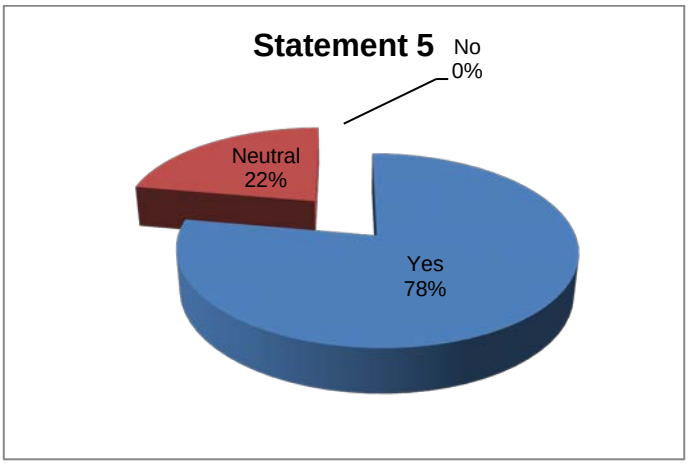
The following is an overview of pie charts categorized per responses in 3 scales as aggregated in paragraph 5.3 above. The sequence of the statements and pie charts is based on the sequence of the categories as listed in Figure 5-22 above. The responses per category and links to the statements are summarized in Annexure 20 attached.

Figure 5-23 Statement 22 - All material items should be verified



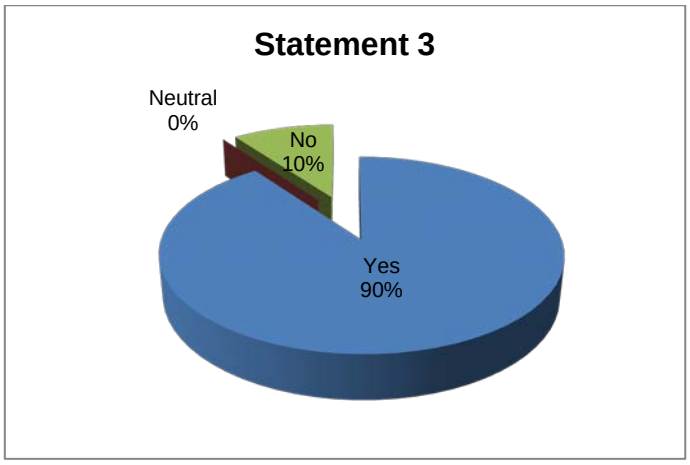
No clear understanding exists in the audit environment on what is meant by classes of transactions. All operating expenditure can be classified as one class of transactions and thus it can be concluded that verification has been performed. Another thought process might be that each line item has different characteristics and this is why it is classified separately. In such an instance more material balances may exist, resulting in more substantive tests being performed.

Figure 5-24 Statement 5 - The cumulative effect on many trivial errors may add up to be material



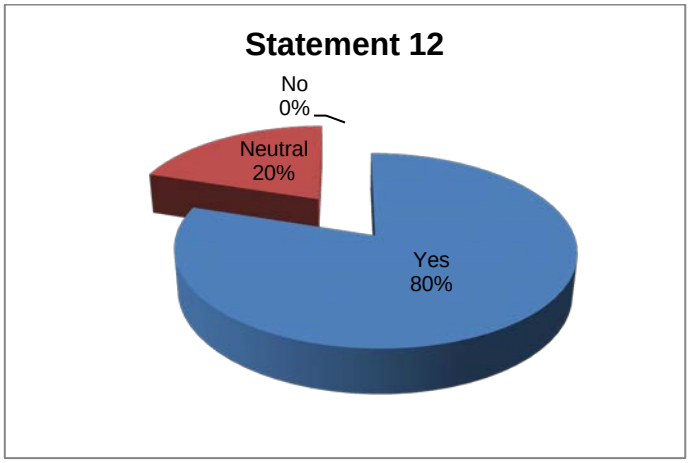
ISA 450 (2012) par 5 has no requirement to accumulate clearly trivial errors. 78% of the positive responses were based on interpretation in the context of the standard.

Figure 5-25 Statement 3 – Materiality driver per entity type



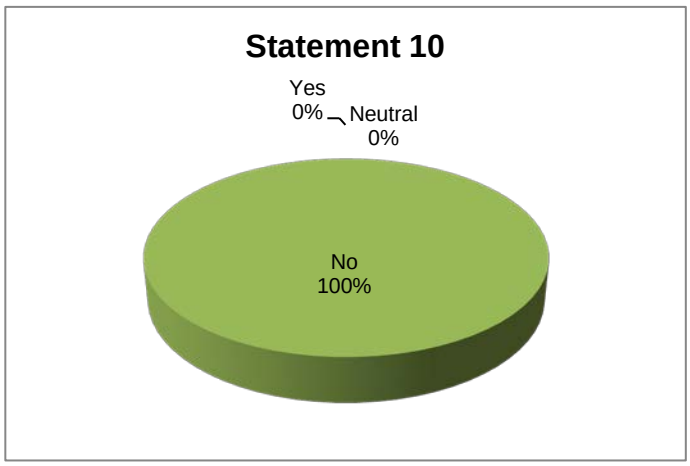
ISA 320 (2012) par 11 suggests that performance materiality should be determined and A10 and A12 further suggest that more than one "class of transaction or account balances" exist and would reduce the probability of uncorrected and undetected misstatements. Although there is no guidance on materiality drivers, 90% of the respondents agreed with the statement.

Figure 5-26 Statement 12 Effective date for ISA 320 (2012) and ISA 450



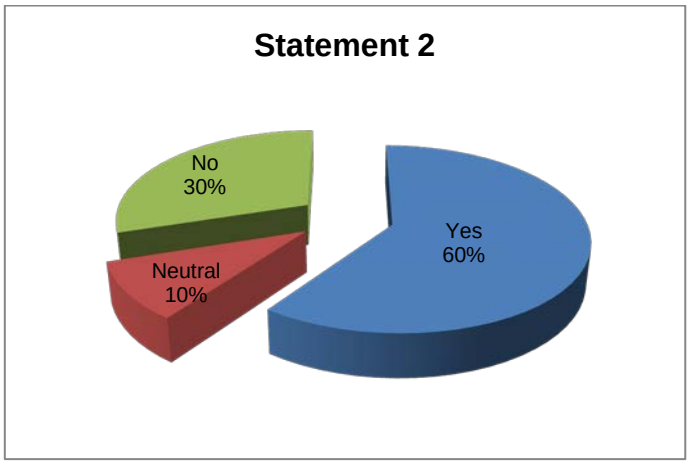
From the 80% positive response it is implied that these statements can be adopted early.

Figure 5-27 Statement 10 - Materiality needs to be considered, but is no requirement to document.



This is 100% in compliance with ISA 320 (2012) par 14 a. This statement is related to statement 1 with the same response.

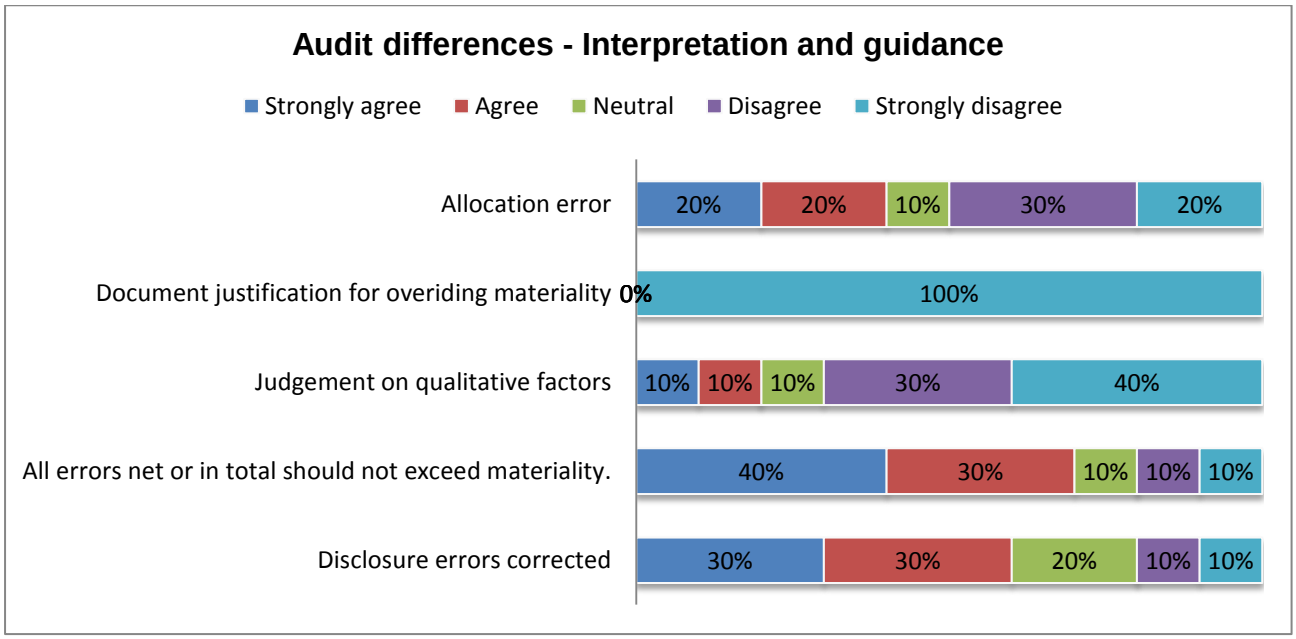
Figure 5-28 Statement 2 – Primary qualitative characteristics for materiality threshold



5.3.6 Audit differences - AD Interpretation and guidance

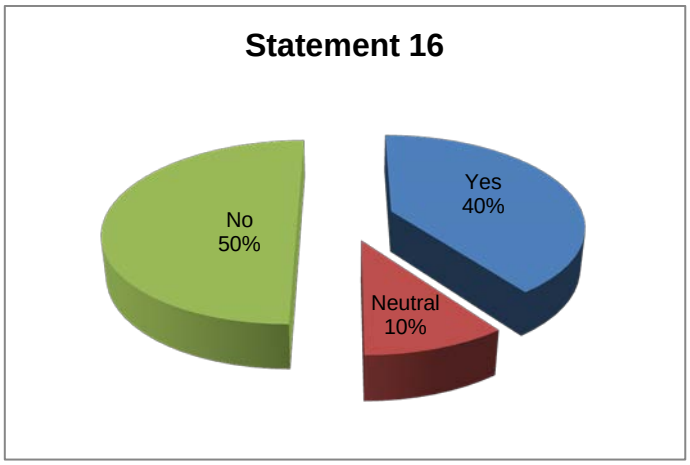
This is an overview of stacked bar charts as per coding and category, and responses per the Likert 5 point scale regarding the interpretation of materiality compliance. The responses per category and links to the statements are summarized in Annexure 21 attached.

Figure 5-29 Audit differences and aggregate - Interpretation and guidance



The following is an overview of pie charts categorized per responses in 3 scales as aggregated in paragraph 5.3 above. The sequence of the statements and pie charts is based on the sequence of the categories as listed in Figure 5-29 above. The responses per category and links to the statements are summarized in Annexure 21 attached.

Figure 5-30 Statement 16 - Any disclosure allocation error above materiality should be adjusted.



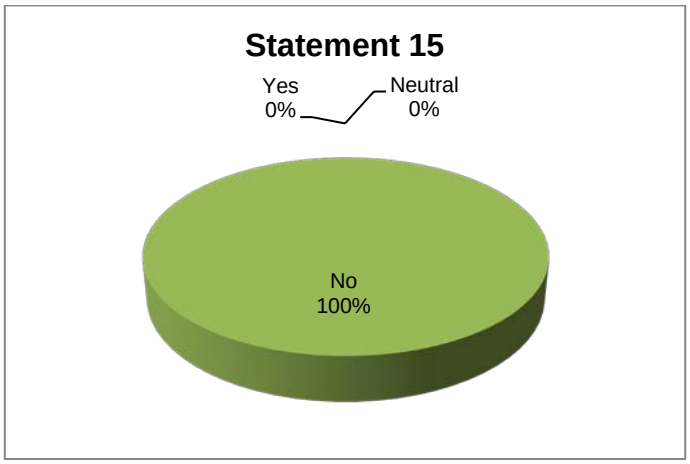
ISA 450 (2012) par A15 suggests that the misstatement is not material if the impact on AFS is considered as a whole. Various other examples are given, which suggest that the impact is not material in relation to the size of the line items.

If there is no impact on the income statement key ratios, then a misclassification would not be considered material.

Additional comment on statement 16: *"Not necessarily, again refer to the arguments above but if a classification only affects balance sheet items and never hits profit and loss and below say 5% of a threshold it is not material. This is in line with SAB 99 of the SEC – SEC Staff Accounting Bulletin Topic 001 (M. Materiality)." According to the respondents it is much more difficult to apply materiality to qualitative than to quantitative disclosures"*.

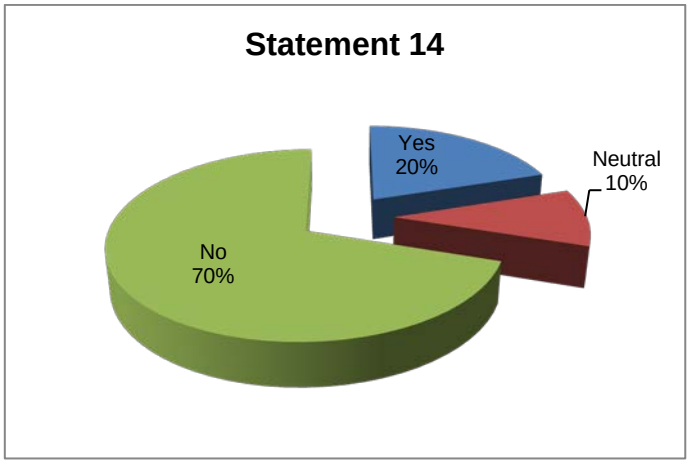
Misclassification could be a result of the incorrect application of IFRS. It may be concluded that this is a probable weakness in the standard and could be a risk for the auditors to accept those material misclassifications.

Figure 5-31 Statement 15 – No need to document the justification and conclusion for overriding final materiality



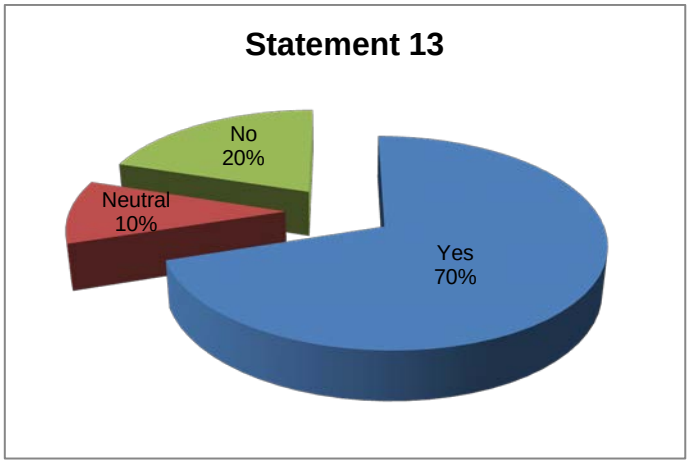
ISA 450 (2012) par 10 and 11 suggest that materiality should be re-assessed and the circumstances should be considered. 100% agreed that the justification and conclusion for overriding materiality should be documented.

Figure 5-32 Statement 14 When an auditor concludes that the misstatement is material, the standard implies that an auditor should use his professional judgement based on qualitative factors and his knowledge of the client, and still issue an unqualified opinion based on qualitative considerations.



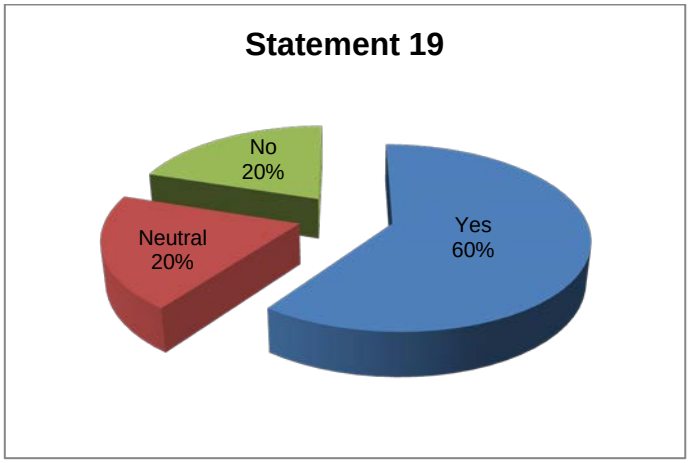
From the 70% of negative responses it was concluded that material misstatements should not lead to an unqualified opinion.

Figure 5-33 Statement 13 - The auditor should assess whether the aggregate of unrecorded misstatements that have been identified during the audit is material.



Gloss (2012) does not clearly define 'Aggregate' and the conclusion that can be drawn from the 70% "Yes" responses is that all errors, net or in total should not exceed materiality.

Figure 5-34 Statement 19 - Disclosure errors above materiality should be considered

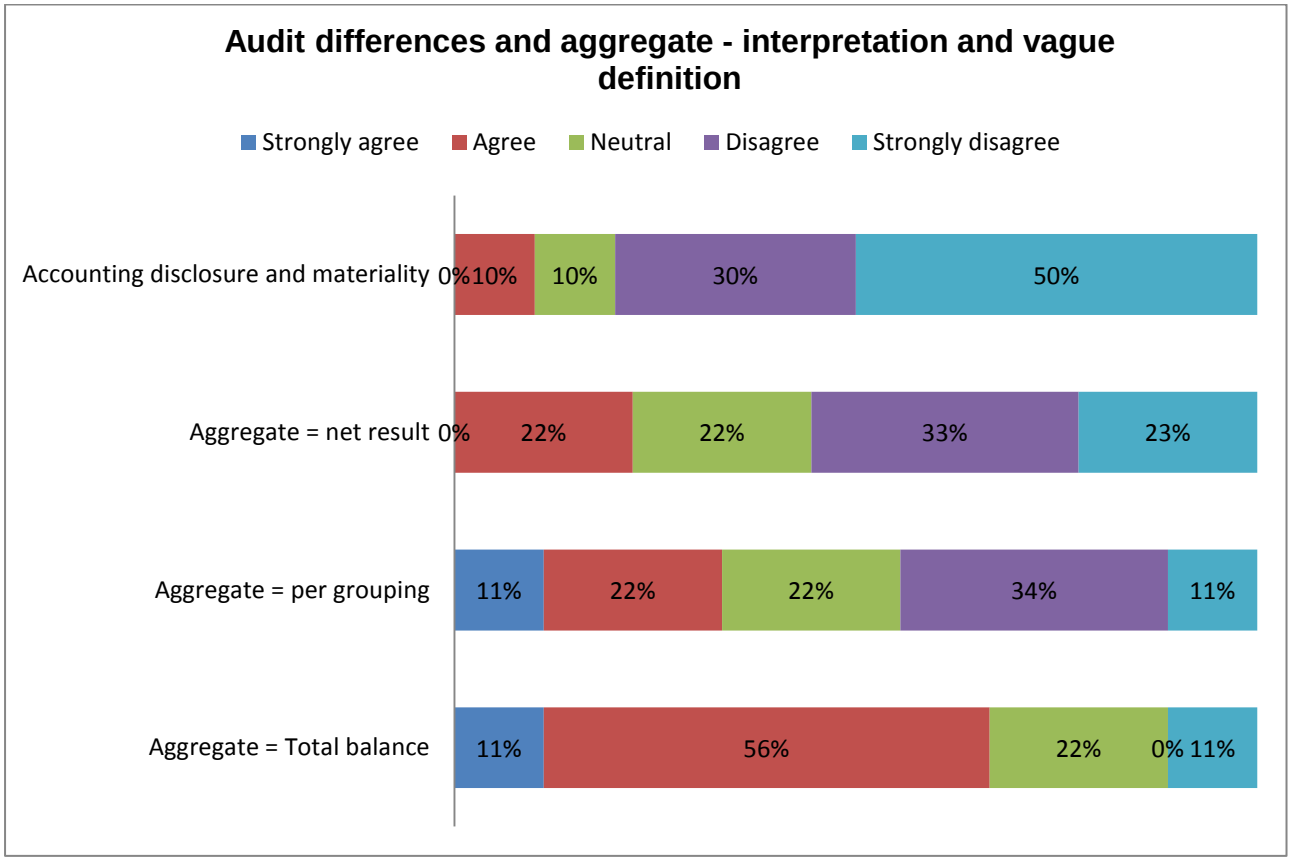


The responses above indicate that the respondents are uncertain about the requirement of ISA 450 (2012) par A 15 as discussed in statements 16 and 17. The conclusion that can be drawn from the responses above is that there is a lack of proper guidance, which is reflected in the different interpretations by respondents.

5.3.7 Audit differences - AD Interpretation and vague definitions

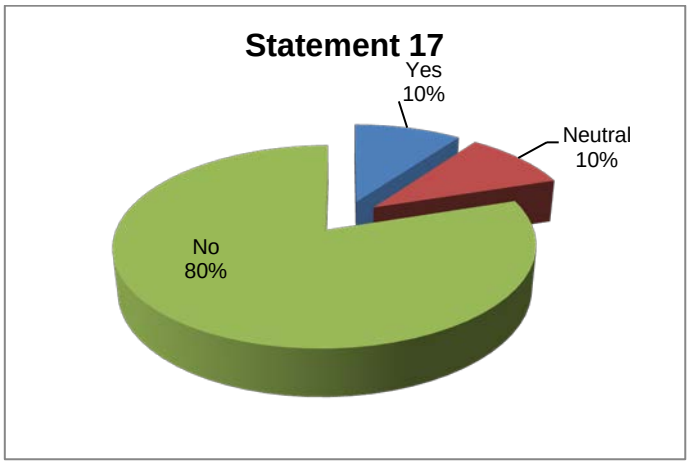
The following Figure is an overview of stacked bar charts as per coding and category, and responses per the Likert 5 point scale regarding the interpretation of materiality compliance. The responses per category and links to the statements are summarized in Annexure 22 attached.

Figure 5-35 Audit differences and aggregate - interpretation and vague definition



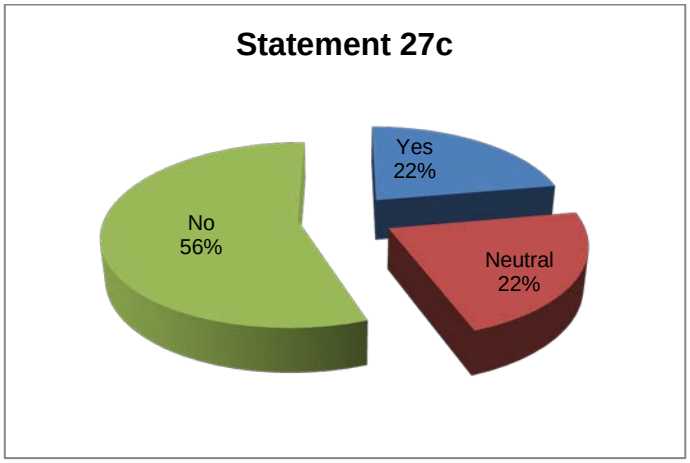
The following overview of pie charts are categorized per responses in 3 scales as aggregated in paragraph 5.3 above. The sequence of the statements and pie charts is based on the sequence of the categories as listed in Figure 5-35 above. The responses per category and links to the statements are summarized in Annexure 23 attached.

Figure 5-36 Statement 17 - If an adjustment is not material in relation to the financial statements, but material due to disclosure requirements in relation to a specific income statement line item, it should be ignored.



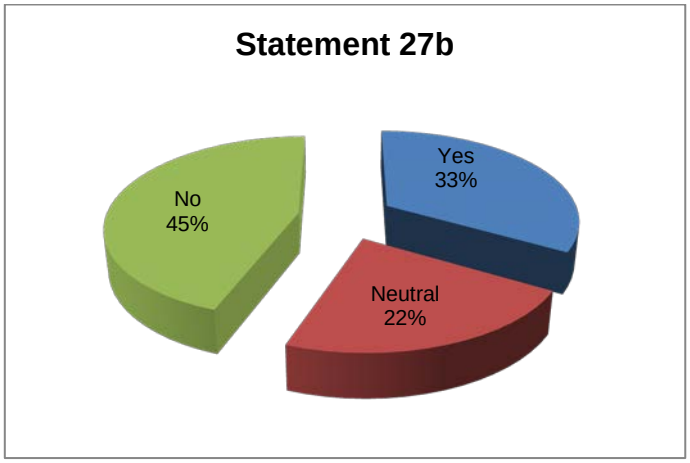
The 80% of negative responses contradicted the requirement of ISA 450 par A15 and the response as per statement 16 above. This might be attributed to the interpretation of the auditing standards due to a lack of guidance.

Figure 5-37 Statement 27c - In aggregate means "the net result of all balances"



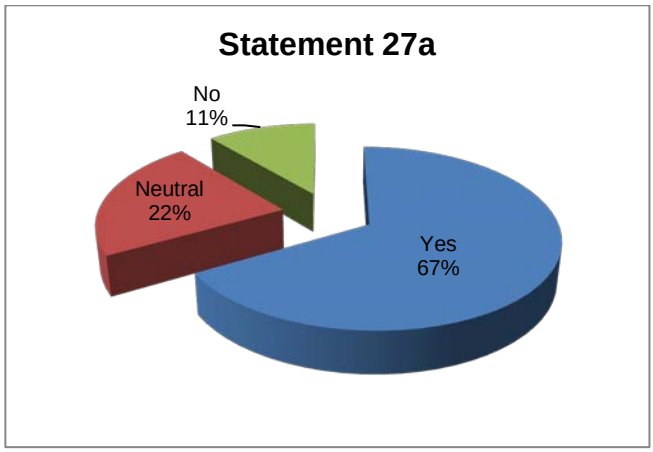
56% of the respondents disagreed with this definition and it can, therefore, not be used.

Figure 5-38 Statement 27b - In aggregate means "In total per assets, liabilities, income and expenses"



This issue is not specifically addressed in ISA 320 (2012) and thus the different interpretations and a lack of guidance exist. 45% of the respondents disagreed with this definition and it can, therefore, not be used.

Figure 5-39 Statement 27a - In aggregate means "in total per balance"



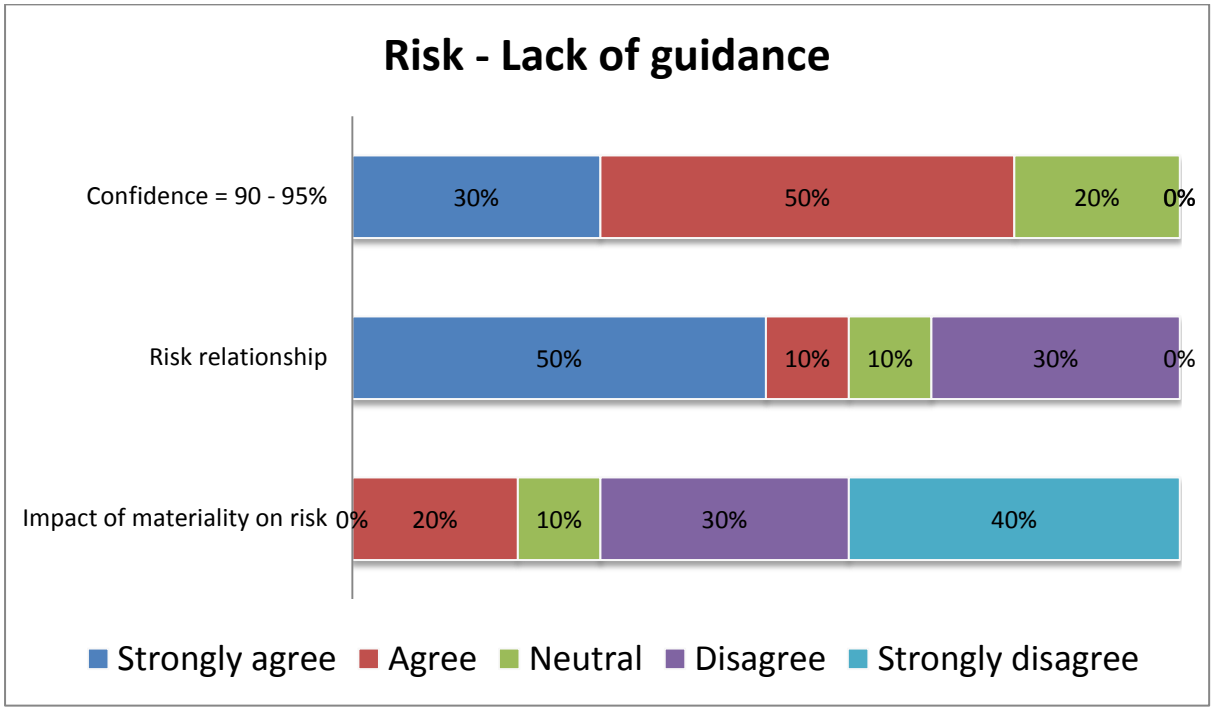
This issue is not specifically addressed in ISA 320 (2012) and thus the different interpretations and a lack of guidance exist. Statement 27a indicated positive responses of 67% and, based on these responses, the definition of "in aggregate" appears to be "in total per balance" and can thus confidently be used as a benchmark. Compared to the other definitions in statements 27b and 27c, the largest responses were negative percentages of 45% and 56% respectively. Statement 27a indicated positive responses of 67% and based on these responses the definition of "in aggregate" appears to be "in total per balance" and can thus

confidently be used as a benchmark. It is suggested that the possible intention for the definition by the standards setters may have been as indicated in statement 27a. “In aggregate” is not defined in the glossary of terms (Gloss (2012) and ISA 450 (2012) par 11). The definition for ‘aggregate’ is “in total per balance” as per statement 27a. 67 % of the responses agreed with this definition as a benchmark.

5.4 RISK – R INTERPRETATION AND LACK OF GUIDANCE

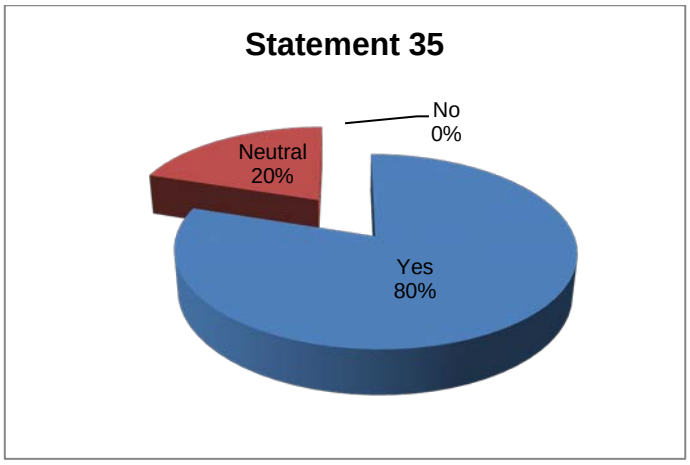
Figure 5-40 is an overview of stacked bar charts as per coding and category, and responses per the Likert 5 point scale regarding the interpretation of materiality compliance. The responses per category and links to the statements are summarized in Annexure 23 attached.

Figure 5-40 Risk - Lack of guidance



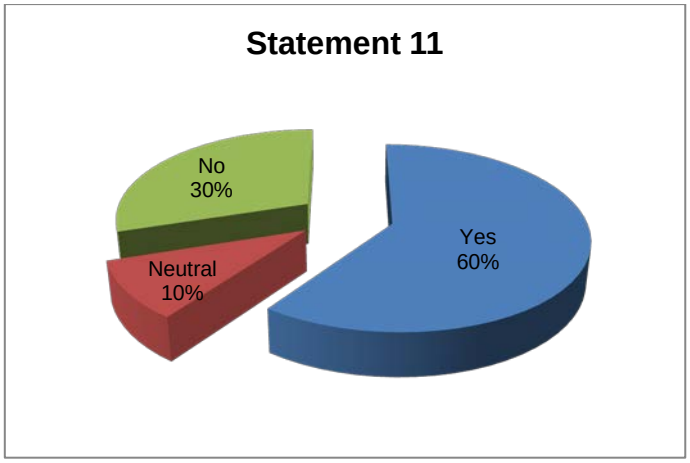
The sequence of the statements and pie charts below is categorized per responses in 3 scales as aggregated in paragraph 5.3 above based on the categories as listed in Figure 5-40 above. The responses per category and links to the statements are summarized in Annexure 23 attached.

Figure 5-41 Statement 35 - Confidence level 90% - 95%



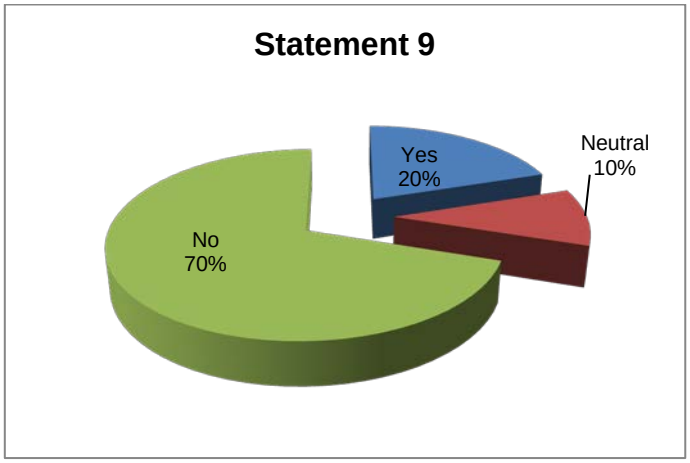
80% of the respondents applies the confidence level of 90 to 95% in the audit planning.

Figure 5-42 Statement 11 There is an inverse relationship between materiality and risk.



Additional comment 11 – the inverse relationship (materiality versus risk) is true in most cases. However, the auditor should also consider other factors like the users' expectations, demographics of the users, changes in the industry, etc. when determining materiality. This comment is in line with the consideration of qualitative and quantitative materiality at the same time.

Figure 5-43 Statement 9 - Materiality is an absolute amount and risk has minimal impact on determination.

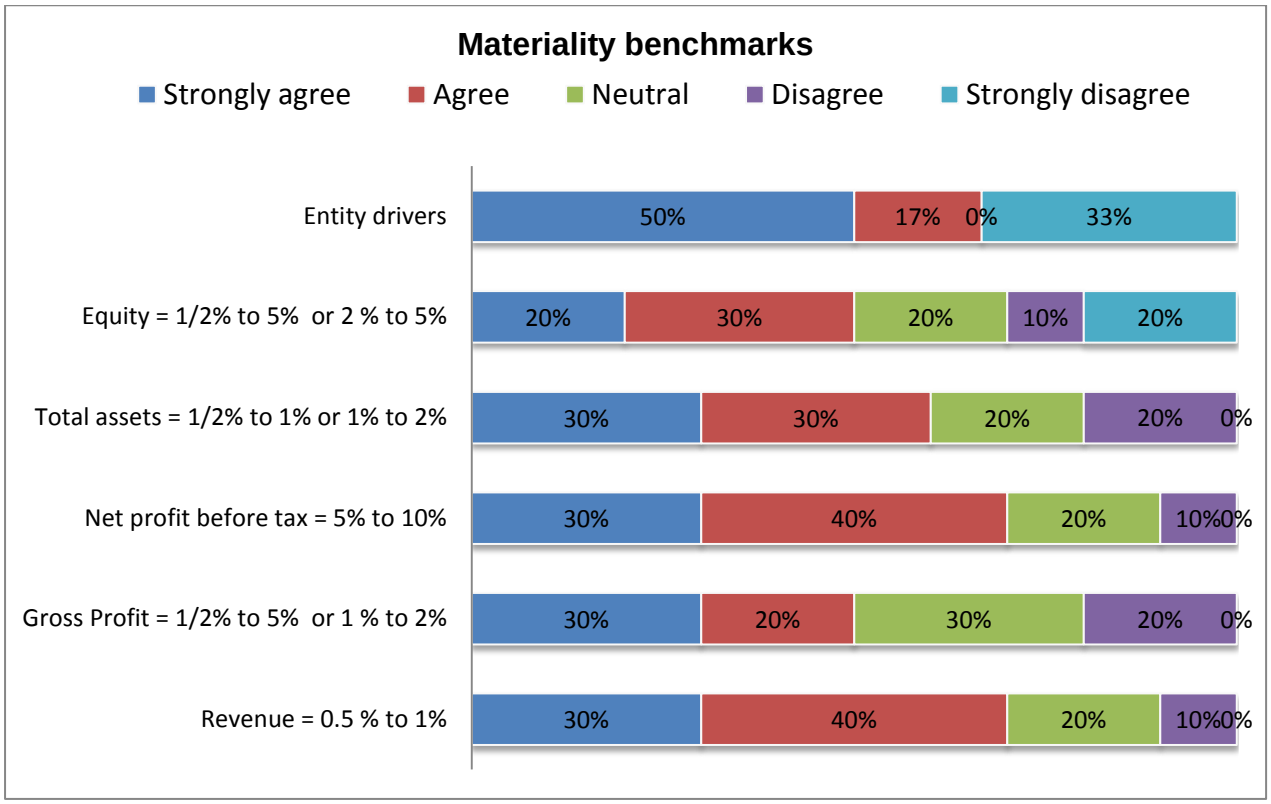


ISA 320 (2012) par 6 suggests that judgements are made relative to the size of the misstatement and it also refers to risk assessment and identification as part of the judgement. The conclusion that can be drawn from this suggestion is that 70% of the respondents agreed with the standard that risk has an impact on the determination of materiality. It is, however, a concern that 20% of the respondents apparently did not see the connection between risk and materiality. This concern highlights the complexity of materiality and risk consideration.

5.5 MATERIALITY COMPLIANCE – MB INTERPRETATION AND LACK OF GUIDANCE ON BENCHMARKS

Below is an overview of stacked bar charts as per coding and category and responses per the Likert 5 point scale regarding the interpretation of materiality compliance. The responses per category and links to the statements are summarized in Annexure 24 attached.

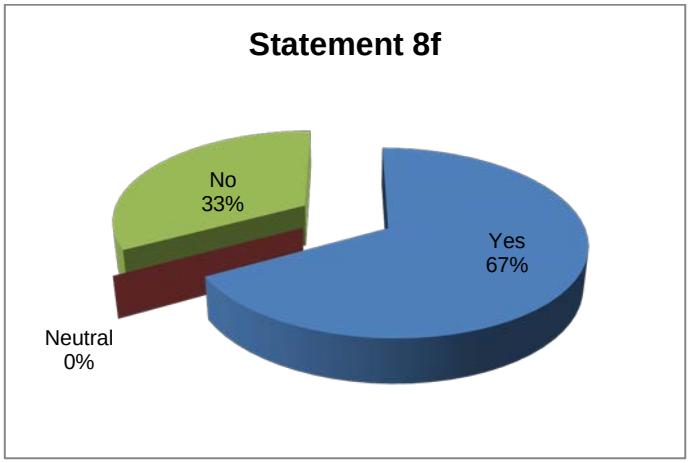
Figure 5-44 Materiality benchmarks



The pie charts below are categorized per responses in 3 scales as aggregated in paragraph 5.3 above. The sequence of the statements and pie charts is based on the sequence of the categories as listed in Figure 5-44 above. The responses per category and links to the statements are summarized in Annexure 24 attached.

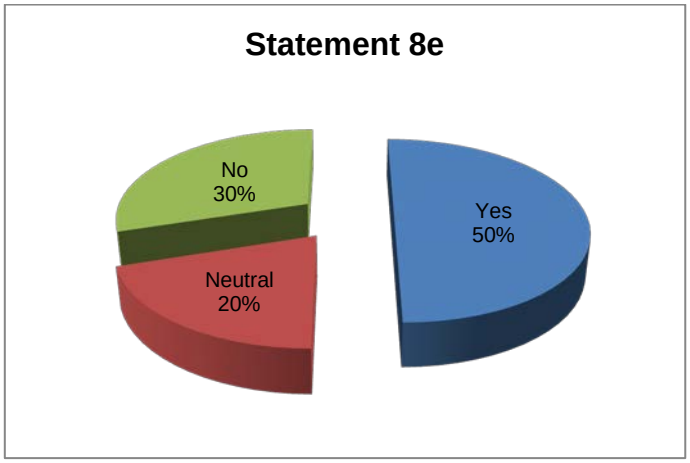
Statement 8 "Benchmarks for materiality may be based on any specific account balance."

Figure 5-45 Statement 8f - Entity driver



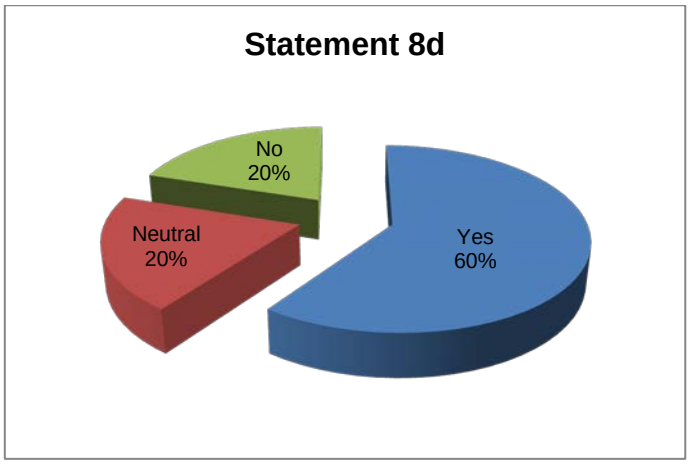
No reference is made in ISA 320 (2012) literature as discussed in chapter 3 and the majority of practitioners indicate that there is a need for a materiality driver which is a combination of quantitative and qualitative materiality.

Figure 5-46 Statement 8e - Equity -1/2% to 5% or 2 % to 5%



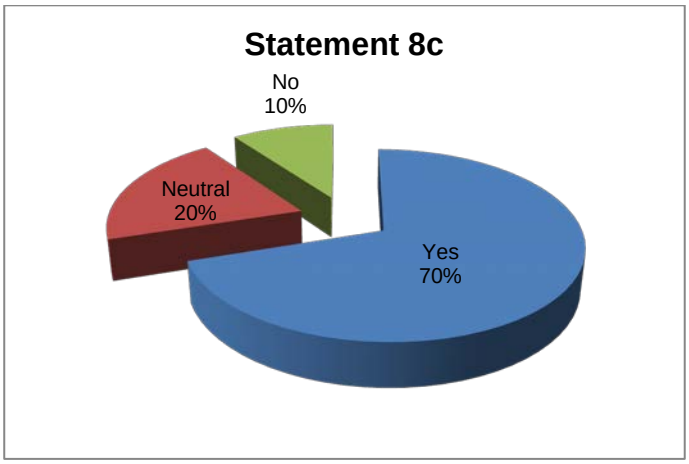
Equity is ranked as the fourth highest benchmark in literature used in this study. Refer to Annexure 4. The concern is the high percentage of neutral responses which may be possibly be stemmed from the uncertainty about the use of an Equity benchmark.

Figure 5-47 Statement 8d - Total assets - 1/2% to 1% or 1% to 2%



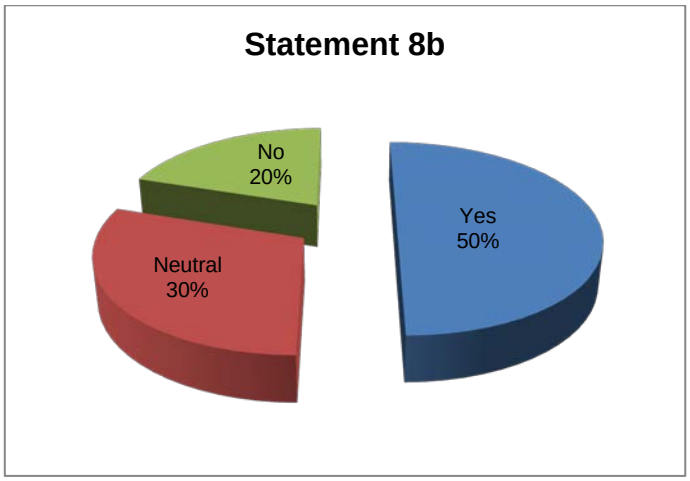
Annexure 1 and chapter 3 indicate that the frequency of total assets is ranked as the highest benchmark listed in literature. No guidance or examples are given in ISA 320 (2012) and benchmarks are within the constraints of DP6 discussed in Chapter 3. This benchmark is not commonly used in practice.

Figure 5-48 Statement 8c Net profit before tax 5% to 10%



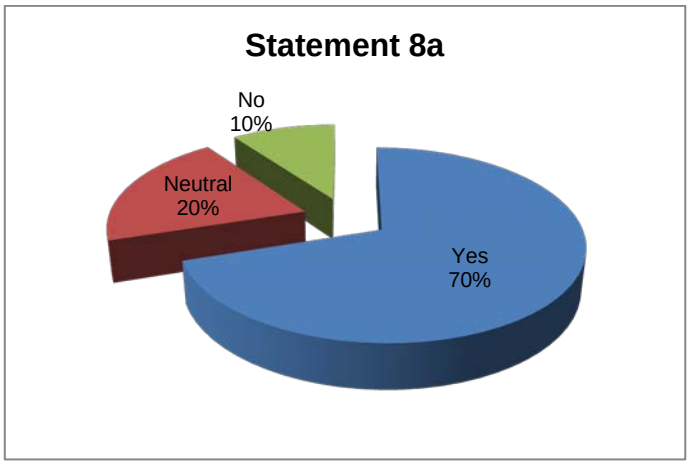
ISA 320 (2012) uses the above-mentioned benchmark as an example. According to Chapter 3, researchers single out this benchmark as the most relevant, but Annexure 2 indicates it as the second highest listed benchmark based on frequency.

Figure 5-49 Statement 8b Gross profit - 1/2% to 1% or 1 % to 2%



No guidance or examples are given in ISA 320 (2012) and benchmarks are within the constraints of DP6 discussed in Chapter 3. This benchmark is not commonly used in practice and is listed as fifth highest listed benchmark in literature as shown in Annexure 5.

Figure 5-50 Statement 8a Revenue – 0.5 % to 1%



ISA 320 (2012) par A7 uses Revenue as an example, but no clear guidance is given. There is a lack of guidance as the last paragraph is an open-ended statement that states that the circumstances may be in higher or lower percentages to be appropriate. This also falls within the constraints as illustrated in Chapter 3 and Annexure 3 and is ranked the third highest frequently listed benchmark in research used in this study. ISA 320 (2012) par A7 suggests that 5% of profit before tax, as an example, can be used for manufacturing entities. No guidance or examples are given

in ISA 320 (2012) and benchmarks are within the constraints of DP6 discussed in Chapter 3.

Statement 8 a – f: Revenue and net profit before tax and equity appear to be the highest percentages. 67% of the respondents further believed that a materiality driver should be used to determine benchmarks and indirectly that qualitative materiality should be considered before finally deciding on a materiality Figure. The benchmark, which was not expected to be among the three top percentages, was "Equity" as it never featured in any audit files that were inspected or reviewed. The literature indicated in Chapter 3 and Annexures 1 to 8 that the practitioners ranked the benchmarks different from literature and might possibly indicate that there is a need for guidance to eliminate the inconsistencies. Additional comments on statement 8(a-f) "The gross benchmark (e.g. total assets, total revenues or total expenses) falls between 0.5% – 2% (inclusive) of the benchmark. The net benchmark (e.g. profit (loss) before tax from continuing operations or net assets/equity) falls between 3 – 10% (inclusive) of the benchmark. Factors that may affect the range of percentages include concentration of ownership; debt arrangement; business environment; and other sensitivities (i.e. regulated environment or not)."

5.5.1 Literature review on materiality benchmarks

The frequencies of benchmark per account grouping were sorted per date from oldest to latest dates according to the literature sources. Wegner (2007:136-137) explains the quartiles as a calculation to identify outliers as well as the most frequently listed benchmark, called the mode. According to Levine *et al*. (2011:132), the interquartile is the result of quartile 3 less quartile 1. The pattern of occurrences per era was analysed due to the interquartile resulting in negative percentages or lower high materiality benchmark compared to the low benchmark. The benchmarks indicated in literature as listed in Annexures 1 to 8 indicated that in 69 instances the low benchmark was not lower than the highest benchmark. The conclusion that can be drawn from summaries of different classes of benchmarks found in literature (Annexures 1 to 8) is that any higher materiality that is lower than the low materiality benchmark should be rejected. The analysis of the results found in literature as indicated in Annexures 1 to 8 was constructed in Tables 5-2 to Tables 5-6 below.

The accounting scandals in the United States of America were a major event that changed the auditing profession's outlook on audit processes. The introduction of the Sarbanes-Oxley Act (2002) was a major watershed event that changed the auditing profession and the empirical research for Tables 5-2 to 5-8 were divided into before and after the implementation of the Sarbanes Oxley Act (2002). The following keys were used to distinguish between the different periods in Tables 5-2 to 5-8 below:

- Before SOX = Before the Sarbanes-Oxley Act (2002)
- After SOX = After the Sarbanes-Oxley Act (2002)

Table 5-2 Total assets - Interquartile, modes and patterns

Total assets			
Total	Low	High	Multiplier
Mode	0.10%	20.00%	2.00
Interquartile	9.90%	18.00%	48.00
Pattern	0.10% or 10%	20.00%	200.00 or 2.0
Before SOX	Low	High	Multiplier
Mode	10.00%	20.00%	2.00
Interquartile	9.90%	15.00%	73.00
Pattern (Same as mode)	10.00%	20.00%	2.00
After SOX	Low	High	Multiplier
Mode	1.00%	2.00%	2.00
Interquartile	-0.50%	-1.50%	-2.00
Pattern	5.00%	10.00%	2.00

It is evident from Table 5-2 above that the benchmarks based on the mode and pattern became more conservative, since the implementation of the Sarbanes-Oxley Act (2002). The multiplier remained at 2 for the benchmarks before and after implementation of the Sarbanes-Oxley Act (2002). The result for the interquartile

after implementation of The Sarbanes-Oxley Act (2002) was negative and thus the pattern appears to be relevant at 5% to 10% (low to high respectively). DP6 (1984) indicated a lower benchmark of 1% to 2% (low to high respectively) which is more conservative and may possibly be the benchmark taking into account that net profit before taxation which might be a lower balances is a benchmark used as an example in ISA 320 (2012) and also in table 5.3 below. The responses from statement 8d indicate that the lower benchmark of 1% to 2% (low to high respectively) is a factor for 60% of the respondents while 20% were neutral. The plausible reason for this difference of opinion on this benchmark is the lack of guidance and consistency.

Table 5-3 Net profit before tax - Interquartile, modes and patterns

Net profit before tax			
Total	Low	High	Multiplier
Mode	0.50%	10.00%	72.00
Interquartile	4.55%	29.75%	70.00
Pattern	5.00%	36.00%	72.00
Before SOX	Low	High	Multiplier
Mode	0.50%	36.00%	72.00
Interquartile	0.00%	0.00%	61.09
Pattern	0.50%	36.00%	72.00
After SOX	Low	High	Multiplier
Mode	5.00%	10.00%	2.00
Interquartile	5.00%	5.00%	498.25
Pattern	5.00%	10.00%	2.00

The conclusion drawn from Table 5-3 above is that the benchmarks based on the mode and pattern became more conservative since the implementation of the

Sarbanes-Oxley Act (2002). above is that the benchmarks are more conservative, based on the mode and pattern since the implementation of The Sarbanes-Oxley Act (2002). The multiplier remained at 2 for the benchmarks before and after implementation of the Sarbanes-Oxley Act (2002). The result for the interquartile after implementation of the Sarbanes-Oxley Act (2002) was negative and thus the pattern appear, to be relevant at 5% to 10% (low to high respectively). DP6 (1984) indicated the same benchmark of 5% to 10% (low to high respectively), which may possibly be the benchmark that may be used. There is no inconsistency between literature and the example in ISA 320 (2012). The responses from statement 8c indicate that the benchmark is a factor for 70% of the respondents while 20% were neutral. The plausible reason for this difference of opinion on this benchmark is the lack of guidance and consistency due to 10% of the respondents disagreeing with this benchmark.

Table 5-4 Revenue – Interquartile, modes and patterns

Revenue			
Total	Low	High	Multiplier
Mode	0.50%	1.00%	2.00
Interquartile	0.30%	9.00%	48.00
Pattern	0.50%	1.00%	2.00
Before SOX	Low	High	Multiplier
Mode	0.20%	10.00%	50.00
Interquartile	0.00%	0.00%	-
Pattern	0.20%	10.00%	50.00
After SOX	Low	High	Multiplier
Mode	0.50%	1.00%	2.00
Interquartile	0.00%	0.00%	-
Pattern	0.50% or 1.00%	1.00% 2.00%	2.00

The conclusion drawn from the Table 5-4 above is that the benchmarks are more conservative, based on the mode and pattern, since the implementation of The Sarbanes-Oxley Act (2002). The multiplier remained at 2 for the benchmarks in total and after implementation of the Sarbanes-Oxley Act (2002). The result for the interquartile after implementation of the Sarbanes-Oxley Act (2002) was zero and thus the pattern appears to be relevant at 0.5 or 1% to 1% or 2% (low to high respectively). DP6 (1984) indicated a lower benchmark of 0.5% to 1% (low to high respectively) which is more conservative and may possibly be the benchmark, taking into account that the mode and pattern for all the benchmarks were the same as DP6 (1984). The responses from statement 8a indicate that the lower benchmark of 1% to 2% (low to high respectively) is a factor for 70% of the respondents while 20% were neutral. The plausible reason for the 10% disagreement on this benchmark is the lack of guidance and consistency. There is, however, a major consistency on this benchmark.

Table 5-5 Equity - Interquartile, modes and patterns

Equity			
Total	Low	High	Multiplier
Mode	0.50%	5.00%	10.00
Interquartile	0.50%	0.00%	6.88
Pattern (Same as mode)	0.50%	5.00%	10.00
Before SOX	Low	High	Multiplier
Mode	#N/A (N1)	#N/A	#N/A
Interquartile	-1.99%	0.00%	-
Pattern (Same as mode)	0.50%	5.00%	10.00
After SOX	Low	High	Multiplier
Mode	0.50%	5.00%	10.00
Interquartile	1.50%	0.00%	7.50
Pattern (Same as mode)	0.50% and 2.00%	5.00%	10.00 or 2.50

N1- The number of frequencies were less than 4, as the quartile need at least 4 observations to be calculated. The conclusion drawn from Table 5-5 above is that the benchmarks are more conservative, based on the mode and pattern, since the

implementation of the Sarbanes-Oxley Act (2002). The multiplier is 2.5 to 10 for the benchmarks before and after implementation of the Sarbanes-Oxley Act (2002). The result for the interquartile after implementation of the Sarbanes-Oxley Act (2002) was positive for low and zero for high and thus the pattern appears to be relevant at 0.5% or 2% to 5% (low to high respectively). DP6 (1984) indicated the benchmark of 2% to 5% (low to high respectively) which is the same and may possibly be the benchmark. The responses from statement 8e indicate that the benchmark of 2% to 5% (low to high respectively) is a factor for 50% of the respondents while 20% were neutral. The plausible reason for the 30% disagreement on this benchmark is the lack of guidance and consistency. The unanimity of the responses may indicate that this is not the most used benchmark. There is, however, a major consistency on this benchmark in literature.

Table 5-6 Gross profit - Interquartile, modes and patterns

Gross profit			
Total	Low	High	Multiplier
Mode	0.50%	5.00%	10.00
Interquartile	0.13%	0.75%	2.00
Pattern	0.50%	5.00%	2.00
Before SOX	Low	High	Multiplier
Mode	#N/A (N1)	#N/A	#N/A
Interquartile	-0.50%	0.00%	-
Pattern	0.50%	1.00%	2.00
After SOX	Low	High	Multiplier
Mode	0.50%	5.00%	10.00
Interquartile	0.50%	1.50%	4.00
Pattern	0.50%	5.00%	10.00

N1- The number of frequencies were less than 4, as the quartile need at least 4 observations to be calculated. It is proven in Table 5-6 above that the benchmarks this is the only instance which are not more conservative based on the mode and pattern since the implementation of the Sarbanes-Oxley Act (2002). The multiplier was 2 for the benchmarks before and 10 after implementation of The Sarbanes-Oxley Act (2002). The result for the interquartile after implementation of The

Sarbanes-Oxley Act (2002) was 0.50% and 1.5% (low to high respectively) and the pattern appears higher at 0.5% to 5% (low to high respectively). DP6 (1984) indicated a lower benchmark of 1% to 2% (low to high respectively) which is more conservative and may possibly be the benchmark. The responses from statement 8b indicate that both benchmarks are a factor for 50% of the respondents while 30% were neutral. The plausible reason for the 20% disagreement on this benchmark is the lack of guidance and consistency. The unanimity of the responses may indicate that this is not the most used benchmark. There is, however, a limited consistency on this benchmark in literature and in responses from practitioners. The suggestion is to use the lower benchmark of 1% to 2% (low to high respectively).

Table 5-7 Expenditure - Interquartile, modes and patterns

	Expenditure		
Total	Low	High	Multiplier
Mode	#N/A (N1)	#N/A	#N/A
Interquartile	0.00%	-1.00%	-2.00
Pattern	0.00%	0.00%	0.00
Before SOX	Low	High	Multiplier
Mode	0.50%	1.00%	#N/A
Interquartile	0.00%	0.50%	1.50
Pattern	No benchmark listed in literature used for this study		
After SOX	Low	High	Multiplier
Mode	0.50%	1.00%	#N/A
Interquartile	0.00%	1.00%	2.00
Pattern	0.50%	1.00%	2.00

N1- The number of frequencies were less than 4, as the quartile need at least 4 observations to be calculated. It is evident from above that the benchmarks, based on the mode and pattern, are more conservative since the implementation of the

Sarbanes-Oxley Act (2002). The multiplier was 2 for the benchmarks after implementation of the Sarbanes-Oxley Act (2002). The result for the interquartile after implementation of the Sarbanes-Oxley Act (2002) was zero and thus the pattern appears to be relevant at 0.50% to 1.00% (low to high respectively). DP6 (1984) did not indicate a benchmark and only three were found in literature. A benchmark of 0.50% to 1.00% (low to high respectively) may possibly be a benchmark taking into account that Revenue is associated with expenses as they are both reported in the Statement of comprehensive income.

The events preceding the Sarbanes-Oxley Act 2002 necessitated the audit and accounting regulators to reconsider their own interpretations of materiality and risk. It is evident from the above that the Sarbanes-Oxley Act 2002 had an major impact on more conservative benchmarks being advocated in literature.

5.5.2 Materiality benchmarks

a. Quantitative indicators of materiality

From the conclusions above it appears that the most conservative and appropriate benchmarks are summarized in Table 5-8 below. There may be scholars who differ with this conclusion because quantification is based on professional judgement. The results from the research indicated that these benchmarks may be the most appropriate. Further research on the quantification, including the impact of qualitative measures is needed to reduce the auditor's risk. The standard materiality benchmarks, as shown in Table 5-8 below serve as a basis for quantification, and are discussed below. The following paragraphs will deal with concepts related to materiality such as materiality, 'trivial', performance materiality, audit differences, aggregate and pervasiveness.

Table 5-8 Quantitative indicators of materiality

	Low		High	Multiplier
Turnover (Gross Revenue)	½ %	-	1 %	2
Gross profit	1 %	-	2 %	2
Net income	5 %	-	10 %	2
Total assets	1 %	-	2 %	2
Equity	2 %	-	5 %	2.5

Marx *et al*.: 2009:8-26 (DP6)

The research in Chapter 3 indicated that materiality drivers may differ from the traditional appropriate benchmarks when the type of industry is also considered.

The following benchmarks, as discussed below, are related to materiality, as the conclusion of the audit differences in ISA 450 (2012) and the audit report ISA 705 (2012) and 706 (2012) include the consideration of materiality at various levels.

b. Performance materiality

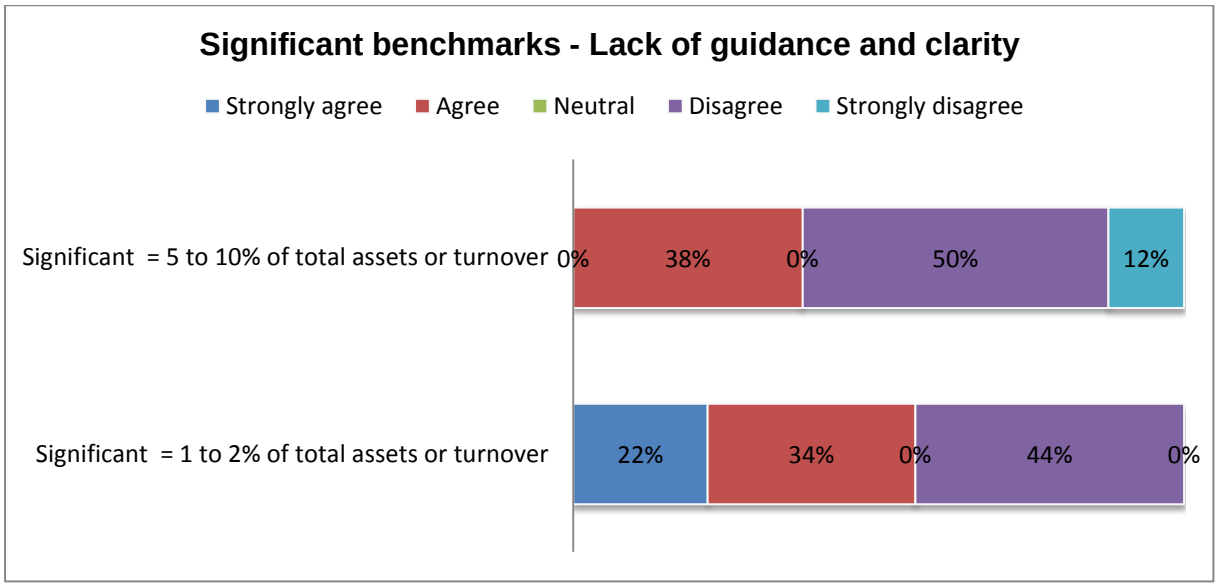
One of the limitations in the questionnaire was that performance materiality was not included. Based on past experience, the amounts were set between 70% and 80% of materiality, which is the same level at which tolerable error was previously set.

5.5.3 Other materiality-related benchmarks

a. Significant benchmark – SB Lack of guidance, clarity and interpretation

Figure 5-51 is an overview presented in a stacked bar chart as per coding and category, and responses per the Likert 5 point scale regarding the interpretation the understanding of significant. The responses per category and links to the statements are summarized in Annexure 25 attached.

Figure 5-51 Significant benchmarks - Lack of guidance and clarity



The following pie charts categorized per responses in 3 scales as aggregated in paragraph 5.3 above is an overview of Figure 5-51 below. The sequence of the statements and pie charts is based on the sequence of the categories as listed in Figure 5-51 above. The responses per category and links to the statements are summarized in Annexure 25 attached.

Figure 5-52 Statement 36b – Significant benchmark - 5% to 10% of total assets or Turnover (Gross Revenue)

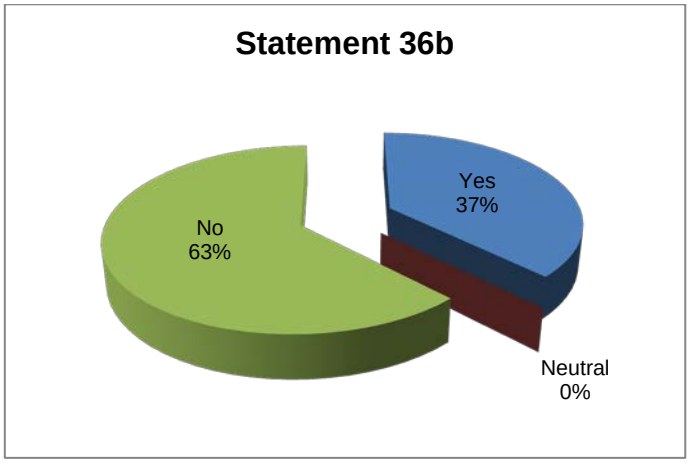
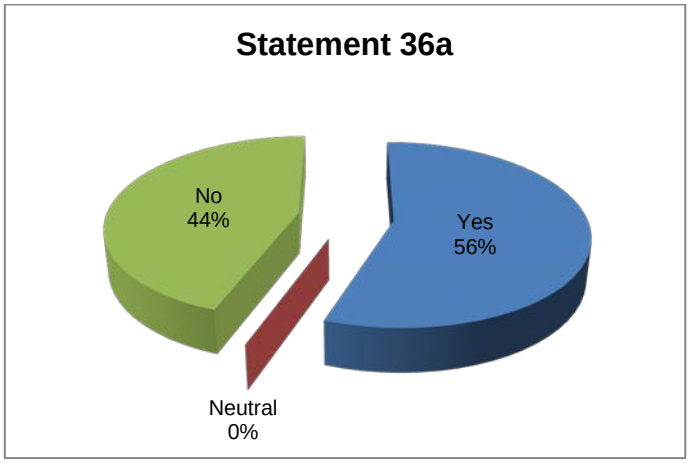


Figure 5-53 Statement 36a - Significant benchmark - 1% to 2% of total assets or Turnover (Gross Revenue)

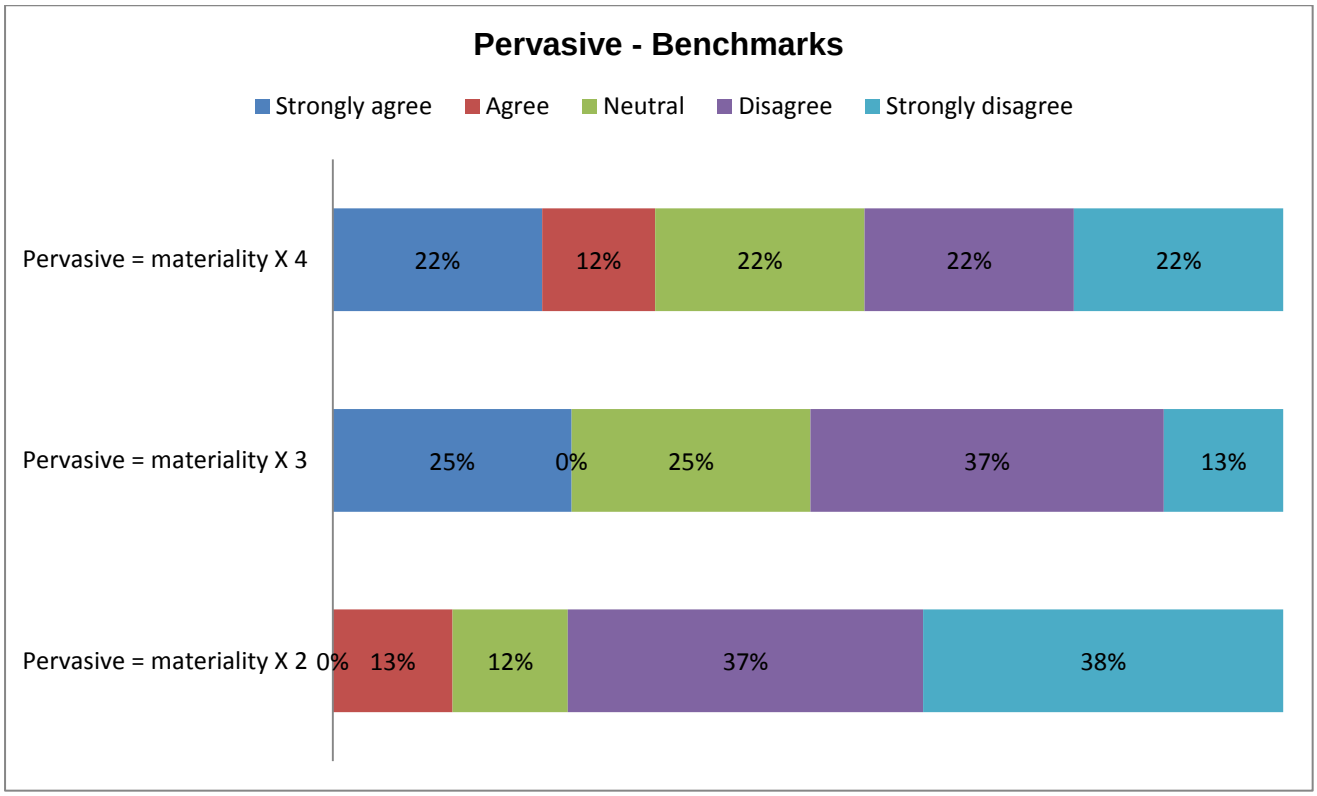


No guidance exists in ISAs. This can be concluded from the 56% of positive responses that indicated that 1% to 2% of total assets or Turnover (Gross Revenue) is a benchmark for 'significant'. 'Significant' appears to be between 2% and 5%. The response percentage decreased from 56% positive to 63% negative for a benchmark of 1% to 2% and 5% to 10% respectively. The negative responses increase as the benchmark increased. It can be concluded from the 63% negative responses that 5% to 10% of total assets is too high to be considered as a benchmark for 'significant'.

b. Pervasive benchmark – PB Lack of guidance, clarity and interpretation

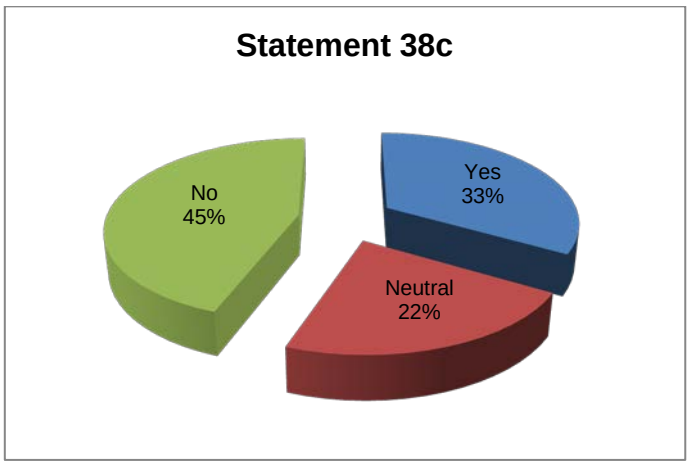
The stacked bar charts below were sorted per coding, and category and responses as indicated in Figure 5.54 below. The overview is a representation of responses according to the Likert 5 point scale for understanding of the interpretation of pervasive. The responses per category and links to the statements are summarized in Annexure 26 attached.

Figure 5-54 Pervasive Benchmark



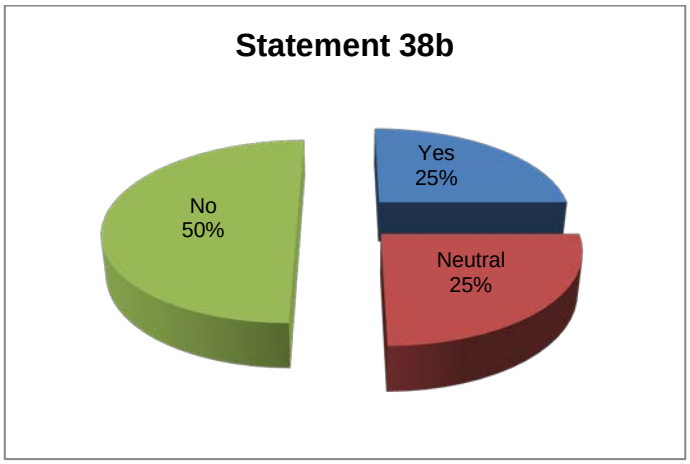
The following pie charts is an overview of responses categorized per responses in 3 scales as aggregated in paragraph 5.3 and illustrated in Figure above. The sequence of the statements and pie charts is based on the sequence of the categories as listed in Figure 5-54 above. The responses per category and links to the statements are summarized in Annexure 26 attached.

Figure 5-55 Statement 38c – Pervasive benchmark – four times final materiality



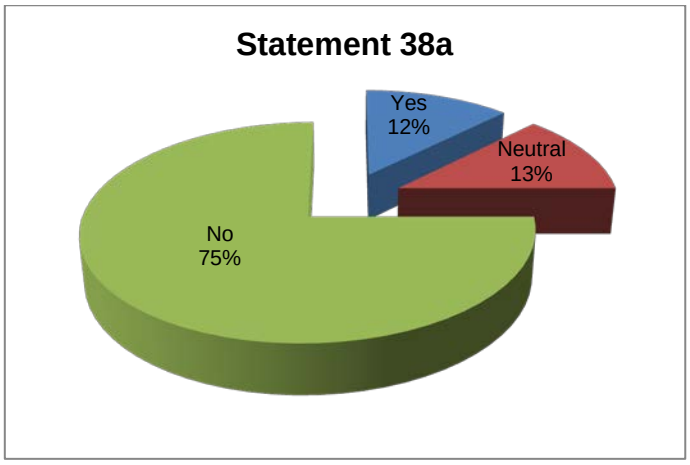
ISA 450 (2012) does not indicate any benchmarks and there appears to be a lack of guidance. The respondents suggested that consideration should be given to use performance materiality rather than materiality in determining this threshold. It can be concluded from the 45% responses indicated that four times final materiality is not a benchmark for 'pervasive'.

Figure 5-56 Statement 38b – Pervasive benchmark – Three times final materiality



ISA 450 (2012) does not indicate any benchmarks and there appeared to be a lack of guidance. The respondents suggested that consideration should be given to use performance materiality rather than materiality in determining this threshold. It can be concluded from the 50% responses indicated that three times final materiality is not a benchmark for 'pervasive'.

Figure 5-57 Statement 38a – Pervasive benchmark - Twice final materiality



ISA 450 (2012) does not indicate any benchmarks and there appeared to be a lack of guidance. The respondents suggested that consideration should be given to use performance materiality rather than materiality in determining this threshold. It can be concluded from the 75% responses indicated that twice final materiality is not a benchmark for 'pervasive'.

Additional comments to statement 38: "'Pervasive' should rather be considered in the context of ISA 705 (2012) par 10 in that it is something that flows throughout the entire set of financial statements or involves multiple uncertainties. Pervasiveness is more than a defined quantitative amount as per the question. 'Pervasive' refers rather to misstatements that affect a number of financial statement items, than a specific amount."

The conclusion on the result of the responses from statements 38a to 38c is that 'pervasive' could be more than five times materiality as the percentages of the positive responses start increasing as the benchmark increases. Applying the same principle to the rest of the responses, the negative response percentage decreased as the benchmark increased. From the suggestion above, the benchmark of between five and six times materiality appears to be the solution. This benchmark appears to be too high and thus the following should be taken into account:

- Professional judgement of the auditor based on the impact of the misstatement on other accounts and the financial statements as a whole

- Two to three times materiality including considering the above
- Other qualitative considerations based on the entity, impact on users and financial ratios used by financial analysts
- Shareholding in company
- Impact on taxation and other legislation

Conclusion: As materiality is a judgement call, it is important to relate this to the specific circumstances of each entity.

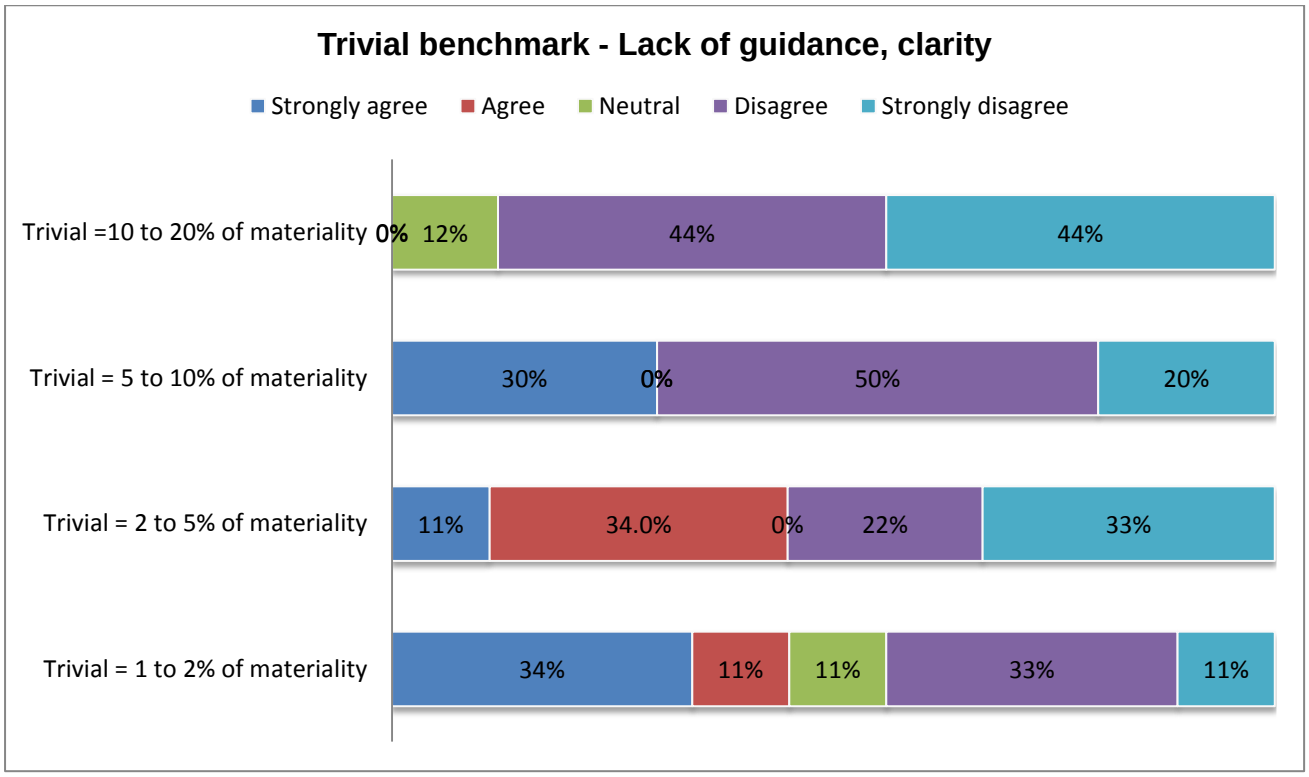
c. 'Pervasive' relative to audit reports

The conclusion in statement 38c indicated that 'pervasive' appears to be between five and six times materiality. This benchmark appears to be higher than expected, as concluded below. The firm could consider applying the benchmarks of two to three times materiality in their risk management process. The other factors listed in Chapters 5 should be taken into account when deciding on the audit opinion. The benchmark of two to three times materiality will be applied when considering the type of audit opinion to be issued.

d. Trivial benchmark – TB Lack of guidance, clarity and interpretation

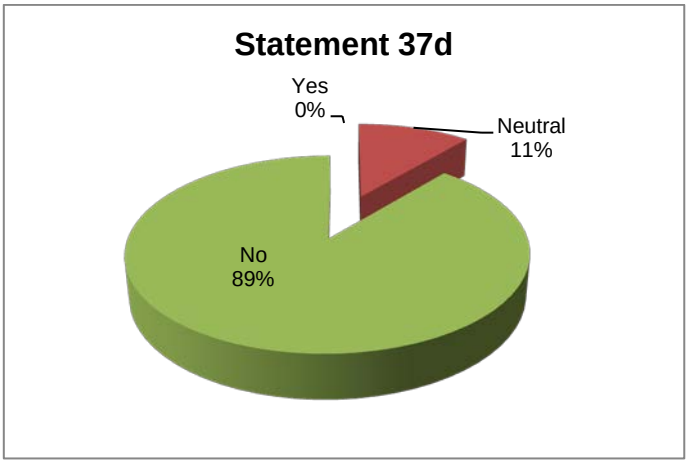
The stacked bar charts in Figure 5-58 is an overview of the coding, and category and responses per the Likert 5 point scale regarding the understanding and interpretation of trivial. The responses per category and links to the statements are summarized in Annexure 27 attached.

Figure 5-58 Trivial benchmark - Lack of guidance, clarity



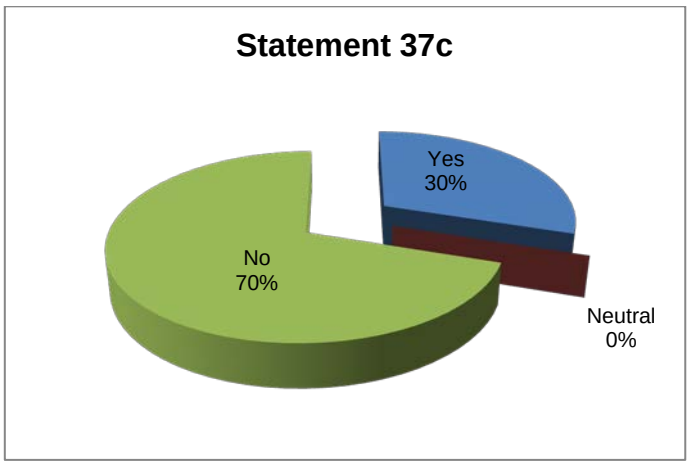
The pie charts below are an overview of categorized per responses in 3 scales as aggregated in paragraph 5.3 above and illustrated in Figure 5-58 above. The sequence of the statements and pie charts is based on the sequence of the categories as listed in Figure 5-58 above. The responses per category and links to the statements are summarized in Annexure 27 attached.

Figure 5-59 Statement 37d – Trivial benchmarks – 10% to 20% of materiality



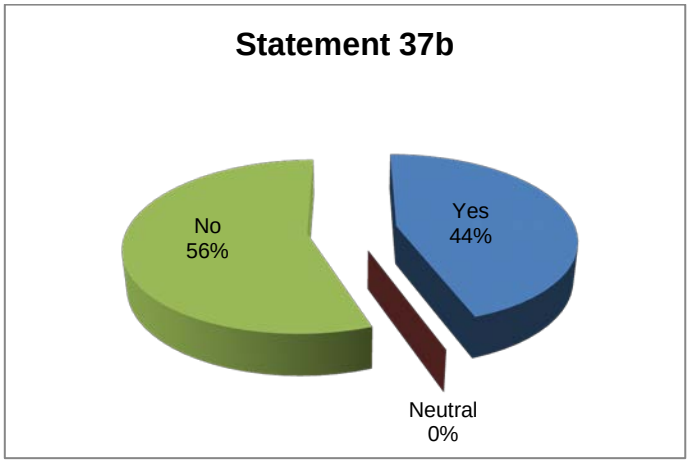
ISA 450 (2012) does not indicate any benchmarks and there appeared to be a lack of guidance. The respondents suggested that consideration should be given to use performance materiality, rather than materiality, in determining this threshold. It can be concluded from the 89% negative responses which indicated that 10% to 20% of total materiality is not a benchmark for 'trivial'.

Figure 5-60 Statement 37c – Trivial benchmarks - 5% to 10% of materiality



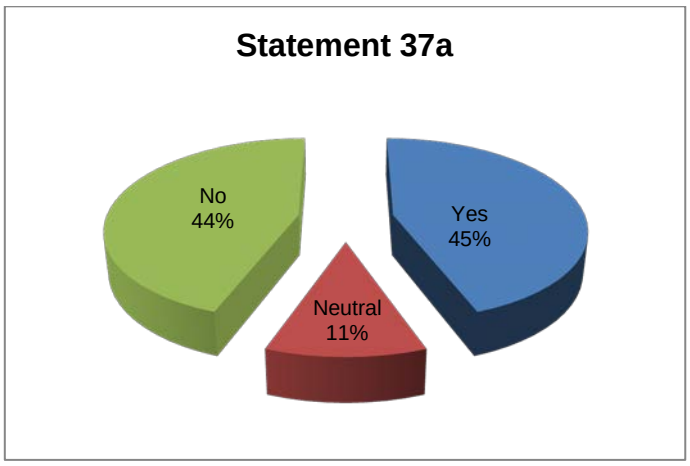
ISA 450 (2012) does not indicate any benchmarks and there appeared to be a lack of guidance. The respondents suggested that consideration should be given to use performance materiality rather than materiality in determining this threshold. It can be concluded from the 70% responses which indicated that 5% to 10% of total materiality is not a benchmark for 'trivial'.

Figure 5-61 Statement 37b – Trivial benchmarks - 2% to 5% of materiality



ISA 450 (2012) does not indicate any benchmarks and there appeared to be a lack of guidance. The respondents suggested that consideration should be given to use performance materiality rather than materiality in determining this threshold. It can be concluded from the 56% responses which indicated that 2% to 5% of total materiality is not a benchmark for 'trivial'.

Figure 5-62 Statement 37a - Trivial benchmarks 1% to 2% of materiality



ISA 450 (2012) does not indicate any benchmarks and there appears to be a lack of guidance.

The respondents suggested that consideration should be given to use performance materiality rather than materiality in determining this threshold. It can be concluded from the 45% responses indicated that 1% to 2% of total materiality is a possible benchmark for 'trivial'.

The conclusion that can be drawn from the information above is that the benchmark for 'trivial' appears to be lower than expected, as 44% disagreed on 1% to 2 % and the percentage increased to 89% for 10% to 20% of materiality. The expectation was that the result should be 5% to 10% of materiality. The conclusion that can be drawn is that 'trivial' can be expected to be between 0.01% and 0.5% of materiality based on the responses.

e. Trivial errors relative to audit differences

The guidance on trivial errors consists only of a definition and it is left to auditors to form their opinion. Figure 5-24 (Statement 5) indicated that 77% of the respondents agreed that trivial errors may add up to be material.

The conclusions indicated that the expected benchmark of 5% to 10% for 'trivial' appeared to be too high. 44% of the respondents disagreed with a benchmark of 1% to 2%. The majority of the respondents (89%) disagreed with a benchmark of 10% to 20%. The higher the percentage for trivial materiality indicated in the questionnaire, the higher the percentage of respondents who disagreed. The conclusion is that an acceptable benchmark for trivial errors appeared to be between 0.01% and 0.5% of materiality. The auditor should combine the definition of 'trivial', according to ISA 450 (2012), and professional judgement when considering trivial errors.

5.6 COMMENTS AND SUGGESTIONS ON BENCHMARKS

The following considerations should be read in the context of a lack of commitment from the professional bodies and standard setters to commit themselves to benchmarks and thus the differences in interpretation. The following is a summary of the additional comments from a respondent who suggested that guidelines to assist the auditor should be written into the ISAs to prevent confusion and strengthen consistency without taking away professional judgement from the auditor. This conclusion should be exercised based on the specific circumstances of the client and the professional judgement of an auditor. The following are direct quotes from the respondent and the comments are not linked to a specific question on the questionnaire:

- *"What standards are used when the auditor is alleged to have expressed an incorrect opinion?*

If a user of the financial statements seeks to recover money that he/she has lost due to placing reliance on the auditor's incorrect opinion, then the user can proceed with civil litigation, or with criminal litigation, or both depending on the facts of the matter.

The legal standards used by the courts to decide whether or not the appellant in a civil case or the prosecution in a criminal case will succeed are "on a balance of probabilities" and "beyond a reasonable doubt" respectively.

In drawing inferences, the courts will be led by what a reasonable auditor would have done in the circumstances, which places more responsibilities on the auditor than the "reasonable man" test would have done. In other words, the auditor will be measured against what a competent and diligent peer with similar qualifications would have done in the circumstances of the case in issue."

- *"What should the International Standards on Auditing pronounce in this regard?*

It would be of immeasurable value to the auditing profession and its members if the auditing standard setters could pronounce themselves clearly on:

  - *the volumes of work (measuring tool) that will be used to assess whether or not the defendant auditor had done sufficient audit work for him/her to assert that it is 'sufficient'; and*

  - *what the criteria are that will be used to assess whether or not the defendant auditor had gathered audit evidence that is relevant and valid enough for him/her to assert that it is 'appropriate.'"*

- *"What is the status quo?"*

The standard setters have not made such clear pronouncements to date. Instead guidance is given on how to apply the concept of materiality in order to draw conclusions about whether or not the audit evidence gathered by the auditor in question warrants that he/she may asserts that he/she has satisfied the requirement of 'sufficient appropriate audit evidence'.

Should a matter go to litigation, are the opposing legal teams free to argue this point without having to start the argument from a clear point of reference in the standards?

The results may vary as indicated above due to a questionnaire being used and most statements were made with compliance or no-compliance in mind. More

information would have changed the respondents' answers in certain instances but the above also proves that professional judgement should be respected based on the guidance given in the ISAs."

5.7 CONCLUSION ON BENCHMARKS BASED ON EMPIRICAL RESEARCH AND RESPONSES

The following is a summary of the benchmarks, found in literature and empirical research, which appears to be prominent and applicable in the auditing environment.

5.7.1 Different materiality drivers

Statement 3 - No guidance is given on materiality drivers although 90% of the respondents agreed with the statement. The responses in statement 8f indicated a response rate of 67% for materiality drivers as an element of materiality consideration. The expectation would have been that the responses should be closer. The probable reason for this difference is that interpretation of the statements and guidance is lacking.

5.7.2 Trivial errors may add up to be material

Statement 5 - No requirement exists in ISA 450 (2012) par 5 to accumulate clearly trivial errors. 78% of the positive responses were based on the interpretation in the context of the standard.

5.7.3 Materiality benchmarks

a. Revenue 0.5% to 1%

Statement 8a – 70 % responded positive to this benchmark.

b. Gross profit 1% to 2%

Statement 8b – 50 % responded positive to this benchmark.

c. Net profit 5% to 10%

Statement 8c - 70 % responded positive to this benchmark.

d. Total assets 1/2% to 1% or 1% to 2%

Statement 8d – 60% responded positive to this benchmark.

e. Equity 1/2% to 5% or 2% to 5%

Statement 8e –50 % responded positive to this benchmark.

5.7.4 Conclusion on materiality benchmarks

The benchmarks with the highest percentage positive responses (excluding equity) are the following:

a. Revenue 0.5% to 1%

Statement 8a –70 % responded positive to this benchmark..

b. Net profit 5% to 10%

Statement 8c– 70 % responded positive to this benchmark..

c. Materiality drivers

Statement 8f – No guidance on materiality drivers, although 67% responded positive to this statement.

5.7.5 Definition for in aggregate is “in total per balance”.

Statement 27a – 67 % responded positive to this benchmark.

5.7.6 ‘Significant’ benchmark

Statement 36a – 66% of the respondents indicated that the benchmark for ‘significant’ appears to be between 1% to 2% of total assets or Turnover (Gross Revenue).

5.7.7 ‘Trivial’ benchmark

Refer to statement 37a – ‘Trivial’ appears to be lower than expected, as 44% disagreed on 1% to 2% and the percentage increased to 89% for 10% to 20% of

materiality. The expectation was that the result should be between 5% to 10% of materiality. The conclusion that can be drawn is that 'trivial' can be expected to be between 0.01% and 0.5% of materiality based on the responses. The definition of 'trivial', according to ISA 450 (2012), and professional judgement should also be taken into account.

5.7.8 'Pervasive' benchmark

Refer to statement 38c - From the analysis of responses for statement 38a – the benchmark of materiality of between five and six times appears to be appropriate. This benchmark appears to be higher than expected. It can be concluded below in statement 38c – that the benchmark of two or three times materiality and all other factors that need to be taken into account appear to be more appropriate from a risk management point of view.

5.8 CONCLUSION

This chapter reported on the responses to the questionnaire completed by auditing firms and can be considered as a reflection of the practical application of auditing standards. As reported above, there are many instances where ISAs do not give any guidance or give poor guidance on important issues, This should be viewed as a major concern for a profession held in high esteem.

A further concern is that the respondents were unanimous in very few of their replies. Major auditing firms operating under the same professional standards are in disagreement regarding crucial issues. The question comes to mind whether different auditing firms, if they had to audit the same records, would form different opinions?

It is evident from the evidence reported on in this chapter, that there is a need for clear guidance on materiality and risk in the auditing profession. A profession that takes pride in its high level of standards should ensure that its members are directed in accordance with accepted principles that are well understood and applied by all.

The benchmarks set almost three decades ago may still be the most conservative and appropriate benchmark. This conclusion is supported by the literature (Annexure 1 to Annexure 8) as well as the responses from the respondents.

The literature is unanimous on the benchmarks for risk quantification as indicated in chapter 4.

6 CHAPTER 6: CONCLUSION AND RECOMMENDATIONS FOR PRACTICE

6.1 INTRODUCTION

According to ISA 330 (2011) par 5, *"the auditor shall design and implement overall responses to address the assessed risks of material misstatement at the financial statement level".*

The correlations between materiality indicators for different categories of risk clients were investigated. The inverse correlation between materiality indicators or factors and risk assessment was researched. Risk management process and probability in the development of the benchmarks were investigated and applied.

The quantification of materiality and audit risk were investigated and inconsistent benchmarks in literature and audit practices were found. Interquartile, pattern, coding and categorizing were applied to determine whether consistence benchmarks do exist. ISA 330 (2011) par 7 states that the persuasiveness of the audit evidence influences the risk. Therefore higher risk will lead to gathering more audit evidence. The benchmarks were investigated in order to integrate them all into a basic audit strategy and audit plan with guidance for the audit approach to be adopted.

A conclusion was drawn on the benchmarks researched based on this study to quantify certain aspects as described in the previous chapters. The benchmarks were analysed through an empirical study to gauge the professional judgement and public professional auditors' and academic literatures on the interpretation of the standards and application. Risk quantification to include significant risks in a model from quadrants to a pentagon and lastly to a sextant approach were investigated and recommended.

Following the results of the empirical research in Chapter 5, this chapter aims to propose that the benchmarks recommended be applied to standardize an auditor's planning with regard to materiality, audit risk assessment and responses to risk. The objective referred to above also relates to the requirement of ISA 230 (2011) that all relevant information should be documented. Past experience with engagement file reviews indicated that documentation of the audit process contains various weaknesses. This statement is supported by the annual report of the IRBA (2011:28)

which stated that 10% of 658 engagement inspections performed in a financial year indicated documentation weaknesses.

6.2 WEAKNESSES IDENTIFIED IN WORKINGS IN WORKING PAPERS

The first issue with regard to planning and execution audit working papers that was identified over the past ten years, was that conclusions on audit working papers are in certain instances not even relevant to the risk, objectives and assertions that were indicated as being the audit objectives during the planning, as well as the evidence-gathering stage. IRBA (2011:28) listed specific areas of concern with regard to weaknesses in documentation. The concerns of documentation weaknesses include fraud, independence, audit risk, going concern and audit reports and conclusions on opinion, which serve as examples.

The following are examples of conclusions that were found on audit working papers:

“All sales are complete, accurate and did occur.”

Using the word “all” might imply that 100% of the population was selected as indicated in the conclusion. The working paper might indicate a sample size of 20 to 30 or more items and the conclusion should thus be drawn based on the sample selected from the population.

The above-mentioned issue is a risk management issue from an auditing firm’s perspective as the population was selected based on the discussion in the previous paragraph, which contradicts the sample size documented. Certain auditing firms keep their client records in their audit file and these can be used as audit evidence when the file is subpoenaed for any inspection or litigation purposes. The conclusion and the evidence documented can be seen to be contradictory as explained above.

From a risk management perspective, the following conclusion would appear to attract the least risk:

Based on the sample selected:

It appears that the above-mentioned objective has been met / not met

Furthermore, the auditor would then have to conclude on the appropriateness and sufficiency of the audit procedures and audit evidence gathered. Table 6-1 below is a summary of the definitions or explanations of the appropriateness and sufficiency of audit evidence:

Table 6-1 Summary of the definitions or explanations of the appropriateness and sufficiency of audit evidence

Appropriate	Sufficient
The direction of testing was appropriate. The tests met their objectives. The following serves as an example: The existence of assets was verified while the objective was ownership verification. Inappropriate test did not meet the stated objective.	The number of samples selected was sufficient based on prescribed methodology of the firm for: 1. number of items selected for test of controls or transactions; and 2. coverage obtained for balance sheet items.

Source: Based on ISAs (2012) and own research

The documentation standard ISA 230 (2011) indicates that an auditor should record evidence of his procedures in such a manner that another knowledgeable auditor may re-perform the same steps and come to the same conclusion. The risk that an auditor may express an inappropriate audit opinion is less than the risk that an audit opinion can be contradicted by the evidence on working papers and inappropriate conclusions.

Audit risk, materiality and sample size form the basis of audit testing. No audit tests can be planned without a consideration of these three aspects. Risk and materiality should be considered throughout the audit up to the point where an opinion is formed. In the auditing profession that prides itself on its high level of standards, it is surprising that the guidelines referring to risk, materiality and sample size are very pervasive. No definite guidelines and benchmarks are in existence. Where emphasis on consistent application is placed on financial accounting, auditing standards lack specific guidelines to ensure consistent application.

The primary objective of this study was to investigate and develop benchmarks, based on an understanding of the literature and then to measure these benchmarks against their practical application. In this study, research has been done in order to develop an acceptable benchmark for the calculation or quantification of the elements linked to materiality, audit risk and audit sampling for the market based on standards supported by the ISAs and regulations that are acceptable in the auditing environment.

The definitions of key concepts were discussed and a general overview of the content of the study was used as an outline to Chapter 1.

6.3 LIMITATIONS OF THE STUDY

The number of South African audit firms responsible for the audits of listed companies is limited to 27 firms. The research could reveal different results if the scope was not limited to South African Auditing firms. The titles found in literature did not specifically refer to benchmarks although some of them did include reference to benchmarks.

The questionnaire did not include a consideration for the threshold benchmark and research should be extended to include it.

Materiality driver is a new concept and the experiment was performed on a limited sample as this did not form part of the main objectives of this study.

The issues that were not expected to feature at the beginning of the study to feature were the following:

- The prominence of the equity benchmarks due to the number of responses and times it was mentioned in the literature.
- The net profit benchmark not being the highest ranked in literature and empirical studies.
- Trivial benchmark not to reach the 2% to 5% but respondents indicating that the benchmark should be significantly lower.

Literature studies in the South African environment relating to materiality and risk benchmarks are limited. The most articles are written by authors from the United States of America, with Europe starting to have a prominent place in this arena.

6.4 RECOMMENDATIONS

The benchmarks used in South Africa are the most conservative and should be used as a starting point. Caution should however be taken when considering the quantitative measure to also include the qualitative features that may exist in the specific circumstances.

There is a need for additional guidance on materiality and risk as indicated in the range of responses received and summarised in Chapter 5.

Audit risk quantification is a possibility but research in this area is lacking and could assist the auditing profession immensely through having at least a benchmark to measure themselves against.

Further research is required with regard to materiality drivers for specific industries and to extend the sample to include all listed companies per industry sector.

6.5 CONTRIBUTION OF THE STUDY

This is the first study in South Africa that may address the gap that exists for medium to small firms to obtain guidance in specific areas of uncertainty in planning and completion of the audit process. The benchmarks suggested in this research may also improve efficiency and the correct allocation of time and work, identifying and concentrating on the appropriate risk areas.

The further contribution is the suggestions for further research in areas that needs attention specifically as the ISAs are being implemented in the United States of America. This will open up a boom in research as all the literature still refers to the SAS issued by AICPA.

6.6 CONCLUSION

The research on the audit process in Chapter 2 indicated that the audit process is a dynamic process and that certain areas of planning may need to be revisited and revised during the gathering of audit evidence and that the process does not follow a straight line forward but may have bends (circumstances) that may guide the auditor to revisit the planning stage. The implementation of the independent reviews and the uncertainty surrounding the issue is a field that requires further research.

While conducting literary research for Chapter 3, it was highlighted that although there are benchmarks due to complexity and judgement, there are factors that should be considered that cannot always be foreseen in a specific circumstance, and that materiality should be considered in conjunction with other quantitative methods. The theory regarding the materiality drivers was an additional topic that was investigated. It is recommended that further research on this topic would benefit the auditing profession. The conclusion is that literature may have too many abnormal materiality benchmarks which are not always consistent.

Further discoveries were made that the auditor can be liable for any negligence regarding the inappropriate and reckless consideration of only the numerical side of the audit materiality consideration. Professional judgement is a complex manner and the recommendations are as follows:

- Materiality should have a low and a high margin.
- Before decisions are made regarding the materiality figure, some knowledge and risk assessment should be performed to substantiate the low level of materiality for a high-risk client and vice versa.
- The auditor should consider other factors as well as the expectation of shareholders and users before the final decision is made. The examples of the tests of the materiality drivers confirm that theory.
- The method that is mostly used in medium to small audit practices may be the most appropriate method as it has been proven to be reliable for quite a

number of years and the auditor can deviate from it with the necessary reason provided in the audit working papers.

- The auditor should document his materiality consideration and the amount selected. For specific balances and circumstances a lower materiality may be used.
- Consideration should be given to the disclosure of materiality on the financial statements due to the following:
  - Attempting to reduce the expectation gap between auditor, management, users, investors and stakeholders.
  - Attempting to increase the shareholders' materiality perception, which is significantly lower than audit materiality, to a more acceptable or agreeable level.

Arens *et al*. (2012:153) support the research that assertions per balances are not always limited to one assertion per balance, but may have "to meet several audit objectives for any given class of transactions". Three different related audit objectives are listed:

- Transaction-related
- Balance-related
- Presentation and disclosure objectives

These objectives are closely related to ISA 315 (2011) par A111, which is also divided into three categories of assertions.

During the research and discussions with members of auditing firms, a suggestion was made by a prominent member of a specific firm that materiality should be disclosed in the financial statements. This view is based on the fact that the audit opinion states in ISA 700 in the auditor responsibility paragraphs 28 to 33, that an auditor should express an opinion on whether the financial statements are free from material misstatement.

In Chapter 4 the following conclusions were made:

- The performance of an audit or the audit process can be classified as a risk management and assessment process, as the auditor needs to reduce the risk of material misstatement to an acceptable level.
- There is a direct relationship between risk and materiality.
- The audit risk model further indicates that there is a relationship between risk quantification and assessment and gathering of audit evidence, which may include audit sampling.
- The different interpretations and quantification of materiality, the audit risk model, business risk model and the comments on the different models are topics that require further research.

The risk quantification model suggested in Chapter 4 can be used as a method to integrate specific considerations into a quantifiable model. The research also indicated that two (2) was the most consistent risk multiplier.

The consideration of an error is a minefield and should be approached correctly. If an error appears to be material, discussion should be entered into with management and a solution sought. The auditor cannot just issue the following reports based on the materiality and pervasiveness of the error or disagreement:

- Qualified opinion
- Adverse opinion
- Disclaimer of opinion

If there are any factors such as fraud, due to the severity of the action, different measures than just the numerical materiality should be applied. Characteristics and compliance with laws should be some of the qualitative measures that should be considered.

Chapter 5 dealt with the statistical methods used in the empirical research and the sample sizes. The sample of auditors in South Africa that performed audits for listed

companies as at 28 February 2010 were less than thirty (actually only 27 firms). The result of the small population necessitated the researcher to apply a mixed quantitative and qualitative approach for the evaluation of the results. The results were aggregated, based on the number of companies being audited by that specific firm. Due to the confidentiality of the information and the names of the firms involved, acknowledgement will only be given to the participants on an aggregate basis and no firm will be individually named in this research, unless indicated in other literature. Various interpretations and valuable comments were received, acknowledged and summarized in aggregate and not individually per firm.

Specific benchmarks were recommended in Chapters 3 to 5, but caution should be taken with regard to the type of industry, client-specific circumstances, occurrence of fraud, and other qualitative matters. The client's need for the statements and the specific firm's guidelines should also be taken into account. The auditor should thus also apply scepticism and professional judgement in applying these benchmarks.

Chapter 5 elaborated on and integrated the analysis and comparison of benchmarks based on responses on the questionnaire and literature. The understanding of the academic researchers and public professional auditor's interpretation of the standards were gauged in the questionnaires. The responses were interpreted as the professional judgement the auditors might exercise on materiality, risk and related benchmarks. The literature study and the empirical study were incorporated in the recommendation of the following benchmarks, where applicable:

- Materiality
- Materiality drivers
- Risk
- Significant risk
- Trivial errors
- Pervasive consideration

Further research culminated in the following developments:

- Benchmarks were developed and used based on this study to quantify certain aspects as described in Chapters 2 to 5 above.

Experience gained over the last eleven years has indicated that risk assessment is a significant weakness where resources should be invested to train auditors properly, as the ISAs are based on a risk-based and currently the business risk audit approach.

The risk management and quality control of a firm may be less onerous if there were guidelines and consistency between all audit team members with regard to the performance and documentation of the audit. The implication for an auditor is that, if the planning is not done correctly, there is a substantial increase in the auditor's risk. The gathering of audit evidence process and the conclusion process, including the audit report, may not be correct. More time should be spent on audit planning and the efficiency of the audit, and thus audit fee write-offs may decrease.

This study investigated the existence of benchmarks that may have an impact on materiality, risk and the audit process. The prime objective stated in Chapter 1 was to investigate benchmarks for the quantification of elements linked to materiality, risk and the impact they may have on the audit process. This objective followed the problem statement that there are no benchmarks available to the auditor in literature and regulations. The first two secondary objectives built on the primary objective, namely to compare the theoretical aspects with benchmarks used, to consider the compliance to the auditing standards and also to assist the auditing profession and students to understand the complexity of materiality and audit risk. This understanding will benefit and contribute to more consistent performance of audits and assist in more effective and efficient audit planning.

This chapter reported on the responses to the questionnaire completed by auditing firms and can be considered as a reflection of the practical application of auditing standards. As reported above, there are many instances where ISAs do not give any guidance or give poor guidance on important issues, This should be viewed as a major concern for a profession held in high esteem.

A further concern is that in very few cases the respondents were consistent in their replies. Major auditing firms operating under the same professional standards are in

disagreement regarding crucial issues. The question comes to mind whether different auditing firms, if they had to audit the same records, would form different opinions?

It is evident from the evidence reported on in this chapter, that there is a need for clear guidance on materiality and risk in the auditing profession. A profession that takes pride in its high level of standards should ensure that its members are directed in accordance with accepted principles that are well understood and applied by all.

The benchmarks set almost three decades ago in DP6 (1984) may still be the most conservative and appropriate benchmarks. This conclusion is supported by the literature (Annexure 1 to Annexure 8), as well as the responses from the respondents. The literature is unanimous on the benchmarks for risk quantification as indicated in chapter 4.

Based on the research performed, benchmarks for materiality and risk could be established. The integrated sextant model was also developed to assist the auditor and student to conceptualize the principle of materiality and risk assessment. The integrated model illustrated that materiality and risk sampling have a significant impact on the audit process. The success of audit planning may assist in the reduction of audit failures as incorrect materiality and risk assessment is the cornerstone for a successful audit.

7 ANNEXURES 1 to 27 attached

Annexure 1

Total assets	Low	High	Multiplier	Author
	10.0%	20.0%	2.0	Plumhoff (1952)
	10.0%	20.0%	2.0	Mitchell (1972)
	10.0%	20.0%	2.0	Towers (1986)
	10.0%	20.0%	2.0	Plumhoff (1952)
	10.0%	20.0%	2.0	Mitchell (1972)
	10.0%	20.0%	2.0	Towers (1986)
	0.1%	5.0%	50.0	Turley and Cooper (1991)
	0.1%	5.0%	50.0	Woolf (1994)
	0.1%	10.0%	100.0	Woolf (1994)
	0.1%	10.0%	100.0	Turley and Cooper (1991)
	0.1%	10.0%	100.0	Mitchell (1972)
	5.0%	10.0%	2.0	Azzorpardi (2009)
	0.5%	1.0%	2.0	CICA (2005)
	0.1%	1.5%	1.5	Brennan and Gray (2005)
	0.1%	10.0%	100.0	Woolf (1994)
	1.0%	2.0%	2.0	Marx (DP6) (2009)
	0.5%	1.0%	2.0	Caseware (Probe 2012)
	0.5%	2.0%	4.0	Azzorpardi (2009)
	1.0%	2.0%	2.0	Zhou (2012)
	1.0%	2.0%	2.0	ACCA (2007)
	1.0%	1.5%	1.5	Keune (2010)

Annexure 2

Net profit before tax	Low	High	Multiplier	Author
	0.5%	36.0%	72.0	Bernstein (1967,1970)
	0.5%	36.0%	72.0	Copeland and Frederick (1968)
	0.5%	36.0%	72.0	Neumann (1968)
	0.5%	36.0%	72.0	Thomas (1978)
	0.5%	36.0%	72.0	Turley and Cooper (1991)
	3.3%	36.0%	10.9	Turley and Cooper (1991)
	5.0%	10.0%	2.0	Marx (DP6) (2009)
	0.1%	10.0%	100.0	Rotaru (2006)
	0.0%	5.0%	500.0	Zhou (2012)
	0.0%	5.0%	500.0	ACCA (2007)
	0.0%	5.0%	1.0	IFAC (2004 illustrative) Brennan and Gray (2005)
	5.0%	10.0%	2.0	Brody at al (2003)
	5.0%	10.0%	2.0	Caseware (Probe 2012)
	1.0%	10.0%	10.0	Zuca, S, (2012)
	0.0%	5.0%	-	Messier *et al.* (2005)
	0.0%	5.0%	1.0	Libby and Brown (2013)
	5.0%	10.0%	2.0	Azzorpardi (2009)
	5.0%	10.0%	2.0	Keune (2010)

Annexure 3

Revenue	Low	High	Multiplier	Author
	0.2%	10.0%	50.0	Anderson (1977)
	0.2%	10.0%	50.0	Turley and Cooper (1991)
	0.2%	10.0%	50.0	Plumhoff (1952)
	0.2%	10.0%	50.0	Towers (1986)
	0.2%	10.0%	50.0	Woolf (1994)
	0.5%	1.0%	2.0	Caseware (Probe 2012)
	0.5%	2.0%	4.0	Azzorpardi (2009)
	1.0%	1.5%	1.5	Keune (2010)
	0.5%	1.0%	2.0	Marx (DP6) (2009)
	1.0%	1.5%	1.5	Brennan and Gray (2005)
	0.5%	1.0%	2.0	IFAC (2004 illustrative) Brennan and Gray (2005)
	0.5%	1.0%	2.0	CICA (2005)
	0.5%	1.0%	2.0	Zhou (2012)
	0.5%	1.0%	2.0	ACCA (2007)

Annexure 4

Equity	Low	High	Multiplier	Author
	0.0%	10.0%	1 000.0	Mitchell (1972)
	0.5%	5.0%	10.0	CICA (2005)
	2.0%	5.0%	2.5	Marx (DP6) (2009)
	0.5%	5.0%	10.0	Caseware (Probe 2012)
	1.0%	5.0%	5.0	Azzorpardi (2009)
	1.0%	1.5%	1.5	Keune (2010)

Annexure 5

Gross profit	Low	High	Multiplier	Author
	0.5%	5.0%	10.0	Carmichael (1969)
	0.5%	5.0%	10.0	CICA (2005)
	1.0%	2.0%	2.0	Marx (DP6)(2009)
	0.5%	5.0%	10.0	Caseware (Probe 2012)

Annexure 6

Expenditure	Low	High	Multiplier	Author
	0.5%	1.0%	2.0	Zhou (2012)
	0.5%	1.0%	3.0	ACCA (2007)
	0.5%	2.0%	4.0	CICA (2005)

Annexure 7

Current liabilities	Low	High	Multiplier	Author
	5.0%	10.0%	2.0	Azzorpardi (2009)

Annexure 8

Total liabilities	Low	High	Multiplier	Author
	0.0%	10.0%	1 000.0	Mitchell (1972)

Annexure 9

Wholesaler / Retailer

Listed Client JD Group Limited

Condensed Consolidated Financial statements

Year end 31 August 2011

Features listed in the financial statements

- Financial Highlights – Revenue, Headline Earnings, Net asset value per share, Revenue by business line.
- Total assets
- Debtors cost down
- Strategy of group
    - Customer centricity
    - Art of service
    - Operational excellence
    - Resource management
- Enterprise resource planning
- Return on sales
- Customer satisfaction
- Supplier relationships
- Various brands and branches and obtain a footprint in Africa.

Financial results	2011 R'm	2010 R'm
Total Revenue for year	13 224	12 922
Materiality at 1% of revenue	132,24	129,22
Trading profit before interest, taxation depreciation and amortisation	776	643
Materiality at 5% on Profit	38,80	32,15
Total assets	9 281	8 922
Materiality at 2% of assets	193,62	188,44

Annexure 10

Transport and Freight Industry

Listed Client — Grindrod Limited

Condensed Consolidated Financial statements

Year end — 31 December 2010

Features listed in the financial statements

- Ship sales
- Foreign Exchange
- Capital Expenditure
- Took delivery of six ships
- Contracted to build two carriers
- Acquired bunker tanker business
- Acquired a bulk transport business
- Target major transport infrastructure products
- Increase revenue and tonnage

- Financial services -
- Assets under management increased by 28%

Financial results	2010 R'000	2009 R'000
Total Revenue for year	30,202,885	27,691,957
Materiality at 1% of revenue	302,029	276,920
Trading profit before interest, taxation depreciation and amortisation	1,301,284	1,471,439
Materiality at 5% on Profit	65,064	73,571
Total assets	14,251,662	12,631,099
Materiality at 2% of assets	285,033	252,622

Annexure 11

Construction

Listed Client Group Five Limited

Consolidated Group Financial statements

Year end 30 June 2011

Features listed in the Annual reports

- Securing and executing large and multi-disciplinary contracts
- Expanding geographic footprint
- Diversifying across sectors to spread risk and access stranger growth opportunities.
- Risk management became the primary driver to mitigate the rapid decline in trading condition.
- Conditions of the group's home market in South Africa.
- Debt crisis and cancelled contract.
- Progression to larger engineering procurement and construction contracts.
- Completion commission investigation of into the construction industry / Safety performance – Reputational Risk.
- Talent retention
- Identifying key stakeholders.

Financial results	2011 R'000	2010 R'000
Total Revenue for year	9 206 998	11 337 588
Materiality at 1% of revenue	92 069,98	113 375,88
Trading profit before interest, taxation depreciation and amortisation and fair value adjustments	498 828	876 895
Materiality at 5% on Profit	24 941,4	43 844,75
Total assets	7 770 978	9 950 394
Materiality at 2% of assets	155 419,56	199 007,88

Annexure 12

Consulting and service

Listed Client Gijima Group Limited

Consolidated Financial statements

Year end 30 June 2011

Features listed in the financial statements

- Strong second halve (EBITDA) Profit
- Professional services under pressure
- Strong performance in Managed services.
- Results have been negatively impacted by a dispute on a major contract. Settlement expenses of R373,9 million rand.
- Managed service division obtained a 8% Revenue growth and strong margin improvements.
- Professional services decisions revenues were down by 35%.
- Significant SAP contract wins.
- Reduced cash balances.
- Client centricity as primary focus.
- Invest in its people to assure innovations and certifications.
- Speed to markets is improved and maintaining a rate in excess of 98%.

Financial results	2011 R'000	2010 R'000
Total Revenue for year	2 566 582	2 943 417
Materiality at 1% of revenue	25 665,82	29 434,17
Trading profit before interest, taxation depreciation and amortisation	(211 807)	285 674
Materiality at 5% on Profit	(10 590,35)	14 283,70
Total assets	1 212 437	1 614 527
Materiality at 2% of assets	24 248,74	32 290,54
Trade and other receivables, more than 50% of total assets	693 666	927 944

Reason for selection: Leading ICT Company.

Annexure 13

Property

Growthpoint Properties Limited

Listed Client

Condensed Consolidated Financial statements

Year end 30 June 2011

Features listed in the financial statements or directors report

- Largest listed company on the JSE with property assets valued at R45.7 Billion.
- Market Capitalization of R29,1 Billion at 30 June 2011 (R18,31) per linked unit.
- Diversified portfolio with 424 properties in South Africa.
  - o Retail R12,0 Billion
  - o Office R13,7 billion
  - o Industrial R6,8 billion
- V & A Waterfront R4,8 billion (50% interest in properties of V & A Waterfront)
- R8.4 billion in Australia.
- Internationally managed Property Company.
- R26.4 return to investors, 8.4% income yield 18% capital growth.
- Most empowered Property Company on JSE for the 4th year.
- Additional equity raised.

Financial results	2011 R'm	2010 R'm
Total Revenue for year	3 291	2 940
Materiality at 1% of revenue	32,91	29,4
Trading profit before interest, taxation depreciation and amortisation	1 954	1 783
Materiality at 5% on Profit	97,7	89,15
Total assets	45,702	38,954
Materiality at 2% of assets	914,04	779.08
Distribution for year	2 072	1 876

Annexure 14

Energy and Chemicals Company/ Manufacturing

Listed Client
Consolidated Financial statements — Sasol Group Limited
Year end — 30 June 2010

Highlights listed in the financial statements

- EPS up by 17%
- Volumes up by 3.9%
- Reduced cash fixed cost
- Strong cash flows generated by operating activities
- Strong balance sheet to fund growth
- Growth projects remain on track
- Emphasis is also placed on employees in the financial statements

The following Key financial risks were also identified

1. Crude oil prices
2. Exchange rates
3. Chemical prices
4. Capital projects
5. Sustainable development
6. Credit market risk
7. Region in which they operate
8. Current economic climate
   - 8.1. South Africa
   - 8.2. United States
   - 8.3. European
9. Inflation and cost containment
10. Impairments
11. Credit management
12. Net realisable value write downs on inventory

Financial results

	2010 Rm	2009 Rm
Total Revenue for year	122 256	137 836
Materiality at 1% of revenue	1 223	1 378
Trading profit before interest, taxation depreciation and amortisation	23 372	24 195
Materiality at 5% on Profit	1 169	1 210
Total assets	155 484	145 685
Materiality at 2% of assets	7 774	7 284

Annexure 15 Questionnaire and responses

		Strongly agree	Agree	Neutral	Disagree	Strongly disagree	Total
1	A threshold or cut off point for materiality implies that materiality should be calculated but no need to document it.	0%	0%	0%	20%	80%	100%
2	Primary qualitative characteristics is an underlying factor for threshold materiality.	20%	40%	10%	20%	10%	100%
3	Different entities should use different materiality considerations based on balances and the most appropriate driver for that specific company.	80%	10%	0%	10%	0%	100%
4	Materiality depends on the size of error or judgement in a particular circumstance of its omission or misstatement. This implies that an auditor should use his professional judgement when determining materiality.	40%	40%	0%	10%	10%	100%
5	The possibility that relative small amounts of errors or misstatements will cumulatively impact on the risk of material misstatement. (The cumulative effect on many trivial errors may add up to be material)	45%	33%	22%	0%	0%	100%
6	Materiality should only be considered at financial statement level .	20%	30%	0%	30%	20%	100%
7	Materiality should be considered through all stages of the audit and should be adjusted accordingly if any other information come to the auditors attention.	70%	30%	0%	0%	0%	100%
8	Benchmarks for materiality may be based on any specific account balance and they are the following:						
a	Revenue 0.5 % to 1%	30%	40%	20%	10%	0%	100%
b	Gross Profit 1/2% to 5% or 1 % to 2%	30%	20%	30%	20%	0%	100%
c	Net profit before tax 5% to 10% In practice the net income Figure can be the Figure before or after taxation. This will depend on the specific circumstances, trends and conditions.	30%	40%	20%	10%	0%	100%
d	Total assets 1/2% to 1% or 1% to 2%	30%	30%	20%	20%	0%	100%
e	Equity 1/2% to 5% or 2 % to 5%	20%	30%	20%	10%	20%	100%
f	Materiality consideration should include a materiality driver. (Own defifnition - Materiality driver can be defined as: "The part of the operations which drives the entity to achieve it's objective and may differ between different type of entitites".)	50%	17%	0%	0%	33%	100%

9	Materiality is an absolute amount and risk has a minimal impact on materiality determination.	**0%**	**20%**	**10%**	**30%**	**40%**	**100%**
10	Determination of materiality needs to be considered but there is no requirement to document the amount on audit working papers.	**0%**	**0%**	**0%**	**0%**	**100%**	**100%**
11	There is an inverse relationship between materiality and risk. This implies that materiality for a high risk client should be lower than that determined for a low risk client. No other factors should be taken into account.	**50%**	**10%**	**10%**	**30%**	**0%**	**100%**
12	The effective date for ISA 320 (2011) and ISA 450 are for financial periods starting 15 December 2009. This implies that IFAC has shown their intentions and therefore these statements can be early adopted.	**40%**	**40%**	**20%**	**0%**	**0%**	**100%**
13	The auditor should assess whether the aggregate of unrecorded misstatements have been identified during the audit is material. This implies that all errors net or in total should not exceed materiality.	**40%**	**30%**	**10%**	**10%**	**10%**	**100%**
14	When an auditor concludes that the misstatement are material the standard implies that an auditor should use his professional judgement based on qualitative factors and his knowledge of the client and still issue an unqualified opinion based on qualitative considerations	**10%**	**10%**	**10%**	**30%**	**40%**	**100%**
15	Refer to statement 13. The implication is thus that the auditor do not need to document his justification and conclusion for overriding final materiality Figure.	**0%**	**0%**	**0%**	**0%**	**100%**	**100%**
16	Refer to statement 13. Any disclosure allocation error above materiality should be adjusted	**20%**	**20%**	**10%**	**30%**	**20%**	**100%**
17	If an adjustment is not material in relation to the Financial statements but material due to disclosure requirements in relation to a specific income statement line item it should be ignored.	**0%**	**10%**	**10%**	**30%**	**50%**	**100%**
18	Planning materiality based on Figures not covering the full current financial reporting period the basis should be grossed up to annualise the Figure.	**11%**	**45%**	**11%**	**22%**	**11%**	**100%**
19	According to IAS 1 all material balances should be disclosed in the financial statements. Material misstatement means that all disclosure errors above materiality should be corrected.	**30%**	**30%**	**20%**	**10%**	**10%**	**100%**
20	Reclassification of errors above materiality should be treated on a different basis as they are qualitative and not quantitative	**10%**	**20%**	**10%**	**40%**	**20%**	**100%**
21	Qualitative materiality can be assessed on a differential range from planning materiality. Compare the error as a percentage of the total balance and use a different range.	**10%**	**20%**	**10%**	**20%**	**40%**	**100%**

22	Each and every material item on the trial balance and audit working papers be subject to a verification procedure (E.g. all material items on TB or lead schedule).	**40%**	**50%**	**0%**	**10%**	**0%**	**100%**
23	All immaterial items / balances should not be verified	**0%**	**40%**	**20%**	**20%**	**20%**	**100%**
24	Risk of material misstatement can be interpreted as over statement for certain balances and understatement of certain balances.	**30%**	**50%**	**0%**	**10%**	**10%**	**100%**
25	Materiality should be one Figure for the audit or differential amounts for balance sheet and income statement	**10%**	**40%**	**20%**	**20%**	**10%**	**100%**
26	Average of various group of balances can be used to calculate materiality for the following reasons.						
a	To reduce risk	**0%**	**44%**	**0%**	**22%**	**34%**	**100%**
b	To be conservative	**0%**	**33%**	**11%**	**22%**	**34%**	**100%**
c	To increase sample and	**0%**	**22%**	**11%**	**33%**	**34%**	**100%**
d	Increase audit fee.	**0%**	**0%**	**0%**	**44%**	**56%**	**100%**
27	In aggregate means:	**0%**	**100%**	**0%**	**0%**	**0%**	**100%**
a	In total per balance	**11%**	**56%**	**22%**	**0%**	**11%**	**100%**
b	In total for assets, liabilities, income and expenses	**11%**	**22%**	**22%**	**34%**	**11%**	**100%**
c	The net result of all balances	**0%**	**22%**	**22%**	**34%**	**22%**	**100%**
28	Materiality and audit risk/fraud risk influences sample sizes	**60%**	**30%**	**0%**	**0%**	**10%**	**100%**
29	Prior year errors should be included in the consideration for the effect on the financial Figures for the current year	**50%**	**30%**	**10%**	**10%**	**0%**	**100%**

30	Implementation of controls (Walkthrough tests) sample sizes should be limited to						
a	1 per cycle or balance	**40%**	**40%**	**10%**	**10%**	**0%**	**100%**
b	2 per cycle or balance	**0%**	**0%**	**33%**	**67%**	**0%**	**100%**
c	3 per cycle or balance	**0%**	**0%**	**44%**	**56%**	**0%**	**100%**
d	None at all when no reliance are placed on internal control	**11%**	**11%**	**0%**	**45%**	**33%**	**100%**
e	more than three per cycle or balance	**0%**	**22%**	**11%**	**45%**	**22%**	**100%**
31	Sample size should be used for test of controls						
a	1 item per month	**0%**	**11%**	**33%**	**34%**	**22%**	**100%**
b	2 items per month	**0%**	**45%**	**33%**	**11%**	**11%**	**100%**
c	20 items per annum	**0%**	**11%**	**22%**	**45%**	**22%**	**100%**
d	25 items per annum	**0%**	**11%**	**22%**	**45%**	**22%**	**100%**
e	20 items per annum covering the full period	**11%**	**11%**	**22%**	**34%**	**22%**	**100%**
f	25 items per annum covering the full period	**22%**	**34%**	**33%**	**11%**	**0%**	**100%**
g	more than 25 items	**0%**	**22%**	**22%**	**45%**	**11%**	**100%**
32	The sample size for substantive tests should be reduced when tests of controls were performed satisfactorily .	**78%**	**11%**	**0%**	**0%**	**11%**	**100%**

33	The sample size for substantive tests should be the following:						
a	1 item per month	0%	0%	11%	51%	38%	100%
b	2 items per month	0%	11%	11%	45%	33%	100%
c	20 items per annum	0%	0%	22%	45%	33%	100%
d	25 items per annum	0%	0%	22%	45%	33%	100%
e	20 items per annum covering the full period	0%	0%	22%	45%	33%	100%
f	25 items per annum covering the full period	22%	0%	33%	34%	11%	100%
g	more than 25 items	11%	0%	44%	22%	23%	100%
h	Percentage of coverage for balance sheet	22%	34%	11%	33%	0%	100%
i	Percentage of coverage for income statement	0%	34%	11%	33%	22%	100%
j	Percentage of coverage for balance sheet and income statement	0%	0%	45%	33%	22%	100%
k	Stratified sample based on all material transactions and balances	33%	45%	11%	11%	0%	100%
l	Analytical review with corroborative explanations	0%	57%	33%	11%	0%	100%
m	No detail testing and analytical reviews by discussions with management	0%	0%	11%	33%	56%	100%
n	Analytical reviews supported by explanations by management and detail testing to corroborate the explanations	22%	56%	22%	0%	0%	100%
o	Based on account balance, materiality and risk	70%	20%	10%	0%	0%	100%
p	Combination of all based on risk, knowledge of client and auditor's professional judgement	33%	56%	11%	0%	0%	100%
34	The sample size for substantive tests should be reduced when tests of controls were not performed satisfactorily.	11%	0%	0%	44%	45%	100%

35	The confidence level for sampling should be between 90 to 95%.	**30%**	**50%**	**20%**	**0%**	**0%**	**100%**
36	Significant can be quantified as follows:						
a	Any amount between 1 to 2% of total assets or Turnover (Gross Revenue)	**22%**	**34%**	**0%**	**44%**	**0%**	**100%**
b	Any amount between 5 to 10% of total assets or Turnover (Gross Revenue)	**0%**	**37%**	**0%**	**50%**	**13%**	**100%**
37	Trivial amounts or trivial materiality can be quantified as any amount below						
a	Any amount between 1 to 2% of materiality	**33%**	**12%**	**11%**	**33%**	**11%**	**100%**
b	Any amount between 2 to 5% of materiality	**11%**	**33%**	**0%**	**22%**	**34%**	**100%**
c	Any amount between 5 to 10% of materiality	**30%**	**0%**	**0%**	**50%**	**20%**	**100%**
d	Any amount between 10 to 20% of materiality	**0%**	**0%**	**11%**	**44%**	**45%**	**100%**
38	Pervasive can be quantified as:						
a	Any amount greater than twice final materiality	**0%**	**12%**	**13%**	**38%**	**37%**	**100%**
b	Any amount greater than three times final materiality	**25%**	**0%**	**25%**	**38%**	**12%**	**100%**
c	Any amount greater than four times final materiality	**22%**	**11%**	**22%**	**23%**	**22%**	**100%**

Annexure 16 Materiality compliance

Key	Category	Statement number	Statement summary	Strongly agree	Agree	Neutral	Disagree	Strongly disagree	Total
MC	Compliance	1	Document threshold materiality	80%	20%	0%	0%	0%	100%
MC	Compliance	7	Stages	70%	30%	0%	0%	0%	100%
MC	Compliance	29	Prior years differences	50%	30%	10%	10%	0%	100%
MC	Compliance	20	Reclassification different treatment	10%	20%	10%	40%	20%	100%

Annexure 17 Materiality compliance- Guidance vague

Key	Category	Statement number	Statement summary	Strongly agree	Agree	Neutral	Disagree	Strongly disagree	Total
MC	Guidance vague	26a	Average materiality to reduce risk	0%	44%	0%	22%	34%	100%
MC	Guidance vague	26b	Average materiality to be conservative	0%	33%	11%	22%	34%	100%
MC	Guidance vague	26c	Average materiality to increase sample	0%	22%	11%	33%	34%	100%
MC	Guidance vague	26d	Average materiality to increase fees	0%	0%	0%	44%	56%	100%
MC	Guidance vague	25	Materiality per audit	10%	40%	20%	20%	10%	100%

Annexure 18 Materiality compliance - Interpretation

Key	Category	Statement number	Statement summary	Strongly agree	Agree	Neutral	Disagree	Strongly disagree	Total
MC	Interpretation	4	Professional judgement	40%	40%	0%	10%	10%	100%
MC	Interpretation	6	Consideration at AFS level	20%	30%	0%	30%	20%	100%
MC	Interpretation	18	Gross up materiality	11%	45%	11%	22%	11%	100%
MC	Interpretation	21	Qualitative materiality different assessed	10%	20%	10%	20%	40%	100%
MC	Interpretation	28	Influence of materiality and risk on sample size	60%	30%	0%	0%	10%	100%

Annexure 19 Materiality compliance - Professional judgement/ Interpretation

Key	Category	Statement number	Statement summary	Strongly agree	Agree	Neutral	Disagree	Strongly disagree	Total
MC	Professional judgement/ Interpretation	24	Overstatement	30%	50%	0%	10%	10%	100%
MC	Professional judgement/ Interpretation	17	Accounting disclosure and materiality	30%	30%	20%	10%	10%	100%
MC	Professional judgement/ Interpretation	23	Not verify immaterial items	0%	40%	20%	20%	20%	100%

Annexure 20 Materiality compliance - Interpretation and compliance to standards and lack of guidance

Key	Category	Statement number	Statement summary	Strongly agree	Agree	Neutral	Disagree	Strongly disagree	Total
MC	Interpretation and compliance to standards	2	Qualitative consideration	20%	40%	10%	20%	10%	100%
MC	Interpretation and compliance to standards	10	Document materiality	100%	0%	0%	0%	0%	100%
MC	Lack of guidance	12	Early adoption	40%	40%	20%	0%	0%	100%
MC	Lack of guidance	3	Entity drives materiality	80%	10%	0%	10%	0%	100%
MC	Lack of guidance	5	Cumulative material error	45%	33%	22%	0%	0%	100%
MC	Lack of guidance	22	Material line items	40%	50%	0%	10%	0%	100%

Annexure 21 Audit differences - Interpretation and guidance

Key	Category	Statement number	Statement summary	Strongly agree	Agree	Neutral	Disagree	Strongly disagree	Total
AD	Interpretation and guidance	19	All error net or in total	30%	30%	20%	10%	10%	100%
AD	Interpretation and guidance	13	Disclosure errors	40%	30%	10%	10%	10%	100%
AD	Interpretation and guidance	14	Judgement on qualitative factors	10%	10%	10%	30%	40%	100%
AD	Interpretation and guidance	15	Document justification for overriding materiality	0%	0%	0%	0%	100%	100%
AD	Interpretation and guidance	16	Allocation error	20%	20%	10%	30%	20%	100%

Annexure 22 Audit differences - Interpretation and vague definitions

Key	Category	Statement number	Statement summary	Strongly agree	Agree	Neutral	Disagree	Strongly disagree	Total
AD	Interpretation and vague definitions	27a	Aggregate = Total balance	11%	56%	22%	0%	11%	100%
AD	Interpretation and vague definitions	27b	Aggregate = per grouping	11%	22%	22%	34%	11%	100%
AD	Interpretation and vague definitions	27c	Aggregate = net result	0%	22%	22%	34%	22%	100%
AD	Interpretation and vague definitions	17	Accounting disclosure and materiality	0%	10%	10%	30%	50%	100%

Annexure 23 Risk interpretation - Interpretation and lack of guidance

Key	Category	Statement number	Statement summary	Strongly agree	Agree	Neutral	Disagree	Strongly disagree	Total
R	Interpretation and lack of guidance	9	Impact of materiality on risk	0%	20%	10%	30%	40%	100%
R	Interpretation and lack of guidance	11	Risk relationship	50%	10%	10%	30%	0%	100%
R	Interpretation and lack of guidance	35	Confidence = 90 - 95%	30%	50%	20%	0%	0%	100%

Annexure 24 Materiality benchmarks - Interpretation and lack of guidance on benchmarks

Key	Category	Statement number	Statement summary	Strongly agree	Agree	Neutral	Disagree	Strongly disagree	Total
MB	Interpretation and lack of guidance on benchmarks	8a	Revenue = 0.5 % to 1%	30%	40%	20%	10%	0%	100%
MB	Interpretation and lack of guidance on benchmarks	8b	Gross Profit = 1/2% to 5% or 1 % to 2%	30%	20%	30%	20%	0%	100%
MB	Interpretation and lack of guidance on benchmarks	8c	Net profit before tax = 5% to 10%	30%	40%	20%	10%	0%	100%
MB	Interpretation and lack of guidance on benchmarks	8d	Total assets = 1/2% to 1% or 1% to 2%	30%	30%	20%	20%	0%	100%
MB	Interpretation and lack of guidance on benchmarks	8e	Equity = 1/2% to 5% or 2 % to 5%	20%	30%	20%	10%	20%	100%
MB	Interpretation and lack of guidance on benchmarks	8f	Entity drivers	50%	17%	0%	0%	33%	100%

Annexure 25 Significant benchmark - Lack of guidance, Clarity and interpretation

Key	Category	Statement number	Statement summary	Strongly agree	Agree	Neutral	Disagree	Strongly disagree	Total
SB	Lack of guidance, Clarity and interpretation	36a	Significant = 1 to 2% of total assets or Turnover (Gross Revenue)	22%	34%	0%	44%	0%	100%
SB	Lack of guidance, Clarity and interpretation	36b	Significant = 5 to 10% of total assets or Turnover (Gross Revenue)	0%	38%	0%	50%	12%	100%

Annexure 26 Pervasive benchmark - Lack of guidance, Clarity and interpretation

Key	Category	Statement number	Statement summary	Strongly agree	Agree	Neutral	Disagree	Strongly disagree	Total
PB	Lack of guidance, Clarity and interpretation	38a	Pervasive = materiality X 2	0%	13%	12%	37%	38%	100%
PB	Lack of guidance, Clarity and interpretation	38b	Pervasive = materiality X 3	25%	0%	25%	37%	13%	100%
PB	Lack of guidance, Clarity and interpretation	38c	Pervasive = materiality X 4	22%	12%	22%	22%	22%	100%

Annexure 27 Trivial benchmarks - Lack of guidance, Clarity and interpretation

Key	Category	Statement number	Statement summary	Strongly agree	Agree	Neutral	Disagree	Strongly disagree	Total
TB	Lack of guidance, Clarity and interpretation	37a	Trivial = 1 to 2% of materiality	34%	11%	11%	33%	11%	100%
TB	Lack of guidance, Clarity and interpretation	37b	Trivial = 2 to 5% of materiality	11%	34.0%	0%	22%	33%	100%
TB	Lack of guidance, Clarity and interpretation	37c	Trivial = 5 to 10% of materiality	30%	0%	0%	50%	20%	100%
TB	Lack of guidance, Clarity and interpretation	37d	Trivial =10 to 20% of materiality	0%	0%	12%	44%	44%	100%

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